FINANCIAL IMPACT OF WORLD TRADE CENTER ATTACK

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INTRODUCTION

The degree of damage from the September 11 terrorist attacks on the World Trade Center is unprecedented in the United States. Damage will total at least twice that of the most expensive previous U.S. disaster (Hurricane Andrew in 1992 cost an estimated $25 billion), and some analysts estimate the total at more than three times greater. Approximately 30% of all the commercial space available in lower Manhattan was destroyed or damaged. And this does not count the additional damage done to the City's infrastructure in Lower Manhattan, to residential properties located there, and to the small business community of retail and personal services that existed to support the financial services firms located there.

This report focuses on the immediate impact of September 11, both to the City and the State of New York. We assess the impact on economic activity for both, as well as the impact on the State's tax revenues. Our focus is on determining the employment impact, particularly on the number of jobs that have left New York State or are likely to leave in the nearby future. During the fourth quarter of 2001 New York State lost an estimated 100,000 jobs. Our analysis centers on the financial services sector in this regard. We also consider the impact to the important tourist and travel sectors of both the City and the State. Using the DRI•WEFA econometric models of New York City and New York State, we estimate the total impact on employment and incomes—this encompasses the direct impacts, the secondary effects they imply, as well as the effects from the national economic recession which has clearly accelerated in the wake of September 11. This preliminary analysis is based on the DRI•WEFA macroeconomic forecast of November 2001, and it will be updated in February 2002.

Our estimates of the reduction of New York State taxes by more than $3.5 billion over the first 18 months following the attack flow from these estimates. When added to the $2.5 billion baseline gap projected by the Governor in his last Executive Budget, the State could be facing a $6.0 billion budget gap. The reduction in personal bonus income and in financial sector profits will have a key impact on the outlook for tax revenues during the next few years. Again, although these reductions were in the cards prior to the attack, the outlook for them has deteriorated since. Finally, we have reviewed the expected impact of the attack on rental income, considering the relocation of firms formerly housed in the WTC environment, the changes in rents they are paying in their new locations, as well as the relocation of some former WTC tenants outside of New York State.

NEW YORK STATE: ESTIMATED TAXPAYER REVENUE IMPACT OF SEPTEMBER 11

State Fiscal Years

	2001-2002	2002-2003	Cumulative Total
Loss of Taxpayer Revenue (Billions)	$1.112	$2.421	$3.533

The Baseline outlook for our analysis was that existing immediately prior to September 11. Thus, the Baseline contains our view of the economic slowdown that existed at that point. In focusing on the impact of September 11, this report documents the additional changes to the outlook precipitated by the terrorist attack itself as well as our revision to our economic outlook during that period for the U.S., New York State, and New York City. The following charts summarize these impacts.

UNITED STATES: ESTIMATED ECONOMIC IMPACT OF SEPTEMBER 11

	2001	2002	2003	Cumulative Total
Loss of GDP (Billions.)	$40.8	$318.3	$280.2	$639.3
Loss of Income (Billions)	$28.1	$182.4	$213.7	$424.2
Loss of Jobs (Millions)	0.3	1.4	2.0	

NEW YORK STATE: ESTIMATED ECONOMIC IMPACT OF SEPTEMBER 11

	2001	2002	2003	Cumulative Total
Loss of Income (Billions)	$1.971	$9.101	$10.885	$21.957
Loss of Jobs (000)	24.0	78.2	77.5	

NEW YORK CITY: ESTIMATED ECONOMIC IMPACT OF SEPTEMBER 11

	2001	2002	2003	Cumulative Total
Loss of Income (Billions)	$1.396	$8.710	$5.039	$15.145
Loss of Jobs (000)	17.0	70.0	57.1	

IMPACT ON THE NATIONAL ECONOMY

During the months prior to the attack, the U.S. economy continued to grow slowly, primarily due to the continued enthusiasm of the consumer. Businesses had long since thrown in the towel and it appeared that manufacturing was in a recession. Nonresidential fixed investment had declined at double-digit rates since the first quarter of 2001, and inventory accumulation had turned negative beginning in the first quarter of the year. Despite sharp declines in the measures of consumer confidence, personal consumption continued to grow. After a 4.8% increase in 2000, real personal consumption was on its way to an estimated 3.0% increase for 2001. At the same time, residential investment continued to hold its own. Housing starts in the second quarter totaled an annual rate of 1.621 million units, over 2% above its year earlier level. Through August, the Federal Reserve had cut short-term interest rates seven times for a total of 350 basis points, and DRI•WEFA felt that the economy was on track for a soft landing centered in the third quarter of the year.

The September 11 attack changed all this. Across the U.S., economic activity ground to a halt in the week of the attack, and as the dust settled, it was clear that consumers were in no mood for immediate spending. Retail sales dropped by 1.8% in September, and light vehicle sales fell to an annual rate of 15.8 million units, the lowest monthly sales rate in almost three years. With consumption weakening, business further reduced its investment plans, and it now appears that we are facing a recession that will last through the winter. Real GDP declined by an annual rate of 1.1% in the third quarter, and we expect declines in the 1.6-2.1% range through the first quarter of 2002. For all of 2002, GDP is now expected to decline by $318.3 billion compared with our pre-September 11th forecast.

We expect the recession to last just over a year, with growth resuming in the second quarter of 2002. As recessions go, it will be a mild one, with a 0.8% peak-to-trough decline, well below the average postwar recession decline of 2.3%. The recovery will be led by an end to inventory liquidation, with assistance from stepped-up federal spending and monetary stimulus.

The runoff of real nonfarm inventories over the past three quarters is as severe as in any postwar recession. Through the third quarter, inventories are down 10% from the pre-liquidation peak. Before the liquidation ends in the second quarter of 2002, we anticipate that the decumulation will reach 14%--a post-war recession record. By early in 2002, business' ability to fill orders out of inventory will be severely curtailed, forcing manufacturers to add a few additional hours to the weekly production schedule. Income will begin to recover, and as it is spent, more workers will eventually be needed and employment will accelerate.

Even before this, there could be some rehiring in the tourist industry. As jobs and incomes permit, consumers are resuming their normal routines, eating out, going to sporting events, and returning to the skies to travel. In October, real spending on airline travel erased half the September slide, while spending on spectator admissions more than recovered the September loss, as did spending on hotels and motels (business travel still remains down, however, and will until the economy recovers). This will also help buoy the recovery through the winter and into spring.

Consumption as early as October indicated that consumers were not entirely ready to give up the ghost. Spending on durable goods soared a record 13.7% (not annualized) as consumers raced to take advantage of the 0% interest rate financing on light vehicles. Although much of this spending borrowed from purchases that would have otherwise occurred later in 2001 and in early 2002, some of it represented new purchases by buyers unable to resist the sharp drop in financing charges associated with a new vehicle purchase.

We expect that, except for light vehicle spending, consumer spending in the fourth quarter will be flat. Consumer confidence remains relatively high, but declining employment growth and a sharp reduction in year-end bonuses will hold back consumption spending through the holidays and during the early part of 2002. Fortunately, most households hold the bulk of their wealth in their homes. House prices have softened modestly, but still hold up well, as has new home construction and sales. Even so, foreclosures are on the rise and we expect them to continue to increase—a consequence of the easy mortgage terms over the recent several years. Still, housing should remain relatively strong throughout this recession.

Most of the nation's economic weakness centers on business investment. Equipment spending has fallen for five consecutive quarters—something which has not occurred since 1982—and is likely to continue to fall for an additional two quarters at least. The demise of the dot-coms, an excess of communications infrastructure, and general overcapacity in manufacturing industries worldwide have eliminated most incentives to invest until later next year. Between falling investment and sluggish consumer spending, manufacturing activity continues to weaken. This decline in factory output, which has fallen for 14 of the past 16 months, is the steepest since the 1982 recession. By early next year, however, we anticipate that additional production will be necessary to meet even a sluggish order flow as manufacturing inventories run down.

After-tax corporate profits peaked in the fourth quarter of 2000 and have declined steadily since. In our Baseline outlook, profits declined by 14.3% in 2001, but recovered by 6.2% in 2002. With the recession explicitly defined in our Baseline outlook, profits are expected to decline in 2001 by 16.7% and show a further 2.6% next year. The current profit outlook is determined especially by the outlook for manufacturing and financial services. High-tech activity had generated solid profit growth for both businesses during the second half of the 1990s, and both have been adversely affected by the high-tech slowdown. Both sectors will benefit as the recession concludes in the spring of 2002, and profits are expected to increase once again during the year (although, as noted, not by enough to pull the annual average back above the 2001 level).

Federal spending will also give next year's economy a boost—the 2002 budget contains a huge amount of fiscal stimulus. At the same time the Federal Reserve is still pumping liquidity into the system. At 1.75%, the federal funds target is the lowest in 40 years, and the real rate is close to zero.

The following table details the extent of the attack's impact on the U.S. economy. Compared with our Baseline forecast completed in early September, our Current forecast indicates that GDP will decline in the fourth quarter by $146.9 billion. That shortfall slides further to a difference of $318.3 billion for calendar 2002, and to $280.2 billion in 2003. Although this is a mild recession by historical standards, it has a significant economic impact on our nation's economy:

- Nonagricultural employment declines by 900,000 jobs in the fourth quarter of 2001 and by 2003 are down by two million jobs from what they otherwise would have been.
- Wage and Salary growth is only 1.1% in the fourth quarter of 2001, less than one-quarter of the 4.5% rate forecast in the Baseline outlook. In 2002, wage and salary growth in the Current forecast is 2.6%, less than one-half that in the Baseline. Total personal income growth in the Current forecast follows a similar path, lagging well behind the Baseline outlook.
- The Current forecast for real personal consumption manages only bare-bones growth of 0.2% in the fourth quarter of 2001, and grows in 2002 at a rate that is about one-half its pace in the Baseline forecast. Consumption growth begins to recover in 2003, relative to the Baseline.
- For its part, business remain squeamish about further investment. As a consequence, total investment expenditures drop by 12.5% in 2001Q4 in the Current forecast, down from a decline of 3.3% in the Baseline forecast. Next year, the Current forecast decline is 5.3% relative to a drop of just 0.8% in the Baseline.
- Real inventory accumulation continues through the fourth quarter of 2001 for a drop of 36.1 billion constant dollars. In the Baseline forecast we had anticipated a very modest increase of $3.4 billion. In the Current outlook, inventory accumulation does not resume until the second half of 2002.
- Demand from net trade also deteriorates with sharp declines in export growth in the Current outlook relative to the Baseline.

BASELINE (PRE 9/11) AND CURRENT ECONOMIC FORECAST FOR THE UNITED STATES

(Percent Change at an Annual Rate Unless Indicated)

	2001:1	2001:2	2001:3	2001:4	2002:1	2002:2	2002:3	2002:4	2003:1	2003:2	2003:3	2003:4	2001	2002	2003
GDP ($ Billions)															
Baseline	10142	10202	10265	10379	10506	10643	10802	10977	11160	11311	11448	11587	10247	10732	11377
Current	10142	10203	10248	10232	10228	10328	10458	10640	10831	11015	11178	11362	10206	10414	11096
Real GDP (Billions 96 $)															
Baseline	9334.5	9338.4	9368.2	9417.3	9471.4	9537.6	9624.0	9721.1	9816.8	9891.6	9947.7	10007.5	9365.6	9588.5	9916.9
Percent	1.3	0.2	1.3	2.1	2.3	2.8	3.7	4.1	4.0	3.1	2.3	2.4	1.5	2.4	3.4
Current	9334.5	9341.7	9333.4	9284.3	9246.0	9303.5	9391.5	9510.0	9623.1	9736.8	9821.5	9926.8	9323.5	9362.8	9777.0
Percent	1.3	0.3	-0.4	-2.1	-1.6	2.5	3.8	5.1	4.8	4.8	3.5	4.4	1.1	0.4	4.4
Real Consumption Expenditures															
Baseline	3.0	2.5	2.1	2.5	2.7	2.7	3.3	3.1	3.6	3.4	2.3	2.1	3.0	2.7	3.1
Current	3.0	2.5	1.2	0.2	-1.3	3.0	3.7	3.9	4.5	4.4	3.1	3.5	2.7	1.3	3.9
Real Government Expenditures															
Baseline	5.3	5.3	4.2	1.8	2.1	2.0	1.5	1.5	1.5	1.5	1.3	1.5	3.6	2.4	1.5
Current	5.3	4.9	1.8	4.2	2.7	2.8	2.8	1.5	1.9	2.1	1.8	2.1	3.4	3.0	2.0
Real Investment Expenditures															
Baseline	1.9	-9.8	-6.8	-3.3	0.3	2.1	5.1	5.0	5.2	6.7	5.1	3.9	-1.6	-0.8	5.1
Current	1.9	-9.7	-8.4	-12.5	-5.7	-1.8	4.5	2.4	4.4	8.0	5.5	7.8	-2.4	-5.3	4.7
Nonfarm Inventory Accumulation (Billions of 1996 $)															
Baseline	-27.1	-38.4	-16.6	3.4	14.7	23.3	32.5	40.0	43.3	43.9	42.0	36.7	-19.7	27.6	41.5
Current	-27.1	-38.3	-50.4	-34.7	-16.5	-9.9	6.1	34.8	41.6	53.7	57.5	57.1	-37.6	3.6	52.5
Real Exports															
Baseline	-1.2	-12.2	-5.9	-1.9	1.0	6.1	6.7	8.0	7.1	6.1	5.8	5.7	-2.3	0.7	6.7
Current	-1.2	-11.9	-16.6	-14.2	-8.9	-2.1	3.9	9.9	12.4	12.2	11.9	10.7	-4.5	-7.4	9.7
Real Imports															
Baseline	-5.0	-7.7	-0.5	-0.1	3.5	4.8	5.0	1.4	3.1	9.3	6.4	2.4	-0.5	1.9	4.6
Current	-5.0	-8.4	-15.2	-0.2	1.0	-1.4	6.9	1.3	5.3	11.1	8.1	4.8	-2.6	-1.8	5.7
CPI--All Urban (%)															
Baseline	4.2	3.1	1.3	2.5	2.6	2.5	2.5	2.6	2.7	2.6	2.8	2.8	3.1	2.4	2.6
Current	4.2	3.1	0.7	2.3	1.7	1.8	1.8	2.4	2.4	2.4	2.7	2.6	3.0	1.9	2.4
Pretax Corporate Profits															
Baseline	755.7	739.4	676.0	725.8	759.0	753.5	774.4	789.6	803.3	785.0	781.1	782.2	724.2	769.1	787.9
Percent	-26.6	-8.4	-30.1	32.8	19.6	-2.9	11.6	8.1	7.1	-8.8	-2.0	0.6	-14.3	6.2	2.4
Current	755.7	738.3	698.0	623.6	640.0	669.0	697.3	736.4	758.6	752.2	760.9	773.0	703.9	685.7	761.2
Percent	-26.6	-8.9	-20.1	-36.3	10.9	19.4	18.1	24.4	12.6	-3.3	4.7	6.5	-16.7	-2.6	11.0
After-Tax Corporate Profits															
Baseline	518.9	508.4	469.5	502.0	524.0	519.6	532.5	541.5	549.7	537.7	535.2	536.6	499.7	529.4	539.8
Percent	-27.8	-7.9	-27.3	30.8	18.7	-3.3	10.3	6.9	6.2	-8.5	-1.8	1.0	-12.9	5.9	2.0
Current	518.9	510.3	531.0	446.6	475.1	497.4	516.5	541.2	552.9	545.5	549.2	556.4	501.7	507.5	551.0
Percent	-27.8	-6.5	17.3	-50.0	28.1	20.1	16.2	20.5	9.0	-5.2	2.7	5.4	-12.6	1.2	8.6
Personal Income															
Baseline	5.8	3.7	3.8	4.6	3.6	4.6	5.1	5.9	7.0	5.9	5.0	4.8	5.3	4.3	5.8
Current	5.8	3.5	2.9	1.5	1.6	2.7	4.1	5.2	6.8	6.3	5.6	5.8	5.0	2.6	5.6
Wages & Salaries															
Baseline	6.3	4.0	3.3	4.5	5.0	4.9	5.2	5.7	6.6	5.9	5.6	5.3	5.9	4.7	5.8
Current	6.3	4.0	2.3	1.1	2.3	2.9	3.7	4.8	5.9	6.0	5.9	6.0	5.5	2.6	5.3
Nonagricultural Employment (Millions)															
Baseline	132.6	132.5	132.4	132.5	132.6	132.8	133.2	133.7	134.3	134.8	135.3	135.7	132.5	133.1	135.0
Current	132.6	132.5	132.3	131.6	131.6	131.6	131.8	131.9	132.3	132.8	133.2	133.8	132.2	131.7	133.0
Unemployment Rate (%)															
Baseline	4.2	4.5	4.8	5.1	5.3	5.4	5.4	5.3	5.2	5.2	5.1	5.1	4.7	5.3	5.2
Current	4.2	4.5	4.8	5.7	6.0	6.3	6.3	6.2	6.0	5.8	5.6	5.4	4.8	6.2	5.7
T-Bill Rate, 3-Month (%)															
Baseline	4.8	3.7	3.5	3.1	3.2	3.2	3.7	4.1	4.3	4.4	4.6	4.7	3.8	3.5	4.5
Current	4.8	3.7	3.2	2.0	1.8	2.0	2.4	3.0	3.6	4.1	4.4	4.6	3.4	2.3	4.2
T-Note Rate, 10-Year (%)															
Baseline	5.0	5.3	5.0	4.8	4.9	4.9	5.3	5.5	5.6	5.6	5.7	5.7	5.0	5.2	5.6
Current	5.0	5.3	5.0	4.3	4.2	4.4	4.6	5.0	5.6	5.7	5.9	5.9	4.9	4.5	5.8
Standard and Poor's 500 Stock Index															
Baseline	1276	1233	1163	1183	1201	1235	1272	1298	1318	1325	1354	1372	1214	1252	1342
Current	1276	1233	1143	1083	1125	1152	1198	1250	1267	1249	1258	1279	1184	1181	1263

The Baseline forecast was completed in September, 2001, prior to the WTC attacks. The Current forecast was completed in November.

IMPACT ON THE NEW YORK CITY ECONOMY

The New York City economy had fared reasonably well until September 11, despite the softening national economy. Retail trade sector employment had been particularly robust, up 5.3% year over year in the second quarter following a 4.5% rise in the first quarter. Total nonagricultural employment growth was strong in the early part of the year—up a solid 2.0% in April. But mixed in with this strength were increasing signs of weakness: tourism and general consumer spending was cooling, creating a deceleration in service-sector growth. The bear stock market brought the recent year's growth in the finance sector to a screeching halt. The year-on-year employment comparisons in the private service-producing sectors (telecommunications and public utilities, trade, finance, and services, which account for about three-quarters of the City's employment), had been steadily declining during the year. By August, year-on-year nonagricultural employment growth had slowed to a 1.0% gain.

However, the terrorist attack on September 11 had an immediate impact on employment in the City. As shown in the following chart, employment declined by over 70,000 in the fourth quarter of 2001 and 2002 is expected to average a similar decline.

TOTAL REDUCTION IN EMPLOYMENT FROM SEPTEMBER 11—NEW YORK CITY

Thousands

Sector	2001Q4	2002	2003
Construction, Mining	1.28	1.46	0.98
Financial, Insurance, Real Estate	31.85	31.89	31.86
Government	0.07	1.40	2.75
Manufacturing	3.05	4.04	2.82
Services	14.57	15.39	9.72
Trans., Telecom., Public Utilities	5.07	1.44	0.97
Trade	15.33	14.38	8.01
Total Non Agricultural	**70.95**	**70.00**	**57.10**

By late last summer, the City's phenomenal real estate boom was slowing, and markets were returning to some semblance of equilibrium. The extraordinarily high cost of local real estate combined with the slowing national economy drove housing starts down from their sky-high levels during the last half of 2000. Consequently, employment growth in the construction sector moderated from double-digit employment gains in 2000 to still healthy job increases of 5.2% and 4.0% in July and August, respectively. The vacancy rate for office space in Manhattan remained only 5.1%, despite the addition of over seven million square feet of office space freed up by closing and downsizing dot-coms. Large contiguous blocks of space remained scarce. On balance, however, the City remained less affected by the national downturn than most other metros prior to September 11.

The post-attack forecast, however, presages a sharp decline for New York in the coming months, especially during the fourth quarter of this year and in 2002. DRI•WEFA estimates that the City will lose 71,200 jobs during 2002 compared to our pre-September 11 expectation. The job losses are both direct and indirect, as a result of the September 11 events. In addition, the loss in personal income is quantified at $8.7 billion, a reduction of 2.2% from the Baseline. Wages and salaries will also lose a projected $4.9 billion, a 1.8% decline. The difference between the two is largely accounted for the drops in proprietor's income and in property income, both of which are sharply affected by the impact.

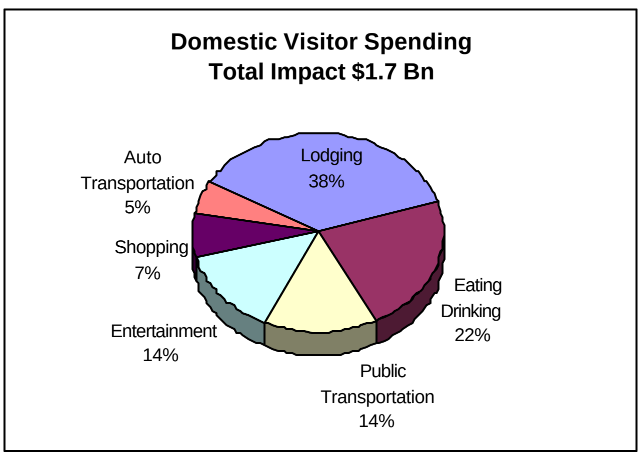
The immediate economic consequences to the City from the attacks come in three ways:

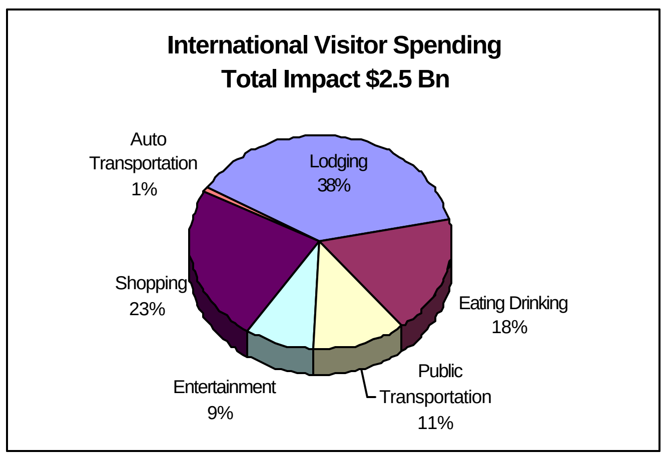
- First, an estimated 31.8 thousand jobs formerly housed in the WTC that have been relocated out of state.
- Second, a sharp fall in tourist and business travel to the City in the wake of the attacks. In the fourth quarter of 2001, an estimated 27.5 thousand City jobs will be lost in the industries that cater to tourists and business travelers: hotels, restaurants, air transport, tourist attractions, and the retail industry. This will be a relatively short-lived impact; by 2003 we anticipate that most of these jobs will be regained as tourists and business travelers return. The total estimated reduction in tourist spending through 2003 is over four billion dollars (see chart below).
- Third, an additional drop in employment in the retail and service sectors located in Lower Manhattan that catered primarily to the financial sector. An estimated 126.5 thousand jobs needed to be relocated after the attacks, and most of them have left Lower Manhattan, at least temporarily. These departures mean lost customers to thousands of local restaurants and other service firms located there.

In the longer term, the key risk for the City is that the loss of financial sector employment from Lower Manhattan could accelerate as firms relocate elsewhere. While a relocation out-of-state would be most harmful, even a relocation of workers to other areas in the City could slow the redevelopment of Lower Manhattan. The City and State must work diligently to assure that this does not occur.

DISTRIBUTION OF VISITOR SPENDING

Cumulative Impact from 2001Q4 through 2003





Assuming that the redevelopment of Lower Manhattan proceeds apace, the good news for the City economy is that the downturn will be fairly short-lived. The most severe impact of the terrorist attacks will be felt in the fourth quarter, and in 2002. Employment in the City will trough in the fourth quarter when it is estimated to decline by 5.8% at an annual rate, followed by a slow recovery in 2002. Although employment for 2002 will remain 0.3% below the 2001 average, by the fourth quarter of the year it is forecast to be 1.2% higher than 2001Q4. A recovery by the national economy during the second half of next year will help, and the tourism sector, responsible for much of the immediate drop in City employment after September 11, will regain its momentum. Consumer spending appears to remain remarkably resilient; we expect both the retail sector and housing starts to rebound by the fourth quarter of 2002. Expenditures to clean up and rebuild Lower Manhattan will also contribute to the City's economy.

IMPACT ON THE NEW YORK CITY ECONOMY

(Percent Change at an Annual Rate Unless Indicated)

	2001:1	2001:2	2001:3	2001:4	2002:1	2002:2	2002:3	2002:4	2003:1	2003:2	2003:3	2003:4	2001	2002	2003
Nonagricultural Employment (000)															
Baseline	4315.9	4333.1	4324.2	4332.4	4355.7	4361.6	4370.9	4381.3	4392.2	4405.2	4417.7	4430.2	4326.4	4367.4	4411.3
Current	4315.9	4333.1	4326.1	4262.4	4285.7	4293.0	4295.6	4315.4	4334.0	4347.6	4359.6	4375.5	4309.4	4297.4	4354.2
Unemployment Rate (%)															
Baseline	4.9	4.9	6.1	6.0	6.1	6.0	6.1	6.1	6.1	6.2	6.2	6.3	5.5	6.1	6.2
Current	4.9	4.9	6.1	6.5	6.8	6.9	6.7	6.5	6.4	6.4	6.3	6.3	5.6	6.7	6.4
Personal Income															
Baseline	6.0	5.8	6.7	4.3	6.9	2.9	5.9	4.4	3.8	4.2	4.8	4.6	5.7	5.3	4.4
Current	6.0	5.8	4.7	-4.5	6.2	6.1	5.2	6.2	6.4	4.7	3.9	4.5	4.8	3.8	5.4
Wages and Salaries															
Baseline	7.2	5.7	8.4	5.2	7.2	2.1	7.1	4.9	3.7	4.5	5.4	5.0	6.9	5.7	4.7
Current	7.2	5.7	7.6	-5.4	8.9	6.2	5.5	6.8	7.2	3.4	3.8	4.0	6.0	4.7	5.5
Housing Starts (000)															
Baseline	16.5	19.6	14.1	14.0	14.0	13.8	13.8	13.9	13.9	13.9	13.9	14.0	16.0	13.9	13.9
Current	16.5	19.6	11.7	10.9	10.5	11.6	11.5	11.8	12.2	12.4	12.3	12.4	14.7	11.4	12.3

The Baseline forecast was completed in September, 2001, prior to the WTC attacks. The Current forecast was completed in November.

IMPACT ON THE NEW YORK STATE ECONOMY

As documented by State economic statistics, the State's economy will undergo a reaction to the attacks similar to that of the City, but more subdued. To some extent, the State statistics will hide the dichotomy between the impact of the shock to the City and to Upstate New York. The City accounts for just under 50% of the State's employment, and much of the weakness associated with the attack will be centered in New York City. The major direct impact on the State will result from a decline of an estimated 19,400 jobs related to the drop in tourism and business travel in Upstate New York in 2001Q4 (i.e., jobs in addition to those lost in the City for this reason). However, Upstate tourism will recover more rapidly than in the City, and the impact on Upstate employment is more limited as a result. Even in early 2002, Upstate tourism is beginning to return towards pre-attack levels.

As indicated in the following chart, total State employment declined by an estimated 100,000 jobs in the fourth quarter of 2001, and it is anticipated that employment for all of 2002 will remain over 78,000 below the pre-attack estimate.

TOTAL REDUCTION IN EMPLOYMENT FROM SEPTEMBER 11—NEW YORK STATE

Thousands

Sector	2001Q4	2002	2003
Construction, Mining	0.25	1.60	2.37
Financial, Insurance, Real Estate	31.85	31.89	31.86
Government	0.09	1.91	3.32
Manufacturing	4.10	4.64	5.07
Services	32.53	10.98	12.31
Trans., Telecom, Public Utilities	6.67	2.90	2.88
Trade	24.34	24.31	19.68
Total Non Agricultural	99.83	78.20	77.50

Only about a third of the almost 100,000 jobs lost to New York State following the attack are a direct result of the attack itself. As the following table shows, an estimated 32,000 jobs left New York State as City businesses directly affected by the attack relocated employees out of the State. The additional 68,000 jobs lost by the state came about because of declines in business activity in other sectors that sold directly to WTC businesses or their employees (such as restaurants and retail establishments in Lower Manhattan), or due to the secondary impact of the attack on the State's economy.

ESTIMATED DIRECT EMPLOYMENT IMPACTS BY SECTOR

	Total Jobs Directly Impacted[1]		Jobs Leaving NY[2]	
Sector	Number	Share (%)	Number	Share (%)
Architectural Services	271	0.2%	90	0.3%
Business Services	6,068	4.8%	586	1.8%
Communications	1,218	1.0%	212	0.7%
Computer Services	2,330	1.8%	139	0.4%
Educational Services	277	0.2%	-	0.0%
Financial	92,997	73.5%	28,722	90.2%
Insurance	14,219	11.2%	1,558	4.9%
Legal Services	5,999	4.7%	-	0.0%
Manufacturing	554	0.4%	-	0.0%
Personal Services	751	0.6%	-	0.0%
Retail Trade	150	0.1%	-	0.0%
Social Services	975	0.8%	-	0.0%
Transportation	692	0.5%	542	1.7%
Total	**126,502**	**100.0%**	**31,849**	**100.0%**

[1] Jobs relocated from Lower Manhattan due to terrorist attack.

[2] Jobs relocated out of New York State.

Apart from tourism, the economic story Upstate is driven by the ongoing weakness in Manufacturing. Even during the boom years from 1995 to 2000, the State's manufacturing employment losses averaged 1.5% annually. With production falling this year, manufacturing employment is forecast to decline by 3.4%, followed by a further drop of 2.4% in 2002. Although the DRI•WEFA forecast calls for a slight 0.8% increase in 2003, we anticipate that the sector will continue to lose employment at an average pace of 1-2% through the decade.

IMPACT ON THE NEW YORK STATE ECONOMY

(Percent Change at an Annual Rate Unless Indicated)

	2001:1	2001:2	2001:3	2001:4	2002:1	2002:2	2002:3	2002:4	2003:1	2003:2	2003:3	2003:4	2001	2002	2003
Gross State Product															
Baseline	4.5	6.4	3.0	3.9	5.9	5.5	5.0	5.5	5.2	5.6	5.3	5.9	5.2	5.0	5.4
Current	4.5	6.4	3.0	-3.7	6.9	5.3	4.8	5.6	5.4	5.6	5.3	6.0	4.7	3.7	5.4
Real Gross State Product															
Baseline	1.2	4.1	1.7	1.7	3.4	3.2	2.8	3.3	2.6	3.4	2.8	3.6	2.9	2.8	3.0
Current	1.2	4.1	1.8	-5.8	4.3	3.0	2.7	3.4	2.8	3.4	2.8	3.6	2.4	1.5	3.1
Nonagricultural Employment (000)															
Baseline	8717.5	8732.6	8706.0	8671.7	8678.1	8676.0	8684.3	8724.5	8755.8	8792.0	8813.1	8851.6	8706.9	8690.7	8803.1
Current	8717.5	8732.6	8708.1	8573.5	8605.4	8598.7	8602.0	8643.7	8678.6	8714.3	8735.5	8773.9	8682.9	8612.5	8725.6
Unemployment Rate (%)															
Baseline	4.2	4.3	4.8	5.2	5.7	5.8	5.7	5.5	5.4	5.4	5.2	5.2	4.6	5.7	5.3
Current	4.2	4.3	4.8	5.6	6.0	6.2	6.0	5.8	5.7	5.7	5.5	5.5	4.7	6.0	5.6
Personal Income															
Baseline	9.4	4.5	2.3	4.0	4.3	5.9	4.4	7.3	5.5	5.7	3.0	4.7	5.6	4.5	5.4
Current	9.4	4.5	3.1	-2.2	5.1	5.5	3.9	7.2	5.4	5.6	2.9	4.7	5.3	3.5	5.2
Wages and Salaries															
Baseline	10.2	4.3	2.6	2.6	7.0	5.2	4.3	6.7	6.7	3.8	3,4	4,2	6.1	4.8	5.2
Current	10.2	4.3	2.7	-2.2	7.8	4.7	3.7	6.5	6.5	3.5	3.2	4.1	5.7	3.8	4.9
Retail Sales (% chya)															
Baseline	1.4	2.7	3.7	5.9	21.5	4.3	4.5	5.6	6.2	6.2	5.7	4.7	3.5	8.5	5.7
Current	1.4	2.7	4.0	4.1	19.7	2.6	2.2	5.6	5.9	6.0	5.7	4.6	3.1	7.1	5.5
Housing Starts (000)															
Baseline	36.3	33.7	33.3	31.9	31.4	32.7	32.0	32.3	33.3	33.3	33.3	33.2	33.8	32.1	33.3
Current	36.3	33.7	33.3	31.7	30.9	31.9	30.9	31.0	32.0	31.9	32.0	31.9	33.8	31.1	32.0

The Baseline forecast was completed in September, 2001, prior to the WTC attacks. The Current forecast was completed in November.

In total, the State will lose almost 100,000 jobs in the fourth quarter of 2001 due to the attacks, and this differential will recover to about 78,000 in both 2002 and 2003. The job losses will translate into drops in retail sales and personal income for the State. Retail sales in the State will decline by about 1.7% in both 2002 and 2003 as a result of the attacks, and the drop in personal income will be about 1.4% in both years from our pre-attack expectations.

The Upstate economy has lagged the City's growth in recent years, and there is little to suggest that this situation will change. Consequently, this puts even more importance on the need for New York to do everything it can to bring about economic recovery from the attacks.

IMPACT ON NEW YORK STATE TAXES

As a consequence of the reduction in economic activity and employment in New York State, we estimate that, on a preliminary basis, State taxes will decline by over $1.1 billion in SFY2002, followed by a drop of $2.4 billion in SFY2003. Our assumption that, on net, the 32 thousand jobs already lost to relocation out of New York State following the attack do not return, implies that the State's tax base has been reduced, and through SFY2004 at least, revenues continue to lag what we had anticipated prior to September 11.

PRELIMINARY ESTIMATE OF STATE TAX REVENUE REDUCTIONS FOLLOWING THE TERRORIST ATTACK

($ Millions)

	SFY2002	SFY2003
Personal Income Tax	$927.9	$2,038.9
Withholding	479.8	1,124.4
Estimated Payments	434.6	719.5
Final Returns	13.5	195.0
User Taxes and Fees	52.1	116.2
Business Taxes	131.7	265.7
Total	**$1,111.7**	**$2,420.8**

CONCLUSIONS AND RECOMMENDATIONS

NEW YORK STATE HAS A BIG STAKE IN THE CITY'S ECONOMIC RECOVERY

New York City has been an important part of growth in New York State for a number of years. From 1995 to 2000, nonagricultural employment in New York State rose by an average of 1.8% per year. In the City, however, employment grew by an average of 2.2% annually. Employment growth in the Upstate economy consequently was only 1.4% per year on average during that period. If it proves difficult for the City to get back on its feet in the wake of the attacks, growth in the State's future tax base will down-shift sharply. Although this difference of 0.4 points may seem small, it will accumulate up to significant differences in tax revenues over a decade.

THE STATE'S TAX BASE HAS ALREADY TAKEN A PERMANENT HIT

State nonagricultural employment in the fourth quarter of 2001 will decline by an estimated 99.8 thousand jobs as a result of the attack and over 70% of these losses will occur in New York City. To date, an estimated 31.8 thousand jobs have left New York temporarily as a result of the attacks. Even with a steady economic recovery in the City, some of these job loses will become permanent. The City will have to work hard to regain the growth trajectory we expected for it prior to the attacks.

NEW YORK MUST WORK TO RETAIN ITS FINANCIAL SECTOR

The financial service sector is important to New York, for the State as well as the City, where it accounts for 13% of total employment (compared to only 6% nationally). This imbalance gains added urgency now. Although individual firms have relocated to New Jersey in recent years, the flow was more of a trickle because New York City clearly retained its title as the financial center of the country, and large financial firms perceived value in being represented there. With the destruction of the World Trade Center, however, the floodgates could open if New York is not careful.

One lesson that business took away from the attack is the risk of concentrating operations, and failing to maintain adequate backup and operational redundancy. This implies additional geographical dispersion by financial-sector firms as they regroup for the future. Add to that the current unavailability of space in Lower Manhattan, the distasteful elements of the cleanup there, and ongoing efforts by New Jersey to lure firms across the Hudson

River, and you have a scenario where many more financial service jobs could find their way to New Jersey in the months to come.

New York needs to convince business leaders that there is a future for them in Manhattan, and continue to move rapidly enough in planning for and constructing this future so as to encourage them to remain committed to the City. Such an effort implies the need for enthusiastic leadership and cooperation among both public and private sector leaders.

NEW YORK SHOULD ACT NOW TO REBUILD TOURISM AND TRAVEL

In addition to the financial sector jobs lost in September, many more jobs disappeared when the tourists did. We believe that 27,500 City jobs were eliminated during the fourth quarter of 2001 in hotels, restaurants, retail, and other sectors directly due to the drop in tourism. The State lost an additional 19,000 jobs from these sectors.

In one sense, tourism should be the easiest part of the disrupted economy to rebuild. Few of the attractions that draw tourists to New York were affected by the attacks, although some remain closed. Assuming no further terrorist incidents, tourists will return to New York, but the City and State should be aggressive in encouraging this. Tourists provide an important part of the vibrancy that is New York City, and they are extremely important to the retail trade there, not to mention hotels and restaurants. Potential tourists need to understand that the City is mostly back to normal, and that their safety can be reasonably guaranteed. City and State officials should lead a revitalized partnership with the airlines, travel professionals, and the tour guide industry to make this happen.

NEW YORK NEEDS TO BUILD A 21ST CENTURY INFRASTRUCTURE FOR LOWER MANHATTAN

A critical part of rebuilding Lower Manhattan will be to attend to infrastructure problems in the wake of the attacks. Transportation, communications, and power services to the area were severely compromised by the attack, and much of the immediate work will entail just getting the area back up and running with a basic level of service.

Even beyond that, however, New York should plan for future growth. With the destruction of the PATH station beneath the WTC complex for example, the City has the opportunity to rethink public transportation to Lower Manhattan. By one estimate, about 40% of the WTC employees commuted from New Jersey prior to September 11. If the City is serious about holding on to its financial service firms and their employees, easing the commute of these workers would be an excellent step to help encourage employers to remain in the City. At the same time, enhanced access from Midtown and the other boroughs could also be reconsidered as part of the rebuilding. Such an effort suggests that New York should devise ways to build cooperation among the several transportation authorities with interests in the redevelopment.

With regard to telecommunications and electrical power, the attack highlighted the reliance of the WTC and much of Lower Manhattan on just a few service facilities. Verizon, the incumbent local exchange carrier, served the area through one local switching facility which sustained significant damage in the attack. Con Edison lost two substations located beneath the WTC, and sustained damage to other substations that supplied power to Lower Manhattan. As these organizations repair and replace these capabilities, New York should encourage them to provide a level of redundancy so that any future shocks to their systems serving the area could more easily managed. Again, this sort of assurance should encourage business leaders in their decisions regarding locating in Lower Manhattan.

NEW YORK SHOULD WORK TO ENHANCE PUBLIC SECURITY

With two major terrorist attacks in eight years, New York City needs to recognize that future terrorist activities could also be targeted at the City. Residents, employees, and tourists all need to feel a reasonable level of safety when they travel to the City. Indeed, without this basic level of security, all of the City's efforts to retain firms and to attract tourists could fall short. Although no security measures can ensure complete safety at all times, the City has been reasonably successful over the years in maintaining control over the criminal element, and it should expand its efforts to enhance this control over potential terrorism as well. This may entail closer collaboration with federal and state authorities than in the past.

# # #

After the site cleanup is complete (a task estimated to take up to a year), New York City faces the difficult task of rebuilding and restoring lower Manhattan. It is clear that this cannot be a mere reduplication of the World Trade Center. After September 11, it is problematic that the business community and its employees would ever consider occupying a new set of twin towers, and it is not certain the public will allow such a restoration to take place. As the City moves ahead to develop plans for the area's future, it must accept the reality that the new lower Manhattan area will not be like the old. In particular, there is a risk that the base of financial services employment previously located in the area cannot be restored there.

Taking a broader view, restoring the vibrant, mixed-use neighborhood that existed in lower Manhattan prior to the attacks will be difficult under the best of circumstances. It is easy to forget that it took decades for this neighborhood to develop. The completion of the WTC initially flooded the area with excess commercial space, and rents suffered as a result. It took almost a decade for it to be fully leased, and much longer for Lower Manhattan's Class A vacancy rates to fall to the level of those in Midtown. Not until the openings of high-end Battery Park City residences escalated in recent years did Lower Manhattan begin to develop the balance to help turn it into a functioning, around-the-clock neighborhood. The more recent construction of hotels and museums contributed further. The time it took to get to this point (about the past 30 years) points to the difficulty of recreating such a neighborhood environment now.

IMPACT ON EMPLOYMENT

By any measure, the physical and economic devastation wrought by the September 11 attack has no historical peacetime precedent in the United States. There are presently a number of efforts underway to catalog the physical damage on New York City, as well as to estimate the direct and indirect general economic and employment effects of the attack. For the purposes of estimating the shock to the City and State economies, and to State tax revenues, quantifying the immediate and direct employment effects is critical. As such, DRI•WEFA has carefully surveyed the existing data and analyses in order to provide as complete and thorough a picture as possible, with a particular emphasis on the number of jobs that are relocating from New York State. Our methodology and results of this analysis are explained in this chapter.

DIRECT EMPLOYMENT IMPACT

To date, the best available published information on the direct employment impacts of the attack has come from the commercial real estate industry. Several real estate services firms and brokerage companies have developed initiatives to track tenant movements from Ground Zero, as firms seek to relocate and return their businesses to normal operation. Of these, DRI•WEFA has determined that data provided by TenantWise.com, an Internet real estate services and advisory firm based in downtown Manhattan, appears to be the most complete and accurate for estimating employment impacts.

Shortly after the attack, TenantWise.com began to systematically survey tenants in 15 large properties—those in the World Trade Center, the World Financial Center, and in other adjacent large properties in downtown Manhattan that were heavily damaged. Within these 15 properties, TenantWise.com identified a total of 187 non-governmental tenants that leased space in excess of 10,000 square feet (using real estate industry norms, this corresponds to firms employing at least 40 people). These 15 buildings constitute a total of 31.9 million square feet (msf) of office space. Of this total, six buildings—the entire 13.4 msf World Trade Center complex—were completely destroyed. The remaining nine buildings, accounting for over 18.5 msf of space, were heavily damaged and not able to support immediate re-occupancy. We denote these 15 properties our “core sample” and use it to derive our job migration estimates. We also supplement the TenantWise.com information with data provided by other sources. An annotated list of the buildings physically destroyed or damaged by the attack is shown in the chapter “Physical Impact of September 11.” Buildings in the core sample are also identified there.

The methodology for deriving job migration estimates is relatively straightforward. For each of the 187 tenants in the core sample, TenantWise.com initiated a series of ongoing surveys of their relocation plans, along with estimates of the number of jobs affected by the relocation. For each tenant in the core sample, the pre-September 11 space is first recorded, along with an estimate of the pre-September 11 job count. Each firm is then asked to report on its specific relocation plans, including their destination, the destination square footage, and an estimate of their destination job count. The primary industry of each firm is also recorded. Destinations include both a geographic location, including ‘Midtown’, ‘Downtown’, ‘New Jersey’, ‘Elsewhere (out of state)’ or ‘Not Available’, along with whether the firm was relocated to new space or backfilling existing space that the company currently leases. Using these survey results, along with estimates of job migration for firms not included in the TenantWise.com sample (*i.e.*, firms with under 10,000 square feet of space) we have been able to estimate the *direct* or *primary* employment impact of the attack.

For the core sample of 15 buildings directly surveyed by TenantWise.com, the stratification of job migration by destination and building status is shown in the following table. Slightly more than 84,000 jobs covering the 187 tenants were impacted by the attack. Nearly 33,000 of these jobs came from the six destroyed World Trade Center buildings.

SUMMARY OF TENANT JOB RELOCATION SURVEY OF CORE SAMPLE

	Building Status		
Destination	**Damaged**	**Destroyed**	**Total**
Downtown	25,608	732	26,340
Downtown Backfill	2,830	707	3,537
Midtown	5,528	8,909	14,437
Midtown Backfill	467	11,074	11,541
New Jersey	2,224	2,640	4,864
New Jersey Backfill	8,289	1,930	10,219
Relocate Elsewhere	1,617	2,385	4,002
N/A	4,520	4,598	9,117
Grand Total	**51,083**	**32,974**	**84,058**

Source: TenantWise.com. These totals are for only the "core sample" of 15 building tenants directly surveyed by TenantWise.com.

These job migration counts are used as the basis for our total employment estimates. The estimates do not reflect the relocations of smaller tenants, nor that some of the tenants that reported a destination as 'N/A' will in fact move their jobs out of New York State. At this stage it is critical to note that our primary concern is estimating *out-of-state* job movements. Jobs moved out of state represent an immediate, direct, and potentially severe negative impact on the tax base. Firms that choose to migrate to another part of New York City (or State) can be considered tax-revenue neutral. In addition, it is critical to provide a break out by *industry* for out-of-state job movements. Different industries have distinct wage, salary, and compensation schedules, and as such have different effects on tax collections.

To calculate more complete job impact estimates, we first stratified the TenantWise.com data by major industry. Within each industry, we calculated the number of jobs confirmed to be moving out of New York State. We then calculate the share of confirmed jobs moving out-of-state relative to each industry's total jobs (after removing the "N/A" firms). This proportion is the percentage of jobs known to be leaving New York State. We next make the assumption that for each industry, the eventual destination of jobs represented by firms reporting a destination of "N/A" is the same as those for broader sample. By repeating this calculation for each industry sector in the core sample, we derived a broader estimate of how many jobs for the 187 non-governmental tenants are migrating out of New York State.

We next need to augment this calculation by estimating the job migration patterns for each industry for smaller tenants not included in the TenantWise.com survey (those leasing under 10,000 square feet). This estimate is developed by approximating the number of small tenants in the core sample based on their space requirements. As noted above, the core sample of 15 properties totals 31.9 msf of space. The 187 large tenants collectively occupy 21.2 msf, or 66.4% of the total space in the sample. The remaining 10.7 msf is assumed to be occupied by small tenants (less an allowance for government space). Using the real estate industry convention that an office worker on average requires 250 square feet of space, a total of 42,400 jobs in the 15 core sample buildings are estimated to be from small tenants. Since no specific tenant-by-tenant data is available for these firms, we assume that the distribution industries and the percentage of out-of-state job migration is the identical to the large tenant sample. Finally we sum the large tenant and small tenant job estimates by industry to determine our final job impact estimates. The results are shown below.

ESTIMATED DIRECT EMPLOYMENT IMPACTS BY SECTOR

	Total Jobs Directly Impacted		Jobs Leaving NY	
Sector	**Number**	**Share (%)**	**Number**	**Share (%)**
Architectural Services	271	0.2%	90	0.3%
Business Services	6,068	4.8%	586	1.8%
Communications	1,218	1.0%	212	0.7%
Computer Services	2,330	1.8%	139	0.4%
Educational Services	277	0.2%	-	0.0%
Financial	92,997	73.5%	28,722	90.2%
Insurance	14,219	11.2%	1,558	4.9%
Legal Services	5,999	4.7%	-	0.0%
Manufacturing	554	0.4%	-	0.0%
Personal Services	751	0.6%	-	0.0%
Retail Trade	150	0.1%	-	0.0%
Social Services	975	0.8%	-	0.0%
Transportation	692	0.5%	542	1.7%
Total	**126,502**	**100.0%**	**31,849**	**100.0%**

Based upon our calculations, nearly 32,000 jobs have migrated out of New York State as a direct result of the September 11 attack. In total, over 126,000 were impacted—this is equivalent to the entire employment base of a small city.

It is no surprise that the financial and finance-related companies were hardest hit by the September 11 attack. Financial firms accounted for over 73% of the direct job impact; if insurance companies are factored in, then the proportion rises to nearly 88%. If we consider the proportion of financial jobs estimated to be leaving New York State, the statistics become more alarming. Over 90% of the jobs leaving New York come from the financial sector. Adding insurance companies to this total raises the proportion to over 95%. Fortunately, several of the other industries hard hit by the attack, including Business Services and Legal Services, have not reported significant out-of-state relocations. In part this is due to the fact that these are support industries for the Financial Services sector, and proximity to concentration of financial firms in the City is critical. With the out-of-state migration of notable numbers of financial jobs, however, there will likely be a reduced incentive for these firms to expand their New York-based staffs.

Finally, while the estimates provide an assessment of the immediate job impacts of the attack, we need to make some further assumptions about how much of this employment is likely to migrate back into New York State. For the purposes of this study, we have assumed that negligible numbers of the jobs that moved out-of-state will return within the next three years. At first glance, this seems a conservative estimate, but our reasoning is as follows:

- First, the energy, communications, and transportation infrastructure necessary for these many of these firms to return to their pre-September 11 locations will not be in place soon, possibly for years to come.
- Second, concerns on behalf of many former Downtown Manhattan firms that they need to decentralize their operations away from that area.
- Third, there are a number of disincentives for firms that moved from downtown Manhattan to New Jersey locations to return. These include the costs of moving and resettlement, along with the repeated disruptions to employee commutes, many of whom already live in New Jersey.
- Fourth, there is anecdotal evidence that firms have used this forced relocation as an opportunity to engage in cost cutting and consolidations, and will not have an immediate need to return to the higher-cost environment of New York City.
- Fifth, some of the relocations to New Jersey will be linked to incentives to stay offered by that state.
- Sixth, as noted below, the likelihood of further departures from New York City is not insignificant, and any returns may be counterbalanced by additional departures.

Knowing the number of jobs that have immediately left the City is relatively easy, but is very difficult ascertain how many jobs on net may actually eventually leave. We have taken a middle road by assuming that further departures and returns cancel each other out on net.

FUTURE RELOCATIONS?

That assumption aside, a key concern for New York City and State must be whether the exit of financial sector employment from the City could continue or even accelerate. Even before the attacks, office rents in downtown Manhattan had soared, forcing many of the City's largest financial service firms to look for less-expensive accommodations in neighboring New Jersey. Earlier this year, Chase Manhattan signed long-term leases for 1.1 million square feet in the Newport Office Center, planning to move more than 2,000 employees across the Hudson River. Merrill Lynch plans to double the size of its Jersey City work force (currently 2,000) when it finishes another office tower next to its 42-story building in the Colgate Center. Other City-based financial services companies that have moved or plan to move operations across the river include Goldman Sachs, PaineWebber, U.S. Trust, and American Express. Many of these companies will benefit from tax abatements from New Jersey.

An important advantage of a Jersey City location, however, may be the relative ease of constructing build-to-suit developments with the latest telecommunications and computer technology. Construction costs and development regulations are far less onerous in Jersey City than in Manhattan, where new building projects and renovations take much longer to complete.

Since the attacks, the list of major lower Manhattan employers seeking to release space there has lengthened, and now includes such notables as Citygroup, Goldman Sachs, American Express, and Dow Jones. By one count, over 3.5 million square feet of Downtown Manhattan space has been offered by these and other firms.[1]

To be sure, the economy is motivating a portion of this—not every firm on the list has designs to leave New York. However, the City has to be careful not to lose more of its financial services employment. The sector is a critically important driver to the City's economy. Finance, insurance, and real estate (the so-called FIRE sector) contribute almost 13% of the metro area's jobs, compared with just under 6% nationally, and the proportion is estimated at 46% for the eight ZIP codes that constitute Lower Manhattan. Many of these jobs tend to be relatively high-paying positions, with very positive contributions to the State's personal income tax base. Finally, FIRE-sector employees support a large base of business in the City's retail, restaurant, and personal services sectors. In the same way, there are a large number of business service firms—dedicated print shops, advertising firms, temporary help suppliers, and the like—located in Lower Manhattan to serve the financial sector. These jobs would follow any outflow of FIRE-sector employment from the City.

TOTAL EMPLOYMENT IMPACT

Despite the risk of further relocations from New York, in this study DRI•WEFA has made no assumptions that additional jobs would continue to be relocated from New York in the coming years. Our estimates of total employment impact from September 11 thus flow from three sources of job loss to the City and the State:

- First, the direct impact on employment by affected firms detailed above. As noted there, we estimate that 31.8 thousand jobs are relocated out of New York State, and we are assuming that on balance, none of these return through 2004.
- Second, the decline in tourist visits to New York City and State results in a reduction of 27 thousand jobs to the City in 2001Q4, and an additional reduction in over 19 thousand jobs located in Upstate New York in that quarter. In this case, we do assume that many of these job losses are temporary, and that most of them return as tourist activity revives through 2002-04. See the "Impact on Travel, Tourism, and Business Travel" chapter for details.
- Finally, there is an additional impact on job losses for the City and the State resulting from the general decline in the national economy which accelerated in the weeks following the attacks. See the Executive Summary for details on our assumptions as to this decline for the national, state, and city economies. This decline gives rise to a set of secondary job reductions for New York City and New York State. We have utilized our econometric models of the U.S., New York State, and New York City in estimating these impacts.

Based on these assumptions, DRI•WEFA believes that New York City will face a loss of an additional 71 thousand jobs during the fourth quarter of 2001 compared to our expectation prior to September 11—a decline of 1.6% from the employment base existing prior to then. For the State, the estimated additional loss in jobs totals almost 100 thousand—a decline of 1.1%.

[1] Newmark & Company Real Estate, Inc., *A City Challenged,* Fall/Winter 2001.

TOTAL REDUCTION IN EMPLOYMENT FROM SEPTEMBER 11—NEW YORK CITY

Thousands

Sector	2001Q4	2002	2003
Construction, Mining	1.28	1.46	0.98
Financial, Insurance, Real Estate	31.85	31.89	31.86
Government	0.07	1.40	2.75
Manufacturing	3.05	4.04	2.82
Services	14.57	15.39	9.72
Trans., Telecom., Public Utilities	5.07	1.44	0.97
Trade	15.33	14.38	8.01
Total Non Agricultural	**70.95**	**70.00**	**57.10**

In the City, financial sector jobs lost account for 45% of the total jobs lost in 2001Q4, while the remainder come primarily from the impact on tourism and business travel. The decline in tourist visits to the City affects an estimated 27.5 thousand jobs in that quarter, jobs primarily centered in retail and wholesale trade, restaurant, hotel, and air transportation. In addition, indirect impacts reduce employment in construction and manufacturing.

While the employment impact on the financial sector is virtually the same at the state level, there is significantly more impact from the reduced number of tourists and business travelers. Of the total drop in nonagricultural employment in 2001Q4, the direct impact from the decline in tourism and business travel accounts for a total of almost 47 thousand (this includes the 27.5 thousand jobs eliminated in New York City).

TOTAL REDUCTION IN EMPLOYMENT FROM SEPTEMBER 11—NEW YORK STATE

Thousands

Sector	2001Q4	2002	2003
Construction, Mining	0.25	1.60	2.37
Financial, Insurance, Real Estate	31.85	31.89	31.86
Government	0.09	1.91	3.32
Manufacturing	4.10	4.64	5.07
Services	32.53	10.98	12.31
Trans., Telecom, Public Utilities	6.67	2.90	2.88
Trade	24.34	24.31	19.68
Total Non Agricultural	99.83	78.20	77.50

While we have assumed that the financial sector jobs lost from the State do not return during this period, employment related to tourism comes back rapidly as tourism and business travel recovers. Employment in the tourist-related sectors begins to increase once again, both in 2002 and 2003, reducing the total non agricultural reductions shown in the two preceding tables.

IMPACT ON INCOME—SPECIAL CONSIDERATIONS

The employment drops in the City and the State resulting from the attacks will translate into drops in personal and other types of income, especially during the current quarter and in 2002. Because of the importance of financial services in the City economy, however, and due to the fact that the September 11 attacks resulted in the destruction of the WTC buildings, there are several special considerations that must be recognized in making this translation:

- Wages in the financial sector are higher than average.
- Large bonus payments are an important part of total compensation in the financial sector.
- Rental payments have been disrupted by the building destruction and damage around the WTC, and the subsequent relocation of business there to other locations.
- In addition, the collapse in the stock market during the past year has led to a large cyclical downturn in financial-sector profits, capital-gains realizations, and exercise of stock options, all of which have implications for personal income.

BONUSES & OTHER PERSONAL INCOME

FINANCIAL SECTOR BONUS PAYMENTS

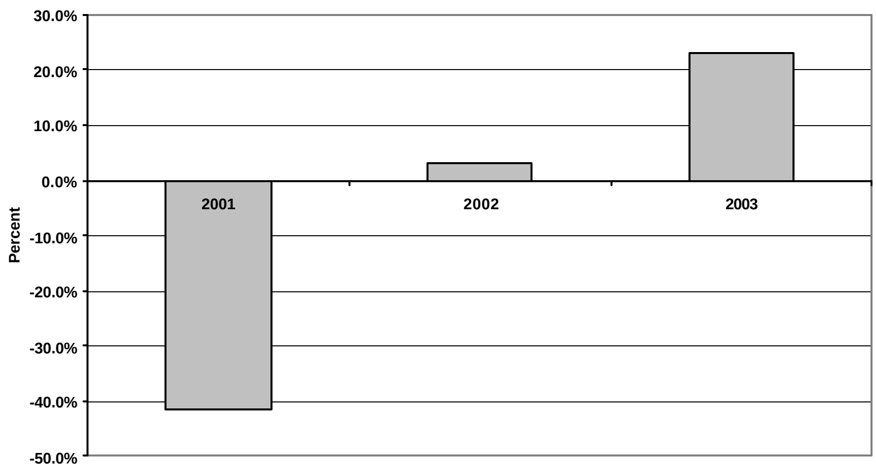
In recent years, companies have moved increasingly towards tying employee compensation to measures of performance and profitability. This has long been true among the financial sector that represents a significant part of both the New York City and State economies. The New York Division of the Budget estimates that in 1998, 25% of total employee compensation in the State was distributed through bonuses, and half of these were paid by the securities industry. In that industry, bonuses represented an estimated 40% of total compensation. This extraordinary compensation translates both into direct income tax revenue for the State, as well as a strong economic stimulus through consumer spending. In addition, individuals earning bonuses tend to be high income employees, with large portions of their income subject to taxation at the highest marginal rates.

The stunning bull market in recent years propelled bonus payments to a record level in 2000. The falling stock market this year has limited sector profits, however, and bonus payments will likewise decline. With many revenue sources to the securities industry falling throughout most of 2001, bonuses are expected to decline by 42% in 2001[2]. The industry will begin to recover later next year, but we anticipate that industry profits will only slightly exceed those of 2001. Bonus payments will follow these profitability trends, growing by a mere 3% before bouncing back by an estimated 23.0% in 2003 to about $23 billion.

[2] In this section, the discussion of annual numbers refer to the "bonus year." Most annual bonuses are paid at the end of a calendar year or the beginning of the following year. A bonus year is composed of the last three quarters of the calendar year and the first quarter of the next year. For example, profits earned in the calendar year 2000 determined bonuses paid in the bonus year of 2000, which consists of 2000Q2-Q4 and 2001Q1.

The large drop this year is no surprise, and was in the cards even before September 11. In a survey conducted by the Securities Industry Association (SIA) in August 2001, 58.1% of responding firms expected bonus payments to be slightly to significantly lower in 2001. Disruptions caused by the terrorist attacks will only serve to add to the industry's woes. However, both the industry and the economy should be solidly in recovery mode by next fall and in 2004.

Security Industry Bonus Payments Growth



Note: Years shown are "bonus years" ending in the first quarter of the following year. See footnote 2.

CAPITAL GAINS REALIZATIONS

With the bull market, the amount of income generated in New York State from capital gains realizations has grown tremendously over the last decade. Capital gains income rose from $9.5 billion in 1992 to an estimated $55 billion in 2000[3]. In the booming stock market environment of the 1990s, this source of income grew much faster than other categories. As a consequence, the share of capital gains income in New York State's reported adjusted gross income has tripled over this period.

This year's decline in stock prices will bring an end to this trend, at least temporarily, and the income earned from capital gains is expected to decline by 20% in 2001—the first annual decline since 1994. Stock prices are forecasted to regain a growth trend by the end of 2002, and capital gain income growth should resume the following year.

[3] New York Division of the Budget, 2000-01 Executive Budget, Appendix II, Part II–Explanation of Receipt Estimates, 2000.

Tax Year	Reported NYS Capital Gains (Millions)	% Change
1992	$9,457	
1993	13,365	41.3%
1994	12,032	-10.0%
1995	14,086	17.1%
1996	22,441	59.3%
1997	31,563	40.6%
1998	40,246	27.5%
1999	49,311	22.5%
2000	55,478	12.5%
2001	44,369	-20.0%
2002	44,134	-0.5%
2003	47,739	8.2%

Source: New York State Division of the Budget, DRI•WEFA.

EXERCISE OF EMPLOYEE STOCK OPTIONS

Employee stock options are another form of compensation that has become much more predominant in recent years, particularly with the increase in high-tech, entrepreneurial activities. This trend has revealed itself by an increase in personal income or capital gains, depending on the nature of the options granted. Although relevant data is scarce, recent studies indicate that the extra income earned from exercising stock options is estimated to have increased by 166% from 1997 to 2000.

The financial industry, which generates a large percentage of New York's personal income, is also apt to use employee stock options as part of its compensation scheme. A Bureau of Labor Statistics pilot study found that while on average 1.7% of employees received stock options in 1999, in the financial sector, 33.9% of employees were granted options[4].

While it is difficult to assess the magnitude to which taxable income earned from exercising stock options will decline during the next few years, that it will decline is unquestioned. The strike price of an option is typically fixed two to three years before an option may be exercised. This means that many stock options that could be exercised over the next few years had their conversion prices set during the strong bull market of 1999 and 2000. With the S&P 500 Index down over 14% in the past year, and the NASDAQ down over twice that, the value of many of these options is eliminated. The amount of income generated from stock option exercise will be very limited in 2001 and 2002; not until 2003 when a sustained market increase is again underway, is income generated from this source likely to begin to increase again. Even so, it is not likely approach its peaks of the late 1990s for some time to come.

[4] U.S. Department of Labor, Bureau of Labor Statistics, "Pilot Survey on the Incidence of Stock Options in Private Industry in 1999," October 11, 2000.

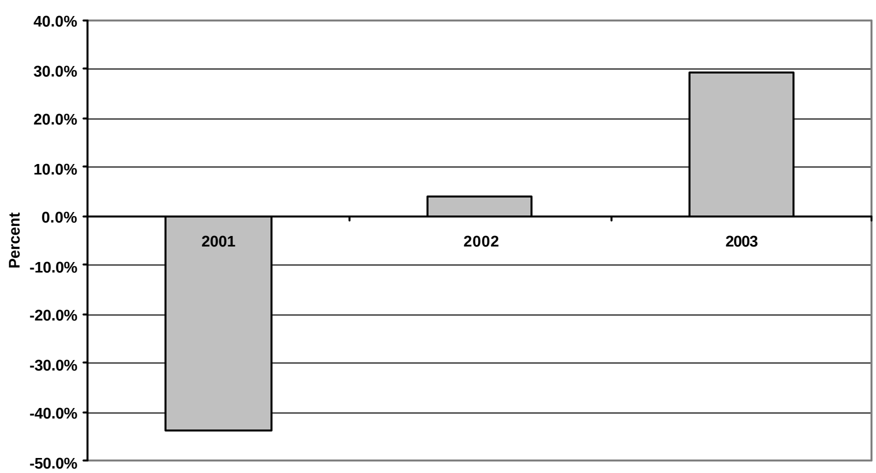
FINANCIAL SECTOR PROFITS

Due to the relatively high wages paid by the financial sector, it is one of the most important industries in New York City, accounting for an estimated 33% of the City's output last year (including insurance and real estate). In addition, this sector generates significant employment in its supporting industries and in the consumer spending undertaken in the City by its employees. The sector is also very important tax revenue generator to New York State through both income tax paid by financial sector employees, and the corporate franchise tax paid by financial firms.

The main sources of the securities industry income are commissions, underwriting initial public offerings (IPOs) and secondary stock issues, managing mergers and acquisition activity, and underwriting bonds. All of this activity is very cyclical, increasing in bull markets and declining in bear markets.

After one of the longest bull markets in history, the stock market started to decline late in 2000. Although as a whole, 2000 was a very successful year for the industry, the growth rate of securities industry profits had begun to decline towards the end of the year. As equity prices continued their descent in 2001, trading volumes declined, the amount and value of initial and secondary offerings fell, and as a result, the profit of the securities industry waned. Industry profits reported for the first two quarters of 2001 were already nearly 50% lower than that of a year earlier. With equity prices falling even further in the rest of 2001, we expect that profits for the entire year will also be about half of that earned in 2000. This weakness will continue into the beginning of 2002, but will pick up by the end of the year, such that a small increase is expected over the year as a whole. By 2003, rising trading volumes and IPO activity will help boost industry profitability again, although the overall level of industry profits that year will not reach the peak level achieved in 2000.

Security Industry Profits Growth

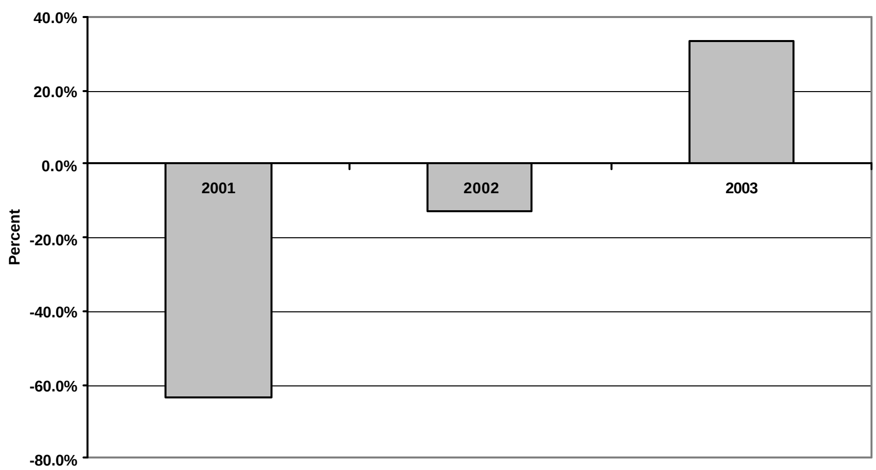


IPOS

The remarkable rise in the number and value of initial public offerings (IPOs) over the past few years has been a big contributor to security industry income. In 2000, over $100 billion in IPOs were sold, over two and one-half the value just five years earlier. However, as the business environment and market sentiment soured in 2001, the flood of IPOs slowed sharply. One impact of the September 11 attacks was to bring IPO activity virtually to a halt that month. Only 14 IPOs were done in the third quarter, down from 139 in the year-earlier period.

While IPO activity rebounded in October, it is likely that several years will elapse before IPO activity approaches its 2000 level. For 2001 as a whole, the value of IPOs is estimated to total little more than a third of its value in 2000, a decline of 63% from $100 billion to $36.6 billion. In 2002, the value of IPOs is expected to fall another 12.5% unless the stock market and economy recover more rapidly than anticipated. IPO activity should increase in 2003 as growing economic activity contributes to a recovery of corporate profits which will boost stock market values. The value of IPOs are expected to increase by 33% in that year.

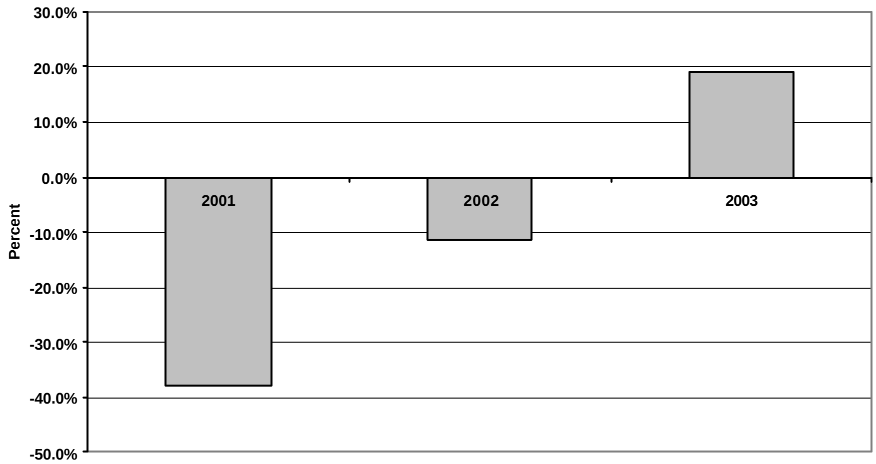
Growth in Value of Initial Public Offerings



SECONDARY ISSUES

Securities firms also earn significant revenues from secondary stock issues. This activity is influenced by much the same forces that impact IPOs, the volatility of the industry's business in secondary issues is not as great as that of IPOs. The value of secondary stock options is forecast to fall by 38% in 2001, somewhat less than the forecast drop in the value of IPOs for the year.

Growth in Value of Secondary Offerings



RENTAL INCOME

DIRECT IMPACT ON RENTAL INCOME

An important side-effect of the relocation of tenants from Ground Zero to other locations is the impact on rental income. DRI•WEFA estimates that rental income in New York State paid by these firms will be reduced by $341 million per year as a consequence. This estimate is only for those large core tenants forced to relocate from the Ground Zero area because their location was destroyed or severely damaged. This amount represents 40% of the estimated total $847 million paid in annual rents by these firms prior to September 11.

Rents paid by the former tenants of the WTC and other currently uninhabitable buildings in the area have ended, to be replaced by new rental payments made by these tenants in their new locations—whether within New York State or not. Using data provided by TenantWise.com (our primary source of tenant relocation data), supplemented by real estate market rental information provided by several leading New York-based real estate companies, we have estimated the aggregate direct change in rental income as a result of the September 11 attack.

Based upon the core sample of 15 affected properties and 179 of the 187 non-governmental tenants surveyed by TenantWise.com, we estimated the annual lease payments for each tenant on a building-by-building basis, as of September 11, and compared that to an estimated annual lease payment for each tenant in their post-September 11 location. Because there is enormous variation in rental rates and other lease factors on a tenant-by-tenant basis, and because much of this information is confidential to the tenants and landlords affected, our estimates depend closely upon currently market rental information for various New York City office sub-markets and building quality categories (Class A versus Class B). Additionally, our analysis only covers so-called “base rent” estimates. Other important costs associated with relocation including tenant improvements, moving costs, lease downtime, tax, insurance, and utilities costs, and escalations in the base rental rate are not factored into our estimates.

As noted in the section on employment impacts, firms relocating after September 11 have selected one of three options:

- Lease new space elsewhere within New York State. Most of this new space is in Midtown Manhattan. Comparable Midtown space is generally more expensive than the vacated downtown space, however, in some cases, firms are contracting for less space than they formerly occupied in Lower Manhattan.
- Backfill into existing leased space located primarily in New York City. In this case, the backfilling firm is simply filling space they already lease. In this case, rental income formerly paid in the WTC pre-September 11 location is generally lost.
- Lease space outside of New York State. Generally, space in this category is located in New Jersey; in a few instances, firms relocated to Connecticut. In this case, the rental income moves from New York State.

The following table classifies the change in estimated rental income by firms relocating within New York State, firms relocating out of new York State, and firms that have closed. By our calculations, a total of $341 million dollars in rental income is lost from the New York State tax base as a result of the direct impact of tenant migrations from Ground Zero. To date, the rental income lost from companies in our core sample that are confirmed to be closing New York operations is modest, just over $3.1 million. Annual losses due to out-of-state migrations total an estimated $140.5 million. The largest share of annual rental loss, almost $198 million, derives from firms remaining in New York City. This total reflects both firms that are backfilling space and firms that are leasing new space at different rental rates after September 11. The preponderance of companies that are backfilling space they currently lease in other parts of New York City accounts for much of this decline.

ESTIMATED DIRECT REDUCTION IN ANNUAL RENTAL INCOME

Firms Forced to Relocate from Damaged & Destroyed Properties

Destination	Reduction In Annual Rent Payments
Firms Closed	$3,168,159
Firms Relocated Out-of-State	$140,481,761
Firms Relocated within New York State	$197,753,367
Total	**$341,403,287**

TOTAL IMPACT ON PROPERTY INCOME

The above estimate of the direct impact does not include the impact on rents paid by affected residents in the area or any secondary impacts on rental income paid by other area firms that may eventually close or relocate as a consequence of shifting business needs in lower Manhattan. It also does not reflect the relocation plans of firms that leased under 10,000 square feet prior to September 11, nor does it include any estimates for firms located in Upstate New York.

The DRI•WEFA economic model of New York State provides estimates of the total impact on property income including indirect effects of the attack. Our simulation of this model after September 11 takes into consideration not only the direct effects of the attacks on the World Trade Towers, but the indirect economic impact as the State's economy adjusts to the changes wrought by the attacks within the context of the ensuing national recession. In all, we estimate that total property income will fall by an average of $1,650 million annually during 2002-3, a reduction of about 1.2% of total property income that we had forecast prior to the attack.

If we presume there is no change in tenant relocation behavior, it appears that New York State will lose a minimum of just over $1 billion in taxable lease income over the next three years from the direct impact of the attack, and a total (direct plus indirect) of approximately $5 billion in property income during that period relative to our expectations prior to September 11.

IMPACT ON TRAVEL & TOURISM

Apart from financial services, the travel and tourism industry is most affected by the September 11 attacks. The devastating impact on travel and tourism has been global, but the epicenter of these reverberations is, without question, New York City. A popular tourist destination for both international and domestic travelers, New York City has seen sharp declines in this business as travelers, afraid of being caught in the middle of possible future terrorist activity, have opted to vacation elsewhere or to stay home altogether this fall. Assuming no further terrorist attacks, this fear will gradually wane; however, it could be several years before New York City's tourism activity will truly get back to pre-September 11 levels of normalcy.

The importance of tourism to the City's economy derives from the number of jobs directly or indirectly dependent on it. Jobs not only in the industries that primarily serve the tourist—hotels, car rentals, tour operators, and the like—but industries such as restaurants and retail trade also heavily rely on tourist business. 56% of the City's employees work in the service or trade sectors, and tourists are very important to the demand for a huge proportion of these workers.

Fortunately for New York, the tourist sector is one which is readily available to rebuilding. Few of its popular tourist attractions were physically diminished by the attacks, although some remain closed, and access to the downtown area remains difficult. Nevertheless, most of the City's shopping, museums, and historical sites remain intact, and the City retains the necessary infrastructure to host an ongoing volume of visitors. The biggest challenge is convincing potential visitors, both in the U.S. and abroad, that the City is safe. Although overcoming this obstacle will not be easy, the City economy stands to gain for every uncertain tourist it is able to lure back. DRI•WEFA believes that a strong effort to restore the enthusiasm of tourists should be an important immediate goal as the City seeks to move forward. Gains here will accrue broadly to the City as a whole, helping to recovery the vitality that has always been so much of what New York represents.

NEW YORK CITY

Last year 37.4 million people visited New York City for business or leisure and spent almost $17 billion in the City. Two-thirds of visitors to New York City arrive for leisure purposes with the remaining coming for business. It is estimated that travel and tourism in New York City generated $882 million in State tax revenues last year and provided direct employment for 146,000 persons.[5]

The effects of reduced visitor spending touch many different sectors of the State economy. First, providers of goods and services to the visitor are affected. These include hotels, restaurants, taxis, retail trade, tour operators, and entertainment. However, the impact is also felt by secondary providers of goods and services to these companies. Therefore, losses have been also felt by sanitation services, laundry, advertising, wholesale trade and other intermediate suppliers to the tourism sector.

The impact has been most severely felt in the international visitor market which comprised 42% of all visitor spending while accounting for only 18% of all visits. International visitors spend, on average, two and one-half times more than their domestic counterparts. This spending is particularly concentrated in shopping with foreign visitors accounting for 70% of retail visitor spending last year. The impact on international visits will continue to be high

[5] Travel Industry Association, TEIM Model

as international travelers substitute intra-regional for long-haul travel. As a result European and Asian travelers have shunned the United States in favor of closer and perceivably safer destinations.

The domestic travel market has also been significantly affected, but the effects were initially moderated by three factors. The first is the resilience of drive/train origin markets. Approximately three quarters of New York City's domestic visitors reside within driving distance of the City, and early indicators point to substitution of these modes of transport for air travel. The second factor was the short-term influx of rescue and relief workers as well as victims' family and friends. The third has been the rescheduling of trade shows from September into October. Each of these factors created an temporary boost to lodging and other spending in October. As these last two factors have subsided, the outlook for domestic travel to NYC has deteriorated.

City promotional agencies such as NYC & Company have responded with promotional efforts such as "Paint the Town Red White & Blue." This promotion offers discounted packages to visitors, including lodging, a Broadway show, meals and parking discounts. They have been joined by the airlines, hotels, and major retailers who are now promoting low-price shopping trips in NYC to residents of other northeast cities prior to the holidays. Such promotions will help stave off more dramatic losses through the relatively slow winter months.

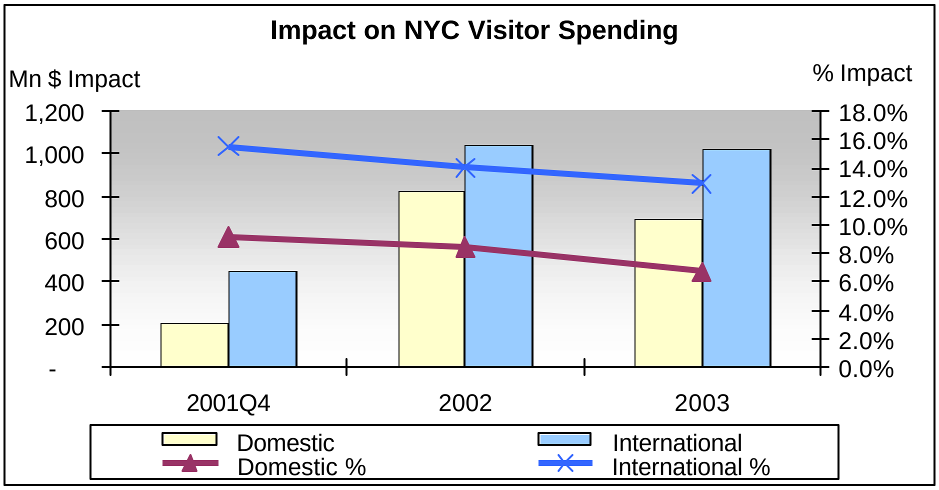
COMPARISON OF BASELINE (PRE-9/11) AND CURRENT (POST-9/11) OUTLOOK FOR VISITOR SPENDING

New York City, $ Million

	2001Q4	*2001*	*2002*	*2003*
Baseline				
Domestic	2,292	9,506	9,800	10,388
International	1,943	6,840	7,416	7,935
Total	4,234	16,346	17,216	18,323
Current				
Domestic	2,082	9,099	8,971	9,689
International	1,495	6,188	6,374	6,909
Total	3,577	15,287	15,345	16,598
Loss				
Domestic	210	407	829	699
International	448	652	1,042	1,026
Total	658	1,059	1,871	1,725
Percentage Loss				
Domestic	9.2%	4.3%	8.5%	6.7%
International	23.0%	9.5%	14.1%	12.9%
Total	15.5%	6.5%	10.9%	9.4%

Although business travel to New York City will not be as severely affected as leisure travel by the attacks themselves, business travel budgets are directly related to corporate profitability, currently very weak for most industries. Consequently, the City can expect only modest help from business travelers in the months to come.

2001 was already set to experience contraction in its travel and tourism-related sectors. After strong growth of 9% in 2000, visitor spending was expected to decline about 4% this year. Hotel room nights were down around 6% year-to-date through August and attraction attendance was down approximately 4%. The losses were primarily felt in business travel and international visits.



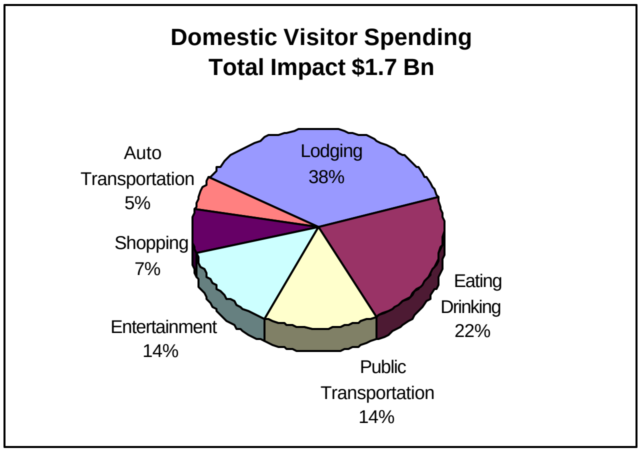
The impact on visitor spending in the fourth quarter of 2001 alone will tally $658 million. The impact on international spending will be twice that of domestic visitor spending. Over 20% of previously expected international visitor spending will be foregone in the final three months of 2001. Nearly 10% of anticipated domestic traveler spending in New York City will be lost in the amount of $210 million. The most dramatic effects were felt in the final three weeks of September. If one includes this period of the crisis, the impact on visitor spending climbs to $1 billion for the year 2001.

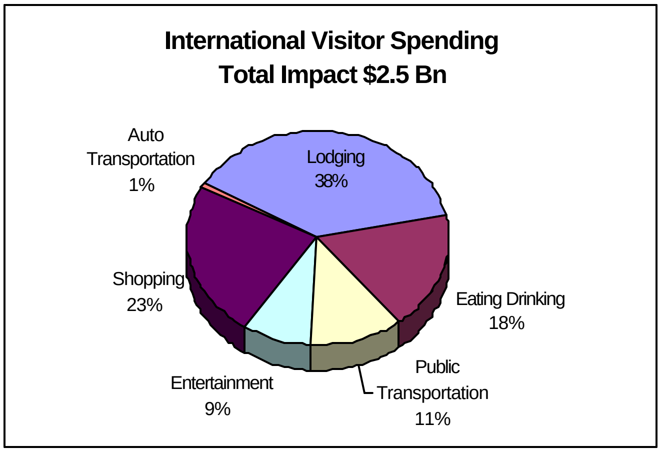
The outlook for travel and tourism in 2002 and 2003 incorporates two key drivers. The first driver is the residual effects of the terror attacks on the perception of safety. The second driver is the U.S. recession brought on, in part, by the events of September 11. Therefore the largest impact is felt in 2002 as both of these drivers weigh-in heavily in the first half of the year. The U.S. domestic travel market is not expected to recover until the second half of 2002 as the economy regains its foothold. The international travel market will recoup some of its dramatic losses in the second half of the year as well. However, a slowing global economy and the traveler's natural aversion to risk will keep this market from fully recovering for some years to come.

The impact on visitor spending will tally $1.9 billion next year and $1.7 billion in 2003. Each of these years is successfully better than the period before it on a percentage impact basis. The loss in 2002 is equivalent to 10.9% of expected spending compared with 23% in the final quarter of 2001. Then, in 2003 the impact falls to 9.4% of the Baseline (pre-9/11) outlook as growth accelerates.

The impacts on particular sectors of the economy vary with the distribution of spending for domestic and international visitors. For both domestic and international visitors, lodging comprises the largest portion of spending. The most notable difference between the profiles of the two types of visitors is the more significant weight given to shopping for international visitors. International visitors spend 23% of their budget on shopping compared with only

7% for domestic visitors. Given the disproportionate impact on international visitors, the relative impact on the City's retail sector is greater than average.





Cumulative impact measured from 2001Q4 through 2003

Occupancy rates at New York hotels have consistently risen since the week of September 11. The rate hit its low point in mid-September with 45% of rooms occupied and the first week of November registered 78%. However, the impact is more severe than occupancy rates reveal for several reasons.

- First, beyond the destruction of the Marriott WTC, three other hotels in downtown Manhattan suffered severe damage. Thus post-September 11 occupancy rates calculations are based on a reduced supply of rooms.
- Second, hotels have significantly slashed room rates to help stimulate demand. The average daily rate (ADR) for New York City was down 21% in September and 30% in October, year-over-year. The ADR in October was $184, compared to $269 one year earlier. Consequently, hotel revenues have plummeted more rapidly than occupancy.
- Third, the October data reflect the effects of rescheduled as well as regularly-scheduled trade shows in addition to relief and rescue workers. It is widely expected that the numbers for November will be even more dismal.

As a result, PKF Consulting's forecast for 2001 revenue per available room (RevPAR) is $150 for 2001 and $125 for 2002. This compares with a RevPAR of $201 in 2000. So far, an estimated 6,000 New York City hotel employees have been laid off and hours for remaining workers have been cut substantially.

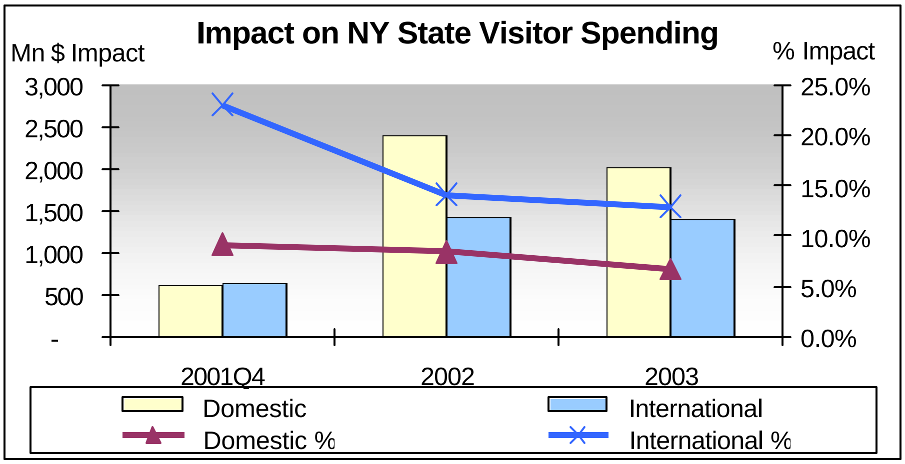
Restaurants have experienced large a drop-off in sales, approaching 50% in the second half of September. The New York State Restaurant Association has estimated that 12% of the workforce has already been laid off in New York City. Over thirty restaurants have been permanently closed with an additional 40 closed temporarily.

Broadway and the theater industry have sustained a cumulative loss in ticket sales of $15 million from September 11-November 4. More substantial losses have been staved off by marketing to closer markets within New York City and the tri-state area. However, advance ticket sales have not picked up. Museums have also realized declines in attendance as group travel has fallen dramatically. Attendance from September 11-October 15 at the major New York City museums (including the Bronx Zoo) fell 40% short of the same period last year.

NEW YORK STATE IMPACT

The travel and tourism sector directly employed 468,000 New York State residents last year and generated State tax revenue of $1.6 billion. Visitor spending in New York State registered over $39.5 billion in 2000. Domestic expenditures were $29.2 billion, or 73% of total tourist-related spending in the State. New York has the fourth-highest traveler expenditure by domestic visitors and the third-highest for international visitors.

New York City makes up 43% of all visitor spending in the State with 70% of all international visitors and 33% of all domestic visitors. Although the data are not as current for the State as for the City, it can be assumed that the impact on New York State travel and tourism mirror those on the City for each particular origin market (i.e. international and domestic). However, New York State has a much lower percentage of international visitors and the effects on the State are not as dramatic as for the City.



The most severe impact is naturally seen in the fourth quarter of 2001 with a loss of $1.3 billion, a 13.2% decline from the pre-September 11 Baseline visitor spending forecast. This compares with a 15.5% decline expected for New York City. Recovery will begin to take hold in the second half of 2002 but not quickly enough to reverse the effects of a $3.8 billion (9.9% of the baseline) cut in spending by travelers. Visitor spending will grow by a healthy 8.0% in 2003, but will still remain 8.4% behind the pre-September 11 outlook. Full recovery—particularly for international visitors—is not expected until 2005.

BASELINE (PRE-9/11) AND CURRENT (POST-9/11) OUTLOOK FOR VISITOR SPENDING

New York State, $ Million

	2001Q4	*2001*	*2002*	*2003*
Baseline				
Domestic	6,849	28,407	28,407	30,112
International	2,778	9,783	10,076	10,782
Total	9,627	38,190	38,483	40,893
Current				
Domestic	6,221	27,190	26,005	28,086
International	2,138	8,851	8,660	9,388
Total	8,359	36,041	34,666	37,474
Loss				
Domestic	628	1,217	2,402	2,026
International	640	932	1,416	1,394
Total	1,268	2,149	3,818	3,420
Percentage Loss				
Domestic	9.2%	4.3%	8.5%	6.7%
International	23.0%	9.5%	14.1%	12.9%
Total	13.2%	5.6%	9.9%	8.4%

The distribution of traveler spending in New York State reveals those sectors most vulnerable to current and future declines. Of the major spending categories, *Lodging*, *Other Transportation* (primarily air travel), and *Food* (primarily restaurants and bars) top the list.

DISTRIBUTION OF VISITOR SPENDING IMPACT ON NEW YORK STATE

$ Millions

	Auto Transportation	Other Transportation	Lodging	Food	Recreation	Shopping	Total
2001Q4	109	305	353	262	88	151	1,268
2002	327	919	1,062	790	266	454	3,818
2003	293	823	951	707	238	407	3,420
% Impact	9%	24%	28%	21%	7%	12%	100%

It is critical to note that the effects of September 11 on airport/airline revenue and employment are significant for New York State. When examining the size of air-related expenditure, including air tickets and airport spending, New York ranks third among all states, registering $6.2 billion last year.

AIRLINE AND AIRPORT REVENUE, 2000—TOP 5 STATES

State	Air-related Expenditure, $ Millions
California	14,710.3
Florida	6,959.0
New York	6,182.4
Texas	5,360.7
Illinois	5,106.5

Source: Travel Industry Association, TEIM, DRI-WEFA estimates based on 1999 data

The airline sector has been hit extremely hard nationally, with across the board capacity cuts of 20% and current load factors well below average. Load factors were already low before the attacks. Now, approximately 85% of companies anticipate continued cutbacks in travel spending by an average of 35%. After the fourth quarter of this year, the economy is as much to blame as terrorism. We expect some capacity to be restored as 2002 begins.

Air-related expenditures comprise 15% of total traveler spending in New York State and will struggle to recover over the next two years. Based on visitor declines, the impact on the State's air travel sector will tally $200 million in the fourth quarter alone. The losses will reach $600 million and $530 million in 2002 and 2003, respectively. Approximately 3,000 workers have already been laid off in the transportation industry.

IMPACT ON STATE TAX RECEIPTS

Taken together, the economic disruptions from the terrorist attacks to New York and the further weakness in the national economic outlook that resulted will have a significant impact on New York State tax revenues during the next several fiscal years. DRI•WEFA's preliminary estimate of this impact totals a reduction of $1,111.7 million in SFY2002, increasing to a reduction of $2,730 million by SFY 2004, when compared to our expectation prior to the attacks.

PRELIMINARY ESTIMATE OF STATE TAX REVENUE REDUCTIONS FOLLOWING THE TERRORIST ATTACK

($ Millions)

	SFY2002	SFY2003	SFY2004
Personal Income Tax	$927.9	$2,038.9	$2322.3
Withholding	479.8	1,124.4	1,339.2
Estimated Payments	434.6	719.5	760.1
Final Returns	13.5	195.0	223.0
User Taxes and Fees	52.1	116.2	133.8
Business Taxes	131.7	265.7	274.2
Total	**$1,111.7**	**$2,420.8**	**$2,730.3**

Although the national recession was underway months prior to the attack, the state's economic prospects weakened after September 11. Our preliminary estimates take into account the elements of economic weakness directly associated with the attack as well as secondary impacts coming from the resulting reduction in DRI•WEFA's economic outlook by early November. The following lists show the major elements that impact our estimate on State tax revenues, categorizing them as to their source—either directly from the terrorist attack or the further slowing in the national economy outlook that it caused.

KEY ELEMENTS AFFECTING STATE TAX REVENUE COMPARISON

Elements Resulting Directly From September 11 Attack:

- Relocation of jobs from WTC site out of NY State.
- Immediate impact on worker productivity in days following the attack.
- Decline in rental incomes paid as WTC firms relocated.
- Decline in tourism and business travel to NY City and State.
- Decline in sales at Lower Manhattan trade establishments.

Elements Resulting from Indirect Economic Weakness:

- Further reduction in financial sector income and bonuses paid to employees.
- Further reduction in capital gains realizations and exercise of stock options.
- Further reduction in general economic activity in New York City and State.

It is important to understand that the elements shown in the second column had already affected the pre-September 11 Baseline used in calculating the impact on State tax revenues. By then, the stock market had been declining for a year, and it was clear that bonus payments, financial sector income, capital gains realizations, and the exercise of stock options would fall sharply in 2002. Economic growth had slowed to near-zero and the manufacturing sector had seen a sharp downshift in activity. Following the attack, stock prices dropped further when the markets reopened, and although much of that decline was subsequently recovered, DRI•WEFA expects that stock prices will lag behind our pre-September 11 Baseline through much of next year. Our outlook for the overall economy is similar. Consequently, there is a *further* drop in economic activity related primarily to September 11 which is reflected in the tax revenue impacts presented here.

All told (including both direct and indirect impacts from September 11), DRI•WEFA estimates that New York State's real gross state product will decline by about 1.7% relative to our expectation prior to the attack. Not surprisingly, the drop is largest in the financial-services sector (including finance, insurance, and real estate), whose contribution to gross state product drops by over 4%. The following elements are particularly important contributors to the preliminary tax reductions that we forecast for the State over the coming years.

Employment Losses

Relocation of Jobs from New York State

Over 80% of our preliminary estimate of the impact on tax revenues flows through a reduction in Personal Income Taxes (PIT). This is due to the relative importance of the PIT to the State, and the relatively high wage earners directly affected by the terrorist attack. Over 73% of the employment directly affected by the attack was in the financial services industry, and if insurance companies are included, then the proportion rises to nearly 88%. Generally speaking, these are relatively high-paying jobs that made up an important part of the State's personal income tax base.

The State's tax base is most directly affected by those jobs relocated from the WTC out of New York State. When we consider just these jobs, the proportion in the financial sector is even higher. Over 90% of the estimated 32 thousand jobs leaving New York are in the financial sector, and if insurance is included, the proportion rises to over 95%. In considering the impact on the PIT, it is clear that most of the jobs immediately lost to New York State are those which, from the standpoint of tax revenues, it least wanted to lose. Not only has the State lost 32 thousand relatively high-paying jobs following the attack, but these also contributed very high levels of gross state product on average. Consequently, the loss of these jobs disproportionately affected both personal income and corporate profits, and the state taxes to be paid on these incomes.

Other Employment Losses

Beyond the jobs directly affected by the attacks, DRI•WEFA estimates that a total of over 71,000 jobs will be lost following the attacks in 2002 as the direct job and income impacts ripple through the City's economy. For the most part, these losses are in other non-financial sectors, notably retail and wholesale trade, and services. Many of these losses are related to the decline in tourist and business travel that has occurred, and others were in the businesses that serviced the financial-sector firms and their employees in Lower Manhattan. Although many of these jobs will eventually return, we do assume that about 30 thousand jobs have been permanently displaced from New York, and this will have a lasting effect on State tax revenues.

DECLINE IN TOURISM AND BUSINESS TRAVEL

Although the immediate impact of the disaster was on the financial sector located in Lower Manhattan, it is the State's travel and tourism loss that accounts for the largest direct job loss in the short-run. Travel and tourism sector directly employed 468,000 New York State residents last year, and generated State tax revenue of an estimated $1.6 billion. DRI•WEFA estimates that almost 47 thousand jobs in this sector were lost in the fourth quarter of 2001. These jobs were clustered in hotels and restaurants, museums and other tourist attractions, air transportation, and wholesale and retail trade. Of the 47 thousand jobs lost in the State, 27 thousand are located within New York City.

The good news is that many of these jobs will return in time. In our Current forecast, the initial fourth-quarter drop in tourism and travel-related employment eases significantly in 2002. For the year as a whole, the employment drop relative to our Baseline is less than 20 thousand, and we expect this to fall further to about six thousand jobs in 2003, relative to the Baseline. Business travel will recover along with the economy, particularly during the second half of 2002 and in 2003. At the same time, tourists will also return as they shed their fears of air travel and crowds. In this report, we have recommended that the City and State take the recovery of tourism seriously by developing an enthusiastic policy of promotion along with steps to enhance tourist security. Given such a program, our analysis suggests that while the travel-related impact is significant in the short-run, it has good recovery prospects over the next few years.

RETAIL SPENDING

This recovery in tourism will be equally important for the State's user taxes and fees. Visitor spending in New York State totaled over $39.5 billion in 2000; we expect this total to decline to an estimated $34.7 billion in 2002. Most of this spending is subject to sales and other user taxes. The recovery of New York City tourism will help reduce the lasting impact of September 11 on these taxes.

In total, DRI•WEFA estimates a $3.4 billion hit to retail sales in New York State in 2002, a 1.7% drop compared with our Baseline outlook. In addition to the reduction in tourist spending (especially by foreign tourists, who spend more than two and one-half times on shopping compared with their domestic counterparts), this reduction is accounted for by employees relocated out of New York State, who take most of their retail spending with them, as well as the effects of the decline in general employment and economic activity in the State subsequent to September 11. Additionally, the State's retail sales will suffer to the extent that residents of New York City's out-of-state suburbs continue to be reluctant to come into the city to shop.

RENTAL INCOME

Our preliminary tax impact also includes a reduction of $132 million in business taxes in 2002 which doubles to $266 million in 2003. A key component of this decline is a reduction in rental income paid as former WTC tenants relocate. Approximately one-fourth of the jobs relocated from the WTC have moved out of state. But even more importantly, many former WTC tenants have taken up residence in properties they already owned or leased (so-called "backfilling"). We estimate that a total of $341 million in rental income will be lost annually as a consequence of all these relocations. This reduction will be accompanied by a drop in profits earned by the real-estate sector which makes up an important piece of our estimated decline in business taxes.

PHYSICAL IMPACT OF SEPTEMBER 11 ATTACK

PHYSICAL IMPACT AND DAMAGE ASSESSMENT

The extent of the physical damaged created by the September 11 attack is unprecedented during peacetime in the United States. The only recent events arguably comparable in scope are significant natural disasters: Hurricane Andrew in South Dade County Florida in 1992, and the Northridge earthquake in Southern California in 1994. Until the September 11 attack, these events ranked as the two most expensive disasters in U.S. history, costing an estimated $25 billion and $20 billion, respectively. With preliminary assessments of total damage in the September 11 attacks on New York running as high as $60-$70 billion, the City clearly faces an extraordinary challenge.

A number of simultaneous efforts are presently underway to assess and catalog the full physical extent of the attack on New York. These assessments vary widely for several reasons:

- Much of the impact area continues to be relatively inaccessible, inhibiting on-site damage inspection.
- The complexity of the damage requires extensive engineering efforts to accurately determine the extent of the damage.
- The damage is widespread and its assessment requires the cooperation of affected businesses.
- The degree of damage is broad, ranging from complete destruction to structural damage to façade damage, and the definitions and classifications used vary among assessors.
- Additional façade damage may be precipitated by the freeze-thaw cycle this winter.

In New York City, commercial structures bore the brunt of the physical damage from the attack, though telecommunications, utilities, and transportation infrastructure was also affected greatly as were numerous residential structures in the vicinity of ground zero. Using a variety of independent, survey-based estimates of the impact area, we tentatively conclude that 31 buildings were directly affected by the attack, centered on the six buildings making up the World Trade Center. These 31 properties, which suffered varying degrees of damage ranging from complete destruction to only minor window and façade breakage, collectively account for over 37.2 million square feet of office space.

By any measure these buildings comprise a sizable proportion of downtown Manhattan—by some estimates over 60% of the downtown submarket's Class-A office space—and a fairly sizable proportion of the overall New York office market as well. An annotated listing of these properties, as well as a map detailing the impact area, are shown in the following Table.

However, tenants were not forced to vacate each of these 31 buildings. For the purposes of developing estimates on the impact on employment, we consider a sub-sample of 15 properties carefully tracked via survey by TenantWise.com (and corroborated by other independent information sources). These are designated our "core sample." These 15 buildings constitute properties that were destroyed or severely damaged to the extent that existing tenants were forced to make relocation decisions. These properties total 31.9

million square feet and housed over 650 tenants prior to the attack. The buildings making up this sub-sample are shaded in the Table.

LOWER MANHATTAN BUILDINGS DESTROYED AND DAMAGED

Property Address	Size (square feet)	Status	Damage Assessment	Projected Re-opening
1 World Trade Center	4,761,416	Destroyed		
2 World Trade Center	4,761,416	Destroyed		
4 World Trade Center	576,000	Destroyed		
5 World Trade Center	783,520	Destroyed		
6 World Trade Center	537,693	Destroyed		
7 World Trade Center	2,000,000	Destroyed		
1 Liberty Plaza	2,121,437	Damaged	Building is structurally sound. Some façade and window damage	October-2001
140 Broadway	1,200,000	Damaged		
1 World Financial Center	1,461,365	Damaged	Glass and façade damage	November-2001
2 World Financial Center	2,591,244	Damaged	Glass and façade damage	
3 World Financial Center	2,263,855	Damaged	SE corner is structurally damaged	October-2002
4 World Financial Center	2,083,555	Damaged	Glass and façade damage	November-2001
1 Bankers Trust Plaza (30 Liberty)	1,415,086	Damaged		
101 Barclay Street	1,226,000	Damaged		
22 Cortlandt	668,110	Damaged	Severe window damage, falling glass	March-2002
90 Church	1,126,260	Damaged	Building is safe; renovation underway	April-2002
99 Church	336,000	Damaged		
100 Church	1,030,000	Damaged		November-2002
111/115 Broadway	418,000	Damaged		
75 Park Place	564,145	Damaged		November-2001
140 West	1,171,540	Damaged		
30 West Broadway	381,000	Damaged	Structural columns broken	
195 Broadway	875,000	Damaged		
24-26 Cortlandt	25,000	Damaged		
106 Liberty	18,000	Damaged		
110 Liberty	6,000	Damaged		
130 Liberty	1,415,086	Damaged	Dangling steel pieces and debris from 10th floor	
130 Cedar	135,000	Damaged		
90 West	350,000	Damaged	Major façade damage, no occupancy	
114 Liberty	69,000	Damaged		
195 Broadway	875,000	Damaged		
Total	**37,245,728**			

The 15 buildings in the shaded section constitute our "core sample" used to track the impact on employment.

Aside from the damage to buildings, communications and utilities infrastructures in the World Trade Center area were also greatly affected. Verizon and AT&T reported heavy damage to five major telecommunications switching stations and a substantial amount of commercial networking equipment, including the destruction of 36 miles of communications cabling and 300,000 telephone lines. Con Ed lost two major electrical substations, and the lower Manhattan local distribution system was damaged to the extent that one substation will need to be rebuilt by next summer to avoid severe power outages as demand peaks then. Con Ed also reported the loss of 33 miles of electrical cable.

The public transportation system in the area was also devastated. The Port Authority Trans-Hudson (PATH) commuter line to New Jersey was rendered virtually unusable when the trade towers collapsed on top of the WTC PATH station, while the WTA and Transit Authority report that the Number 1 and Number 9 subway lines were severely disrupted. Adequate public transportation access to lower Manhattan will be an important element of rebuilding the environment for future business in the area.

MAJOR EMPLOYERS AFFECTED

The individual firms that suffered the largest share of the impact include some of the best know names in financial services. The following table shows the 30 largest firms by job count, based upon estimates of their employment prior to September 11. This table is based upon available data from TenantWise.com, which actively tracks all of the 187 non-governmental tenants in the core sample of properties occupying more than 10,000 square feet of space.

Financial firms, led by major investment houses, dominate this list. They include Merrill Lynch, Bankers Trust/Deutsche Bank, Bank of New York, American Express, Salomon Smith Barney, Lehman Brothers, Morgan Stanley, and CIBC World Markets. Indeed, Merrill Lynch alone accounted for nearly 10% of the impacted jobs in our core sample—all of which have left New York State. Collectively, the Top 30 firms represent over 63,200 jobs—or nearly three-quarters of all the affected large firm employment. Of this, over 18,700 jobs are confirmed to be leaving New York State, a significant number of which are high paying positions. Overall, we estimate that a full 30% of the jobs from the Top 30 firms have departed New York State, or will soon do so.

Of the Top 30 companies, significant non-financial firms include the law firm of Cleary, Gottlieb, Steen, & Hamilton (1,120 jobs), Moody's Investor Services and Dow Jones & Co. (business services firms with a combined 1,842 jobs), and Verizon Communications (622 jobs). None of these firms are reported to be leaving New York State.

TOP 30 COMPANIES IMPACTED BY SEPTEMBER 11 ATTACK
RANKED BY EMPLOYMENT

Rank	Company	Sector	Total Employment	Percent of Total	Leaving NY	Percent Leaving NY
1	Merrill Lynch	Financial	8,334	9.8%	8,334	100%
2	Bankers Trust/Deutsche Bank	Financial	6,756	8.0%	-	0%
3	Bank of New York	Financial	6,205	7.3%	-	0%
4	American Express	Financial	5,218	6.1%	3,021	58%
5	Salomon Smith Barney	Financial	4,812	5.7%	3,208	67%
6	Lehman Bros	Financial	4,123	4.9%	-	0%
7	Morgan Stanley	Financial	3,360	4.0%	1,120	33%
8	CIBC World Markets	Financial	2,000	2.4%	250	13%
9	Empire Health Choice	Insurance	1,844	2.2%	231	13%
10	Brown Brothers Harriman	Financial	1,720	2.0%	-	0%
11	Merrill Lynch & Co. Inc.	Financial	1,680	2.0%	-	0%
12	Marsh USA	Financial	1,444	1.7%	-	0%
13	Guy Carpenter	Insurance	1,280	1.5%	-	0%
14	Cleary Gottlieb Steen & Hamilton	Legal Services	1,120	1.3%	-	0%
15	Moody's Investor Services	Business Services	1,072	1.3%	-	0%
16	Goldman Sachs & Co.	Financial	1,040	1.2%	-	0%
17	Fiduciary Trust Company International	Financial	981	1.2%	-	0%
18	Cantor Fitzgerald Securities	Financial	980	1.2%	653	67%
19	Oppenheimer Funds, Inc.	Financial	924	1.1%	231	25%
20	Brown & Wood, L.L.P.	Financial	892	1.1%	112	13%
21	AON Corporation	Financial	877	1.0%	110	13%
22	Bank of Nova Scotia	Financial	840	1.0%	-	0%
23	Gruntal & Co.	Financial	807	1.0%	-	0%
24	Fidelity Investments National Financial Services Corp.	Financial	772	0.9%	-	0%
25	Dow Jones & Co.	Business Services	770	0.9%	257	33%
26	Fuji Bank	Financial	732	0.9%	732	100%
27	Credit Suisse First Boston	Financial	717	0.8%	-	0%
28	Royal Bank of Canada	Financial	657	0.8%	328	50%
29	Nasdaq	Financial	644	0.8%	161	25%
30	Verizon Communications	Communications	622	0.7%	-	0%
	Top 30 Totals		**63,223**	**74.5%**	**18,747**	**30%**

PHYSICAL COSTS

The costs of cleaning up Lower Manhattan following the September 11 attacks will encompass a broad variety of activities. Expenses will include the cost to remove the debris, victim assistance and support services, infrastructure repair, and spending to enhance security. Early estimates compiled in September and October by the New York State Division of the Budget, the New York City Mayor's Office, and the New York City Office of the Comptroller indicate the cost of basic rescue, recovery, and rebuilding of Lower Manhattan to be $32.0 billion, $33.8 billion, and $51.8 billion, respectively (see following table). Obviously, these totals can only be a very rough first cut at estimating the actual costs of cleanup. Additional detail regarding physical cost estimates are provided in the Appendix.

ESTIMATED PHYSICAL COSTS OF THE WORLD TRADE CENTER ATTACK*

(Billions)

	Governor	Mayor	NYC Comptroller
Rebuilding WTC and Lower Manhattan	**$11.8**	**$11.8**	**$31.2**
World Trade Center and Hotel Space Replacement	8.3	8.3	6.7
Equipment, Lost Inventory and Renovation	2.4	2.4	11.5
Other Buildings: Structural Remediation	1.1	1.1	13.0
New York City Infrastructure	**$7.9**	**$7.4**	**$7.4**
Metropolitan Transportation Authority (MTA)	3.7	4.1	3.0
Port Authority	2.5	2.4	2.4
Utility and Other Infrastructure Costs	1.7	0.9	2.0
Emergency Response	**$14.1**	**$12.9**	**$13.2**
Emergency Construction Costs (debris removal etc.)	5.0	7.0	6.0
NYC Emergency Protective Measures (city agency costs)	5.1	5.2	7.2
Other (including State agency costs)	4.0	0.7	0.0
GRAND TOTAL	**$33.8**	**$32.0**	**$51.8**

*The NYC Comptroller estimates that $17 billion of the property loss/damage is covered by insurance. This figure does not include health, life, earnings, or other insurance which may also be available.

COMPENSATION

New York is not without financial help. Considering federal disaster aid, private insurance payments, and charitable contributions, most of the immediate costs of the disaster to the City and its citizens will be covered. The large federal budget surplus has made it easy for Washington to pitch in with substantial financial aid, not only to the City but even to some of the industries most directly affected by the disaster. Also, because most of the damage was to large business properties and operations, insurance will cover a good deal of the private costs of the attack.

Both the political and popular will to help the City and its residents is strong and enduring—a consequence of the horrific nature of the attack and its consequences. This is especially reflected in the unprecedented amount of private charitable contributions made since the attack to support its victims (over one billion dollars by the end of November). As detailed below, New York City, its workers, and its residents are likely to find the help they need in meeting the immediate costs associated with the disaster. However, many of these payments will take time to come, and there is a role for the local and federal governments in ensuring that assistance is available to those whose damage claims take time to resolve.

INSURANCE CLAIM PAYMENTS

The scale of the disastrous attacks in New York dwarf that of the previous largest insurance loss, that from Hurricane Andrew in South Dade County Florida in 1992. The attacks are far reaching in breadth of insurance lines affected, as well as being the first catastrophic event for life insurance and workers' compensation insurance. Estimates of total insurance claims to survivors, property owners, businesses, and airlines vary widely, in a range of $30 billion to as high as $70 billion. Consensus estimates, though, fall within a range of $35 billion to $55 billion. These insurance claims will offset a large portion of the financial loss borne by those affected, and to the extent that lower Manhattan is repaired and rebuilt, and that its former tenants return, much of these claims will be spent in New York.

Despite the tremendous demands placed on the insurance industry, companies have indicated their willingness and ability to meet the claims stemming from this tragedy. By mid-November, $16.6 billion in claims had already been received, with $16 billion of this coming from commercial property damage claims. This means that one-half to one-third of total claims are already in the process of being evaluated and on their way towards being settled.

Despite this progress, a number of claims will take time to evaluate, and some of these will require a court decision to finalize. This can take years—some of the claims from the 1993 bombing of the WTC are unresolved to this day—and in these situations, local and federal governments must be sure to make resources available to claimants facing cash-flow deficits while their claims are under consideration.

In addition to the insurance claims that will be paid to victims' families and affected businesses, there are several other sources of compensation. In many cases, claimants are also entitled to receive aid from the federal government and many special charities. In estimating payments to be made by insurance companies and other sources below, we have netted out estimated payments from other sources so as not to double-count the level of compensation that may be received.

SUMMARY OF ESTIMATED INSURANCE PAYMENTS

Type of Insurance	Estimated Payments
Life Insurance	$4 - $6 billion
Commercial Property	> $17 billion
Personal Property (Contents)	$2 - $3 billion
Automobiles	$90 million
Airline Liability	$6 billion
Aircraft Insurance (Broad Hull Coverage)	$434 million
Workers' Compensation	$1.3 - $4 billion
Business Interruption Insurance	$5 - $18 billion
TOTAL	**$36 - >$54 billion**

LIFE INSURANCE

While the lives lost on September 11 are the most incalculable loss of all, life insurance claims will be among the smallest of the various lines of insurance. These payments are also among the most easily estimable. At the end of November, the Mayor's office was estimating 2,936 New York Fatalities. Most insurance experts expect claims ranging from $3 billion to $4 billion, although the National Association of Insurance Commissioners (NAIC) estimates only $900 million, an estimate that seems low considering that many victims were highly-paid workers of financial firms that offered favorably-priced life insurance benefits to their employees.

In the interest of expediting these claims, Governor Pataki signed an Executive Order to expedite the issuing of death certificates, as did the New Jersey Supreme Court. Even so, many life insurance companies are waiving the requirement for a death certificate, relying instead on sworn affidavits, employer statements, and confirmation from insurance agents. Payments to victims' families may therefore be processed and paid more quickly. However, it is difficult to judge how much of the total life claims may benefit New York State. By one estimate, approximately 40% of World Trade Center employees lived in New Jersey.[6] Additionally, it is likely that some number of other employees lived in New York only because of their jobs, and that their survivors are likely leave the State in the months to come. By this reckoning, it is possible that perhaps half of the personal life claims paid will not ultimately accrue to New York State residents.

It is quite likely that the life insurance industry will experience an increase in demand in the aftermath of this tragedy, as more people reevaluate their life insurance needs. Indeed, many insurance companies already report a sharp increase in life insurance inquiries, especially among age groups that have traditionally been smaller purchasers. Because the insurance industry is relatively important to New York—the State accounts for almost 10% of total insurance sector employment—the State's economy and tax revenues may ultimately benefit from this additional business.

PROPERTY AND CASUALTY

In terms of dollar value, commercial property owners will receive the largest insurance payments. Estimates for total commercial property claims is beyond $17 billion; damage to the World Trade Center alone is estimated at $5.5 billion. Most of this money should be spent in New York State assuming that real estate owners rebuild and repair their facilities.

[6] J.W. Hughes and J. J. Seneca, eds., *Sitar-Rutgers Regional Report*, November 2001, p. 2.

The business and personal non-building property that was lost is estimated to be in the range of $2 to $3 billion. By mid-November, $550 million in personal property claims had already been filed. In addition to the contents that were located in buildings, an estimated 3000 cars were destroyed or damaged in New York City. Total insurance payments for these automobiles are estimated at $90 million, with $40 million already claimed by mid-November.

The airline industry has two types of insurance. The liability and bodily insurance, for which the government has already legislated a cap of $1.5 billion per plane, differs from the insurance for the airplane itself. This broad hull coverage is expected to generate insurance claims of $434 million, based on the replacement costs of Boeing 757 and 767 airplanes.

Commercial property owners and businesses are also expected to review their need for insurance coverage, and to increase demand for coverage. The extent to which this will increase demand for the insurance industry is questionable, though. Many insurance companies are considering the exclusion of terrorist attack coverage from future policies, limiting the amount of coverage they will offer, and raising property rates sharply (see below).

WORKERS' COMPENSATION

While smaller than many of the other types of insurance claims, never before has an event prompted such a large amount of workers' compensation claims. Practically all of the 3,900 victims and the 8,000 injured in New York City were employed within the State. Estimated insurance claims are within a range of $1.3 billion to $4 billion.

BUSINESS INTERRUPTION

An estimate of the total claims that will paid under business-interruption policies is the most difficult to make. Not only is the extent to which business-interruption policies were in force unknown, but the types of coverage varied notably as well. Businesses that were forced to close because of physical destruction, damage, or the elimination of access to their location, are eligible to collect under business interruption insurance if they had purchased it. Other types of business disruptions, however, may not be eligible. Many area businesses reopened in the weeks following the tragedy, but experienced lost business because customers will unable or unwilling to come back. The eligibility of claims for this type of business loss is more difficult to assess. Likewise, business-interruption claims due to event cancellation are not straightforward. For these reasons, estimates of business-interruption insurance payments in New York range from $5 billion to $18 billion.

INSURANCE PREMIUM INCREASES

The enormous payments that insurance companies are required to make in the aftermath of the attack gave rise to initial fears that the industry could be financially vulnerable. However, industry leaders have reassured investors and clients that, overall, their finances are sound and they will be able to fulfill their obligations. Moreover, the industry will benefit from a spate of premium hikes in the aftermath of September 11. Insurance company stock prices collapsed in the week following the attack, but have since recovered as premiums began to rise sharply, particularly for property and casualty lines.

After ten years of intense price competition had held insurance premium prices nearly constant, premiums began rising in early 2001 by an average of about 15%. However, after Sept. 11, premium price increases have jumped far higher. Rate increases will vary, with the highest increases expected for workers' compensation (an estimated 20%) and commercial property (30-50%). High-rise buildings in Manhattan potentially face insurance premium hikes as high as 100%, as does coverage for geographically concentrated buildings.

With an estimated 70% of commercial insurance policies up for renewal between September 11 and the end of the year, the effect of these price increases will be far-reaching. These premium price increases are expected to boost profits in insurance companies by perhaps 20-25% in 2002. Additionally, many insurance companies are limiting their future liability of property coverage or specifically excluding terrorist activities from their policies. Although these restrictions may eventually be lifted under a new federal government option to cover the costs associated with any future terrorist activities, there is no question that all business will face significantly higher premium increases at their next policy renewal.

With a significant concentration of insurance business located in New York State, rising industry prosperity will benefit the State's economy as well as prospects for its future tax receipts. New York State accounts for almost 10% of total insurance sector employment. This is the highest proportion than all but one other state. Increased income generated by the sector in 2002 and beyond may provide some respite from the State's costs associated with the September 11 attacks.

FEDERAL AID

The U.S. Congress quickly established a special fund of $15 billion in federal aid that will be paid to the families of victims of the terrorist attacks. Federal programs already in place provide for the families of uniformed victims, and these payments were also increased. Families of fire fighters and police will receive a one-time, tax-free payment of $250,000, as well as a monthly stipend to help with college expenses. This is in addition to other government aid such as the New York City policies and the New York Memorial Scholarship for surviving dependents' college tuition.

A few days after the attacks, President Bush promised that New York City would receive $20 billion in federal aid, part of a $40 billion plan for emergency defense spending. As of late November, the City had received $3.2 billion, with another $6 billion waiting to be transferred by the end of the year. Following additional lobbying to increase this amount, an additional $1.75 billion is scheduled will be sent to the City this year, bringing federal aid in 2001 to $11 billion. The rest of the $20 billion promised will be paid in 2002. Several lobbies continue to push for additional federal aid.

Two industries suffered immediately from the brunt of the attacks: airlines and insurance. The federal government agreed to aid to the airlines industry, which incurred heavy costs and lost revenue when the air transportation system was shut down in the wake of the attack. The federal government has promised $5 billion in aid and another $10 billion in loans to the industry.

For its part, insurers are concerned about potential liabilities from future terrorist attacks. While the industry expects to weather the demands stemming from September 11, additional large-scale terrorist attacks in the next year or so could put the industry in a difficult financial position. In order to preserve the industry and encourage insurance companies to continue to price risk and offer policies, the federal government is weighing several different options that would support the insurance industry in the case of future terrorist attack liability.

CHARITIES

In one of the largest outpourings of contributions, over $1 billion has already been pledged to over 200 charities that are supporting victims from September 11. Two charities collected 70% of these donations: the American Red Cross has raised over $550 million to date, while the September 11th Fund, a joint venture between the United Way of New York City and New York Community Trust, has raised $337 million. Much of this money remains to be distributed. As of Oct. 30, the September 11th Fund had distributed $34.4 million to local agencies connected with meeting New Yorkers' needs. At that point, the American Red Cross had also distributed $153.3 million in aid.

Payments from the various charities are proceeding. The Twin Towers Fund, which collected over $95 million, is a charity set up to assist the families of uniformed and other City workers. It has begun to issue initial payments to all the families, with additional payments pending based on need.

The State charity, the World Trade Center Relief Fund, will also distribute $30 million of the $35 million it collected by late November. Initial payments of up to $5,000 will be sent to 800 families, with another 3,000 families eligible.

APPENDIX—PHYSICAL COST ESTIMATES

RESPONSE AND CLEANUP COSTS

Early estimates compiled in October by the New York State Division of the Budget, using figures provided by the New York City Mayor's Office, indicated the cost of basic rescue, recovery, and rebuilding of Lower Manhattan to be $32.0 billion. Obviously, due to the nature of the attack and uncertainty as to what damage lied below the ground at the site, these totals were a very rough first cut at estimating the actual costs of cleanup. For example, the $5 billion for emergency construction costs listed in the chart below has subsequently been revised to $1 billion.

SUMMARY OF IMMEDIATE RESPONSE AND CLEANUP COSTS

Costs	$ Millions
Emergency Construction Costs	$5,000
NYC Emergency Protective Measures	$5,138
Utility Infrastructure Costs	$900
NYC Victim Assistance, Citywide Support Services	$378
NYC Other Costs	$323
Total	**$11,739**

Source: New York State Division of the Budget

WTC SITE

According to the New York State Division of the Budget the Ground Zero cleanup will cost an estimated $5 billion. This cost includes demolition, debris removal, and the stabilization and remediation of the area. Funding for these efforts will come from the federal government through FEMA's Public Assistance Program less any available insurance claims.

REMEDIATION OF DAMAGED BUILDINGS

By our count, a total of 37.2 million square feet of office space was destroyed or damaged as a result of the attacks. The six destroyed World Trade Center buildings account for about half of this. A study by McKinsey & Company estimates that 10.1 million square feet of office space was damaged and can be reoccupied this year. The report also estimates that 3.5 million square feet will require at least a year's worth of repairs. Total repair costs are estimated at a minimum of $2.2 billion on this space. In addition, approximately a half million square feet of retail space was damaged. Some of these costs will be covered under insurance; the remaining costs are expected to be funded from federal sources. Consequently, this figure is not included in the $11.7 billion estimate of cleanup costs shown in the table above.

UTILITY INFRASTRUCTURE STABILIZATION

Two substations were destroyed when the Twin Towers collapsed. For now, Consolidated Edison has laid 33 miles of high voltage cable to restore power to area buildings, much of it temporarily placed in above-ground wooden structures. This temporary power infrastructure and eventual substation repairs will cost the City $900 million according to the Division of the Budget. Normally, work to rebuild the destroyed substations would not be able to proceed until after the WTC site is cleared. However, peak warm-weather power needs in Lower Manhattan suggest that at least one new substation needs to be available by this summer to avoid brownouts and outages in the area.

VICTIM ASSISTANCE

Victim assistance extends not only to the families of victims of the Trade Center attacks, but also to businesses, non-profit institutions, and governments affected by the disaster. The New York State Division of the Budget's estimate of victim assistance costs stands at $378 million. Federal disaster assistance has covered victim assistance costs to date and is expected to continue to cover these costs.

SECURITY

Security costs are the largest single cleanup cost at $5,138 million. Most of this expenditure will cover police and fire overtime, additional emergency services, and increased security measures both around ground zero and other NYC sites such as airports, train and bus stations, and public attractions.

OTHER COSTS

Other City costs include burial costs, replacement of roads and other infrastructure, and the replacement of lost emergency (fire, police, rescue, ambulance) equipment. These costs are currently estimated at $323 million.

REDEVELOPMENT COSTS

Redevelopment costs are difficult to estimate due to the uncertainty over what facilities will eventually be constructed in the area. Some portions of the redevelopment costs will be easier to pinpoint, however. At the minimum, the roads, tunnels, and mass transit infrastructure that were destroyed will have to be rebuilt. Buildings that were damaged will be repaired. Estimates by McKinsey & Company published in the New York City Partnership report *Economic Impact Analysis of the September 11 Attack on New York City* calculate a cost of $6 billion to replace the office space that was destroyed, and an additional minimum of $2.2 billion to repair buildings damaged in the attacks. The New York State Division of the Budget estimates that the redevelopment of lower Manhattan will cost $18.8 billion.

SUMMARY OF REDEVELOPMENT COSTS

Costs	$ Millions
NYC Infrastructure	$300
NYS Department of Transportation	n/a
Metropolitan Transit Authority	$3,206
Port Authority of New York and New Jersey	$2,704
Replacing Office and Hotel Capacity	$11,736
Total	**$17,946**

Source: New York State Division of the Budget

INFRASTRUCTURE

Repairs and rebuilding of water mains, sewers, and roads damaged in the attacks will cost an estimated $250 million. Much of this repair and rebuilding cannot begin until the WTC site has been cleared.

CITY UNIVERSITY OF NEW YORK

The City University of New York suffered some lost and damaged facilities as a result of the attacks. Replacement of lost facilities will cost an estimated $50 million.

PUBLIC TRANSPORTATION

The Metropolitan Transportation Authority (MTA) sustained significant direct damage in the attack. Direct damage includes:

- Collapse of 1,700 feet of subway tunnel serving the number 1 and 9 lines.
- Destruction of signal, communications, and power equipment.
- Loss or damage of four subway stations.
- Destruction of bus and other surface vehicles.

The estimate to repair/reconstruct these facilities is $855 million.

As a result of the disrupted service in the area of the WTC, the MTA estimates that it will incur $144 million in extraordinary operating costs through 2002 to fund disaster-related cleanup, security, traffic management, customer information, and equipment support activities.

Beyond this, the MTA estimates an additional $1.87 billion impact on its capital program. These funds will be used to fund safety and security projects and to ensure the compatibility of the reconstructed facilities with the existing transportation network.

The MTA will suffer indirect effects of the attacks in addition to the repair of physical damage. The MTA receives subsidies from local mortgage and business-related taxes, which will be down by an estimated $66 million through 2002 as a result of the disaster. Ridership and the associated fares will be down as well until facilities are rebuilt. The MTA estimates that it will lose $273 million in forgone tolls and fare revenues through 2002.

The MTA has $1.5 billion of property damage and revenue loss insurance. However, it is clear that much more than that will be needed to rebuild the necessary transportation infrastructure. The City and the State have included these costs in their request for federal aid.

MTA RECONSTRUCTION COST SUMMARY

Costs	$ Millions
Direct Infrastructure Damage	$855
Disaster-related Operating Costs	$144
Capital Costs for Safety, Security and System Compatibility	$1,868
Reduction of Tax Subsidies Due to Economic Disruption	$66
Toll and Fare Revenue Loss	$273
Total	**$3,206**

Source: Metropolitan Transportation Authority

PORT AUTHORITY

The Port Authority of New York and New Jersey owned the World Trade Center complex. Reconstruction costs for the complex itself are not included in this analysis, because it is uncertain what will be constructed there after the cleanup has been completed. Insurance will be available to cover some of the reconstruction costs, but until plans have been made, there is no way to know whether the insurance funds will be adequate to cover the rebuilding.

In addition to the loss of the WTC complex, the Port Authority sustained significant losses including a power substation, the PATH subway station, office equipment, computer systems, vehicle fleet, E-Z Pass systems and telecommunications equipment that were located in the WTC complex. The cost to replace all of this physical infrastructure is estimated at $1,220 million.

As with the cleanup costs, the single largest cost of reconstruction will be in the implementation of security enhancements to protect commerce and to ensure public safety. The Port Authority is responsible for security at area airports, port facilities, tunnels, bridges, and terminals, and estimates that security enhancements will cost $1.3 billion.

The Port Authority will also suffer revenue losses as a result of the disaster. Income from the Authority's airports, shipping ports, and bus terminal is estimated to be off by $54 million. Reduced traffic levels and ridership will cost the Authority $105 million in lost tolls and fare revenues, bringing total revenue losses to $159 million.

The Port Authority has $1.5 billion of property damage and revenue loss insurance per occurrence, but it is clear that the total impact will exceed any available insurance coverage. The balance has been included in the City's request for federal funds.

PORT AUTHORITY RECONSTRUCTION COST SUMMARY

Costs	$ millions
PATH Subway Station Reconstruction	$850
Replacement of Computer Systems, Office Equipment, and Vehicle Fleets	$150
Ferry Service Restoration and Commuter Substitution	$100
Replacement of Authority-Owned Power Facility	$90
Replacement of E-Z Pass and Telecommunications Equipment	$30
Cost of Security Enhancements	$1,325
Revenue Losses Directly Attributable to Disaster	$159
Subtotal Port Authority Costs	**$2,704**

Source: New York State Division of the Budget

SUMMARY OF PRELIMINARY COST ESTIMATES

As detailed above, the preliminary cost estimate to bring lower Manhattan back to its pre-attack economic status is $29.7 billion. This includes the costs of clean up and redevelopment.

PRELIMINARY COST ESTIMATE--SUMMARY

Costs	$ millions
Basic Rescue, Recovery and Rebuilding:	
Immediate Response	$11,739
Redevelopment of lower Manhattan	$17,946
Total Estimated Cost	**$29,685**

Source: New York State Division of the Budget