

Working Together to Accelerate New York's Recovery



Economic Impact Analysis of the September 11th Attack on New York City

November 2001



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Economic Impact Analysis of the September 11th Attack on New York

This economic impact study is the result of a six-week collaborative effort by the New York City Partnership and seven leading management consulting firms. The study assesses the economic impact and ramifications of September 11th on New York City. Through intensive analysis, interviews with New York's business leadership and selected in-depth consumer research, the team has developed an emerging set of implications and priorities.

Seven consulting firms joined forces to work on this unprecedented effort; they are A.T. Kearney, Bain & Company, Booz-Allen & Hamilton Inc., the Boston Consulting Group, KPMG LLP, McKinsey & Company, and PwC Consulting. In addition, this study would not have been possible without the significant contributions of the Federal Reserve Bank of New York, Harris Interactive, Dun & Bradstreet, Reuters, Claritas, DRI-WEFA, Economy.com, IntraLinks and SRI International. Ernest Tollerson, senior vice president, the New York City Partnership, and Janice Cook Roberts, executive vice president, the New York City Investment Fund, coordinated this project and managed the preparation of this report. A complete list of contributors can be found in the acknowledgments section of this report.

The team, working *pro bono*, sought the advice of economists from the Federal Reserve Bank of New York and the City and State governments, used their own proprietary as well as public data, conducted public opinion research with Harris Interactive and interviewed more than 300 business and public sector leaders.

The New York City Partnership is the voice of New York City's business community on issues that affect business and the economy. The Partnership and the New York City Investment Fund bring together CEOs from the corporate, investment and entrepreneurial sectors to address critical business issues facing New York City.

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Economic Impact Analysis of the September 11th Attack on New York

EXECUTIVE SUMMARY

The September 11th attack caused massive damage to New York's economy. This damage can be managed if we act quickly. The New York business community stands ready to work with government at all levels, as well as with other stakeholders, to rebuild the New York economy and restore Lower Manhattan.

Following the terrorist attack, New York has struggled to understand the specific economic effects and what can be done to cope with them. Now, a team of leading consultants and economists organized by the New York City Partnership has evaluated how much the attack stands to affect the main sectors of the New York economy, and has recommended specific steps that the private sector and government can take to achieve a full recovery. After examining and quantifying the impact of the attack on each industry sector, the team found:

- ❖ The economic impact of the attack is likely to total \$83 billion in damage to New York City's economy. Even after payment of insurance claims and federal reimbursement for rescue, cleanup and infrastructure repair costs, the net damage to the economy is likely to be at least \$16 billion. If third-party reimbursement is delayed or inadequate, or if New York lags behind the nation in recovery from the national recession, the loss could be far greater.
- ❖ An estimated 125,000 jobs will be lost in the fourth quarter of 2001 as a direct result of the attack. While many of these jobs will return, New York City will still have a net loss of approximately 57,000 jobs attributable to the attack at the end of 2003.
- ❖ The financial services, tourism and retail sectors felt the greatest impact; small businesses in all sectors were and will continue to be the hardest hit.
- ❖ Damage is concentrated in Lower Manhattan, which lost 100,000 jobs and almost 30% of its office space in the wake of the attack.

This puts at risk many of the 270,000 jobs that are still located in the area south of Chambers Street.

Based on these findings and on interviews with industry leaders, the team and the Partnership identified the following priorities that must be addressed promptly by the public and private sectors:

- ❖ Produce a plan by mid-2002 (before the World Trade Center cleanup is completed) to redevelop Lower Manhattan.
- ❖ Fast track rebuilding of the downtown infrastructure (power grid, transportation and telecommunications) to 21st Century standards.
- ❖ Secure federal economic aid aimed at protecting the city's status as a world capital of commerce and finance.
- ❖ Restore confidence by investing in comprehensive, innovative security measures.
- ❖ Execute a five-borough strategy to retain and expand the financial services industry.
- ❖ Quickly restore Lower Manhattan as a functioning community for workers, small business and residents.
- ❖ Take immediate steps to promote New York for business and tourism.

September 11th tested New York City and, for the most part, we held up well. At the same time, senior management of every business has had to reevaluate the geographic concentration of their talent and facilities, security, space needs and data and phone systems. Business decisions are being made now. To protect the interests of the city and of the national economy, government must provide decisive leadership for the many stakeholders in the private sector who are committed to ensuring that New York comes back – stronger than ever.



Economic Impact Analysis of the September 11th Attack on New York

The New York City Economy Will Sustain A Net Loss of at Least \$16 Billion

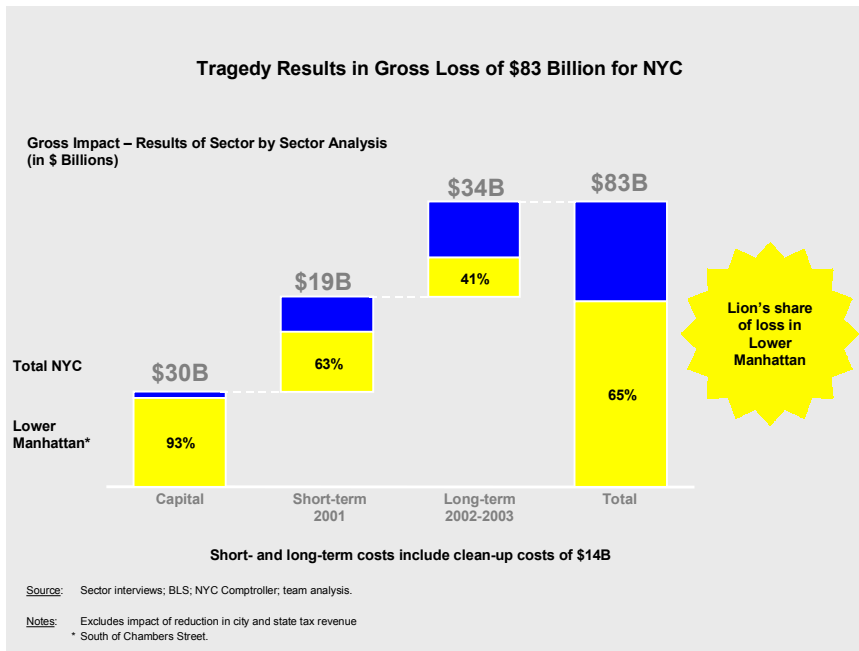
OVERVIEW

September 11th has had a profound impact on individual businesses and on New York City's economy. Within a week of the terrorist attack, the New York City Partnership, representing the leadership of New York's business community, launched this study to assess quickly the extent of the economic damage and to identify priorities to speed recovery. In an unprecedented collaboration, the Partnership assembled a team from seven leading management consulting firms -- A.T. Kearney, Bain & Company, Booz-Allen & Hamilton Inc., the Boston Consulting Group, KPMG LLP, McKinsey & Company, and PwC Consulting. Within six weeks, they completed the first "bottom up," industry-by-industry analysis of the lost economic output and jobs attributable to the attack, over and above the effects of the economic slowdown in the national economy.

For each sector of the economy, the team developed an assessment of the impact of the attack and identified a set of priorities and policy recommendations that should be valuable to the industry as well as other policy makers. The team reviewed the analysis and vetted recommendations with business leaders in each sector to build consensus for the recommendations.

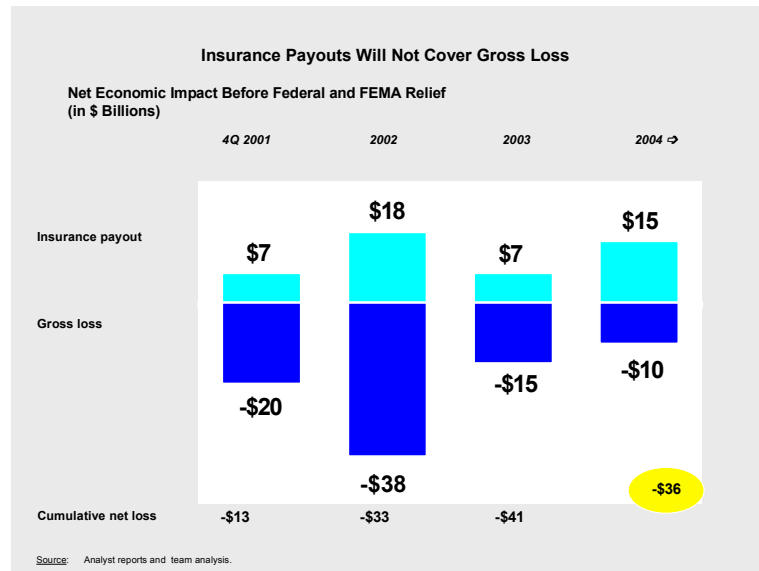
The team then combined the individual sector findings to form a complete view of the attack's impact on the New York economy and to develop a set of priorities that the private sector and the public sector can use to accelerate recovery.

The research and analysis by the team of management consulting firms found that the city's economy will sustain a gross loss of approximately \$83 billion due to the attack, including \$30 billion in capital losses, \$14 billion in cleanup and related costs and \$39 billion in loss of economic output to the economy. Moreover, the attack will cost the city an estimated 125,000 jobs during the fourth quarter of 2001. Some of these jobs will return, but the city will still have a loss of 57,000 jobs at the end of 2003, over and beyond what it would have lost in the recession.



Even after the effect of insurance payments and the federal emergency funds to defray the costs of rescue and cleanup, the New York City economy faces a net impact of at least \$16 billion in lost economic output. This assessment is based on the assumption that New York's recovery from recession will match the pace of nation's (usually the city lags the nation) and that insurance and federal emergency and recovery aid will be paid in a timely fashion and reflect real costs incurred.

Both insurance payments and federal reimbursement for the costs of cleanup will offset some of the gross costs of the attack. The team estimated that insurance payments should amount to \$37 billion. As a result of various multiplier effects, however, the insurance payments should have a positive impact of \$47 billion on the city economy; the benefit of all of these payments will not be immediately available because at least \$15 billion is likely to be paid in 2004 or later.



Similarly, the federal government should fully reimburse the city for the cost of rescue and cleanup, which is currently estimated to be \$14 billion. The impact of this aid, after the multiplier effect, would be about \$20 billion. Combined, these two sources should have a positive impact of \$67 billion on economic output. Under this set of assumptions, the total net impact of September 11th on New York City’s economy would be at least \$16 billion.

If these assumptions pan out, the impact of the attack on New York City’s economy will be large, but manageable. The gross city product, a measure of total economic output, is approximately \$440 billion a year.

Obviously, the effects of the attack and the national economic slowdown will result in significant losses in New York City and New York State tax revenues, which are not addressed in this report.

THE LOWER MANHATTAN ECONOMY SUSTAINED THE GREATEST DAMAGE

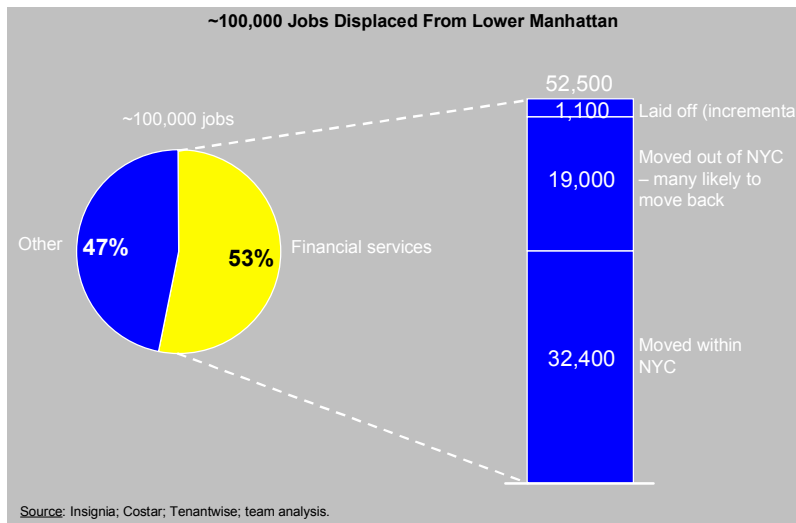
The destruction of the World Trade Center had the greatest impact on Lower Manhattan, generally defined as the area south of Chambers Street, which for decades has been the nation’s third largest business district, after Midtown New York and Chicago. The area, full of landmarks and the history of colonial America, has long provided businesses in New York with highly competitive rents, attracting the nation’s leading financial services companies, small business and emerging industries, such as enterprise software. Prior to September 11th, approximately 50% of those who lived in Battery Park City’s apartment buildings walked to work. During the past five years, the high-tech start-ups and young

professionals drawn to this neighborhood offered proof of Lower Manhattan’s potential to become a model 21st Century neighborhood with a vibrant live-work environment.

The attack on Lower Manhattan killed several thousand people. It displaced 100,000 jobs temporarily, damaged valuable commercial real estate and destroyed essential public and private infrastructure. The downtown area lost nearly 29 million square feet of office space (30% of its total). This includes 15.2 million square feet lost in the destruction of the World Trade Center complex, 3.5 million square feet that is heavily damaged and will take more than a year to repair and 10.1 million square feet of less damaged property that can be restored within a year. Also destroyed was half a million square feet of retail space, mainly in the underground mall of the World Trade Center. Large amounts of commercial space were also destroyed on September 11th.

The damage to infrastructure has made reaching Lower Manhattan even more difficult. It has also rendered communications and utilities less reliable in and around the area. This region of New York City lost commuter service on both the PATH and the 1/9 subway lines. Tens of thousands of workers used those trains to get to work prior to September 11th. Verizon, the local telecommunications provider, sustained \$1.9 billion in damage, including the loss of a switching station and major network equipment. Con Edison lost two substations, and its local distribution system was badly damaged. Much of Lower Manhattan now relies on a combination of emergency generators and other temporary solutions. To avoid power shortages in 2002, Con Edison needs to rebuild one substation before next summer.

The combination of real estate and infrastructure damage forced more than 100,000 workers to relocate to different offices or to work from home. Seven major financial services firms have temporarily relocated. Approximately 19,000 workers, who previously worked in Manhattan, are now working outside of New York City. Many of them may not return, even after transport and communications services are restored in Lower Manhattan.

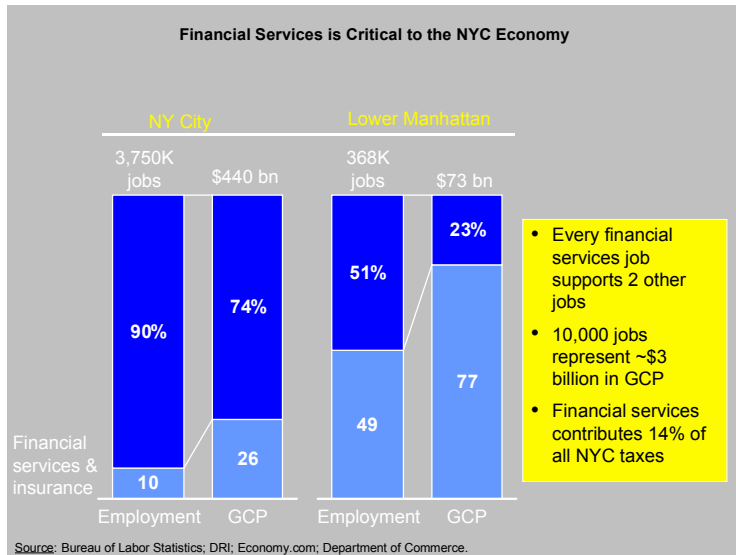


Clearly, the immediate and short-term needs of the 270,000 people who continue to work in Lower Manhattan and the more than 20,000 residents who call Lower Manhattan home must be a matter of great urgency for the nation. Some companies, including those that remain, are rethinking their commitment to Lower Manhattan. Workers and residents alike have expressed ongoing concerns about air quality. This is an issue that must be closely and continuously monitored; and in dealing with it, it will also be important to separate fact from perception. Prior to September 11th, the area’s amenities, its access to transportation and its communications infrastructure were not competitive with those of Midtown, or New York City’s global competitors. The damage from the attack has clearly aggravated these problems. As a result, the area’s 270,000 remaining jobs are potentially at risk.

FINANCIAL SERVICES, TOURISM, RETAILING AND SMALL BUSINESSES WERE PARTICULARLY HARD HIT

Across New York, the attack was especially damaging to four sectors – financial services, tourism, retailing and small business:

- **Financial Services:** The financial services industry is the largest contributor to the New York economy. Financial services generates 24% of New York City’s \$440 billion economic output (defined as the value-added of goods and services produced) and at least 14% of all the city’s tax revenue. This sector also creates jobs in many other sectors, including professional services and small business. Indeed, every financial service job supports two other jobs. Financial services and insurance create over 75% of Lower Manhattan’s \$73 billion in economic output.



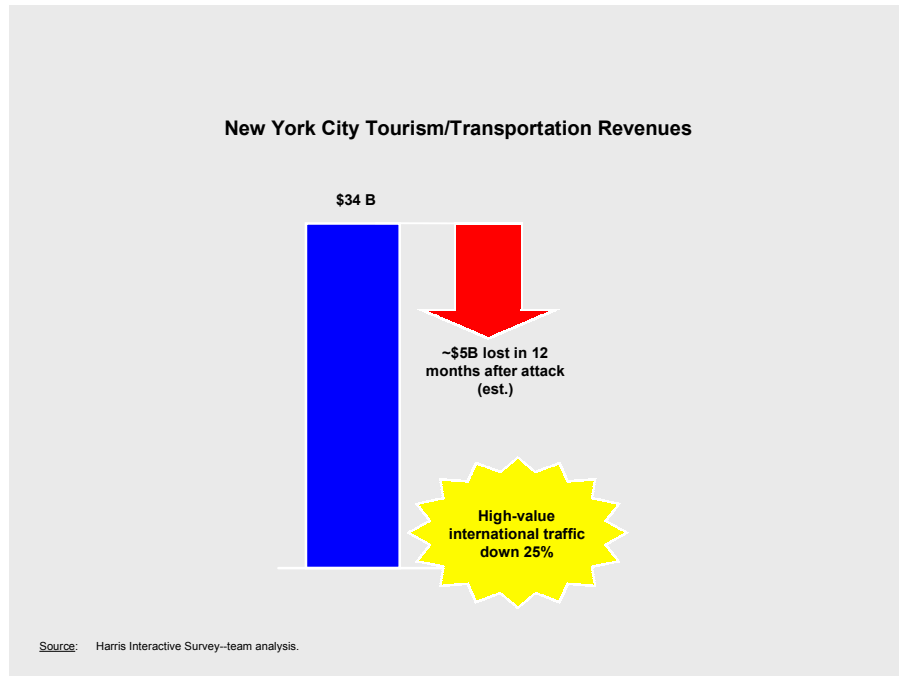
From September 11th through the end of the year, financial services in New York will account for \$4.2 billion in losses of economic output in the New York economy, over and above capital losses and the impact of the economic slowdown. That amounts to more than a third of New York City's estimated short-term losses. Over half of the sector's output loss in New York during this period will be the result of job dislocation. Financial firms have, at least temporarily, moved about 32,400 jobs out of Lower Manhattan to other New York City locations, mostly in Midtown. In addition, 19,000 jobs have been moved to sites outside of New York City, at least temporarily. Some businesses may be reluctant to return their workforces to New York due to continued challenges posed by the transport and communications infrastructure in Lower Manhattan.

Interviews with industry leaders demonstrate that managers are focused on obtaining improved security, operating out of multiple locations and ensuring that their core business services have alternative telecommunications and energy systems to fall back on in the event of a natural or manmade disaster.

- **Tourism:** September 11th has generated widespread fear of air travel and persuaded many people here and abroad to stay home.

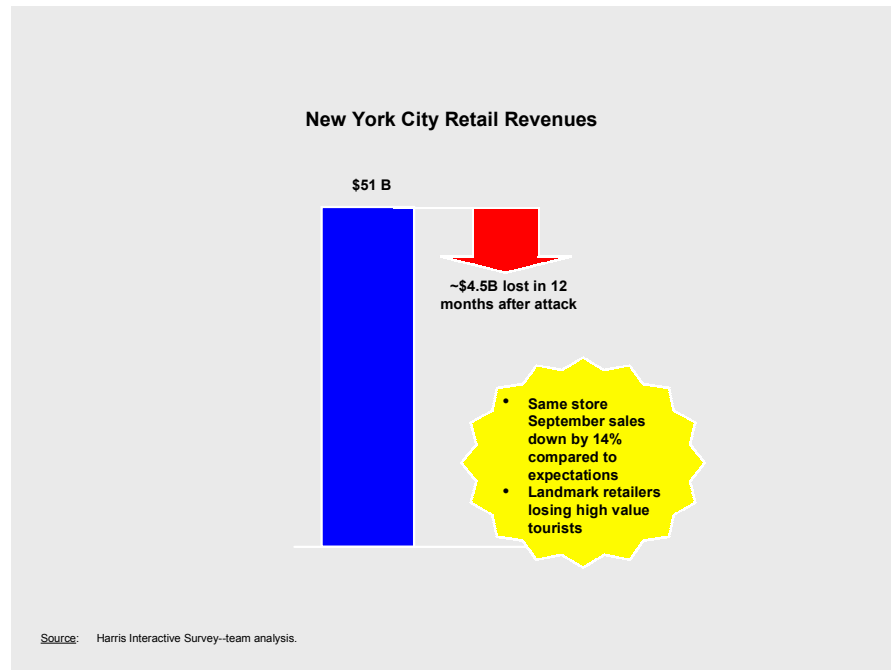
The Harris Interactive survey of consumers in Britain and Canada suggested that travel to New York from those countries would decline approximately 40% in the fourth quarter, a significant blow, when compared to the levels anticipated before the attack. International visitors strengthen the New York economy because they spend three times as much per person as visitors from other locations.

While discounts and other incentives may persuade some to travel, they will also reduce revenue from travelers who would have come even without those reductions. The New York travel and tourism industry, which has enjoyed annual revenue of \$34 billion, is likely to lose \$7 billion to \$13 billion in revenues by the end of 2003, and will lose approximately 25,000 jobs in 2001.



The reluctance to travel is not unique to New York. All major travel destinations have seen substantial declines. New York will need to work with the tourism industry across the country to ensure the implementation of both the appropriate security steps and the necessary incentives to promote travel. Locally, the public and private sectors will need to work to promote New York, and to support a security plan for landmarks, airports, subway and commuter rail terminals, department stores and other venues in the public and private sectors.

- **Retail:** By 2003, revenue from retail business in the city is expected to drop by \$7.6 billion from a base of \$51 billion a year. In the days following September 11th, sales revenue from department stores, specialty shops and other retail outlets in Manhattan plunged 30% to 40%. The disaster temporarily altered consumer behavior elsewhere too. But while seasonally adjusted retail sales in September dipped 2.6 % from the previous month in the nation, they slid 14% below anticipated levels in New York City.



The retail sector will continue to feel the force of September 11th during the 2001 holiday season, especially in high-end department stores and in specialty retail establishments. The decline in the financial services industry and the loss of high-spending international tourists will damage retail businesses. Smaller stores are likely to suffer cash-flow difficulties and may encounter problems with creditors.

- **Small Business:** Small business traditionally has played a critical role in Lower Manhattan's economy, often by providing essential services and products to larger enterprises and to the area's residents. Prior to September 11th, thousands of businesses, employing more than 100,000 people, were located in Lower Manhattan, south of Chambers Street. Approximately half of these firms occupied niches in financial and professional services. More than 700 businesses located in the World Trade Center complex were either destroyed or sustained extensive damage. Many other businesses in the vicinity have seen their sales decline by up to 80% because of disruption and damage to the area. Small businesses tend to be cash-based and underinsured, and risk closure if they don't receive financial support to meet payroll, rent, utility bills and other accounts.

NONPROFIT ORGANIZATIONS

While the four sectors mentioned above sustained the greatest damage in the private sector, nonprofit organizations also face serious financial problems, especially those groups that focus almost exclusively on providing social services to New Yorkers. This segment of the nonprofit world in New York accounted for \$23 billion in revenue in 2000 and 5,700 organizations. This part of the nonprofit community plays a critical role, both as an advocate and as a major provider of the essential social services citywide and in communities. (The overall nonprofit sector is approximately 27,000 organizations, and it receives \$80 billion annually in private and government support.)

While most organizations will experience a short-term drop in direct revenue from public and private sources, those nonprofits focused on youth, family and community development are likely to sustain a sharper, longer falloff in revenue. They rely heavily on government support, and the day-to-day services they provide can be taken for granted, especially when the nation's attention is focused on nonprofits that deliver services that help people deal with the aftermath of September 11th.

SIX PRIORITIES TO ACCELERATE NEW YORK'S RECOVERY

Interviews with more than 200 leaders of the New York business community show that the private sector is committed to working collaboratively to solve these problems. New Yorkers are more united than at any time since the fiscal crisis in the 1970s. To be effective, their energies must be focused. We suggest the following priorities:

(1) Rapidly Develop a Plan for Lower Manhattan

New York City is clearly better off with at least two robust central business districts. By the same token, businesses need a variety of places to base their operations. Businesses have benefited from the attractive and competitive rents Lower Manhattan has provided for decades. In addition to fulfilling its historic role as the headquarters of the financial services industry, Lower Manhattan has attracted many small businesses and entrepreneurs who enhance and expand New York's economy.

September 11th underscores the value of having more than one central business district. Many companies want to operate from a variety of locations to avoid concentrating all their employees and operations in the same place. Without the choice of at least two large New York City central business districts, many businesses may choose to place only some of their employees in New York City, moving the rest. (Note that the opportunity and ability to develop additional business districts in Brooklyn, Queens and on the far West Side would be enhanced by a full recovery in Lower Manhattan.)

To truly revitalize Lower Manhattan, business leaders should address, over the long term, the area's long-standing infrastructure and access problems. Some short-term steps could send a strong signal to businesses that New York is committed to revitalization.

Business, labor and civic leaders need to support the efforts of government to:

- ***Develop a Long-Term Plan by mid-2002:*** The private sector needs to work with New York City and the State of New York to set an overall vision to develop a well-defined plan for Lower Manhattan. Urban recovery efforts after several major earthquakes provide an invaluable lesson: those cities that quickly agree on a recovery plan, even though it may take years to implement, maintain their economic strength. A plan helps to create new business and stimulate investor confidence.

The plan should address Lower Manhattan's long-standing problems of access and infrastructure. Those involved in creating the plan will fail miserably if all they manage to do is recreate the status quo ante in terms of the infrastructure for transportation, telecommunications and energy. The plan that emerges should enable Lower Manhattan to become a world class, high tech community – a 24-hour, mixed use neighborhood. It should be full of high-performance buildings, nodes of housing and retail stores, commercial space for industries such as biotech, enterprise software and international business. Lower Manhattan should be made more attractive than ever, with cultural amenities and, of course, a memorial to those who lost their lives on September 11th. This region of New York should become the envy of its global competitors. By setting a planning process in motion, with a fixed end date, the private sector and other stakeholders will help New York develop the best possible program quickly, avoiding the danger posed by years of debate and paralysis about what to do about downtown.

- ***Work with the Lower Manhattan Redevelopment Corporation:*** In order to maximize the effectiveness of the effort to revitalize downtown and gain the confidence of all key stakeholders, the private sector supports the decision of the Governor and the Mayor to establish a reconstruction authority for Lower Manhattan. It should oversee investment of federal funds, coordinate expedited infrastructure developments and manage the incentives required to attract and retain businesses and residents in the area.

(2) Take Steps to Overcome Infrastructure Challenges

- ***Accelerate efforts to improve access to Lower Manhattan:*** The Partnership supports an expansion of temporary measures to improve transportation. Possible steps include the continuation of single occupancy vehicle restrictions, the addition of high-speed bus lanes and increased land and ferry service to the

area. While these steps would not restore access to pre-September 11th levels, the changes would shorten commutes workers find burdensome and signal commitment to downtown.

- ***Work with telecommunications providers and Con Edison to promote and speed up full restoration of service:*** Employees of Verizon and Con Edison performed heroically after the attack. Still, full telecommunication service has not been restored, and the power distribution system must be substantially rebuilt before next summer. The private sector should work with the utilities to ensure that reconstruction activities are coordinated and expedited, allowing businesses to plan, based on a realistic timetable for the resumption of full services. This collaboration with providers of energy and telecommunications must also ensure that in the intermediate term these services reach 21st Century standards in terms of capacity, resilience and access to alternate systems that can be swiftly activated in the event of a natural or manmade disaster. Clearly, large companies and financial services firms will no longer rely solely on one system for voice communications and data.

- ***Support the appointment of a transportation coordinator to orchestrate the efforts of the Metropolitan Transportation Authority, the Port Authority of New York and New Jersey and the two Departments of Transportation:*** All of these public sector entities will need to work together to speed the improvements required to make Lower Manhattan more competitive. This official should also work with stakeholders to identify key priorities for improvement and the synergies among mass transit services. If restoration and redevelopment of Lower Manhattan is delayed and highly disruptive, the district's vacancy rate could reach 20% by 2006. This worst case scenario could result in the loss of 28,000 additional jobs and \$5 billion in economic output the city can ill afford to lose.

(3) Ensure Improvement in Security

The private sector should take three actions to support efforts to improve security for businesses, employees and customers:

- ***Support national efforts to improve security:*** The private sector should support those government actions and policies that truly improve security at local, state and national levels. Some of the steps government may take will involve some inconvenience and greater investment in technology. Public opinion research by Harris Interactive, however, clearly demonstrates that many Americans would now accept inconvenience in exchange for greater security.

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- **Develop local security protocol in high-traffic private areas to restore consumer confidence:** Local businesses in many landmark locations and key retail industries are potentially at risk. The private sector should work with the city and state to support efforts that improve security for each industry.
 - **Support emergency preparedness plans— especially those focused on bioterrorism:** On September 11th, New York City’s hospitals and emergency response agencies showed the benefits of their existing emergency plans. New York City’s system could be a model for other cities across the nation. Nevertheless, local law enforcement agencies and hospitals will still need to improve their capacity to deal with bioterrorism. The private sector should work with hospitals and public health officials to develop an overall plan to ensure that New York is prepared.

(4) Focus on the Retention of Financial Services Jobs and Income

Because of the importance of financial services to the New York economy, particular attention must be paid to the needs of this sector.

Developing a plan to overcome Lower Manhattan’s infrastructure challenges and improve security remains the primary way to maintain its attractiveness to financial services. In addition, members of the industry will need to work together to:

- **Reaffirm support for building the new home of the New York Stock Exchange in Lower Manhattan.** The New York Stock Exchange should be encouraged to move forward with plans to build a new headquarters here. The New York Stock Exchange is an anchor of the city’s Financial District, which is home to the Federal Reserve Bank of New York and the private sector’s clearinghouse operations.
- **Develop a plan for secure and robust alternatives for key financial services “choke points.”** The financial services industry requires several key services, including the custody of securities and the clearing and the settlement of trades. Many such services are located in Lower Manhattan. The aftermath of the attack demonstrated the need across the industry for alternative systems that can be activated swiftly in the event of an emergency. The industry needs to work collaboratively to improve security for these functions and to ensure that they are resilient.

(5) Support Small Businesses in Lower Manhattan

Efforts to help small business downtown should be intensified. Since September 12th, the Partnership has been working with New York City and the State of New York to identify and support the thousands of small businesses that were damaged by the attack. The network of industry volunteers organized by the New York City Investment Fund is being

redeployed and expanded to deliver these services. These ongoing efforts, which should be expanded, include:

- ***Responding to small business sector's needs for flexible capital financing:*** Many of the businesses hardest hit have clear short-term capital needs. They are typically undercapitalized and may not survive for even a few months. The Partnership's program of outreach helps small businesses navigate the maze of private and public loans and other emergency programs.
- ***Using philanthropic funds for small business support:*** Because some businesses would not qualify for traditional private sector loans, the Partnership is raising philanthropic money to deploy five-year recoverable grants. In the immediate aftermath of the attack, the New York City Investment Fund allocated \$1 million to this effort, and has already raised additional millions from the September 11th Fund and other sources.
- ***Continuing efforts to support relocation and recovery:*** Many of the businesses that were located in the World Trade Center now do not have enough customers to support a resumption of operations. For those businesses, the Partnership is working to provide private sector advisors to assist in identifying new locations for operations, and to raise capital to restart their businesses.

(6) Promote the New York Economy

Business leaders need to share responsibility with government to spur the recovery of key sectors of the New York economy. They ought to:

- ***Set up a public-private alliance to recruit and retain businesses in New York:*** The Partnership is prepared to create a CEO task force to work with the Governor and the Mayor to encourage fellow business leaders either to move to New York, or to commit to staying here. This group should also work to attract company meetings and conventions to New York. The value of this kind of effort is clearly visible in the decision of the World Economic Forum to move its 2002 meeting to New York.
- ***Communicate that Manhattan is "open for business."*** The Partnership's national public opinion survey found that many Americans think the damage to New York extends over a very wide area of the city. The Partnership will work with its members to ensure that the nation and world know:
 - New York remains the world's business capital.
 - Almost all businesses are back in operation.

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- Only the immediate area around the World Trade Center’s sixteen-acre site remains closed.
 - New York is committed to attracting entrepreneurs from emerging sectors such as biotech, international business and enterprise software to establish operations and live-work enclaves in Lower Manhattan.

CAUTIOUS OPTIMISM IS JUSTIFIED

While the economic impact of the attack is clearly daunting, the study also found several reasons that justify an optimistic outlook. New York should be able to muster the homegrown and federal resources required to rebound, and depending on the pace of that rebound, New York may even be in a position to help lead the country out of the current economic slowdown. Consumers around the country and the world, according to public opinion research for this study, continue to believe that New York remains an attractive and exciting place to visit. Polling of New Yorkers and residents of the tri-state area affirmed that New Yorkers and their neighbors continue to believe the city is an exciting place to live.

The sector analyses determined that New York would continue to be a leader in the global economy in such industries as financial services, media and entertainment, professional services and health care as well as the global center for culture.

Most important, the study found a rare depth of commitment among New York’s business leaders. These leaders are eager to work with elected officials and other stakeholders to promote New York, overcome the challenges created by September 11th and accelerate the economy’s recovery.

Economic Impact of the Attack On the Financial Services Sector

This report on the financial services sector is based on research and analysis carried out by McKinsey & Company.

SUMMARY

An estimated 40 percent, or 1,700, of the civilians killed in the attack on the World Trade Center worked in the financial services industry.

The immediate economic impact of September 11th on the financial services industry was modest relative to the overall size of the financial services sector. Capital losses were limited because most financial services firms rented space and carry high levels of insurance coverage. While the industry suffered a shock because of the suspension of most trading for several days, financial systems performed well overall.

Looking forward, however, there is cause for concern, both for the industry and for the New York City economy, which is very dependent on financial services. Of the thousands of jobs that have temporarily left the city, many may never return. In the short-term, this dislocation of employees will deprive the city of substantial tax revenue, and will have ripple effects on the Lower Manhattan economy. In the longer term, the greater concern lies in retaining additional jobs that may leave over time, as companies place operations in multiple locations to achieve higher levels of security and to position themselves to activate alternative systems in the event of a manmade or natural disaster. Some smaller firms may leave entirely because of security concerns and desires to end difficult commutes for employees.

In addition, the attack exposed structural deficiencies in the financial system: the lack of geographic diversity in backup plans, insufficient access to backup sites, a lack of alternative networks for telecommunications and power, and a vulnerability to key “choke points.” These weaknesses could pose a significant threat in the event of future system-wide disruptions.

This report offers recommendations for the city and the industry. New York City, assisted by the State and Federal governments, should regain the confidence of dislocated workers by rapidly implementing a comprehensive security plan that minimizes additional disruptions, developing interim transportation solutions for key bottlenecks and swiftly outlining a redevelopment plan for Lower Manhattan. Economic incentives may be used to influence certain relocation decisions, provided they are carefully tailored and structured. Over the longer term, public-private initiatives should be created to identify

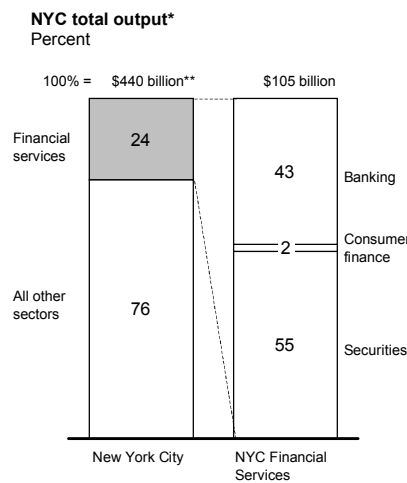
neighborhoods in the five boroughs where it makes business sense to develop backup sites and, potentially, back-office operations.

The financial services industry, with oversight and support from regulators, should reduce the exposure of financial market participants to systemic vulnerabilities. Regulatory oversight of individual institutions, and the linkages among them, should provide guidance for alleviating operational risks. At the same time, the industry should develop an alternative communications network for use in emergency situations, and should work collaboratively with the utilities to make the infrastructure as resilient as possible.

IMPACT ON FINANCIAL SERVICES IN NEW YORK CITY

The financial services industry is a primary driver of the city economy, supporting substantial secondary employment and investment, and in turn, enhancing the city’s prominence as a global business hub. In the near term, the primary concern of the public and private sectors should be the needs of dislocated employees, since they have a greater impact on the city’s loss in output than industry-wide macro-economic effects have. No government can wave a magic wand to end the industry-wide slowdown in financial services. But City Hall, Albany and Washington can work together to restore Lower Manhattan as a desirable place to work and can fashion economic development tools that maximize the number of dislocated employees who return. The long-term concern for New Yorkers and for the city economy is the potentially greater loss that would flow from having a broader group of at risk employees leave the city.

Financial Services is a Large and Growing Component of the NYC Economy



Source: Bureau of Economic Analysis, DRI, Economy.com, NYC Office of the Comptroller.

Notes: *Output is defined as the value-added of goods/services produced. It is a better measure of economic activity than revenues as it avoids double-counting of intermediate goods/services (e.g., telecommunication costs for a financial services firm are revenues to telecom companies).

**Consensus estimate based on DRI, NYC Office of the Comptroller and Economy.com.

Direct economic losses to the industry were modest.

Of the \$30 billion in total capital losses, only about \$4.4 billion was attributable to financial services firms, since most firms leased their office space. Moreover, with a majority of the property damage covered by insurance, the net loss to the sector will be even lower. The cost of business disruption, a combination of lost revenues from market closure and dislocation expenses, was about \$1.8 billion, and was partially covered by insurance. Although the aggregate losses were manageable, many individual financial services firms experienced a devastating loss of life and intellectual capital. Some smaller firms located in the World Trade Center, such as Cantor Fitzgerald, were particularly hard hit.

Incremental layoffs will be low.

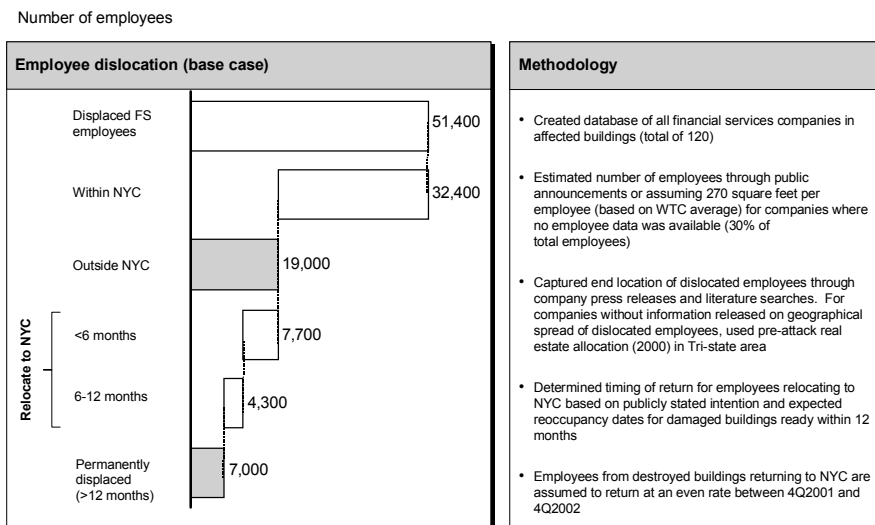
The events of September 11th will only marginally accelerate employment losses in the financial services sector in New York. Over the past ten years, New York City has gradually lost share of national financial services employment. Before September 11th, major New York City-based financial services firms had already announced over 30,000 layoffs globally, including an estimated 11,000 in the New York area. After September 11th, more than 13,000 global layoffs were announced, the majority of which would have occurred anyway. The attack and its aftermath are expected to result in another 2,400 layoffs in New York City in the fourth quarter.

Job dislocations will be significant.

The World Trade Center disaster has dislocated more than 50,000 financial services employees from Lower Manhattan, of whom 19,000 have moved into office space outside of New York City, primarily in New Jersey. An estimated 7,000 of the 19,000 are unlikely to return to New York City. The total impact of dislocation will reduce wages earned in the city by \$1.1 billion in the fourth quarter of 2001.

**More Than Half of Financial Services Employees
Dislocated Outside of NYC Could Return Within One Year**

ESTIMATE



Source: TenantWise, CoStar, Insignia/ESG, literature search, McKinsey analysis.

The longer-term challenge is to retain remaining employees.

Interviews conducted for this economic impact study suggest that a far larger challenge for New York’s public and private sectors is the following: firms that may transfer some or all of their employees out of the city. After dislocation, there remain about 272,000 people working for financial services firms in New York. About 129,000 of them are based in Lower Manhattan. Without a thorough survey, developing a solid estimate of the size of the “at risk” pool of employees is not possible. A “back-of-the-envelope” calculation indicates that it may be as large as 31,000, including an estimated 6,000 employees from small firms that may move out of the city and an estimated 25,000 employees from large firms that may seek to diversify their operations in locations outside of the city.

Loss of jobs and employees is likely to have a greater impact than industry-wide slowdown.

The impact of the economic slowdown and of losing financial services workers in New York City will be felt directly through lower tax revenues, and indirectly through ripple effects on other sectors of the city’s economy, particularly in Lower Manhattan. The financial services sector, especially securities firms, was already experiencing a decline in revenues and profitability before the attack. Estimates based on analyst forecasts, prior to and after September 11th, suggest that New York City’s financial services sector will lose another \$1.5 billion in economic output (i.e., the value-added of goods and services produced in the city) in the fourth quarter of 2001 because of further slowing of the

economy that can be attributed to the attack on the World Trade Center. Through 2003, the total incremental loss of output resulting from macro-economic effects could be \$4 billion to \$10 billion, depending on the severity and length of the economic downturn. Clearly, the magnitude of the macro-economic effect is dependent on one's assessment of the impact of September 11th on financial services over the long term, and could be substantially greater than what has been assumed up to now.

Macro Economic Factors Alone Result in an Incremental Output Loss of \$4 Billion to \$10 Billion

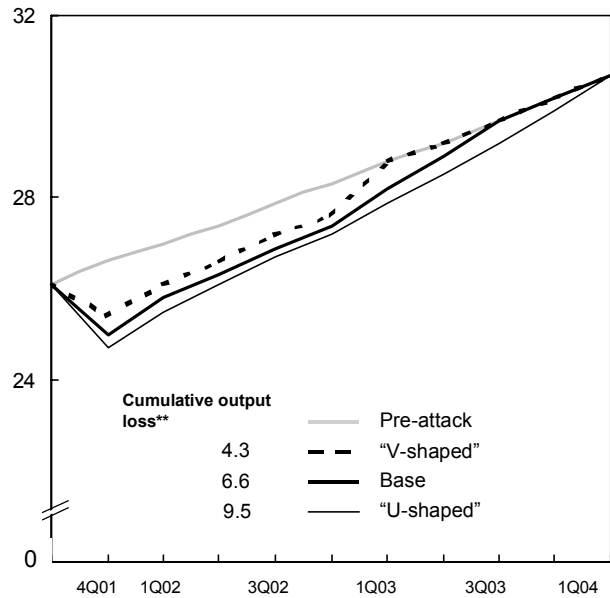
ESTIMATE

\$ Billions

Macroeconomic scenarios	
Base case	<ul style="list-style-type: none"> Economy tipped into recession by attacks, with gradual recovery Output assumed to return at a constant rate to pre-attack levels by 3Q2003*
Best case: "V-shaped" recovery	<ul style="list-style-type: none"> Faster rebound from recession (e.g., due to looser monetary/fiscal policy) Output assumed to return to pre-attack levels by 1Q2003*
Worst case: "U-shaped" recovery	<ul style="list-style-type: none"> More prolonged recession due to attacks as consumer and business confidence falls Output assumed to return to pre-attack levels by 1Q2004*



Quarterly NYC Financial Services Output



Source: BEA, McKinsey analysis.

Notes: *Not including impact of employee dislocation.
**Over 4Q200 to 4Q2003, not discounted.

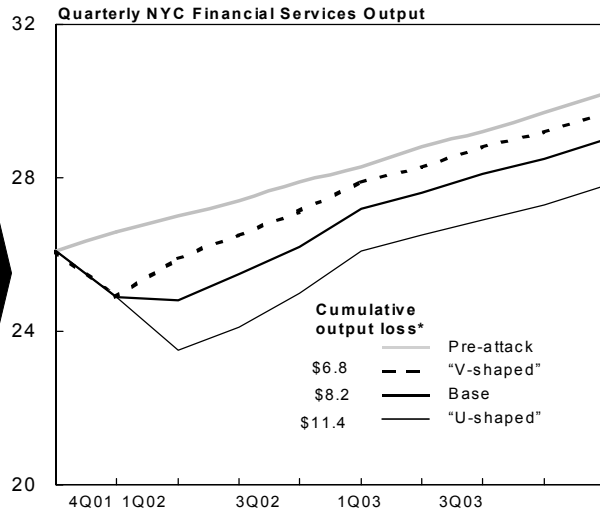
In the short term, New York City should focus its attention on winning back dislocated employees since they account for a greater impact on output than macro-economic effects – additional losses of \$7 billion to \$11 billion through 2003, resulting in total losses of \$11 billion to \$21 billion when combined with macro-economic effects. Moreover, the city, state and federal governments are not in a position to exert any influence over the industry-wide contraction in financial services. But these governments can directly address this issue of winning back dislocated workers.

Employee Dislocation Out of NYC Results in an Incremental Output Loss of \$7 Billion to \$11 Billion

ESTIMATE

\$ Billions, percent

Permanently Dislocated Employees			
	Best	Base	Worst
Stated intent to return			
Destroyed/long-term damage	0%	33%	67%
Short-term damage***	0	0	33
No stated intent to return			
Destroyed/long-term damage	100	100	100
Short-term damage	25	50	75



Source: BEA, McKinsey analysis.

Notes: *Over 4Q01-4Q03, not discounted.
***Building will be ready within 12 months.

In the longer term, retaining the broader group of “at risk” employees should be the top priority for those in the public and private sectors committed to revitalizing the central business district in Lower Manhattan. The magnitude of this potential exodus is significant – amounting to an additional \$11 billion in annual output, were this entire group to leave New York.

IMPACT ON FINANCIAL MARKETS

While the financial system experienced no major breakdowns as a result of September 11, the attacks exposed significant deficiencies.

The system performed well – *this time*.

Overall, the financial system held up remarkably well, given the extent of physical damage and disruption. But there were exceptions within these areas:

- **Wholesale payments systems:** There was major disruption to the clearing banks, which affected other markets (e.g., Treasury securities). As a whole, however, payments systems involving institutional transactions performed well, with continued operations from Manhattan or backup sites.

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- **Fixed income markets:** As a result of the disruption to the clearing banks and damage to major inter-dealer brokers, market making and clearing in Treasury securities were suspended briefly. These effects spilled over from government securities trading to the repo market. The Federal Reserve correctly diagnosed this as a liquidity issue, not a credit issue, and pumped \$80 billion of liquidity into the system to help avert a major market failure.
 - **Corporate credit market:** Due to overall uncertainty in the commercial paper market, some corporations sought to draw down their short-term lines of credit, especially commercial paper back-stops. In instances where some banks were unable to fund loans because of physical disruption, other banks stepped in to advance the entire amount to help avert larger-scale commercial paper defaults.
 - **Commodities and foreign exchange markets:** Some commodities markets were closed for four days because of damage to buildings, but trading resumed the following week. In foreign exchange markets, foreign banks were unable to borrow U.S. dollars from U.S. banks, causing the Federal Reserve to intervene and arrange for \$90 billion in foreign swaps.
 - **Equity markets:** Restrictions on access to Lower Manhattan and connectivity problems between the exchanges and member firms/market-makers forced the equity markets to close for four days. Clearing and settlement were unaffected. Fortunately, the New York Stock Exchange and Nasdaq themselves were undamaged and trading resumed seamlessly when those exchanges reopened on September 17th.
 - **Retail payment systems:** The Federal Reserve was unable to transfer paper checks between Fed districts due to the shutdown of civilian air traffic in the days following the attack. As a result, the Fed undertook some temporary credit risk by extending the float to banks. All other retail payments functioned normally throughout the period.

SOME VULNERABILITIES WERE EXPOSED

While individual companies dealt adequately with the business interruption caused by the attack, the events of September 11th revealed certain important vulnerabilities in the financial system as a whole:

- **Diversification:** Companies' backup plans generally failed to address the need for geographic diversity in backup sites.

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- **Access:** Backup plans did not take into consideration the importance of quick and seamless access to backup sites and failed to assume that mobility and transportation could be disrupted.
 - **Connectivity:** The underlying connectivity of the telecommunications and power infrastructure was surprisingly fragile, with single points of failure (e.g., the Verizon central office at 140 West Street). Both the energy infrastructure and the telecommunications infrastructure lacked alternative networks that could be activated swiftly.
 - **“Choke points”:** In retrospect, the financial markets were, and continue to be, exposed to a few critical and highly concentrated “choke points” – key hubs such as exchanges, clearing firms and inter-dealer brokers. Disruption at the choke points triggers significant spillover effects for the rest of the financial services system.

RECOMMENDATIONS

Although New York City’s economy and the financial services industry are inextricably linked, distinct priorities need to be set going forward. The public and private sectors should pool their efforts to win back dislocated financial services employees and retain those employees now here. This would help maintain New York’s preeminence in financial services and would protect its tax base. Separately, the industry should build a resilient infrastructure. This will entail the following: adapting regulatory oversight of contingency measures to account for the operational risks highlighted by September 11th, particularly for “choke points”; creating alternative communications methods; and, developing alternative networks and systems for the power and telecommunications infrastructures.

Return and retain workers

Securing the return of dislocated workers should be the near-term priority for two reasons. Their departure from the financial services sector based in New York is the largest driver of damage to the city’s economy. This is the only driver that government efforts can influence. At the same time, it is essential to acknowledge the reality of the post-September 11th world. Additional employees currently working in Lower Manhattan remain “at risk” of leaving. The public and private sectors have a responsibility to strive to retain the headquarters and operations of larger firms, as well as to make New York attractive and hospitable for smaller firms.

While redeveloping Lower Manhattan should be a priority for City Hall, Albany, Washington and the business community as a whole, redevelopment may be less of a priority for individual financial services firms. Interviews across a range of firms suggest

that for security reasons, many large firms will seek to diversify where their business units are located by moving some of them outside of Lower Manhattan. As a result, these businesses are unlikely to return all of their dislocated employees to Lower Manhattan.

In the immediate term, the first priority must be to make Lower Manhattan a more desirable place to work. In conjunction, economic incentives to displaced companies could be used to influence relocation decisions. To the extent that the various levels of government decide to offer economic incentives, these packages should be carefully tailored and structured. Over the longer term, the city should develop low-cost areas in the five boroughs to attract emergency backup services and, potentially, back-office functions for financial services firms.

- ***Immediately restore Lower Manhattan as a desirable place to work:*** Financial services firms considering a return to Lower Manhattan suggested during interviews that they would be reluctant to commit until they see government address the following critical issues:
 - Develop and announce a comprehensive security plan that minimizes additional disruptions, particularly around buildings in the Wall Street area and Midtown that are symbols of Corporate America’s economic prowess.
 - Quickly implement interim solutions for disrupted local transportation, including the PATH terminal destroyed in the attack on the Trade Center. These setbacks disproportionately affect financial services employees.
 - Develop and announce a redevelopment plan for Lower Manhattan that minimizes additional disruption to firms located there, and assures both dislocated and remaining firms access and mobility in Lower Manhattan.

- ***Offer tailored incentives to lure firms back, where appropriate:*** To the extent that they are used, economic incentives need to be tailored for specific firms with higher-value jobs. These incentives should also be customized to complement a firm’s desire to avoid concentrating all of its operations and intellectual capital in one small geographic area.
 - Incentive packages may be well suited to influence certain near-term relocation decisions, provided they follow several guidelines. These include focusing on “at risk” companies that account for the majority of dislocated employees least likely to return to New York City; and this also involves creating mechanisms to limit the ability of non-dislocated companies to demand similar packages. These packages should also link incentives to specific requirements over time, and

should be developed and made available in the very near term in order to have the greatest influence on imminent relocation decisions.

- Incentive packages should also be structured to aggressively seek to retain higher-value-added jobs, particularly positions most at risk of migrating, including positions held by traders and fund managers. For the long term, New York City should focus on retaining in Manhattan certain jobs that have a natural network in the city. The city should not necessarily focus on bringing back jobs for which Manhattan is not cost-competitive. Maintaining a critical mass of key functions (e.g., investment banking, sales and trading) and key institutions (e.g., New York Stock Exchange, corporate headquarters) will allow the city to continue attracting intellectual and financial capital – both foundations of its pre-eminence in financial services and necessary elements of a competitive global center.
 - Financial services firms are unlikely to return all of their employees to Lower Manhattan given their new emphasis on geographic diversification. Government incentive packages should explicitly address, rather than fight, this concern by encouraging financial services firms to relocate some employees across the five boroughs and by offering to build necessary infrastructure on a case-by-case basis. City Hall should emphasize areas that are attractive to financial services firms in terms of cost, infrastructure and access. It should also exploit the business-district potential of Downtown Brooklyn, Long Island City and the far west side of Manhattan.
- **Longer term, respond to specific infrastructure needs.** To maintain its attractiveness to financial services firms, the city should facilitate the development of an infrastructure that responds to firms' specific needs. In particular, New York should consider developing low-cost areas outside of Lower Manhattan and Midtown that can house emergency backup services and, potentially, back-office functions. The city could ensure that these areas are attractive to financial services firms by making them areas that would be served by multiple power grids and telcom networks that firms require at backup sites.

Build a more resilient financial system

The financial services industry should focus on identifying systemic vulnerabilities and improving contingency measures of all financial markets participants. They should:

- **Enhance regulatory oversight of individual institutions and linkages among institutions.** The events of September 11th highlighted the financial system's

vulnerability to operational risks within and among financial institutions. In the wake of the attack, regulatory agencies are actively re-examining their approach to oversight, which should be adapted at both levels:

- Business Recovery Plans (“BRPs”) of individual institutions: When regulating BRPs on an individual firm level, regulatory agencies should emphasize issues of access and connectivity.
 - Systemic linkages and dependencies: In parallel, the regulatory agencies should institute mandatory industry-wide “stress tests” to explicitly test linkages between institutions. For example, in the equity markets, regulators and/or industry groups (e.g., the Federal Reserve, SEC, Securities Industry Association) could sponsor joint connectivity tests between backup systems of selected firms, key clearing utilities and major customers. Other entities, potentially including the Treasury and the Bond Market Association, could sponsor tests for the bond markets with particular focus on the clearing and settlement process.
- **Create a secure alternative system for key “choke points”:** A system-wide effort should be launched to:
- Develop a “wiring diagram” for the industry and identify choke points. One option would be to form a private sector task force led by a respected industry member and composed of representatives from Treasury, Federal Reserve and SEC, as well as payments utilities and key wholesale and retail firms.
 - Explore a higher level of contingency standards for choke points. In developing new guidelines for BRPs of individual institutions, regulatory agencies should explore establishing higher benchmarks for critical elements of the system. In this respect, the commercial paper and repo markets should be considered for greater oversight to curtail the level of uncertainty given the lack of central authority over those markets.
 - Create contingency procedures to ensure that local authorities can coordinate with key financial services leaders in the event of emergencies. Measures could include providing local authorities with a list of critical employees and employers at choke points to ensure priority access to offices in the event of another wide area shutdown, and creating a hotline to facilitate coordination.
- **Create an alternative industry communications network:** The industry should consider developing a secure network for use in emergency situations that

does not rely on the main telecommunications network, or on the mobility of participants (e.g., to reach backup sites). In addition, it should leverage existing technology to maintain a dynamic, real-time industry contact list and should establish jointly agreed-upon contingency procedures.

- ***Use industry influence to upgrade infrastructure:*** While the destruction and disruption of elements of the telecommunications and power infrastructures in Lower Manhattan create an opportunity for upgrading, individual firms have limited leverage to effect this because there are no alternative suppliers of these services. Financial services firms located in Lower Manhattan should consider forming an industry consortium to work with key energy companies and telecommunications companies to develop alternative systems and to upgrade critical infrastructure.

Economic Impact of the Attack on the Travel, Tourism and Transport Sector

This report on the sector that encompasses travel, tourism and transport is based on research and analysis conducted by the Boston Consulting Group, which also designed the public opinion surveys commissioned for this study. The survey itself was conducted by Harris Interactive.

SUMMARY

The travel and tourism sector¹ is critical to New York City. This sector represents 6% of the economic output, employing 470,000 people. In 2000, this sector generated \$34 billion in revenues -- a record year. Prior to September 11th, the performance of this sector had slowed in 2001, both in New York City and across the United States.

September 11th has had a devastating effect on the travel and tourism-related sector. Fourth quarter revenue in 2001 including the nineteen days following September 11th is expected to fall by as much as \$3 billion, or 29%, from the same quarter a year ago. This would translate into a 9% decline for 2001 overall, from \$34 billion in 2000.

- ❖ The outlook for 2002 is still unclear. In the period from 2001 through the end of 2003, total revenue for New York City's travel and tourism-related sectors could drop as much as 7%, to 13%, or \$7 billion to \$13 billion, from the \$102 billion that would otherwise be expected in the period. This decline will be driven by both a fall in demand and a steep discounting across the sector. Declines in advance booking by both leisure and business travelers will further exacerbate the economic uncertainty.

In the interim, the decline in the number of visitors to New York City reflects fear and concerns about security, a desire to stay close to home (with family and friends) and general economic uncertainty. In the short-term, even visitors and commuters from the tri-state region are less likely to visit New York City, and city residents are spending more time in their neighborhoods. In the longer term, the outlook looks brighter, as New York City retains its attraction as an exciting place that people want to visit.

¹ The travel and tourism sector specified includes all local restaurants, hotels, attractions, travel agencies, airlines, airports, public transport, car services, taxis and rental cars (thus including some spending by locals in restaurants, public transport, and so on. Retail spending by tourists or visitors is NOT included.)

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- ❖ The loss of fall revenues in 2001 will damage most businesses and may prove fatal for some of the very smallest businesses, as these businesses rely on a strong fourth quarter to get them through a traditionally lean first quarter.

Three initiatives would help the travel and tourism sector recover.

- **Government and the business community should work together** to address the public's safety and security concerns. These institutions should work to develop and champion concrete security innovations that form the basis of a national agenda.
- **Industry should adopt a phased approach** to stimulate consumer confidence through public relations and marketing efforts. The campaign should initially focus mainly on visitors from the region who are easier to attract. The campaign should later concentrate on visitors from other regions of the nation and on visitors from foreign countries who will be more difficult to attract. An immediate plan to boost the number of visitors during the holiday season in November and December of this year should be implemented.
- **Attention should be focused on key elements of Lower Manhattan's mass transit infrastructure**, where destruction is a drag on mobility for residents, workers and visitors. Leaders of the public and private sectors ought to mobilize support for a simple, deliberative and effective process to prioritize the area's transport and infrastructure needs, and should identify funding sources. Access has been a chronic problem in Lower Manhattan. This problem has become much worse as a result of September 11th. A "better than before" solution will be needed if Lower Manhattan is to retain current businesses and attract new ones. Meanwhile, the private and public sectors should work together to implement interim solutions to alleviate current access problems.

ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

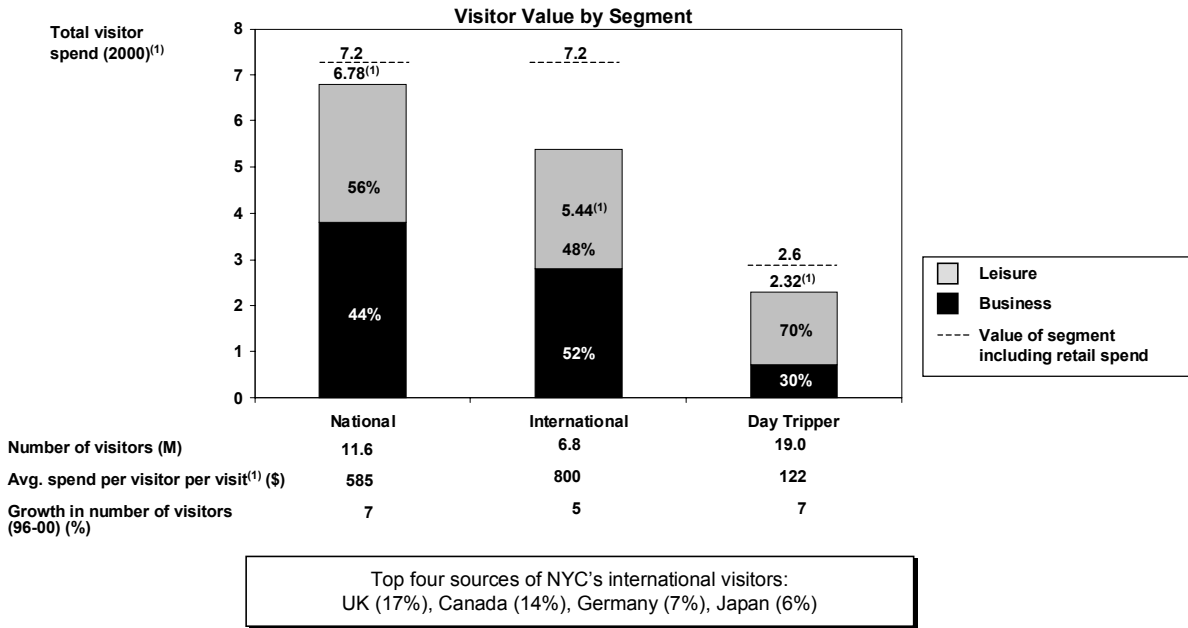
While New Yorkers themselves spent billions of dollars at the city's travel and tourism establishments, visitors to the city spent \$14.5 billion here last year, excluding retail purchases. These visitors can be categorized as follows:

- ❖ 6.8 million travelers from overseas who made up 18% of visitors but spent \$5.4 billion
- ❖ 11.6 million overnight visitors from elsewhere in the nation who spent \$6.8 billion;
- ❖ 19 million day visitors who spent \$2.3 billion.

Looked at in a different way, more than 30% of all visitors (11.7 million) were business travelers, who accounted for 45% of all non-retail spending. If retail spending is included, New York City’s international visitors, on an aggregate level, are as valuable to the city as national visitors from around the country, with each group having spent an estimated \$7.2 billion last year. While spending has increased across the years, the relative proportion of each category of visitor has remained roughly the same.

On a per visit level, international visitors are significant to the travel and tourism sector, spending almost 40% more than domestic visitors, excluding retail purchases. Four countries account for more than 40% of international visitors: the United Kingdom (17%), Canada (14%), Germany (7%) and Japan (6%), and these skew seasonally toward the fall months.

Composition and Spending Patterns of Visitors to New York City



Source: NYC & Company 2000, BCG analysis.

Notes: (1) Excludes shopping
 Visitor defined as one who travels 50+ miles (excluding commuting) or stays overnight. NYC residents excluded.
 National defined as any visitor originating within the United States and staying overnight in NYC.

Weakness in the travel and tourism sector was apparent prior to September 11th, reflecting the country's general economic slowdown. National airlines had already experienced a 2% decline in passengers, starting in the first quarter of 2001. Hotel occupancy had fallen by 10% to 15% in the first two quarters, compared to a year earlier. Car rentals were down by 5% to 10% in the first eight months of 2001, compared to 2000.

The downturn is also visible in the behavior of various categories of visitors. Business travel fell first. This decline began in December 2000, and proceeded dramatically when the first quarter of 2001 came in lower than expected for many businesses. Later in the summer, the number of leisure visitors began to fall. In New York City, the growth in visitors had begun to taper off, with no forecast of recovery until the third quarter of 2002.

While the downtown financial district represents only 2% of New York City's travel, and tourism revenues, the general area south of 14th Street represents approximately 10% of New York City's revenues for this industry².

ECONOMIC IMPACT SINCE SEPTEMBER 11TH

The September 11th terrorist attack on the East Coast, which occurred at the peak of the meeting, convention and leisure travel season, has led to a marked decline in the number of people who intend to visit New York City. While the attack has affected every type of visitor, international and leisure travelers have scaled back their travel plans the most.

In a survey conducted in October for this report³, as many as 38% of international leisure travelers who, prior to September 11th, intended to visit New York City in the next year have changed their minds. A small portion who had *not* intended to come have now decided to visit (9%), leaving a net of 29% deciding to forego visiting New York City during the next twelve months. While it is difficult to both forecast beyond this point, and to find analogs for September 11th, it should be noted that international air traffic took longer than domestic travel to pick up after the Gulf War.

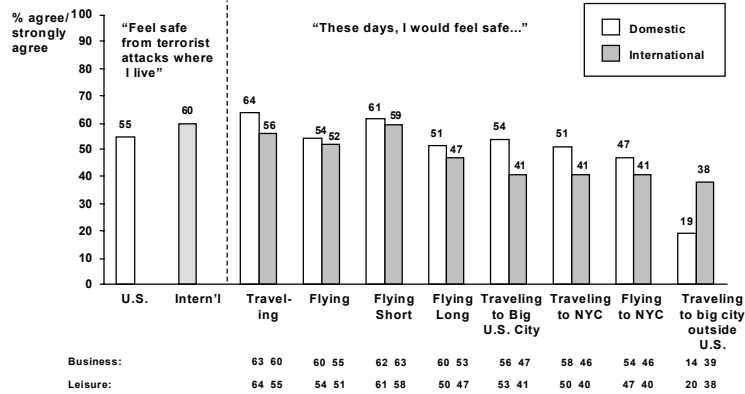
The primary driver for the decline in intention to visit New York City over the next twelve months is the concern about security. The fear factor in travel is real; 40% to 50% of potential visitors do not feel safe traveling now. New York City is not in a class by itself. Both domestic and international visitors are equally leery of traveling to other major U.S. cities. At the same time, the events of September 11th have led people to think differently

² Dun and Bradstreet, 2000

³ Large-scale quantitative survey designed by The Boston Consulting Group and conducted online by Harris Interactive. The survey targeted four distinct geographic segments: NYC residents (N=687), Tri-State residents of counties with substantial numbers of NYC commuters (N=682), a "rest of US segment" (N=2542), and an international segment including residents of the UK and Canada (N=5683). The samples were drawn from a database of seven million potential respondents ages 18 and older and were representative of – and weighted for – gender, race, age, and income to relevant population. The survey was in the field between October 12 and October 18, 2001.

about a range of things. Only 55% of Americans report feeling safe from terrorist attacks where they live.

Only 53% of U.S. Respondents Felt Safe From Terrorist Attacks

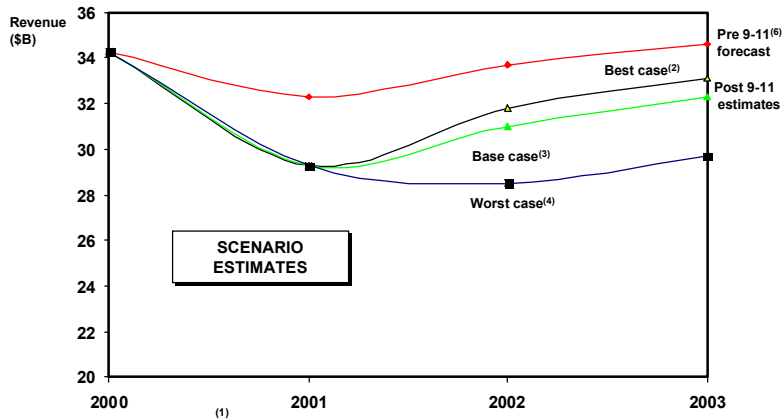


Source: Oct 2001 survey conducted by Harris Interactive/BCG for the NYC Partnership.

Intention to visit the city has also declined among those from the tri-state region, including the 20% who spend more than others from the tri-state area. New York residents report going out less in general, and spending more time and money in their immediate neighborhoods when they do leave home.

Overall, the cumulative expected loss to the travel and tourism sectors for the period 2001 to 2003 ranges from a worst case scenario of \$13 billion to a best case scenario of \$7 billion. The hardest hit segments – international business and leisure travelers and domestic leisure travelers – are, in fact, the biggest spenders as well. As many travel and tourism businesses reduce prices to stimulate demand, smaller businesses, less able to compete on price and have insufficient short-term cash flow, may not survive.

Three Scenarios for Tourism Sector's Future



Source: NYC & Company; BCG Analysis.

Notes:

- 2001 estimate based on estimated revenue drops from T&T sector interviews.
- Based on estimated, self reported, decrease in visitor traffic (from October 2001 survey conducted by Harris Interactive/BCG for NYC Partnership), assumes no decrease in local spending (compared to 2002 forecasts).
- (3) Based on self reported, decrease in visitor traffic and local spending (from October 2001 survey conducted by Harris Interactive /BCG for NYC Partnership)
- National air travel capacity reductions of 20% and international reductions of 20% for business and 35% for leisure; domestic visitor and local spend down by 10%. International spend down by 5%.
- Assumes base case returns to pre-9-11 revenue estimates, grows best and worst case scenarios by same growth rate (base case growth 2002-2003)
- Forecasts based on information from industry associations and interviews, economy.com data, and Dun & Bradstreet data.

In response to the overall decline in business, companies are laying off and furloughing workers across the industry. Industry experts report more than 21,000 people have already been laid off in New York City's lodging, hospitality and tourism businesses as a direct result of September 11th. Another 9,300 employees may be laid off, if current trends continue. Approximately 2,500 workers have been laid off in New York City's transportation industry. Many of those laid off workers are either specialized or unskilled workers who are more difficult to absorb during a recession.

Domestic travel, measured by revenue passenger miles, plummeted more than 30% in the wake of the attack. The Department of Commerce estimates that it will take between two and four years for international traffic to recover. Further, it is expected that visitor rates from European and Asian countries will take longer than others to return to pre-September 11th rates. Within New York City, airlines and airports are expected to lose between \$750 million to \$1 billion in revenues in 2001. Job losses will mirror a drastic drop in demand and commensurate cuts in airline capacity. According to an executive of one major airline, while airline demand in October declined 28% from expected levels across the board, airline travel to New York City plunged 57%.

New York City's hotel industry, which is expected to lose \$400 million in revenue in the fourth quarter of 2001, reported occupancy levels of 37.8% in the second and third weeks of September, a record low. Four hotels in downtown Manhattan suffered an estimated \$500 million of damage: the Marriott World Trade Center (destroyed), the Marriott World Financial Center, the Millennium Hilton and the Embassy Suites Hotel. Some hotels,

facing occupancy rates of under 10%, cut rates to stimulate demand. Prices, in some cases, dropped drastically, with \$800 a night suites selling for \$150. This has led to some recovery in occupancy rates, but has damaged revenues which are down almost 50% from the same period in 2000.

Although New York City's occupancy rate since September 11th has declined more than the US average, the decline has been in line with that in some other large U.S. cities, such as Washington, D.C., Chicago and San Francisco. To reduce costs, some hotels in New York have cut their workforce by as much as 25%. Many hotels have reduced extras such as concierge service and flowers in the lobby. Some hotels hope to replace international customers by attracting more business travelers and residents of the tri-state region. Larger hotels will probably weather the downturn, but smaller hotels with substantial debts and insufficient marketing capabilities may find it difficult to survive.

The restaurant trade has been hit hard by the reduction in visitors. Revenues have declined by 20% to 30%. The steepest declines have been in Lower Manhattan. To date, approximately thirty restaurants there have closed permanently (including 14 World Trade Center restaurants destroyed in the attack), while another thirty-seven have temporarily shut down. Restaurants in Little Italy, Chinatown, Soho and Tribeca have all been damaged by unreliable telephone service, reduced transportation options and the decline in tourism. Even in Midtown, big-name restaurants have suffered revenue declines of 30% to 50%, as tourist traffic dropped. New Yorkers stayed closer to home and businesses cut back on employee expense accounts.

Broadway and the theater industry have successfully shored up revenues in the short-term by attracting customers from the five boroughs and the tri-state region, often with cheaper prices. Advance ticket sales, however, have markedly fallen. The slump in tourism could lead theaters to postpone or cancel new productions. It is also unclear whether New Yorkers and residents of the tri-state region can fill the Broadway houses in the long term, particularly for shows that are more geared to the tourist market, such as "Les Miserables" and "Phantom of the Opera."

Many of New York City's famous tourist attractions are no longer open. The World Trade Center Observation Deck, which previously drew 1.9 million visitors annually, was destroyed. The Statue of Liberty and Ellis Island, which usually attract 5.5 million visitors a year, remain closed indefinitely, as does the educational center at the New York Stock Exchange. The Empire State Building's Observation deck is now open only on weekends.

Many museums have seen attendance drop, particularly as fewer school groups come into Manhattan from the suburbs or the rest of the city. There is concern about operating funds and capital programs of museums, as city agencies prepare for spending cuts. Like the leaders of most nonprofits, museum executives are concerned about the decline in donations as patrons and other individual and institutional donors redirect funds to other causes.

On the infrastructure side, the attacks have placed more pressure on the mass transit system. The events of September 11th displaced over half a million commuters who travel to Lower Manhattan. Ten subway stations that usually handle about 40% of downtown's commuters were closed through most of October, with the NR line re-opening only late in the month. Restoring service to prior to September 11th levels will require substantial investments of money and time, including:

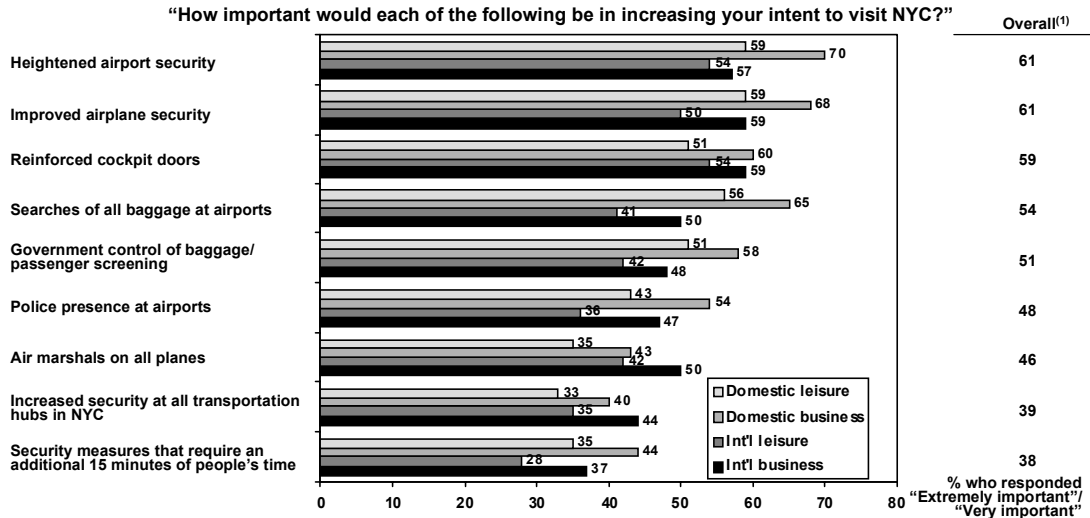
- ❖ More than \$1 billion, and two to three years, to rebuild 1,700 feet of collapsed tunnel on the 1 and 9 subway lines, beneath the World Trade Center site.
- ❖ More than \$1 billion, and one to three years, to rebuild the PATH train station, which used to serve the World Trade Center.
- ❖ Up to \$250 million to repair the damaged streets around the World Trade Center site. Almost a third of Lower Manhattan permits only restricted vehicular access, causing much greater congestion on routes into Manhattan and extending commuting times. Because of access problems and the destruction of much of the PATH, many commuters' journeys now take much longer than before.

IMPLICATIONS

Local, national and international consumers say that security is their main concern, both at home and on the road. For those consumers who say that their desire to visit New York declined after September 11th, upgrading security is by far the number one factor that will influence their decision making. The BCG/Harris Interactive survey shows that there is significant support among Americans for more invasive security procedures, including more frequent searches and the use of surveillance cameras in public areas.

Economic incentives, from tax breaks, lower airfares and sales bargains, are likely to draw only a small segment of potential visitors (under 25%). Continued price-cutting could damage the industry overall. Such measures could make it difficult to restore prices and maintain profitability in the long term. Appealing to travelers' sympathy and patriotism will not persuade large numbers of potential visitors to change their minds about visiting New York City.

Security to Critical to Reassuring Visitors to New York City



Source: Oct 2001 survey conducted by Harris Interactive/BCG for the NYC Partnership; NYC & Company.

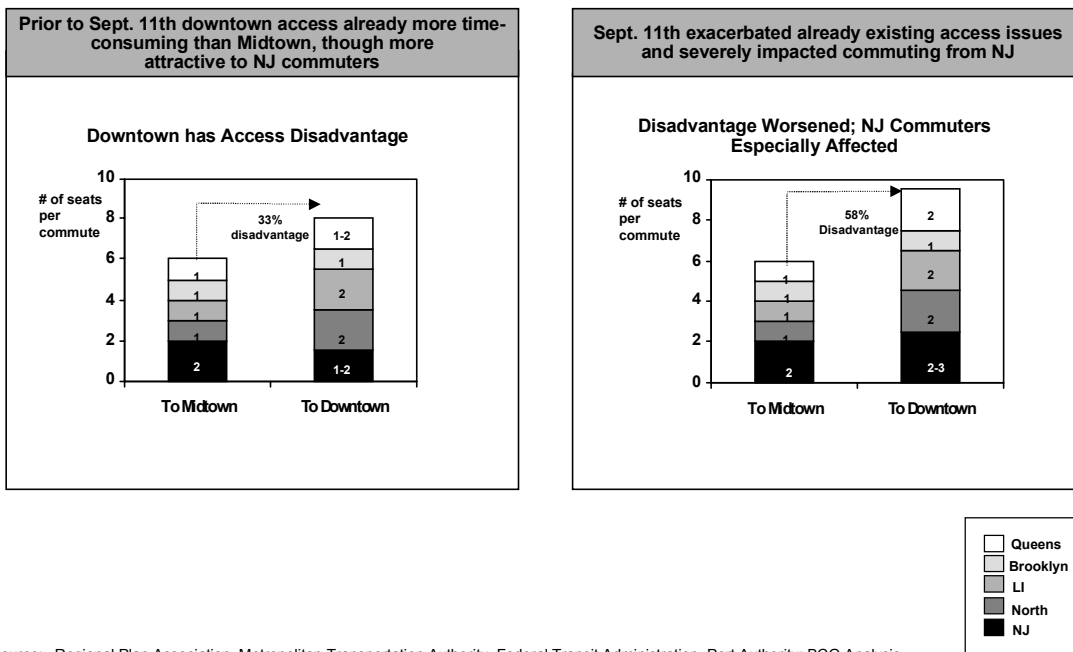
Notes: Other possible measures in descending order of popularity: Increased security in bridges/tunnels leading to NYC, increased security on public transportation in NYC, military patrol of US airspace, improved economy, an opportunity allowing me to show my support for the victims of 9-11 and their families, free companion ticket for travel to NYC, several months going by with no further terrorist attacks, discounted air travel to NYC, package deals to NYC, an opportunity in NYC allowing me to show my patriotism/support for Americans/support for New Yorkers, armed pilots, having friends/family from NYC invite me to visit them, increased security at stores, special holiday events/festivities/parades, hearing that my friends/family are visiting NYC, more flights available, Mayor Giuliani asking me to visit NYC, tax credit for visiting NYC, double reward miles for travel to NYC, temporary reduction in NYC sales tax, President Bush asking me to visit NYC, my head of state asking me to visit NYC, reduction in frequent flyer miles needed to travel to NYC, hearing about sales and promotions at stores in NYC, hearing that celebrities are visiting NYC.

(1) Weighted by number of travelers in each segment.

The damage to New York City’s transportation infrastructure will not only exacerbate the weaknesses of Lower Manhattan’s transport network, but also create system imbalances that will make Midtown less attractive for commuters and business.

The destruction of downtown transport capacity has worsened the problems of overcrowding for Midtown commuters coming from both New Jersey and the East Side. No new lines have been added to New York City’s mass transit infrastructure in forty years. The mass transit infrastructure in Midtown is unlikely to be able to accommodate the further overcrowding that would result from more businesses migrating from Lower Manhattan to Midtown.

Attacks Worsened Access to Lower Manhattan



Source: Regional Plan Association, Metropolitan Transportation Authority, Federal Transit Administration, Port Authority; BCG Analysis.

The costs and complexities of doing business in Manhattan will increase, because of difficulties associated with the transport of goods. East Side river crossings take twice as long because of security checks, and West Side crossings can take even longer. Traffic flows around the island have also been severely hampered by both the closure of the West Side Highway downtown and the restricted access to the FDR Drive. As a result, costs for some small retailers may rise as much as 2%.

RECOMMENDATIONS

The top priority is to improve security to stimulate travel and tourism, not just in New York City, but across the country.

- **Focus on three types of initiatives:** preventative measures, disaster and emergency preparedness plans and advice and education for citizens about what to do in an emergency.
- **Ensure rapid action on new security initiatives.** BCG/Harris Interactive public opinion research conducted for this study found extremely broad support among Americans for a range of new, tougher security measures and a

newfound tolerance for their accompanying inconveniences.

- ***Develop effective security measures***, not cosmetic ones. Investments should be made first in areas that will have the largest tangible effect on security. Air marshals on flights may be more visible to the consumer than improved baggage screening, but the investments required for each measure, and the actual security value obtained, may be quite different. While security is a national issue, New York City should take the lead in championing the overall security agenda.

Continue to invest in promotional efforts to stress that, for most New Yorkers, life is returning to normal.

- ***The poll found that some potential visitors feel the need for permission to enjoy themselves again*** in a place where tragedy has occurred, which may stem from a combination of statements from public figures, as well as opportunities during their visit to pay tribute to the victims of September 11th.
- ***The marketing campaigns*** should take advantage of the fact that New York City continues to be perceived as an exciting and vibrant place, rather than appeal to the sympathy of potential visitors.
- ***Those furthest from New York City believe that the attack affects all of Manhattan and that normal conditions have not returned to New York City, according to the BCG/Harris Interactive survey.*** It is important to communicate that, despite the decimation of the twin towers complex, which sits on sixteen acres, most of the city is fully functional.

Work across the industry to increase visits and spending during the holiday season, including:

- ***Clear short-term security measures*** that are communicated to the public.
- ***Collaborative efforts*** across the travel and tourism-related sectors to stimulate incremental demand
- ***Bundled packages*** which attract travelers
- ***Marketing designed to persuade residents*** primarily from areas near New York City to visit. What these visitors spend per capita cannot make up for what international visitors spend per capita. Nevertheless, this strategy represents the best near- term opportunity.

Develop a plan for the longer-term revitalization of NYC’s travel and tourism-related sector.

- ***The industry should take care in seeking to attract the value-oriented segments.*** Price reductions alone are unlikely to be a large draw, and tourism businesses should be cautious about the potential for long-term price erosion. Lowering prices now may be short-sighted, as it takes many years to raise them back to previous levels.
- ***Over the long term,*** the industry should pursue higher-value segments, such as domestic business and leisure travelers and international visitors.

Focus special attention on Lower Manhattan, particularly on issues of access.

- ***Short-term measures*** are necessary to address Lower Manhattan’s immediate transportation problems (e.g. more ferries, an express bus system, and so on).
- ***It is essential, however, not only to rebuild,*** but also to markedly improve access to the area.
- ***Leaders of the private sector and the public sector*** should evaluate and set priorities for improving access to Lower Manhattan.

Economic Impact of the Attack on the Retail Sector

This report is based on research and analysis conducted by Booz-Allen & Hamilton.

SUMMARY

The retail industry of New York City's five boroughs produces \$50 billion a year in revenue for the city's economy, and employs more than 280,000 workers, generating \$7 billion in annual wages. In Lower Manhattan alone, the retail sector's yearly sales exceed \$1.2 billion. The retail industry adds glamour to the city.

Retail, however, is highly sensitive to local business cycles. Thus, it is no surprise that retailing has been one of the sectors hardest hit by the events of September 11th. Although the growth of New York City's retail industry had already been slowing before September 11th, the attack devastated many of Lower Manhattan's retailers and significantly exacerbated the sector's slowdown throughout the city.

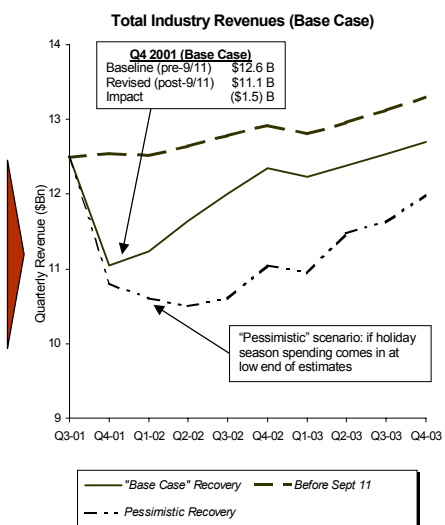
- ❖ All retail employees working in the Twin Towers apparently survived the attack, but the destruction of the World Trade Center Mall obliterated approximately eighty stores⁴ and damaged many nearby retail locations. All together, approximately \$700 million in inventory and fixtures was destroyed.
- ❖ In the wake of the attack, many retailers closed, at least temporarily. Those located in or near the disaster zone lacked access and telecommunications and wanted to avoid the risk of further incidents. Voluntary and involuntary closures are estimated to have cost New York retailers approximately \$300 million in lost revenues.
- ❖ The events of September 11th caused consumer confidence and store traffic to plummet, affecting New York City more than the rest of the country. While seasonally adjusted retail sales in September declined by 2.2% nationally, sales plunged 14% from expected levels in New York City.
- ❖ Lower Manhattan retailers suffered the most significant impact. Many have already gone out of business. Other retailers closed their stores for significant periods, and some that are now open are experiencing sales declines of more than 50%.

⁴ Excluding eating and drinking establishments

- ❖ Both store traffic and purchase patterns have shifted. Consumers are shopping closer to home, often in less upscale stores. Consumers are also spending less and, by some accounts, are buying smaller-ticket items. Fear stemming from concerns about personal safety is now causing many nonresidents to avoid shopping in the city entirely.
- ❖ Department stores, as well as those that sell specialty apparel, footwear, accessories and luxury-goods in Midtown Manhattan saw sales plummet 30% to 40% in September. In some luxury-goods stores sales plunged more than 50%. This is due in part to their reliance on tourists and visitors from beyond the five boroughs.
- ❖ Discount retailers and sellers of necessities, such as food and over-the-counter drugs, fared better than most. Retailers of discretionary goods (specialty apparel, footwear, accessories, luxury goods, and consumer electronics) and durables (such as appliances and furniture, all of which are purchases that can be postponed) saw the steepest declines in sales.
- ❖ With the approach of the holiday shopping season, a period that traditionally provides retailers on average 30% of annual revenue, many businesses have introduced aggressive promotions to move merchandise, and have slashed inventories in anticipation of weaker consumer demand.

Impact Estimation by Segment for 4Q 2001

Segment	Assumptions	Impact ⁽¹⁾	% Sales Decline
FOOD & DRUG "Necessities"	▶ Food minimally impacted, drug might be affected by shift to value purchases	\$110-160 M	< 3%
DURABLES	▶ Consumers delaying major discretionary purchases	\$400-450 M	8-9%
SPECIALTY	▶ High-end specialty affected by shift toward value items	\$280-340 M	10-12%
IMPULSE "Small Ticket"	▶ Effect of tourist/day tripper traffic declines mitigated by shift to lower ticket	\$20-50 M	3-5%
DEPARTMENT STORES	▶ High-end Manhattan locations hardest hit - significant traffic decline	\$100-150 M	15-18%
CONSUMER ELECTRONICS	▶ Partly supported by new product cycles (e.g., X-Box)	\$30-60 M	7-8%
MASS MERCHANDISE	▶ Flat to positive trend due to customers' "value" mindset	\$10-30 M	< 3%
Direct Sales Impact (Ground Zero)		\$250-300 M	
TOTAL EST. IMPACT		\$1.3 - \$1.7 B	



Source: US Dept. of Commerce, Claritas, Inc., BA&H analysis.

Note: (1) Impact relative to industry projections prior to September 11th.

Industry leaders and analysts remain uncertain about the scale and timing of a recovery. If, as most expect, current trends continue, fourth quarter revenues in New York City could drop approximately 10% to 15%, or \$1.5 billion below expectations prior to September 11th. A drop in revenues of this magnitude could lead retailers to employ up to 23,000 fewer workers than normal during the holiday season, which typically involves an increase in hiring.

To help retailers in Lower Manhattan, the hardest hit segment of retail, several actions can be taken soon to accelerate recovery in the area. Small business must be specifically supported through access to loans and grants. In addition, the plan to revive and rebuild Lower Manhattan should explicitly address the need for a strong retail presence with an appropriate mix of stores.

More broadly, other actions should be aimed at speeding the recovery of New York City's entire retail economy, particularly in Manhattan. Overall efforts should address consumers' financial and safety concerns. A sales tax holiday would help spur spending by both resident and nonresident shoppers. Integrated programs, designed in coordination with the tourism and travel sectors, could promote New York City as a shopping destination. These programs can be successful in bringing back the tourist shoppers, who are so critical to Midtown and Lower Manhattan retailers. Additional programs, designed to attract residents and commuters, could involve cooperation between employers and retailers to encourage workers to shop for the holidays. Given consumers' safety concerns, security must be bolstered by relying on measures initiated by both public and private sectors.

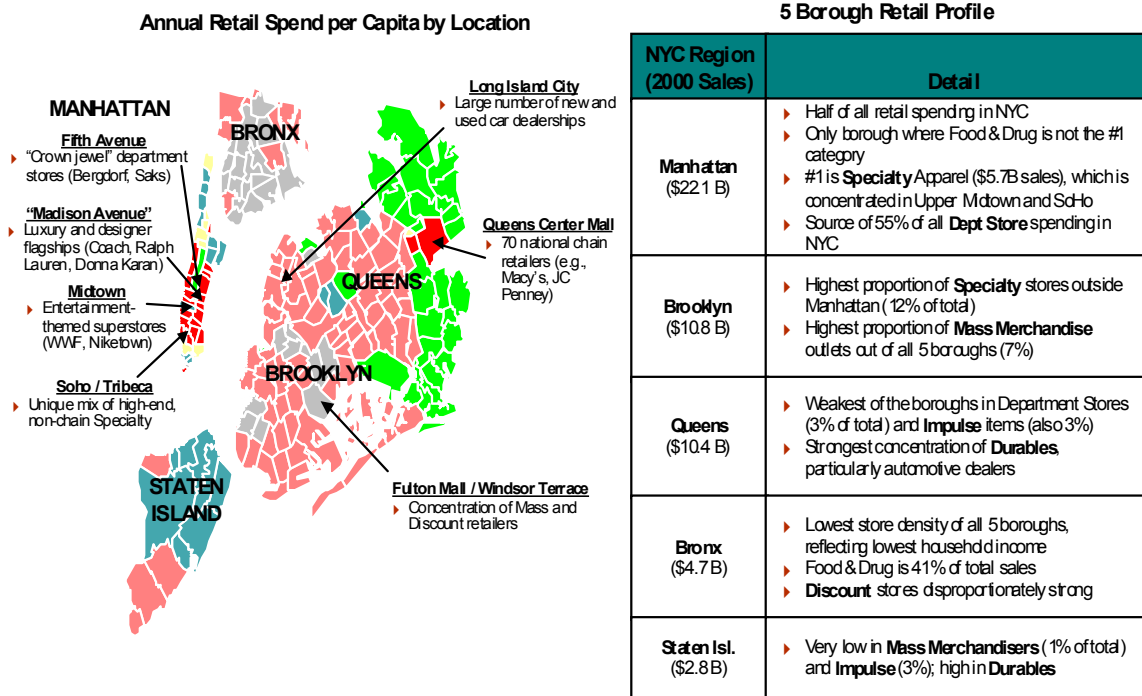
A SNAPSHOT OF NEW YORK CITY'S RETAIL SECTOR

The retail industry in New York City employs more than 280,000 workers, generating \$7 billion in annual wages. The retail industry in the city generates revenues that exceed \$50 billion a year. In Lower Manhattan alone, the retail sector's yearly sales exceed \$1.2 billion. New York City's retail sector relies on a relatively large and lower skilled workforce; on average, these employees earn \$25,500 a year. Operating margins are only 8% to 10% in most retail sectors. The added value produced by the sector yields a total GCP contribution of approximately \$11 billion.⁵

Retail, like the media and entertainment sector, helps to give the city its allure and sophistication. The glamorous image retailing projects is most closely tied to Manhattan, which accounts for 50% of sales across the five boroughs, even though only 20% of New Yorkers live in Manhattan. Offering the most concentrated shopping experience in the country, Manhattan is the only place in the U.S. where specialty and apparel is the number one retail sales generator in virtually every zip code.

⁵ Excluding wholesale trade, eating and drinking establishments, and counties outside the five boroughs

Midtown Manhattan Has the Highest Concentration of Retail Sales Driven by Specialty Apparel and Department Stores



Source: U.S. Department of Commerce, U.S. Census Bureau, Claritas Inc., BA&H analysis.

Specialty retailers look to New York City to refine their image. Donna Karan, Ralph Lauren and Calvin Klein built their flagship stores on Madison Avenue, while national chains such as Saks Fifth Avenue, Bloomingdale's and Macy's have their premier stores in other key Manhattan locations. Pockets of brilliance dot the landscape in subsectors such as home design, consumer electronics and specialty apparel. High-end design centers such as ABC Carpet & Home and designer food emporia such as Dean & DeLuca and Fairway all call Manhattan home. In addition, there are the homegrown mini-chains — J&R Music World, Models', Century 21, Nobody Beats the Wiz, and H&H Bagels. Accessories are more than an afterthought. Tiffany's and Coach, for example, garner some of their highest sales per square foot in their Midtown flagship stores.

Subsectors

Food and drug is the top retail category in New York City, and durables (including home furnishings, appliances, and automobiles) are second. Together, these categories account for 57% of total spending. Specialty (which includes apparel, footwear, accessories, and luxury goods) is third, claiming 16% of retail dollars.⁶ Department stores account for an additional 6% of total retail spending.

Consumers

In total, the retail sector is supported each year by the more than eight million residents of New York City and more than 50 million commuters, day-trippers (visitors from beyond the five boroughs) and tourists. In Manhattan, approximately one-third of retail sales are attributed to non-New York City residents. Day-trippers spend \$3.3 billion per year in Manhattan, while tourists spend \$2.2 billion. Lower Manhattan attracts 7.2 million visitors yearly and is home to a small, but affluent population, of more than 20,000 residents, many of whom are financial services employees.

Recent Trends

Over the last ten years, retail in New York City enjoyed significant growth along with the expansion of the economy and the growth of local tourism. From 1990 to 2000, average growth in retail segments was about 6% to 7%. Nevertheless, in the last eighteen months, there were signs the rate of growth was slowing. On average, retail growth was expected to soften in 2001 to 3.1%. Analysts and retailers worried aloud about the coming holiday season. "I see no evidence the overall economic environment will improve," said Michael Jeffries, chief executive officer of Abercrombie & Fitch, on September 4.

THE IMPACT OF THE SEPTEMBER 11TH ATTACK

Direct Effects

All retail employees apparently escaped from the Twin Towers when it was attacked, but the destruction of the World Trade Center Mall obliterated approximately eighty stores⁶ and approximately \$700 million in inventory and fixtures. Nearby stores also sustained damage. As a precautionary measure, many businesses in and around the New York City area closed for at least a day. Mandatory roadblocks needed to speed rescue and

⁶ Although specialty is #1 in Manhattan, including the other boroughs brings it down to #3 for NYC

firefighting efforts further hampered retail activity in the vicinity of the disaster zone. As a result of telecommunications failures, merchants throughout Lower Manhattan were unable to process charge card purchases for weeks after the attack. Voluntary and involuntary closures are estimated to have cost retailers about \$300 million in lost revenues.

Insurance can be expected to cover half the losses in most categories, depending on the type of coverage and provisions for “business interruption.” Many small businesses had little or no coverage. Some observers expect premiums to rise 15 % to 25 % as a result of September 11th.

Broader Sales Impact

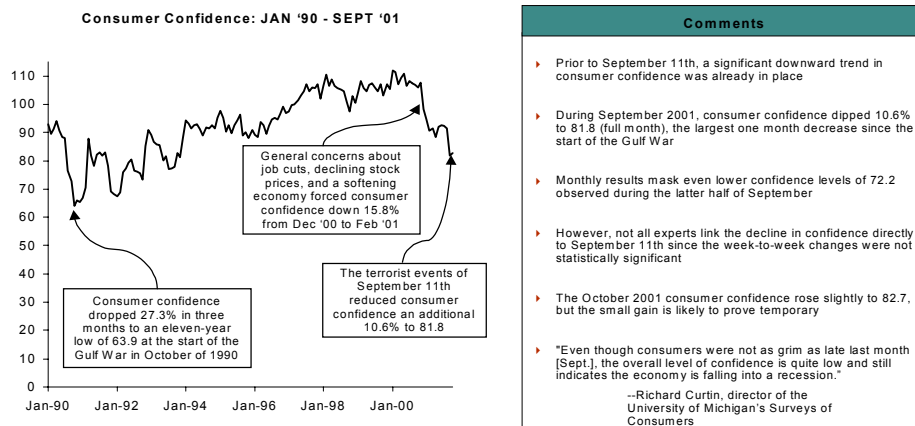
Although the United States as a whole saw seasonally adjusted retail sales fall 2.2% in September, New York City retail sales plunged about 14% below expectations prior to September 11th. Hardest hit were the most discretionary categories — luxury goods, specialty apparel, footwear, accessories, department stores, and consumer electronics. The total shortfall in September sales, versus expectations, was about \$690 million, with \$210 million of that in the specialty and department store categories.

The attack caused many nonresident shoppers to stay home. Tourist travel to New York declined 60% from normal levels in the weeks following September 11th. Meanwhile, resident and day-tripper shopping visits were hampered by public transportation problems. Access restrictions, such as the ban on single-occupant vehicles entering Manhattan below 68th Street, particularly hurt Manhattan retailers. One month after September 11th, domestic airline travel to New York City decreased 20% from normal levels and international travel decreased by 30%.

Fears about personal safety further deterred shoppers. In a recent survey conducted by Harris Interactive for this report⁷, 40% of tri-state respondents said they would decrease trips to New York City out of concern about future attacks. This apprehension has undermined consumer confidence in a population already experiencing economic uncertainty. Prior to September 11th, jobless claims and layoff announcements were up; consumer debt had climbed almost 6% since 1998, and personal bankruptcies were up 17% in 2000 in New York. Adding to the city’s malaise in September, consumer confidence nationwide dropped 10.6%, the largest one-month decline since the Gulf War.

⁷ Quantitative survey designed by Booz Allen Hamilton and conducted online by Harris Interactive from October 12 to 18, 2001. The survey targeted four distinct geographic segments: New York City residents (N=682), Tri-State residents of counties with substantial numbers of New York City commuters (N=682), other “U.S. Domestic” (N=2,542), and an international segment (N=5,683). Samples were drawn from a database of seven million potential respondents ages 18 and older and were weighted for gender, race, age, and income of the relevant population.

**As a Direct Result of the September 11th
Consumer Confidence Plummeted to a Degree Not Seen Since the Gulf War**



Source: Data from University of Michigan [Surveys of Consumers](#), "Consumer confidence" and BA&H analysis.

Some New York City retail sectors held up better than others. Anything deemed indulgent fell off the retail map. A shift to value purchases was observed in many segments. Red meat sales were reportedly down. Chicken sales were up. Fancy dresses were out. Off-price apparel was in. Cottons and flannels were in, displacing luxury silk items. In addition to changing what they bought, consumers also changed the types of stores they shopped in. Nearly 35% of respondents to a Deloitte Research consumer survey said they had spent less at "upscale specialty" stores since September 11th. On the other hand, food and drug, discount and mass-merchant retail businesses were more resilient, rebounding almost immediately after the attack.

Retailers' Response

Many retailers reacted quickly and cut inventories, scaled down orders and tried to move products through price promotions. Bergdorf Goodman even cancelled all remaining fall orders. Some retailers expressed intentions to pare back on seasonal hiring. Many in the industry anticipate a period of extraordinary discounting. Automobile manufacturers have already spurred sales through "0% financing" techniques. High-profile stores have offered deep discounts, some for the first time. Markdowns are ubiquitous in all five boroughs. Deep discounts will help retailers to mitigate the negative impact on their revenues, but will certainly reduce their margins.

THE OUTLOOK FOR RETAIL AFTER SEPTEMBER 11TH

Although sales rebounded somewhat in October, views of industry analysts and experts diverge widely on whether or not the trajectory will be maintained. Many retailers describe the day-to-day volatility in revenues as unprecedented.

A bottom up, sector-by-sector analysis of New York City retail suggests that sector revenues could drop on average 10% to 15% below preexisting trends. This is in line with retailers' expectations.⁸ Uncertainties, however, abound. To what extent will fears of public places abate? Will there be additional attacks? Will tourists and day-trippers return? How effective will retailer promotions be? Which retail segments and areas of the city will be the hardest hit in the long term?

In addition, the following challenges have serious implications for retailers:

Transportation and other access problems will persist

Beyond the fourth quarter, transportation hassles and shifts in retail traffic patterns have the potential to undermine the vibrancy of Lower Manhattan in particular. Although Lower Manhattan retail outlets represent only 5% of Manhattan's total sales, they are a potpourri of cultural and shopping venues that help define Lower Manhattan neighborhoods.

Visitor traffic may not rebound quickly

Department stores receive half their revenues from tourists and day-trippers, while specialty apparel, footwear, accessories, luxury goods and consumer electronics stores derive 30% to 40% of their revenues from nonresidents. These discretionary segments face considerable risk if visitor traffic does not rebound quickly — a risk compounded by a normal decline in both sales and tourism in the first quarter.

Small Businesses are struggling

Small businesses face significant financial problems, as cash flows fall below fixed costs, and those businesses fail to make critical payments on leases, loans and utility bills. According to the Alliance for Downtown New York, Lower Manhattan retailers are experiencing revenue declines of at least 20% — and in some cases far more. With declines such as these, many small businesses will fall far short of break-even. The large-

⁸ Retail impact analysis conducted by Booz Allen Hamilton for this report. Pre-attack baseline for each of eight retail subsectors based on analyst, retailer, and industry expert projections; impact analyzed using estimated changes in overall consumer confidence and in store traffic for various recovery scenarios.

scale failure of small businesses could endanger the unique character of New York retailing, which has a large number of independent establishments.

Consumers are worried about safety

Eliminating security risks should be a priority for retailers, if only because they concern staff and consumers. Retailers should take immediate measures to ensure that their stores are safe.

Retailer costs are likely to rise

Losses from the attack will certainly increase insurance premiums. In addition, increased consumer concerns about security will force retailers to provide higher levels of protection for their shoppers. Presently, it is unclear how expensive these measures are going to be, but any measures, however, will affect retailers' costs.

Price wars and other disruptive market aggression may surface

In the longer term, declining store sales could lead to retail price wars and aggressive long-term promotions. A loss of pricing discipline in department stores, for example, could make it even more difficult for small stores to survive, and could have a detrimental impact on industry margins in the long term.

Fourth Quarter Outlook

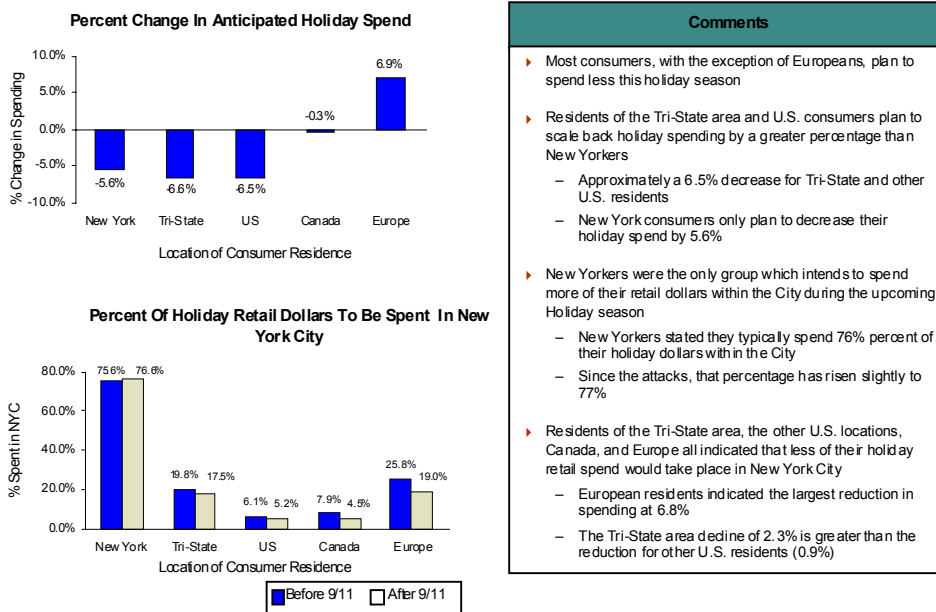
Industry leaders and analysts remain uncertain about the scale and timing of a recovery. If, as most expect, current trends continue, retail revenues in New York City could drop about \$1.5 billion or 10% to 15% below pre-September 11th baseline expectations of \$12.6 billion in the fourth quarter. A drop in revenues of this size could lead to a loss of approximately 23,000 jobs versus normal hiring levels, which typically spike in the fourth quarter.

Certain segments within the overall retail sector are expected to weather these challenges better than others. The grocery and drug segments will probably perform well across all five boroughs, given consumers' intentions to reduce travel and eat at home more often. For example, in a recent survey, more than 20% of New Yorkers polled after September 11th stated that they intend to spend less than last year on dining out. Many mass merchandisers and discount stores outside Manhattan will benefit from the trend to buy less expensive, more value-oriented products.

Retailers of larger ticket durables could see steep revenue declines of 8% to 9% since lower consumer confidence levels appear to be translating into lower spending. As a result of the September 11th attack, 40 percent of consumers surveyed for this study said that they are less likely to make a major purchase. Retailers and manufacturers are offering incentives to draw back consumers. However, it is unclear whether such actions will do more than simply shift early 2002 sales revenues into the fourth quarter of this year.

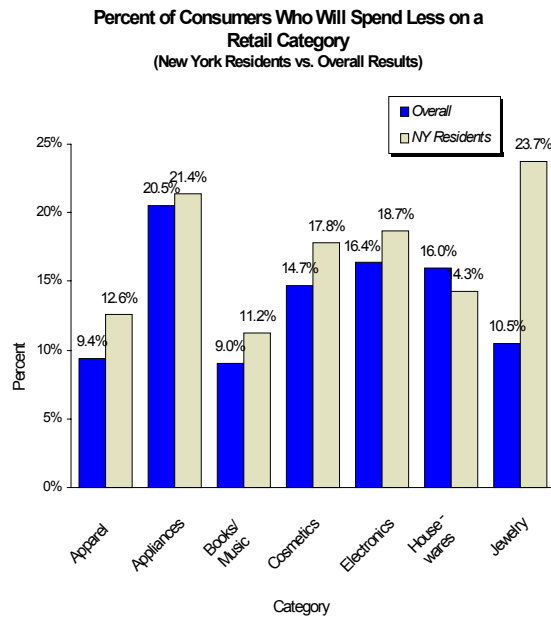
Department stores and specialty stores will probably sustain a disproportionately large share of the impact, in large part as a result of decreased tourist traffic. Department and specialty stores are more reliant than other sectors on nonresident customers, and a large number of domestic and foreign residents surveyed say they will probably not or definitely not visit New York City in the next 12 months because of the attacks. The sales impact for each of these segments could reach 1% to 12% for specialty stores and 1% to 18% for departments stores during the fourth quarter. Within this segment, high-end Manhattan locations will be the hardest hit.

Overall, Consumers Will Spend Less...



Source: Harris Interactive Survey; BA&H analysis.

..and shift purchases away from big-ticket to smaller ticket items



Source: Harris Interactive survey and BA&H analysis.

Comments
<ul style="list-style-type: none"> ▶ A large percentage of consumers surveyed indicate that they will spend less on several retail categories <ul style="list-style-type: none"> – Spending scaled back on appliances, jewelry and electronics – Smaller ticket items, like books, apparel, and housewares are less affected
<ul style="list-style-type: none"> ▶ In general, people in New York plan to spend less relative to the overall population <ul style="list-style-type: none"> – 21.4% of NY residents (vs. 20.5% for the overall population) said that they will spend less on appliances – 23.7% of New Yorkers (10.5% overall) plan to spend less on jewelry
<ul style="list-style-type: none"> ▶ There are some bright spots: <ul style="list-style-type: none"> – Overall, 7% of consumers plan to spend more on apparel – Almost 8% indicate that they will spend more on Books & Music – Over 70% of consumers plan to spend the same on each category

RECOMMENDATIONS FOR SPEEDING RETAIL’S RECOVERY

Actions can be taken in the short term to accelerate New York City’s full and timely recovery. Many of these actions would naturally focus on Manhattan, the hardest-hit retail market in the nation.

Give Manhattan a sales tax holiday

Temporary retail tax abatement is a powerful and proven method for spurring sales. New York area consumers have shown great willingness to respond to promotions; past tax abatements, even with caps, have increased sales by 7% to 10% on average. A tax abatement would draw both day-trippers and residents. Decisions about the timing, length and geographic scope of the abatement need to be made quickly. For instance, should such an abatement apply only in Manhattan or in all five boroughs?

Promote New York City as a shopping destination

Bringing back the tourist shopper — so critical to Midtown and Lower Manhattan retailers — should also be a top priority. Advertising and PR campaigns with potential participation of celebrities that say New York City is open for business would be helpful. But other cities, like Hong Kong, that have had to weather the reaction to a catastrophe have found that getting tourists to visit again requires hotel/airline packages with incentives compelling enough to overcome security fears.

Work with employers to get workers out shopping for the holidays

Local employers can take initiatives to show employees their commitment to the city and to help retail recovery in Manhattan, including “time off” programs to give their staffs the opportunity to do holiday shopping. Local retailers indicate that they would be pleased to support this by offering special discounts and services.

Bolster security without alarming customers

Security at retail stores will require both public and private initiatives. Consumers and employees in New York City and across the nation are asking for more visible protection. High-traffic areas and stores should increase security without creating alarm. Increased use of guards and surveillance equipment should be combined with emergency preparedness plans.

Support small retail businesses

Previous economic downturns have forced significant numbers of small retailers in New York City out of business. Survival rates could be raised in the short term, if the grants and loans flow quickly. Facilitation services could include insurance-industry outreach, expedited grant and loan applications, and corporate mentoring programs. Programs should focus particularly on small retailers in Lower Manhattan, since these businesses have seen the sharpest dropoff in revenues from the attack.

Rebuild Lower Manhattan by thinking outside of the box

The plan to revive and rebuild Lower Manhattan should explicitly address the need for a strong retail presence with an appropriate mix of stores. Before September 11th, many Lower Manhattan shoppers expressed dissatisfaction with the area’s retail and services. Now there is a chance to attract a mix of stores that would better meet the demands of local residents and workers.

Short-term actions should focus on store traffic flows — in particular, on giving shoppers an incentive to shop in stores in Lower Manhattan and the means to do so. Job placement programs (like outplacement support for displaced and laid-off workers) and PR campaigns could help. Ultimately, however, the health of New York City’s retail sector is a function of the well-being of the New York City consumer and the return of visitors from around the country and the globe to one of the most glamorous retail destinations in the world.

Economic Impact of the Attack on the Small Business Sector

This report on small business is based on the research and analysis of KPMG.

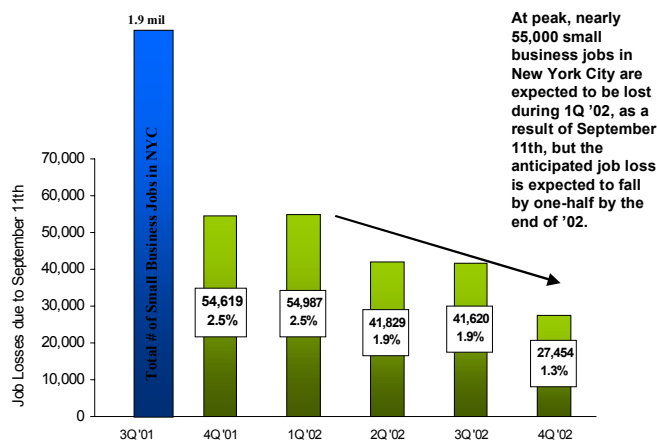
SUMMARY

The terrorist attack on the World Trade Center dealt a severe blow to New York City's small business sector, which provides lifeblood to Manhattan's big business community. Last year, the city's more than 290,000 small businesses employed nearly 1.9 million workers—roughly half the total employment pool—and rang up sales of over \$248 billion.

Concern is growing that small business failures will impede the chances for the local economy to recover anytime soon. Businesses in Lower Manhattan are bearing the brunt of the September 11 assault. In the World Trade Center complex itself, 707 small businesses were destroyed or suffered extensive damage. In the 45 days following the attack, lost sales at 3,400 inaccessible small businesses in the immediate vicinity of Ground Zero totaled \$795 million. Given the sizable hurdles these businesses now face, it is likely that many small businesses in Lower Manhattan, generally defined as the area below Chambers Street, will fail.

The immediate capital loss incurred by small businesses in the form of destruction of inventory and depreciable assets due to the September 11th attack is estimated at \$101 million.

Small Business Job Loss



Source: KPMG calculations and macro model data from National Federation of Independent Business (NFIB) Monthly Report, "Small Business Economic Trends Survey," (September 2001).

Citywide, as many as 55,000 small business jobs are expected to be lost during the first quarter of next year due to the September 11th attack, with the largest concentration in Lower Manhattan.

Given the degree to which the city depends on its small business community, the need for a major resuscitation effort, particularly for Lower Manhattan, is urgent. Small companies' limitations in terms of size and capitalization make them particularly vulnerable to the economic aftermath of September 11. Major problems include the now uncertain future of Lower Manhattan, uncertainty of insurance recovery, infrastructure damage and lack of vehicle and pedestrian access. To avoid significant layoffs as well as business closings and departures from the city, the following actions need to be taken immediately:

- **Actively seek out struggling businesses.** Determine what kind of help they need, such as cash and assistance in applying for emergency grants and loans, and how soon they need it. It is essential to set up more comprehensive small-business rescue efforts to match companies in need with the appropriate resources. The New York City Partnership, the Alliance for Downtown New York and other nonprofit groups are already supplementing the efforts of New York City and State government and of the federal Small Business Administration to provide clearinghouse and recovery services tailored to small business, but these efforts remain inadequate in comparison with the need.

- **Attract customers downtown.** Launch a campaign to revitalize the downtown small business sector through a program of promotions, marketing and financial incentives.
- **Steer procurement to local firms.** Both corporations and government can target procurement activity to small businesses based in New York City and, particularly, Lower Manhattan. To accomplish this, a directory of businesses, together with product and contact information, should be compiled and distributed among members of the Partnership and other sources of demand, as well as published on a Web site for consumer reference.

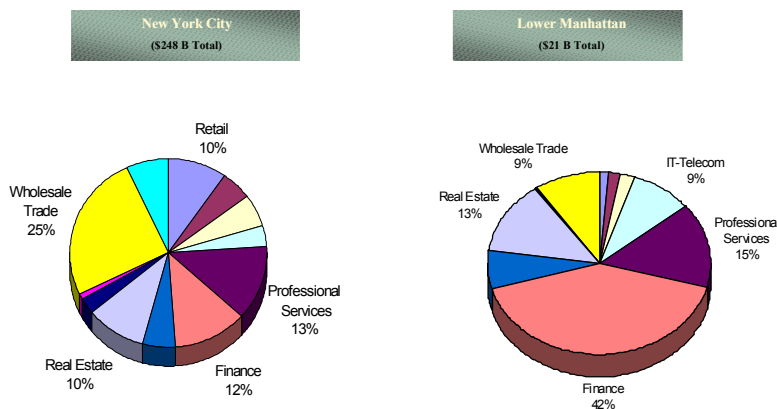
ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

Small businesses (those with fewer than 100 employees) are an integral part of the New York City and downtown economies. By sector, the largest revenue generators were wholesale trade (25%), professional services (13%), finance (12%), retail (10%) and real estate (10%). The biggest sources of employment were retail (16%), transportation and tourism (13%), professional services (13%), health care and biotechnology (10%) and real estate (9%).

Small businesses in Lower Manhattan employed more than 109,000 people, and had sales of over \$21 billion in 2000. The largest revenue generators were finance (42%), professional services (15%), real estate (13%), wholesale trade (9%) and information technology and telecommunications (9%). Jobs were concentrated in professional services (31%), finance (21%), information technology and telecommunications (12%), transportation and tourism (8%) and retail (7%).

Proportion of Small Business Revenue From Finance, Insurance and Real Estate

Lower Manhattan small businesses engaged in Finance, Insurance and Real Estate (FIRE) make up more than half of small business revenue, suggesting a strong reliance on business from large FIRE sector firms.



Source: Data from Dun & Bradstreet. Compiled by SRI.

Prior to the attack, the near-term economic prospects for small businesses in the city and in the downtown area were relatively modest. After several strong years of growth, most small businesses were experiencing slower sales growth, consistent with the slowing national economy, and few businesses expected much in the way of improvement over the coming six months.

ECONOMIC IMPACT OF THE SEPTEMBER 11TH ATTACK

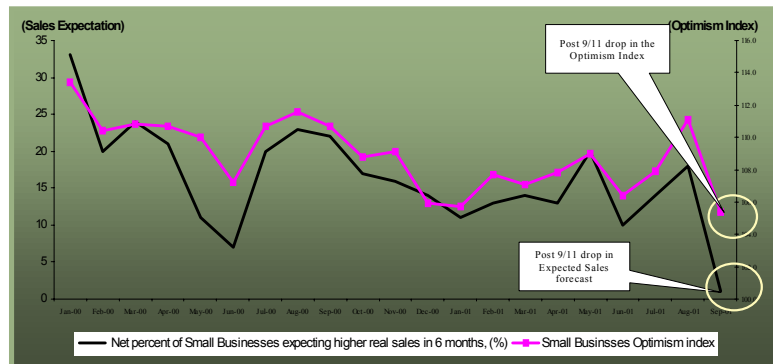
The attack has badly disrupted the city’s small business community. Those outside the downtown area have been hurt, sometimes significantly, by the sharp subsequent declines in consumer confidence and overall economic activity; by logistical difficulties posed by the city’s heightened security measures (for example, with shipping and receiving); and by the temporary loss of access to business partners and customers in the downtown area.

Their problems pale beside those of small businesses located in Lower Manhattan, however—especially those nearest the World Trade Center. More than 4,400 small businesses, employing 43,522 workers, were located in the immediate vicinity of the Twin Towers. Of those, over 700 businesses, employing 8,005 workers, were either destroyed outright or suffered extensive physical damage. The estimate of \$101 million in capital losses that these businesses suffered may ultimately prove to be conservative.

The combination of physical damage, security concerns, unresolved insurance claims, infrastructure problems and restricted area access forced many businesses in Lower Manhattan to remain closed for days, in some cases weeks, following the attacks. Some are still closed. A Downtown Alliance survey reported that downtown businesses were closed an average of eight days, with average weekly sales losses of \$25,123. A Ground Zero Task Team survey found that fully 23% of downtown’s small businesses remained closed through mid-October.

Post September 11th Change in Optimism and Sales

A national survey of small businesses showed a sharp drop in optimism and sales expectations post September 11th.



Source: www.economy.com, National Federation of Independent Business (NFIB) Monthly Report, "Small Business Economic Trends Survey" (September 2001).

Many area businesses that stayed open or managed to reopen have suffered a sharp drop-off in sales. This reflects the overall reduction in visitors to the city and downtown, ongoing access difficulties and continuing infrastructure problems—particularly interruptions in telephone, Internet and utility service. Many companies also have sustained a dramatic loss of client base since their primary clients and customers were located in and around the World Trade Center complex.

Demand has fallen severely for manufacturers and wholesalers who serve tourism-related industries, apparel and professional services. For instance, a Zagat survey reported that sales in restaurants in TriBeCa, SoHo and Little Italy plunged 20% to 50% following the September 11 disaster. Retailers that responded to the Downtown Alliance's survey said that post-attack sales had fallen 20% to 80% from pre-attack levels.

As a direct result of the attack, the city's small businesses overall are expected to suffer sales losses of \$5.3 billion in this year's fourth quarter and \$16.8 billion in 2002 and 2003, for a total revenue loss of \$22.1 billion. The employment estimates are equally discouraging. Aggregate small company job losses in the city as a result of the attacks are expected to climb to 54,619 in the fourth quarter of 2001 and peak at 54,987 in the first quarter of 2002.

IMPLICATIONS

The rapid and drastic change in demand shocked small businesses, and has forced closures, and will force many more to close due to high fixed operating expenses, minimal cash reserves, and in some cases, high debt levels.

The small business outlook is further clouded by the difficulties these firms face in securing financial assistance. The Small Business Administration loan approval process is too lengthy to solve this problem. Even commercial bank approvals are too complex and drawn out, given these businesses' critical short-term needs. Moreover, small businesses need more than loans. Among other problems, most small businesses are underinsured, and many that do have sufficient coverage are effectively paralyzed until their claims are resolved. Many businesses in severe peril need outright grants.

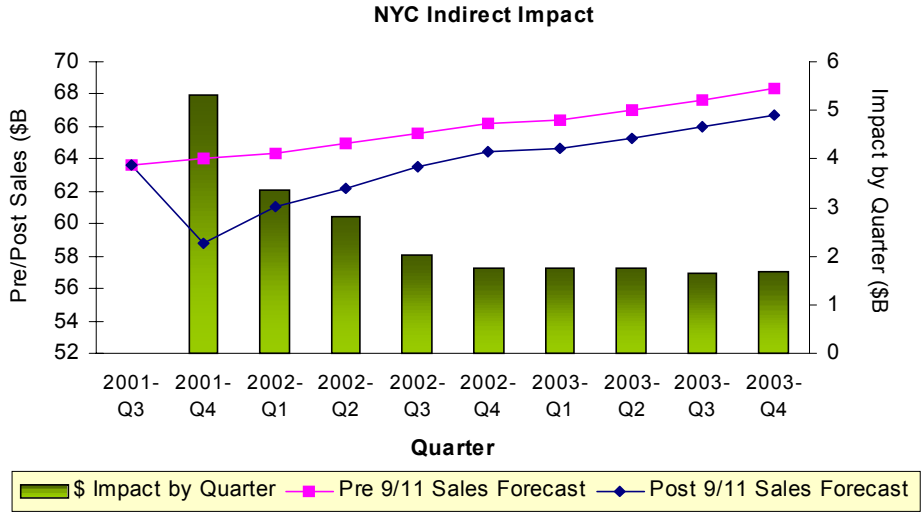
Ironically, many displaced businesses are having extreme difficulty finding affordable, suitable temporary office space, even though the overall vacancy rate in Manhattan has risen since the attack. Businesses in the World Trade Center vicinity that enjoyed favorable long-term lease terms are facing rent increases of up to 150%, as well as high brokers' commissions, when they move.⁹ Many businesses may be priced out of the market.

⁹ Mc Kinsey & Company.

For those that have remained, access to Lower Manhattan remains restricted, limiting foot traffic and deliveries. Problems with phone service continue to plague businesses as far north as Chinatown. Some restaurants still cannot accept credit cards or communicate with suppliers, and professional services businesses are unable to conduct business over the Internet. These businesses cannot survive for long if their lifelines are cut.

Two Year Forecast for New York City Small Business Sales

New York City's small business sales will continue to fall short of previous September 11th forecasted levels, for at least two years.



Source: KPMG calculations, from Dun & Bradstreet data, compiled by SRL.

Recommendations

The following action plan would help restore life and vitality to New York City's invaluable small business community:

- **Establish a Small Business Recovery Operation.** Priority number one should be to identify those businesses most in need of assistance and to match those companies with sources of help, including fast access to bridge loans, expedited processing of insurance claims, temporary workspace, technology assistance and outright cash grants where needed. The Downtown Alliance, for example, is working with the New York State Department of Insurance to resolve retailers' primary insurance concerns. ReSTART Central, a clearinghouse established by the New York City Partnership with the city's Economic Development Corporation and the Empire State Development Corporation, is linking small businesses in need of business services, office furniture, equipment, and supplies with firms that want to donate essential materials necessary to transact business. These efforts, and others like them, need to be expanded. As part of this project, an effort must be made to educate all small businesses about programs readily available to them.

Furthermore, given the diversity of New York's small business community, it is essential to devise a small business search and rescue initiative (SB-SOS) incorporating teams or representatives who actively go out and find those firms which need help, but may be unaware that it is available or unable to negotiate the process of applying for the help they need.

- **Kick off a "Think Small" Promotional Campaign.** More programs similar to the "BuyNYC" initiative of the New York Industrial Retention Network (NYIRN) should be developed and quickly implemented. This program encourages architects, designers, and office tenants to buy materials and office products made by the city's 11,000 local small manufacturers. Programs such as "Proudly Made in New York," a collaborative effort by the Council on American Fashion and Unite encouraging local apparel production, would draw attention to the advantages of patronizing the city's small business establishments, particularly those in Lower Manhattan, through a combination of innovative advertising, marketing enticements, and financial incentives. Corporate sponsorships of events and outings for employees who patronize small businesses would be an effective way to alert New Yorkers to the need to help the local economy.

New York City's small business community, including thousands of little known but indispensable manufacturing and retail firms, provides an invaluable contribution to the local economy. Without the jobs, products and services that these businesses provide, the city's economy will suffer substantial harm.

Economic Impact of the Attack on the Manufacturing and Wholesale Trade Sector

This report is based on research and analysis conducted by Bain & Company.

SUMMARY

Manufacturing and wholesale trade are important drivers of the New York City economy. These sectors combined employ 360,000 people and support \$37 billion in gross city product (GCP). In addition, many of the companies within these sectors are small businesses that often provide first-rung employment opportunities for the city's large immigrant community.

The destruction of the World Trade Center brought business to a halt in the days following September 11th for most New York City manufacturers and wholesalers. The short-term impact on these segments has been significant. Sharp drops in demand, impaired logistics and transportation, interruption in the supply chain, and the disruptive impact of the attack on the personal and work lives of employees are all important factors. The total short-term impact will result in the loss of 36,000 jobs or 10% of employment in these sectors and an \$860 million loss in GCP compared to pre-September 11th projections.

While many subsectors will recover in the short-term, others now face long-term challenges that threaten to have a permanent impact on their industries. Moreover, these businesses continue to struggle with the consequences of the recession exacerbated by the September 11th attack. The long-term impacts in manufacturing and wholesale trade include an approximate 3 % loss in employment in the fourth quarter 2003, or 9,000 jobs, and an approximate \$5 billion loss in GCP, compared with the economic projections prior to September 11th.

In particular, the apparel and printing subsectors, which account for 41% of manufacturing employment in New York City, will confront substantial and protracted declines in demand as a consequence of the September 11th events. In apparel, the attack caused retailers to immediately slash orders. Meanwhile, printers have seen many of their biggest customers—financial services firms—relocate at least temporarily away from Lower Manhattan.

If this trend remains unchecked, the size of the city's manufacturing and wholesale trade sectors may be permanently reduced. To protect these important sectors it is recommended that:

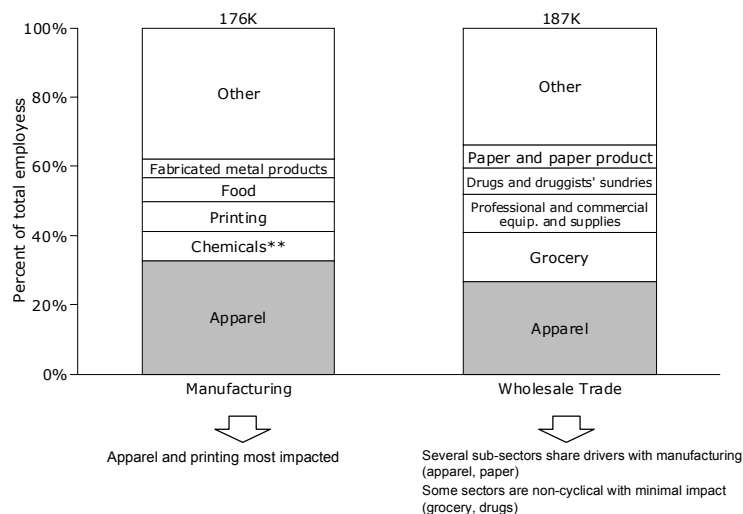
- New short-term funding be found to aid stressed manufacturers and wholesalers.
- Small business owners in the industries be educated to use existing assistance programs.
- A “Buy New York” program in the apparel industry be vigorously promoted.

ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

Manufacturing and wholesale trade are significant contributors to the city’s economy. Manufacturing¹⁰ generates \$16 billion per year in economic output and is the sixth largest source of employment, contributing 170,000 jobs, while wholesale trade provides another 190,000 jobs and \$21 billion in economic output.

Manufacturing And Wholesale Employment (2000)

Apparel is the largest category



Source: Bureau of Labor Statistics 2001; US Census Bureau, 1997 Economic Census

Notes: *Drivers of media-related publishing addressed by M&E group, includes ~63,000 employees.
 **Chemicals are primarily corporate presence, pharma, and consumer products manufacturing.

Most manufacturing businesses and establishments in the city are small businesses which employ fewer than 100 workers. Apparel businesses are particularly fragmented. Small businesses, or local establishments of larger businesses, may be more highly subject to

¹⁰ Does not include 56,000 jobs and \$6 billion GCP from the publishing industry’s non-manufacturing business.

closure as a result of reduced local demand, as is the case for printing establishments serving the downtown financial district.

Before the disaster, both manufacturing and wholesale trade were slow-growing sectors. While New York's manufacturing output has remained stagnant since 1995, the number of manufacturing jobs has actually fallen by an average of 4% a year in the same period. Wholesale trade employment growth has been flat since 1995, while output has increased by 2% a year.

Many businesses across both sectors have been in New York City for decades. Business owners say they stay in New York to be near their customers, but worry that factors endemic to the city keep them from thriving. Rental rates are high, and many landlords are unwilling to give tenants the security of long-term leases, hoping to some day put the real estate to more profitable use. Zoning restrictions meant to curb encroachment by residential facilities are often ignored and not enforced. In addition, complex government regulations and chronic traffic and parking problems disproportionately increase the cost of doing manufacturing and distribution-related business in New York City.

ECONOMIC IMPACT OF THE SEPTEMBER 11TH ATTACK

Short term

The attack affected manufacturers and wholesalers in two primary ways: Logistical challenges were exacerbated and declines in product demand were increased. While most logistical issues have been resolved, demand is still below pre-attack levels for many businesses.

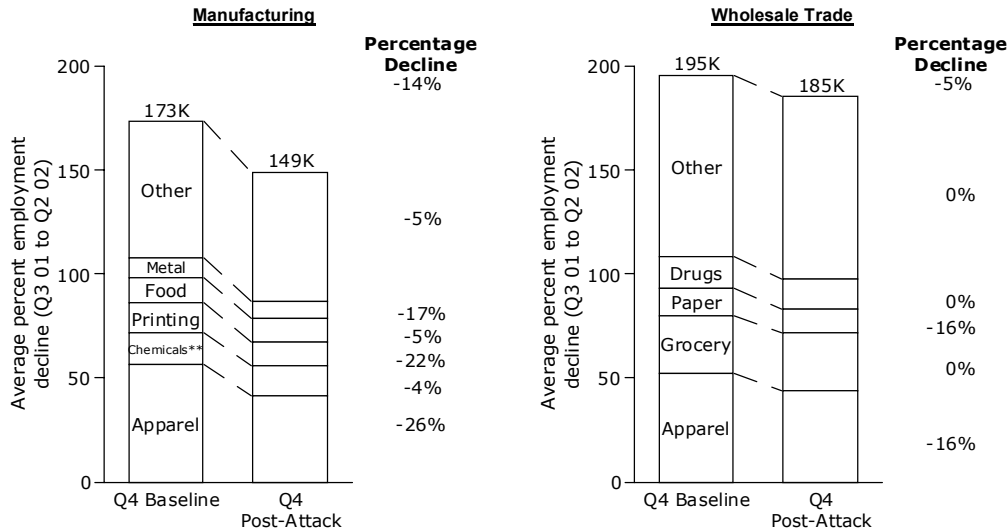
Demand has fallen more severely for manufacturers and wholesalers that serve tourism-related industries, professional services and apparel.

Apparel makers, for example, saw widespread order cancellations from retailers, who themselves are coping with major declines. The Garment Industry Development Association reported a 70% drop in orders to garment contractors in the first several weeks after the attack. "The demand is far from returning to normal," said a spokesperson. As a result, city employment for apparel manufacturers is expected to fall by approximately 26% or 15,000 full time equivalents in the fourth quarter. A "time sharing" tradition within the apparel sector may mask hidden unemployment. For example, many hourly workers, most of whom already earn less than \$20,000 per year, have seen their hours worked cut from more than 40 to 20 hours per week.

Short-Term Impact: Manufacturing

PRELIMINARY

Incremental sub-sector losses since the attack are significant and have been largest in Apparel and Printing Manufacturing



Source: Industry interviews; Bureau of Labor Statistics 2001; US Census Bureau, 1997 Economic Census.

Notes: *Drivers of Media-related publishing addressed by M&E group.
**Chemicals are primarily corporate presence, pharma, and consumer products manufacturing.

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Other subsectors have felt the impact as well. Printing employment will fall by approximately 22% or 3,000 jobs. In addition, the two major subsectors of wholesale trade, apparel and paper, are both expected to see 16% employment declines due to their close ties with manufacturing suppliers.

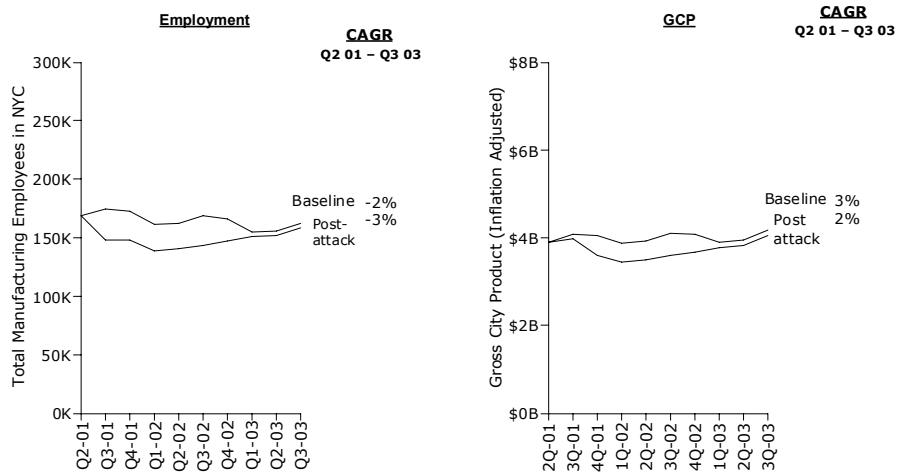
Long term

While macroeconomic trends will probably return to historical norms eventually, a substantial impact is expected in the interim. Manufacturing and wholesale trade are expected to suffer a cumulative loss of \$4 billion in output during 2002-03. Manufacturing output alone is projected to rise at an average annual rate of just 2% through the fourth quarter of 2003, compared with a pre-attack estimate of 3%. Employment in the sector is expected to decline by 3% annually compared with a pre-attack estimate of a 2% decline.

Wholesale trade output over the next two years is expected to rise by just 1%, compared with the 3% projected before September 11th. Employment, previously expected to grow 1%, is now expected to remain flat.

Long-Term Impact: Manufacturing

After an initial sharp drop, sector employment and output should return to historical trends, barring a worsening of overall economic conditions



Source: US Census Bureau, Bureau of Labor Statistics.
 Note: NYC Manufacturing Revenues available for 1997, all other years calculated based on employment and productivity figures for each year; employment is quarter end.

IMPLICATIONS

Like the rest of the nation, New York City was slowing economically before the 11th, and the attack has accelerated the downturn. However, New York City businesses face unique challenges because of their proximity to the attack.

The unusually sudden and severe change in demand caught many businesses unprepared, and will force some business closures due to high fixed operating expenses and, in some sectors, high debt levels. The apparel and printing manufacturing subsectors are particularly at risk. If these businesses fail, other parts of the city economy will be negatively affected.

Fashion industry firms and retailers may obtain services from lower-cost manufacturers in other parts of the U.S. or overseas, taking jobs with them and causing disproportionate economic trouble for neighborhoods such as the Chinatown and SoHo areas.

Printer bankruptcies could rise, chilling bank lending for the remaining firms. Because printers are part of the infrastructure necessary to support financial services firms, it may

be more difficult to attract those firms back to New York City if the printing industry declines significantly.

The slowdown in tourism is jeopardizing those food manufacturers serving restaurants and hotels. If that sector contracts, the city will be less able to support a strong, thriving tourism industry with locally manufactured, fresh, and ethnically diverse food products. In addition, some manufacturers and wholesalers suffer from persisting logistical complications. Closed streets and traffic delays will raise costs, particularly for businesses operating downtown.

RECOMMENDATIONS

- ❖ Educate small manufacturing and wholesale businesses about programs already available to help them, such as Small Business Administration loans. Inform these businesses of the assistance available from trade groups such as the Industrial & Technology Assistance Corporation (ITAC), and the Manufacturers Association of NYC (MANYC). Data indicate these resources may currently be underutilized in the manufacturing and wholesale trade sectors relative to other small business sectors.
- ❖ Provide short-term funding for businesses in jeopardy due to short-term dislocations. Work with business leaders to identify, fund, and roll out appropriate funding vehicles.
- ❖ Reinforce programs to encourage the purchase of locally made goods and apparel. BuyNYC is one such program which promotes the city's 11,000 manufacturing firms employing 208,000 workers.

SUMMARY

Manufacturing and wholesale trade are essential contributors to the New York City economy. These industries offer a stable employment reserve for residents by providing a first-rung employment option for the city's many immigrants. In addition, short supply chains for key industries such as fashion, food, and financial services contribute to the city's regional competitive advantage and drive the disproportionate contributions of these industries to the national economy.

The public and private sectors must work together to establish an environment where manufacturing businesses can compete fairly with regional and global competition, profitably serve their local markets, and make hiring and investment decisions with more certainty around costs.

Economic Impact of the Attack on the Real Estate Sector

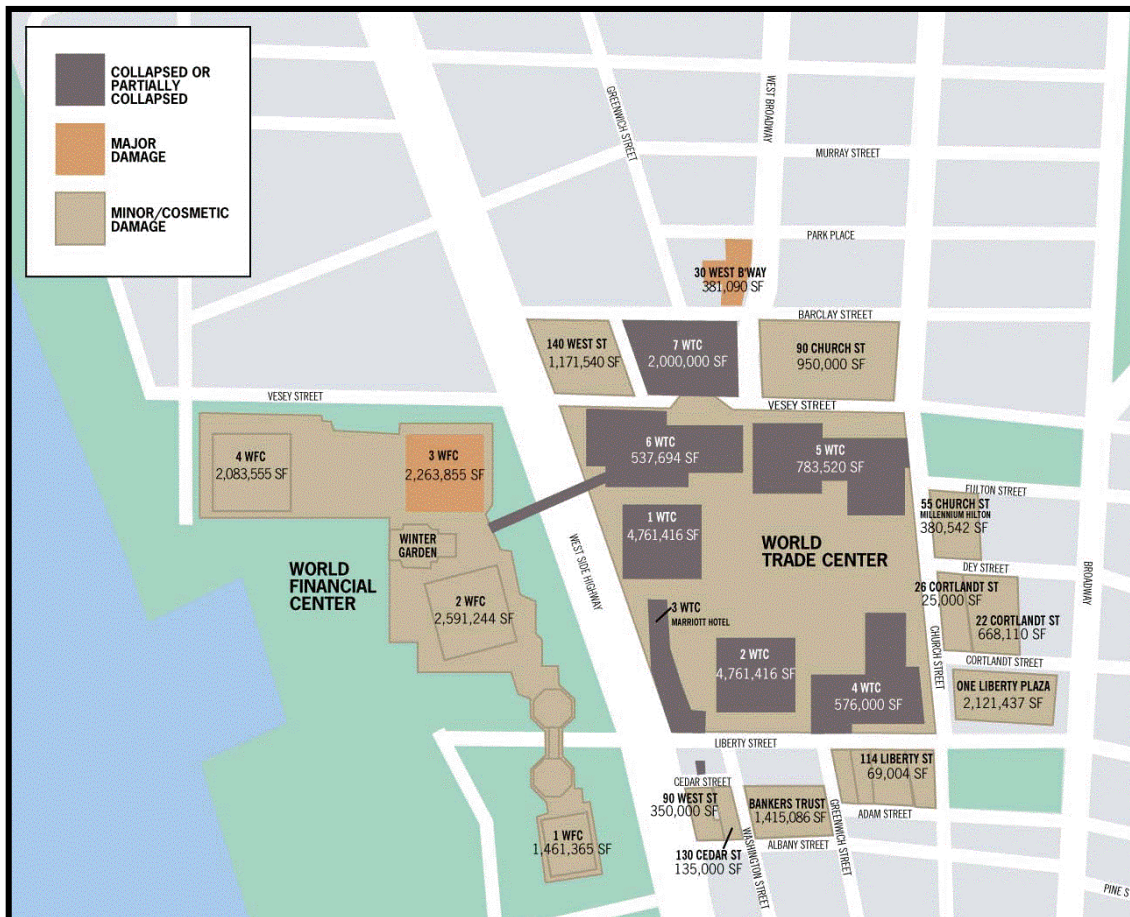
This report on the real estate sector is based on research and analysis carried out by McKinsey & Company.

SUMMARY

The primary impact on real estate was the destruction of a significant portion of Manhattan’s most competitively priced office space.

The attack damaged or destroyed 29 million square feet of office space—8 % of all Manhattan office space, 14% of Manhattan “Class A” space and 30% of all Lower Manhattan space.

Ground Zero Damage to Commercial Office Space Falls into Three Categories



Source: Grubb & Ellis, Insignia ESG.

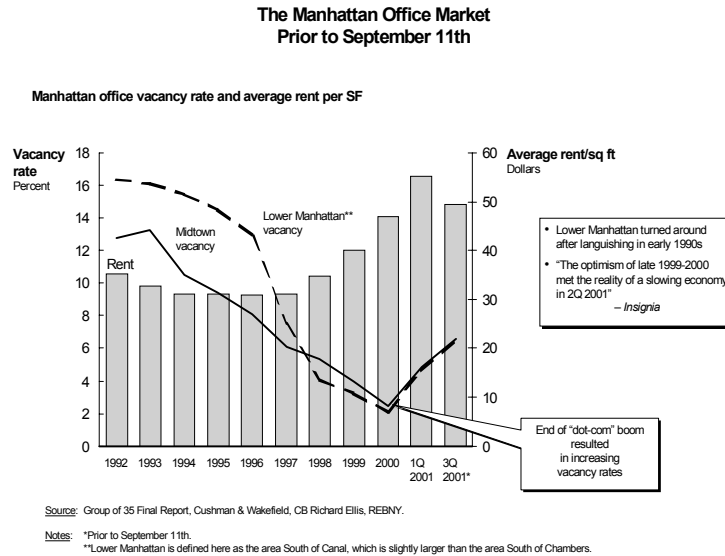
Larger than central Atlanta or Miami, this space housed more than 100,000 workers, enough to fill Madison Square Garden nearly five times.

- ❖ Half the office space (15.2 million square feet) was destroyed. The market value was \$4 billion and its replacement cost is \$6 billion.¹¹ Insurance proceeds will probably cover about 70% of the replacement cost.
- ❖ The other half was damaged: 10.1 million square feet suffered minor damage and can be reoccupied this year. Three and a half million square feet require at least a year's worth of repairs. Total repair costs may exceed \$2.2 billion.

Damage to retail and residential real estate was less severe. The attack destroyed half a million retail square feet, including the underground mall at the World Trade Center. However, this was a small part of the Manhattan retail market. Nearly all Battery Park City apartments and other Lower Manhattan residences are now habitable.

The attack accelerated deterioration in the Manhattan office market.

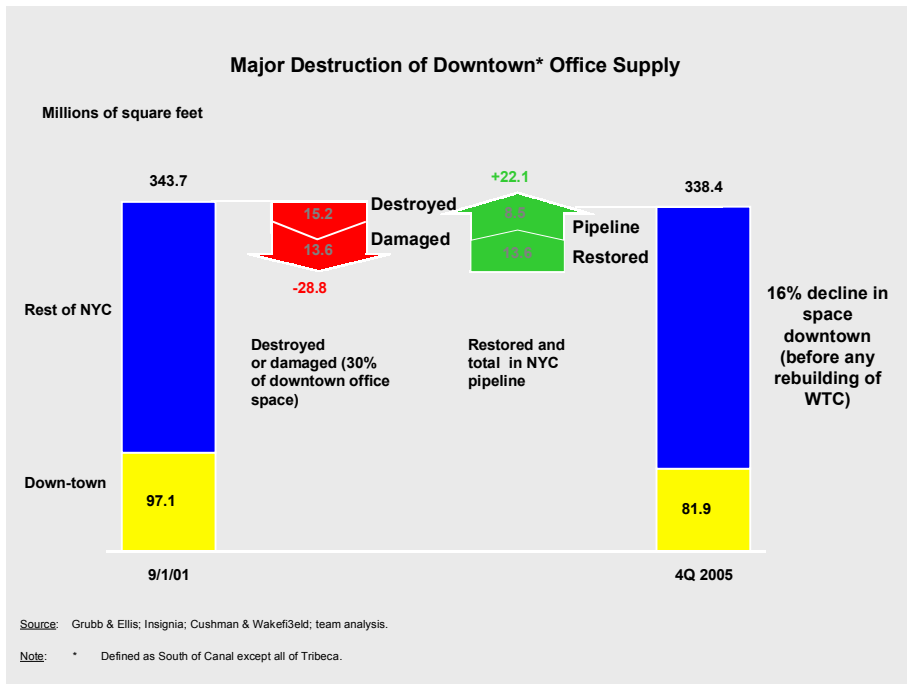
Manhattan's office market had begun softening prior to September 11th. Vacancy rates rose from 5% in May to 7% in August.¹² Rents, meanwhile, slipped by between 5% and 10%. Dot-com and financial firm woes drove this decline. Layoffs pushed unemployment from under 5% in July to 5.8% in August.



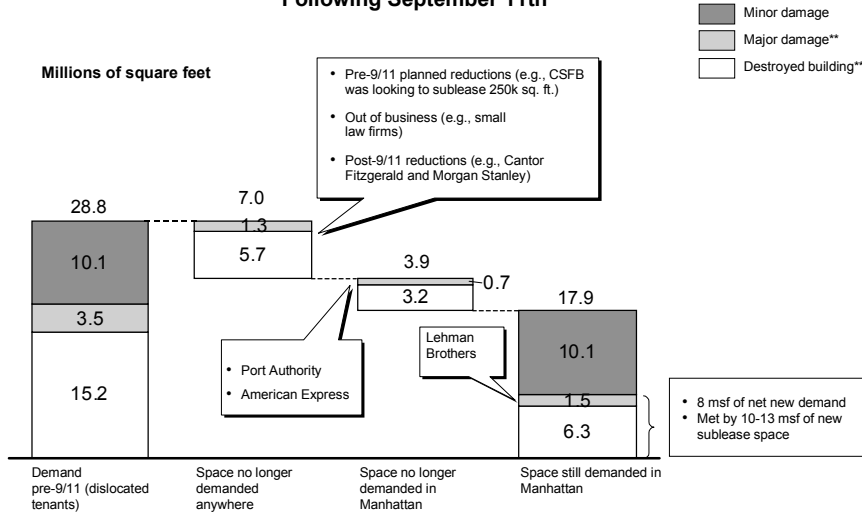
¹¹ Replacement cost estimates exclude excavation, infrastructure repair, and environmental costs, as well as internal finish, telecommunications, and technology.

¹² Leading commercial brokerages differ in how they count total Manhattan office space. Newmark & Co. Real Estate, for instance, uses a total of 410 million square feet of office space in Manhattan; under this count, the vacancy rates would all be about 2 percentage points higher than the estimates used in this report.

Despite the supply destroyed on September 11th, office vacancy continued to rise from 7% (September 1st) to nearly 8% (September 30th), as demand fell faster than supply. Firms in destroyed or seriously damaged buildings sought less space than they lost, reflecting layoffs for some and business failure for others. Most displaced firms chose to remain in Manhattan, but about one-third took space outside New York City (representing about 4 million square feet). Meanwhile, preceding September 11th, a large inventory of excess space (10 million to 13 million square feet to date) became available for sublease from unaffected firms concerned about a worsening economy.



Dislocated Tenants' Demand for Manhattan Office Space Falls ESTIMATE
Following September 11th*



Source: Colliers and Insignia and Grubb & Ellis and interviews.

Note: *Assumptions: (1) No double leasing, (2) Leases in minor damaged buildings will be honored and (3) Tenants in major damaged buildings released from leases. **~3 months to repair minor damage and 12+ months to repair major damage.

Depending on the severity of the economic downturn, Manhattan office vacancy rates may rise to between 9% and 13 % by the end of next year, the worst rates since the early 1990s. Given the heady 80 % increase in commercial rents from 1997 to 2000, rent declines of between 10% and 15 % are likely. In a severe recession, rents could fall by as much as 25 %, as they did between 1989 and 1994.

The primary factor in the outlook for residential markets comes, not as a result of the attack, but in response to general economic conditions. The question for the residential market is demand, which is likely to remain strong. Some softening in rents will ease New York City's affordable housing crisis. A recent poll found that only 7 % of New York City residents said they were more likely to move away after September 11th.¹³ Suburban developers and brokers confirm there is no residential exodus from New York City.

¹³ The poll, performed by Harris Interactive, asked NYC residents about their desire to move to other environments (urban, suburban, rural) after September 11th. Thirty-two % said they were somewhat or much *less* likely to move, while 7 % said they were somewhat or much *more* likely to move.

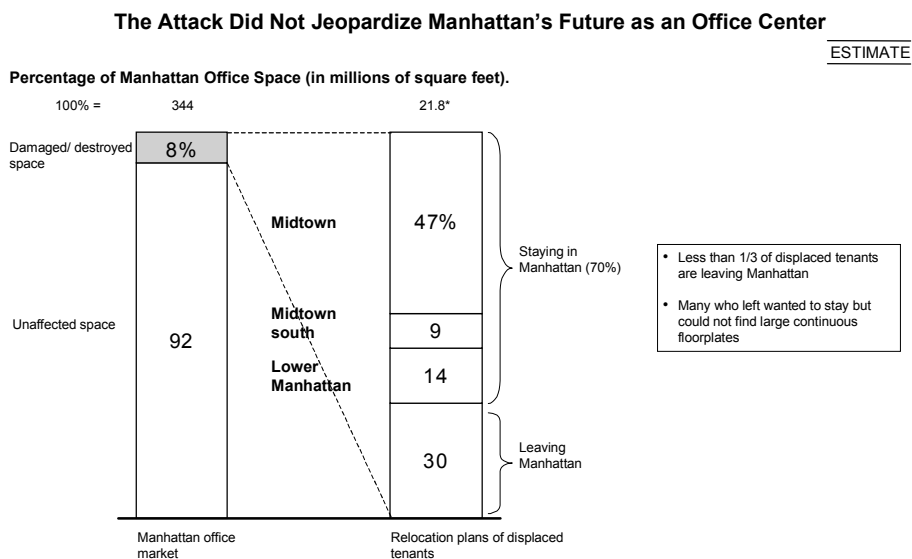
Cleanup and reconstruction of infrastructure and damaged buildings will boost construction employment.

In 2002, site cleanup alone will require as many as 5,000 workers, pushing employment in heavy construction well above prior September 11th forecast levels. Combined with infrastructure rebuilding and the existing pipeline of private and public projects, the cleanup and likely rebuilding may create extraordinary demand for construction labor. With only 1,500 new workers each year joining the 100,000+ construction workers in New York City, the industry may have trouble supplying enough workers, first of heavy construction workers, and later in other construction trades. In contrast, the September 11th attack had minimal impact on employment in office and residential construction industries, although interior renovation work may decline as tenants sublease “as is” space.

TENANT RELOCATIONS IN AND OUT OF THE CITY

The attack did not jeopardize Manhattan’s future as an office center

Dislocated and unaffected businesses, both tenants and owners, are generally seeking to stay in Manhattan. After September 11, higher suburban vacancy rates and readily available large, contiguous floors pulled a few dislocated tenants away. Most (70 %) relocated to Midtown, citing Manhattan’s access to the rich talent pool in the tri-state region and proximity to clients and related businesses. Moreover, expensive long-term leases and ownership of their premises tend to bind businesses for the short term.



Source: Cushman and Wakefield, interviews, McKinsey analysis.

Notes: *Excludes space destroyed or seriously damaged that is no longer demanded.

The picture over the next few years is hazier. Manhattan remains high cost and high tax. Finding large contiguous floors can be difficult. Some firms such as Stamford and New York-based UBS Warburg, were already moving away from urban campuses. After September 11, new desires for diversification will encourage the dispersal of people, telecommunications and technology. Without a redevelopment plan that provides sufficient alternative systems and networks for the energy and telecommunications infrastructures, it is possible that over time many major firms previously satisfied with Manhattan may shift a portion of their operations outside of Manhattan.

Dislocated tenants that are leaving are going to the New Jersey waterfront, not Brooklyn and Queens

Approximately 75% of dislocated firms that have left Manhattan have selected the New Jersey waterfront – “New York’s Sixth Borough.” The remainder went mostly to Connecticut, Westchester and Long Island. So far, only one major dislocated firm (Empire Blue Cross/Blue Shield) plans to relocate in another New York City borough, and it is tied to New York State.

One obvious reason firms chose New Jersey was the immediate availability of usable office space at rents of \$40 per square foot with tax incentives and various direct subsidies. Unfortunately, no such stock existed in Brooklyn and Queens. New Jersey was also the site of existing backup facilities and is home to many executives and their employees.

CHALLENGES IN REVITALIZING LOWER MANHATTAN

Vacancy rates could rise in Lower Manhattan

The World Trade Center was in part a government-driven remedy for Lower Manhattan’s stagnation in the 1950s and 1960s. The completion of the Trade Center coincided with New York’s troubles in the early 1970s. The World Trade Center flooded the market with new space and drove down rents for almost a decade before it was fully leased. The boom of the 1980s brought revival, but that revival was cut short by the 1987 stock market crash. By the mid-1990s, almost a quarter of Lower Manhattan office space was empty.

Once again, Lower Manhattan rebounded with the 1990s boom. Dot-com companies joined financial firms to push Lower Manhattan’s Class A vacancy rates down to 4.4 %, below Midtown’s for the first time in thirty years. Thus, Lower Manhattan was no longer just office space. Battery Park City opened, followed by ten hotels and thirteen museums. Tax incentives spurred conversion of obsolete commercial properties to residences. A growing residential population, (more than 20,000 residents) had begun turning the neighborhood into a vibrant 24/7 community.

The events of September 11th abruptly suspended the Lower Manhattan renaissance, particularly in the area adjacent to Ground Zero, south of Chambers Street and west of Broadway. For now, painful memories, odor, asbestos fears, and limited amenities make many office workers and residents reluctant to return. Once these problems recede, there will be others such as five to seven years of rebuilding and the difficulty of getting to, from and around the area.

For now, Lower Manhattan's commercial outlook is poor. Large financial firms in both damaged and unaffected buildings are trying to sublease an additional 6 % of total Lower Manhattan stock. Like the rest of the island, the Lower Manhattan market is cushioned by long-term leases, but keeping tenants may be difficult as these leases expire. If rebuilding is highly disruptive, the 2006 vacancy rate in Lower Manhattan could reach 20%, as it did in the early 1990s. In more human terms, Lower Manhattan could lose an estimated 28,000 jobs and \$5 billion in cumulative economic output through 2006, above the direct impact of September 11th.

The residential market adjacent to sixteen-acre Ground Zero is experiencing considerable short-term losses, especially anywhere within view of the site. As of late October, only one-third of Battery Park City residents allowed to return to their apartments had actually done so. Even under an optimistic scenario, Battery Park City vacancies will rise and rents will fall. The more deeply rooted and further removed Tribeca neighborhood, and the residential areas east of Broadway should be less adversely affected.

Lower Manhattan rents are too low to spur private rebuilding of high rise office space

A strong market, vacant tracts of land and aggressive New York City development subsidies stimulated construction of only one office building in Lower Manhattan during the 1990s. The underlying reason: rents are too low to cover development costs. Rents for a new Class A building in Lower Manhattan would be calculated today at no more than \$50 per square foot, approximately \$22 (30 %) too low to entice private developers to invest, and a developer would still need anchor tenants.

Insurance proceeds would significantly reduce required rental rates for the replacement in kind of buildings destroyed on September 11. For other new construction, government subsidies will be required to attract private developers to Lower Manhattan. The City of New York often steps in to stimulate new construction and attract or retain taxpaying firms; tenant and/or developer subsidies underlie all but one of ten office buildings now under construction in Manhattan. During the next few years, however, neither the city nor state will have the resources required to provide much in the way of local subsidy. The redevelopment of Ground Zero should be a matter of national resolve.

Government resources must also focus on building the transportation, power and telecommunications infrastructure that is required to attract private development in response to post-recession demands.

RECOMMENDATIONS

Focus government resources on Lower Manhattan.

The damage, as well as short-term and long-term economic impact of September 11th, is concentrated in Lower Manhattan, albeit with ramifications throughout the city and state economy. The extent of the damage makes federal assistance essential to economic recovery and rebuilding. Timing is also critical. Delay will result in significantly higher costs and lost opportunities to capture the positive momentum and the determination, shared by business and the general public to rebound from this terrorist assault on America and prove that such attacks will not be allowed to undermine the nation's financial center.

Concentrate first on retaining businesses and residents.

It will be much cheaper and easier to retain existing commercial and residential tenants than to attract new tenants.

To restore the Lower Manhattan environment to a level of functioning that is close to normal, the city, state and federal governments should work with the private sector to:

- **Create transport and utilities “fixes.”** Essential elements will include water taxis to and from New Jersey, Queens and Brooklyn, express buses within Lower Manhattan and between Lower Manhattan and Midtown, the planned bridge at Rector Street and temporary telecom equipment (e.g., cell towers).
- **Maintain rapid pace of cleanup.** To bolster the confidence of Lower Manhattan residents and workers, cleanup should be expedited (e.g., provide early completion bonuses to contractors). The areas adjacent to Ground Zero should be returned to an acceptable level of access and service first (e.g., clearing West Street to improve access to the World Financial Center).
- **Mitigate disruption from cleanup and then rebuilding.** Simple “best practices” from other major construction projects include limiting air and noise pollution, using clear signs, communicating progress and schedules, keeping transport and traffic moving, and ensuring rapid and effective response to complaints.
- **Certify that Lower Manhattan is safe from health risks.** Steps to minimize asbestosis and other health risks, real or perceived, should continue to be undertaken and communicated. City health officials should systematically

inspect and declare safe each area they treat until Lower Manhattan is wholly clear.

In parallel, there should be a concerted effort to obtain **public commitments from major Lower Manhattan firms to stay** (both dislocated and unaffected). These firms should promise to retain, not just their headquarters, but the vast bulk of their prior to September 11th activities in New York City, and, if possible, in Lower Manhattan. Federal aid or incentives should only be available to those firms that make a long-term (5+year) commitment to maintain jobs in New York City and, wherever feasible, in Lower Manhattan.

Finally, **the most affected area of Lower Manhattan should be designated as a tax-favored zone** to retain and attract business. The zone should complement federal and state programs. Based on what tenants, brokers, urban planners and developers say, the top-priority zone should be the directly affected area (south of Chambers, west of Broadway). Since firms and residents in less affected eastern Lower Manhattan are also showing signs of exit, a second zone, with half the incentives, could be created for south of Chambers, east of Broadway.

The specifics of the public incentive package should include:

- **Offer per-employee tax credits.** A program similar to the Relocation Employee Allowance Program (REAP) that offers incentives for relocation to the other boroughs should be implemented in the target area. REAP provides \$3,000 per employee annually for tenants (including nonprofits) that: a) sign new or renew long-term leases or b) return to a seriously damaged building. If every tenant in a surviving building took up the offer, the maximum cost west of Broadway would be approximately \$400 million a year. The amount could be capped per firm and limited to 10 years.
- **Provide a rent or mortgage subsidy for residents.** Tax credits of \$2,500 a year per household, for residents who remain in or move to the district in the next two years, would help stabilize the area and provide some compensation for the disruption and trauma that residents experienced. The cost would be under \$20 million a year for the 7,000 households living in the high impact area.
- **Eliminate commercial rent tax.** Paying tax on already high rents irritates business tenants. New York City is the only city in the nation to levy such a tax. The revenue loss would be an estimated \$65 million to \$75 million a year for the entire region South of Chambers, and about half that if elimination of the tax were limited to west of Broadway.

In all cases, businesses and residents would have to commit to staying long-term. Any business or resident violating the terms of the aid would be required to reimburse New York City for early departure.

GET THE RECONSTRUCTION AUTHORITY UP AND RUNNING AS SOON AS POSSIBLE

On November 3rd, Mayor Giuliani and Governor Pataki announced jointly their support for a city-state authority, the Lower Manhattan Redevelopment Corporation. This announcement is a welcome step in the efforts to organize the redevelopment of Ground Zero. Now that Mayor-elect Bloomberg is in place, swift action to get the authority up and running should follow.

A New York State Authority is the right choice

Redevelopment will require orchestrating a project as large as any before in America – constructing new buildings and world class infrastructure (e.g., roads, subways, utilities, telecommunications) across multiple private and public properties, all with the nation’s attention upon it. The Mayor’s and the Governor’s choice of a New York State authority is the right one.

The Governor and Mayor aim to form the corporation as a subsidiary of the Empire State Development Corporation (like the 42nd Street Authority). To ensure its success, this authority must be:

- ❖ Able to wield full land-use powers (condemnation, zoning, and permitting) over an area not smaller than west of Broadway, south of Chambers.
- ❖ Chaired by a leader with extensive business experience and federal, state, and city ties.
- ❖ Supported by best-in-class urban planning and project management expertise.
- ❖ Limited in lifespan, probably ten to fifteen years.

The Port Authority of New York and New Jersey owns much of the affected land. To ensure that the project proceeds with no conflicts of interest and with an adequate budget, the Governor of New Jersey should agree to ceding the land to the new New York State authority, with appropriate compensation to the Port Authority.

- **Confirm a rebuilding process by the end of 2001 to galvanize public confidence in Lower Manhattan.** Once the authority has been created, it must lay out its decision-making plan over the next year and beyond, including opportunities for advice from the community and other stakeholders, as well as deadlines for key decisions.

-
- **Complete a master rebuilding plan by mid-2002.** Once in place, the authority must formulate a master plan for reconstruction. Several outlines have already begun to appear, ranging from multiple office towers to a mix of residential, commercial and cultural uses. An appropriate memorial to the victims of the attack must be a key element of any plan, and this idea has received virtually universal support in New York City, across the nation and abroad. To minimize the time that the land lies fallow, the authority should complete a clear master plan before the cleanup is completed. The earlier that the authority completes its plan, the faster it will dispel uncertainty, encourage private investment and rekindle Lower Manhattan's recovery.

DEVELOP VISIONARY RENEWAL PLAN

During the two months following the disaster, attention and resources have been appropriately focused on rescue, cleanup and debris removal. The time has now come to develop a visionary plan for renewal of the community. In order to affirm the resilience and strength of America and New York City, it is essential that Lower Manhattan come back stronger than ever. Prior to September 11th, Lower Manhattan was the nation's third largest business district (following Midtown and Chicago). Lower Manhattan's redevelopment should focus not simply on restoring this status. Redevelopment should also capitalize on the opportunity to transform this region of the city into a center of international commerce and culture.

While a public process is required to develop consensus around the design principals that will guide rebuilding of a site that now "belongs" to all New Yorkers and all Americans, this process should be collapsed into a tight time frame. The beginning of renewal, however, does not have to await the development of plans for the Twin Towers site. Immediate steps can be taken to encourage the renovation and reuse of the damaged buildings at the World Financial Center, on Liberty Street and West Broadway. Moreover, the corporate owners of these buildings should be solicited to become partners in recruiting new tenants for these properties and helping to plan and finance the amenities that will be required to support them.

Silverstein Properties, which controls the leases on the World Trade Center properties, has also indicated the willingness and ability to move quickly to use insurance proceeds to rebuild the 2 million square feet of office space destroyed at 7 World Trade Center, where no lives were lost. Silverstein Properties envisions a redesign of the building that would conform to the local street grid and accommodate the enhancement of the overall site, roadways and other infrastructure. The sooner this site moves to construction, the more insurance proceeds will be available to fund new development, as opposed to carrying costs of the vacant site.

There are many anchor companies and institutions in Lower Manhattan that can and should be enlisted in concerted public-private renewal efforts. These range from the New York Stock Exchange, the Federal Reserve Bank of New York, Goldman Sachs and AIG to the

City University of New York/Borough of Manhattan Community College, NYU Beekman Downtown Hospital and Pace University. All are stakeholders and have resources to bring to bear on a successful redevelopment program. The Alliance for Downtown New York and the Lower Manhattan Development Association have taken the lead in organizing the downtown community and undoubtedly play a key role in reconstruction efforts.

LISTEN TO THE MARKET, THEN DECIDE WHAT AND HOW MUCH TO BUILD

Public investment should focus on building a 21st Century infrastructure for Ground Zero and the rest of Lower Manhattan. This will, in turn, leverage maximum private investment for the commercial and residential projects that end up on the reconstruction agenda.

Presumably, the reconstruction authority will work with private developers to carry out the entire renewal plan. Private firms that put up capital, and share risk with the government, will help ensure accountability, sensible planning and efficient construction. The Port Authority, in fact, sold the ground lease for the World Trade Center for similar reasons. There will be a need, however, for public subsidies in the form of tax credits and financing aid to accomplish rebuilding. For tax credits, a combination of tenant subsidies (such as those in Recommendation II) and the City's Industrial and Commercial Incentive Program (temporary exemptions from real estate taxes) would help close the gap. The availability of federal tax-exempt financing is another key component for renovation and reconstruction.

The purpose of government subsidies, tax or financing, is to catalyze private capital where investment returns appear low. It is possible that demand may prove much greater than anticipated. The government would be prudent to take equity options in the subsidized projects.

Bringing private firms as co-investors in the project and giving them the right incentives would ensure they listen to the market. But even if the government builds as the sole owner, policymakers should take proven demand into account when redeveloping for-profit space (i.e., hotels, apartments, offices). Unwanted construction would not only waste taxpayer money, but also depress market prices and therefore private incentives to build and invest elsewhere.

Policymakers should follow the private sector's "best practices" on ensuring proven demand for for-profit space before starting construction (e.g., pre-lease 50 % of an office tower, stagger construction as demand presents itself, and monitor vacancy rates and the availability of large contiguous floorplates in Manhattan). If planners listen to the market, the most likely outcome is a mix of uses: office, hotel, residential, and retail, while reserving space for a memorial.

Economic Impact of the Attack on the Insurance Sector

This report on the insurance sector is based on research and analysis conducted by A. T. Kearney.

SUMMARY

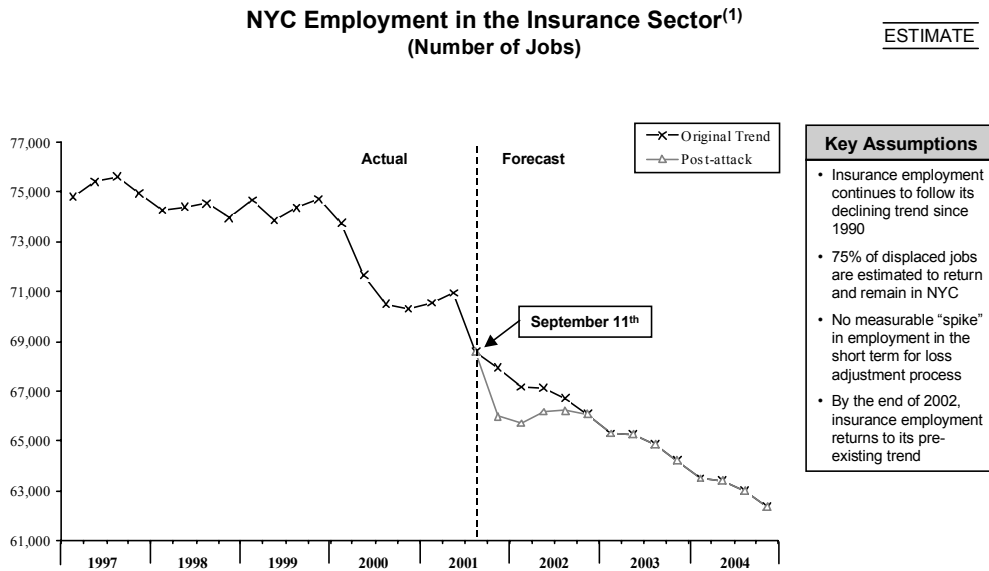
By paying benefits and claims, the insurance industry will be the largest private contributor to New York City's economic recovery and rebuilding effort. To assess the effect of the September 11th attack on the insurance sector, two sets of important questions must be addressed. First, what direct impact did the attack have on those insurance companies located in Lower Manhattan, and how will this affect the local economy? Second, what are the attack's consequences for the insurance industry overall, and how will these influence customers' ability to receive claims money and obtain insurance? Will businesses really have to wait years for their payments, and will they be able to get terrorism coverage at all?

Research, interviews with members of the industry and analysis lead to the following conclusions:

- ***While the insurance industry represents a relatively small portion of the city and state economy, the New York-based insurance industry suffered significant human loss and substantial exposure to insured losses as a result of September 11th.*** The short-term economic effects, however, on these insurers will be minimal, given their strong capitalization and relatively limited presence in Lower Manhattan. Longer-term, insurance sector output will not be adversely affected, as slower overall economic growth will be mitigated by anticipated rate increases and increased demand for insurance coverage.
- ***Because of the attack, businesses may find it impossible to obtain coverage against terrorism risks in the future.*** This may be the primary consequence of September 11th on the insurance industry as a whole. Should reinsurance companies, because of the uncertainty of the terrorism risk, exclude terrorism coverage from commercial policy renewals to be completed by the end of 2001, as is now under consideration, the primary insurers would find it prohibitively risky to offer such coverage to businesses operating in the city.
- ***The speed of claims settlement and payment will be key to recovery efforts and reinvestment in the city's economy.*** As is true in any significant insurable event, the majority of insured losses are likely to require several years to reach full

resolution and settlement, raising cash flow issues for affected commercial claimants. Indeed, some of the insurance claims from the 1993 bombing of the World Trade Center remain in court and unresolved. In addition, not all insurance settlements will flow back to New York City's economy.

- **Finally, as another consequence of September 11th, insurance premium rates will rise to noticeably higher levels than were projected prior to the attack, as a reflection of the reassessment of risk in light of the events of September 11th.** However, this increased cost by itself is not expected to cause current businesses in the city to relocate elsewhere or to keep new businesses from coming to the city.
- **To prevent these factors from slowing New York City's economic recovery, a number of actions must be taken quickly to assure adequate interim cash flow to businesses awaiting payout of longer-resolution claims.** For example, alternative funding, such as low-cost small business loans, may need to be made available to businesses with interim cash-flow problems while means to speed appropriate settlements between insurers and their policyholders are also explored. In addition, ways to make terrorism coverage available, through either private or proposed federal solutions, will need to be addressed by insurers and their commercial customers.



Source: Bureau of Labor Statistics; A.T. Kearney interviews and analysis.
 Note: (1) Actual employment through 2Q 2001, remaining periods are forecast.

OVERVIEW OF INDUSTRY CONDITIONS PRIOR TO SEPTEMBER 11TH

More than seventy leading national and international insurers are headquartered in New York City or have a significant management presence in the city. Despite its importance to the city and state economies, the insurance sector represents only a small portion of real New York State Gross Product (GSP). This translates to \$16 billion, or 2.2 %, of total FY 1999-00 GSP of \$729 billion. The sector's relatively small GSP contribution has, moreover, been declining at an average rate of 3.8 % a year since 1990, when it contributed 3.1 %, or \$18.5 billion, of total GSP.

Although the insurance sector employs highly skilled and well-paid workers, the sector provides approximately 2 % of New York City jobs, or 70,800 jobs, and 3 % of city wages, or \$6 billion. The number of insurance jobs in the city has also been declining steadily over the past decade, decreasing from 92,000 in 1990 to 70,800 in August of 2001 (an annual average decline of 2.5 %). This trend, largely attributable to the migration and consolidation of back-office functions, has been forecast to continue at a similar rate, at least through 2005, and will not be affected by September 11th.

As the key sign of the industry's growing economic output, direct premiums written, or total revenue from customers before reinsurance adjustments, in New York State climbed from approximately \$47 billion in 1996 to approximately \$63 billion in 2000. Prior to September 11th, this growth had been expected to continue through at least 2005.

ECONOMIC IMPACT OF THE SEPTEMBER 11TH ATTACK

The nearly 500 people employed by the insurance sector who lost their lives on September 11th are estimated to account for 10 % of those who perished. These lives were almost exclusively from the insurance brokerage subsector; primary carriers were largely unaffected. The insurance sector also lost significant office space (over 1 million square feet), resulting in the relocation of 6,800 employees, or about 10 % of all insurance sector employees.

Although these losses are high, the impact of September 11th on the New York City's insurance sector employment will be minimal. After a slight initial adjustment, the sector is expected to return to its previously forecast employment pattern within one year. To date, relatively few dislocated employees have left the city. The majority of employees have moved to Midtown office space. To date, none of the dislocated companies has expressed intent to relocate outside of the city.

September 11th is not expected to reduce the insurance sector's overall economic output. On the contrary, the sector will continue its projected upward trend. And as generally slower economic growth is mitigated by increased rates and higher demand, the value of direct premiums written in New York State is expected to increase over the levels projected prior to September 11th.

Finally, New York State's tax revenue from this sector is likely to decline in the short term because of the fall of insurers' net income. But that could be partly offset by the tax collected on direct premiums written in the state. The impact on the city's tax revenue from is likely to be negligible.

IMPLICATIONS

September 11th will clearly represent the largest insured loss in history. The loss is unprecedented in terms of the number of affected lines of coverage and the degree of loss-development complexity.

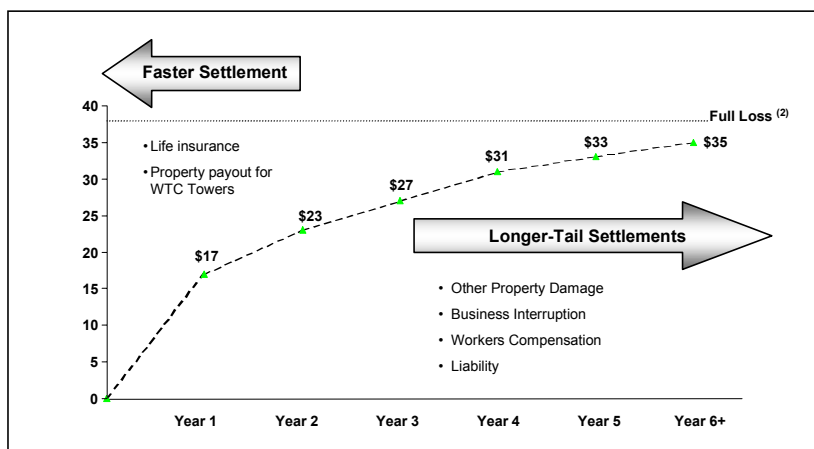
Though certainly subject to refinement and likely upward revision, current early estimates of September 11th losses, made by various industry stakeholders, range from \$25 billion to more than \$50 billion. The average of these early estimates of insurable loss is \$38 billion. Nevertheless, the insurance industry has sufficient capitalization to meet its financial obligations to policyholders. Insured losses are widely distributed among domestic and international insurers, with over 80 % covered by twenty of the largest global insurance companies. Solvency will not be a major issue. A.M. Best, a rating agency, has reaffirmed ratings based on reserve strength, earnings strength and financial flexibility for most of the heavily exposed companies. While commercial property and casualty (P&C) lines experienced the greatest losses, commercial P&C stock indexes have risen over 10 % since September 11th, substantially outperforming the S&P 500 Index.

The speed with which payouts are made will be key to New York's economic recovery. As mentioned, however, the events of September 11th affected an unprecedented number of coverage lines. About 70 % of potential benefits and payments involve lines associated with high degrees of settlement and payment complexity. For example, full-life insurance benefits will be paid relatively quickly, while coverage for business interruption, liability and some property, where losses will be more difficult to estimate, will take much longer to fully settle.

If historical insurance payout patterns prevail approximately 45 % of insured losses will probably be paid within the first year. This would represent approximately \$17 billion, based upon preliminary loss estimates. By the end of two years, 60 % are likely to have been paid. But this, however, would still leave a full 40 % of claims subject to between three and six years of cash-flow constraint before reaching resolution and full payment. The wait will be longer in some cases. Indeed, most liability claims from the 1993 World Trade Center bombing are still unresolved.

Potential Insurance Cash Payments Timing ⁽¹⁾
(Cumulative, \$ Billion)

ESTIMATE



Source: A.M. Best, Morgan Stanley; A.T. Kearney interviews and analysis.

Note: (1) Based on accident year cash payout analysis by line adjusted for unique nature of WTC attack.
 (2) Does not assume any growth in insurable losses; average initial loss estimate of \$38 billion. Loss estimates are often revised upwards over time in certain lines (such as liability) as claims are filed and processed, thus raising the ultimate total loss figure. The final amounts for liability, business interruption and workers compensation may be adjusted and may not be known for several months or years.

Once claims have been settled and paid, approximately 50 % of total payments, those for business interruption and property claims, can reasonably be expected to be directly reinvested in New York’s economic recovery. Life, liability and workers’ compensation payments are typically used for long-term income replacement. This reinvestment into New York’s economy will not directly stimulate additional economic growth. This makes it even more urgent to find cash-flow solutions to the traditional claims resolution process.

To date, the insurance industry has worked to expedite New York’s recovery effort by advancing payments for settlement, waiving certain traditional loss requirements and setting up speedy claims-information and processing services. There is no doubt, however, that ongoing payment speed will continue to be an extremely important issue. Also key to New York’s economic recovery will be the ability of businesses to obtain terrorism insurance coverage. This is an immediate, and nationwide, concern as reinsurance contract renewals take place during the remaining weeks of 2001. Insurance industry capacity in New York City is expected to decline in the short term while the industry reassesses risk coverage parameters. The uncertainty over the terrorism risk has prompted reinsurers to consider excluding coverage in policy renewals. If primary insurers cannot secure reinsurance and must assume all or most of the risk themselves, they cannot offer terrorism coverage. Without terrorism insurance coverage, many commercial projects and reinvestments may be unable to secure debt funding. This in turn could dampen

investments in New York City and economic activity nationally. Furthermore, absent terrorism coverage, the overall risk of business bankruptcies in the event of future attacks may be substantial.

Finally, September 11th has affected traditional underwriting factors and will contribute to rate increases in 2002. Rate increases will vary by coverage line, company size and class of risk. While difficult to estimate at this point, an overall increase in the range of 20 % to 65% in the commercial P&C (which includes business interruption) is likely to occur due to the attack. However, businesses are not likely to locate or relocate outside New York City solely on the basis of increased insurance rates. As a percentage of revenues, insurance represents a relatively small share of costs for both large and small companies. In any event, rates would increase nationwide.

In the longer term, the September 11th attack may initiate change in the insurance industry. September 11th has highlighted a number of issues that will change. In particular, the way commercial insurance is structured, packaged and offered in the future, in New York and globally. Across the board, as the industry adjusts to these new realities, pressures for improved returns, regulatory reform, more attention to risk assumed and operational efficiencies will only grow. At the same time, within the commercial P&C, reinsurance, and brokerage sectors, opportunities to introduce new capacity and new products to address previously unquantifiable terrorism risk will emerge. The interplay of accelerating pressures and new opportunities will lead the industry to a stronger position from which to serve customers and other stakeholders.

RECOMMENDATIONS

Action must be taken in two key areas where insurance problems may slow the pace of New York's economic recovery: (1) ensuring that businesses in the city can obtain terrorism insurance coverage and (2) ensuring that businesses in the city have adequate cash positions while awaiting claims settlements.

1. As the uncertainty of terrorism is assessed, in the aftermath of September 11th, businesses in New York City may find that terrorism coverage will not be available if it is excluded from reinsurance contracts and ultimately, primary insurer coverage. Therefore, to ensure that terrorism insurance coverage is available for city businesses, a coalition of business, insurance and government entities should quickly be established to:

- ❖ Actively support and shape the appropriate proposals currently before Congress.
- ❖ Underwrite and develop an independent, detailed proposal for how to structure a solution before the end of 2001.

2. Given the complexity of insurable losses and the likely multiple-year payout of benefits and claims leading to final resolution, short-term efforts may be required to ensure appropriate levels of cash flow to New York's economic recovery. Here, a coalition of business, insurance and government entities should be formed to:

- ❖ Explore various means of achieving timely insurance settlements.
- ❖ Develop alternative interim funding substitutes for businesses awaiting settlement.
- ❖ Vigorously advocate potential solutions.

With rapid mobilization, a cooperative effort and a strong, coherent advocacy agenda, these actions will speed the payment of claims, which in turn should help spur the recovery of New York City's economy and the progress of redevelopment projects.

Economic Impact of the Attack On the Energy Sector

This report on the energy sector of the city's economy is based on research and analysis conducted by A.T. Kearney.

SUMMARY

A reliable and resilient energy infrastructure (electricity, gas, steam) and an adequate energy supply are essential to the economic well-being of New York. The energy sector (includes electricity, gas, steam and oil—gasoline, heating oil, aviation fuel and propane) employs 32,000 workers in New York City. Its 2000 revenues were \$13.9 billion and its contribution to New York's Gross City Product was \$4.8 billion. The energy sector is largely taken for granted when functioning normally, but its importance becomes all too apparent when service is disrupted, as it was on September 11th.

As a result of the attack on the World Trade Center, Con Edison lost two substations in the underground floors of the trade center complex. The high-voltage supply lines to a third substation were also damaged. Some buildings, including hospitals and stock exchanges, had backup generation to provide electricity in the event that service from Con Edison was interrupted. Most buildings, however, had no way to generate their own power.

The substations that were destroyed supplied power to several parts of Lower Manhattan. Con Edison will spend \$407 million to repair the damage. The effect on 2001 revenues and earnings is estimated at \$15 million after tax. Only \$66 million of the damage sustained is covered by insurance.

A temporary network of above-ground lines, or shunts, housed in wooden enclosures, currently supplies power while the two substations are out of service. The two new replacement substations are scheduled for completion in 2002 and 2003. The company also plans to spend an additional \$384 million in improvements to the security and reliability of Lower Manhattan's energy infrastructure.

Prior to the September 11th attack, the electric distribution network in New York had been among the most reliable in the world. This level of reliability will return once repairs are completed. Nevertheless, New York City and New York State have long needed additional generation capacity. The terrorist attack did not change this. Failure to add such capacity, however, on a timely basis could be a drag on New York City's economic recovery.

The reconstruction of Lower Manhattan’s energy infrastructure is not simply a matter of rapidly replacing elements of the infrastructure that were lost. This reconstruction project is actually an opportunity to create a 21st Century infrastructure that is not only secure, but also resilient. Firms need more options for avoiding business interruptions and they need alternative systems for load management and on-site generation. The latter could be used during a natural or manmade emergency. To bring this infrastructure up to 21st Century standards, the following steps will be need to be taken:

- ❖ There should be expedited review, approval and swift construction of the two new substations and associated underground cables and pipes.
- ❖ City and state government, Con Edison, business, environmental groups and other interested parties should work together to support the appropriate use of environmentally acceptable distributed generation in buildings throughout New York City to provide additional security and alternative sources of power in the system.
- ❖ Emergency federal funding should be used to reimburse Con Edison for repairing the damage to its system and restoring the energy infrastructure in Lower Manhattan.
- ❖ The Federal Energy Regulatory Commission (FERC), city and state government, the New York Independent System Operator, business, environmental groups and other interested parties should work together to: (1) rely on the competitive electricity market to support investment in efficient and environmentally responsible electricity generation capacity in New York City and (2) encourage conservation and load management measures that help promote energy efficiency.

ECONOMIC OVERVIEW PRIOR TO SEPTEMBER 11TH

Infrastructure

New York City’s energy infrastructure includes the transmission system, the distribution system and substations. The transmission system is a network of high voltage cables that transmit power to New York. The distribution system is the network of lower-voltage cables that distribute electric power to individual buildings. Substations transform the higher-voltage power from transmission systems to lower voltage power for distribution to businesses and consumers.

The transmission system (high-voltage cables) system is operated so that it can withstand two major problems (such as the loss of a major transmission line into the city and the loss

of the largest generator in the city). Four substations energized by multiple high-voltage feeders supplied Lower Manhattan, each serving a specific geographic area.

Deregulation

In order to create a competitive electric market, New York State's recent deregulation plan required utilities, including Con Edison, to sell most of their electric generation facilities. The wholesale price of electric energy – the electricity that is used for light and other appliances – is now determined by a competitive energy market, operated by the New York Independent System Operator. Rates for transmission and distribution (the wires required to move the energy from the generators to the customers) are still set by regulators, and have been declining.

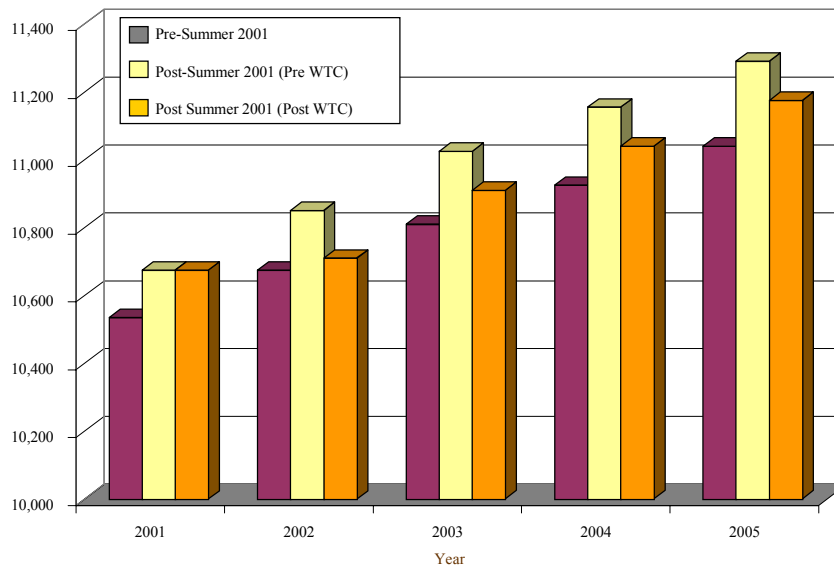
This competitive electric market has resulted in more volatile wholesale electricity prices than existed in a fully regulated environment. There has been a great concern that New York would experience a situation similar to California, which also deregulated its market recently. New York's deregulation plan and market design, however, are different from and superior to California's in several ways. New York's system includes a minimum reserve margin requirement of 18% and a capacity market to ensure adequate supplies are available to meet demand. New York's market also allows for prices to vary across geographic areas, in response to transmission constraints. In addition, the incumbent retail suppliers, such as Con Edison, are not required to purchase primarily on the wholesale spot market. These companies, and individual customers, can purchase a blend of short, medium, and long-term contracts, and other hedges, to manage risk and price.

Increased capacity

Despite these differences between New York and California's deregulation plans, the two states are similar, since both need additional generation capacity. The need existed prior to September 11th and any reduced demand for electricity from the direct and indirect effects of the terrorist attack will be temporary. The World Trade Center load was approximately 140 megawatts (MW), which represents less than 1% of the total demand for electricity in New York City during peak times. This temporary loss of load will partially offset normal load growth, but even with this reduction, the peak demand for electricity next summer is expected to be greater than last summer. Thus, New York City's need for new capacity was not significantly affected by the attack. Indeed, failure to add more generation capacity could slow economic recovery.

Reduced Demand for Electricity
From the Direct and Indirect Effects of September 11th Will Be Temporary

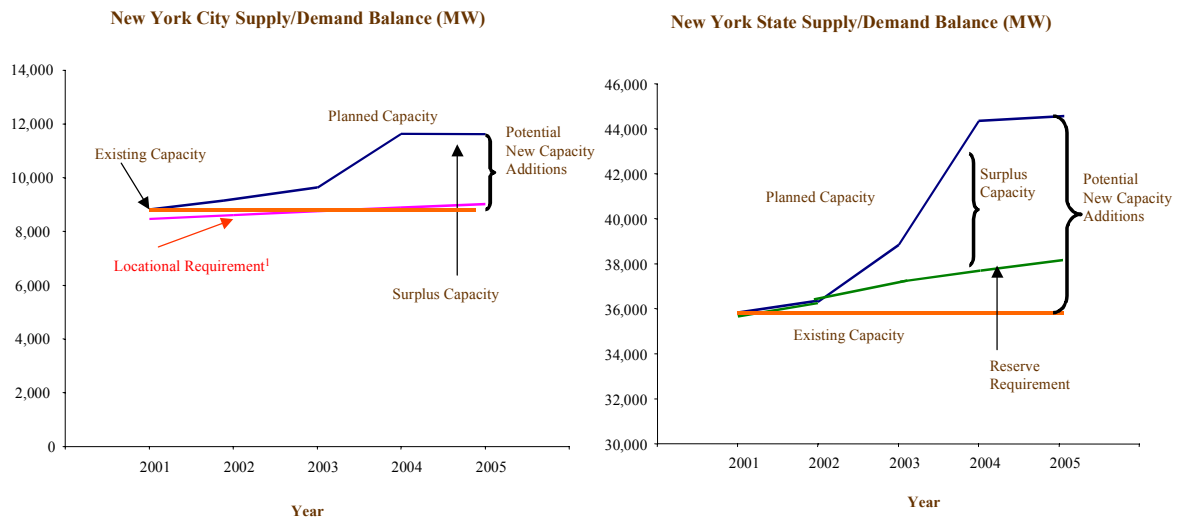
Peak Load Forecast for New York City (MW)



New York City is required to have at least enough generation capacity to satisfy 80% of its peak load, a rule designed to protect the reliability of the system. During the summer of 2001, New York City complied with that rule by having 8,400 MW plus an additional 300 MW for a total capacity of 8,700 MW. Load is forecast to grow at an average annual growth of 1.3%. To absorb this growth in demand, another 500 MW of new generation capacity will be needed in the city by 2005. The statewide load is forecast to grow at 1.4%, which means the rest of the state will need another 2,500 MW of new generation capacity by 2005.

This new generation capacity is required solely to meet the growth in demand. However, additional new capacity, or re-powering projects, would help stimulate the economy and create new jobs, as well as enhance the competitiveness of the electricity markets. The new generation capacity would also have important environmental benefits. Typically benefits include electricity from cleaner, more efficient plants, leading to the displacement and retirement of older, less efficient plants, which produce more air pollution.

New York City and New York State Need Additional Generation Capacity



Source: NYISO Report, "Power Alert: New York's Energy Crossroad and NY Department of Public Service," Status of Article X Cases.

Note: ¹ Under NYISO rules, NYC has a locational requirement by which an amount of installed capacity equal to 80% of the NYC peak electric demand must be located within NYC.

Energy conservation and load management measures must also be a substantial part of New York's energy infrastructure and planning. Energy conservation reduces the need for new generation capacity by reducing load and hence has superior environmental benefits. Load management measures, some of which can be designed to respond to energy prices, will enable businesses and consumers to reduce their usage during peak time when prices are high, and/or shift their usage to off-peak periods. A balanced plan of new generation and sensible conservation and load management measures will help ensure New York's economic recovery and position the city for growth.

ECONOMIC IMPACT OF THE SEPTEMBER 11TH ATTACK

The events of September 11th damaged a portion of Con Edison's distribution system for electricity, natural gas and steam. Two substations located beneath the World Trade Center were destroyed and the high-voltage transmission line to a third was damaged. These substations served parts of Lower Manhattan, which are now receiving power from nearby substations using temporary cables. One new substation will be built by the summer of 2002. Another substation is planned to be built by the summer of 2003. In addition, about

one and a half miles of gas mains (out of a network of about 4,000 miles of gas mains) will be retired or abandoned because of the attack.

**Prior to September 11th
Lower Manhattan (South of Canal) Was Served by Four Substations**



Plan for Summer 2002 Lower Manhattan Network Configuration



The repair and replacement cost for this damage totals about \$407 million, of which about \$66 million will be recovered through insurance. By way of comparison, Con Edison's 2001 capital budget for transmission and distribution investment for its entire service area was about \$500 million. The annual revenue impact from lost and damaged buildings is approximately \$15 million, after taxes.

In addition, Con Edison will spend an additional \$384 million on improving the reliability and security of the energy infrastructure in Lower Manhattan. These enhanced security and reliability measures include building an additional substation (in addition to repairing the two destroyed), adding an additional transmission line, and having enhanced backup control center capability.

DISTRIBUTED GENERATION

Before the attack, some individual buildings, such as hospitals and stock exchanges, had installed their own backup generation, to maintain electric supply during a power failure. Other buildings, however, did not have the capacity to generate their own power. Hence, valuable economic activity was interrupted by the lack of electric power in some buildings.

Distributed generation, which allows buildings to generate some of their own power, can provide backup generation during a power failure, and can be used to provide a clean, efficient alternative to electricity from the central network, or to reduce energy costs by avoiding high market prices during periods of peak demand.

Very little distributed generation, which typically supplies only a portion of a user's requirement for electricity, exists in New York City. Reasons for not installing distributed generation include space constraints in buildings, a sizeable upfront investment, permit requirements and confidence in Con Edison's reliability. Still, businesses and other institutions that cannot readily afford an interruption in either the quantity or quality of power should evaluate the advantages and costs of installing their own electricity generation, especially for the portion of their load that is deemed essential.

There are two types of distributed generation. One choice is the old-fashioned internal combustion engines, or 'back up generators,' fueled by diesel oil, with relatively high air pollutant emissions. These should be used only when the power goes out. The other includes more expensive gas-fired technologies -- advanced internal combustion engines, combustion turbines and fuel cells. These are much cleaner and efficient, particularly when the waste heat is captured in a combined heat and power configuration. Hence, this second kind can be used to reduce energy costs, either for peak-shaving or base load or both.

Types of Distributed Generation and Air Emissions (lb/MWh)

	Fuel	CO2	NOx	SO2	CO	PM-10
Internal Combustion Engine	Diesel	1,300-1,700	10-41	0.4-3	0.4-9	0.4-3
Internal Combustion Engine (stoichiometric)	Natural Gas	950-1200	18-53	negl.	1-6	~0.6
Internal Combustion Engine, low emissions	Natural Gas	980-1,100	0.3-6.0	negl.	2-9	~0.6
Microturbine	Natural Gas	1,300-1,800	0.2-1.4	negl.	0.3-1.8	>0.03
Fuel Cell	H from NG	800-1,400	<0.05	0	0.01-0.02	negl.
Biomass	gas/wood	0-2,300	0.3-0.6	<0.3	2-9	0.6-4
Photovoltaic	sunlight	0	0	0	0	0
Wind	wind	0	0	0	0	0
New CC Turbine	Natural Gas	700-830	0.11-0.9	negl.	0.05-1.0	0.03-0.3

Sources: Data from Nathanael Greene & Roel Hammerschlag, "Small and Clean is Beautiful: Exploring the Emissions from Distributed Generation and Pollution Prevention Policies," Electricity Journal (June, 2000).

RECOMMENDATIONS

- ❖ City and state government and community, business and environmental groups should support the expedited review, approval and swift construction of the two new substations and associated underground cables and pipes.

- ❖ City and state government, Con Edison, business, environmental groups and other interested parties should work together to support the appropriate use of environmentally acceptable distributed generation in buildings throughout New York City to provide additional security and alternative sources of power in the system.

- ❖ Emergency federal funding should be used to reimburse Con Edison for repairing the damage to its system and restoring the energy infrastructure in Lower Manhattan. The citizens of New York should not have to pay for the damage from the attack on America.

- ❖ The Federal Energy Regulatory Commission (FERC), city and state government, the New York Independent System Operator, business, environmental groups and other interested parties should work together to:
 - rely on the competitive electricity market to support investment in efficient and environmentally responsible, electricity generation capacity in New York City.

 - encourage conservation and load management measures that help promote energy efficiency.

Economic Impact of the Attack on the Information Technology and Telecommunications Sector

This report on the information technology (I/T) and telecommunications (telecom) sector of New York City's economy is based on research and analysis by Booz-Allen & Hamilton.

SUMMARY

The September 11th terrorist attack had a modest economic impact on the information technology (I/T) and telecommunications (telecom) sector in New York City.

Interviews with companies indicate that the reversal of this year's slowing revenue growth trends, which was expected to begin mid-2002, is now unlikely to occur before the end of 2002, or midway through 2003. This delay reflects a reduction in spending by sectors directly affected by the events of September 11th, such as financial services and media and entertainment, which historically serve as strong customers of the I/T and telecom sector. At the same time, data and security systems, as well as infrastructure rebuilding and repair, will provide modest growth opportunities for companies within the sector.

The capital losses in Lower Manhattan for I/T and telecom companies are estimated to be \$2 billion. While most of companies that make up the I/T and telecommunications sector are not based downtown, many of their clients in financial services were and continue to be. As a result, there will be an indirect impact on this sector.

Analysis of available data and a thorough study of the sector lead to four recommendations:

- ❖ rebuild a world class infrastructure
- ❖ improve New York City's climate for small businesses
- ❖ nurture innovation while fostering competition.

The short-term effects of the September 11th attack on the I/T and telecommunications sector are modest. As the providers of a critical piece of business infrastructure for New York, the telecommunications and I/T companies will be in a position to help the economy recover.

In the near term, the products and services provided by the technology sector companies can address the business-operations issues that have become more important in the aftermath of the attack. Three of those are the creation of systems and networks that are parallel, secure and resilient. Unfortunately, small businesses often lack the size and scale to make these investments.

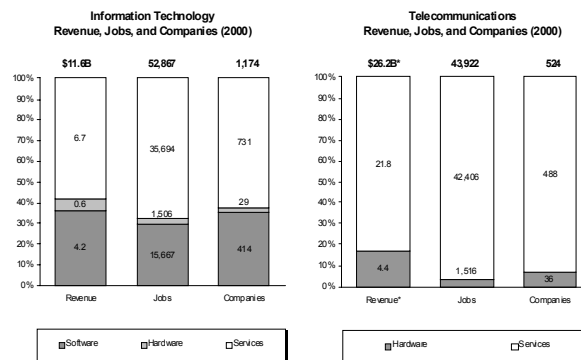
The long-term impact of the attack may extend well beyond the immediate industry. Investors seem to be reluctant to fund high-risk ventures within the I/T and telecom sector, potentially limiting future growth and employment prospects. In light of September 11th, some customers may be reluctant to spend heavily on new technologies thus focusing available funds on technology that protect core operations.

In addition, customers may choose to do business only with familiar names, limiting opportunities for small businesses or startups. The net result is limited outside funding of new technologies and new business models, decreasing competition in the I/T and telecommunications sector. This financial landscape threatens the ability of I/T and telecommunications companies to fund new technology research and the next generation infrastructure improvements required to meet the needs of New York business.

ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

Prior to the September 11th attack, growth had slowed within the I/T and telecommunications sector, reflecting the slowdown of the national economy. The sector's 1,700 companies in New York City generated \$37.8 billion in annual revenue, and employed nearly 97,000 people in the year 2000. Reduced corporate I/T spending and a general economic downturn drove a decrease in I/T and telecommunications sector hardware sales. Additionally, many of the Competitive Local Exchange Carriers (CLECs), which provide local voice and data services to corporate customers, and Internet-based businesses were experiencing financial difficulties. Companies across the telecommunications and I/T sector began reducing their workforces, in light of the declining business conditions. For most subsectors, a return to growth or stabilization was not expected until early to mid-2002.

Prior to September 11th, the I/T and Telecom Sector Generated \$37.8 Billion* and Employed Nearly 97,000 People Throughout New York City



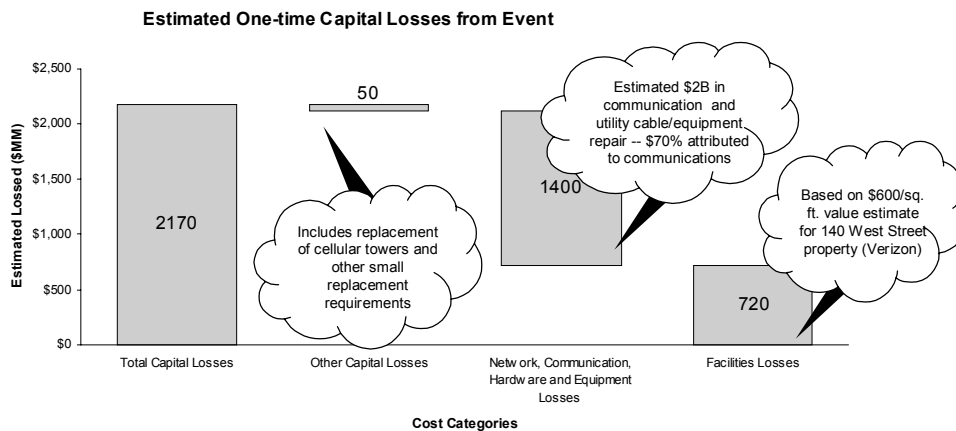
Source: Dunn & Bradstreet, BAH Analysis.

*Note: Only includes revenue generated in New York City. Verizon generates an additional \$61 billion outside of New York City.

Economic Impact of the September 11th Attack

The September 11th attack caused major damage to the technology infrastructure within Lower Manhattan, and has slowed the expected industry growth turnaround by six to twelve months. Capital losses within the sector totaled approximately \$2 billion for companies in the sector, including Verizon, AT&T and AOL Time Warner. Cellular carriers incurred \$50 million in losses, mainly from damaged or destroyed cell sites in Lower Manhattan. Cable providers, local exchange carriers, and backbone and long-haul providers collectively incurred \$1.7 billion in losses. Estimates indicate Verizon alone, the incumbent local exchange carrier, sustained over \$1.2 billion in damage to a switching facility that served the World Trade Center and Lower Manhattan.

The Immediate Capital Loss From September 11th is Estimated at ~\$2 Billion Comprised Primarily of Facilities & Equipment



... Other sectors lost ~\$10 billion of technology infrastructure

Source: Morgan Stanley estimates, NYC Comptroller Report, news articles, BAH Analysis.

The increase in spending required to restore basic services, and address other emergency needs, will delay planned I/T and telecommunications sector spending by six to twelve months. The same delay is expected for the industry's growth turnaround. Many chief information officers (CIOs) are being pressured to reduce or delay expenditures for I/T and telecommunications sector equipment. Additionally, companies are altering their priorities because of financial constraints. These companies are delaying traditional "big ticket" purchases such as customer relationship management (CRM) and enterprise resource planning (ERP) initiatives, in favor of security and infrastructure initiatives.

POTENTIAL IMPLICATIONS

The outlook for the I/T and telecommunications sector is a slower turnaround than forecasted before September 11th, with the newly intensive focus on security, infrastructure integrity and secure communication fostering some growth by the fourth quarter of 2002. As a result of the attack, companies have grown more cognizant of security issues and are apt to bolster spending for enhanced system and data security. Additionally, capabilities such as secure video conferencing and remote access to the office for employees have grown in importance. The attack affected the various I/T and telecommunications subsectors in distinctly different ways, though some common themes have emerged. All of the subsectors are likely to benefit from the business created by companies purchasing equipment and services for disaster recovery, security, and the creation of parallel systems.

The I/T hardware subsector expects to begin to recover next year. The PC market is saturated, with PC makers dependent on the increasing demands of software packages and peripherals to drive growth. This trend is cyclical and part of overall economic trends. Storage system sales will remain stable as Internet expansion continues to drive spending on network-related storage products. Server companies are likely to rebound quickly, sparked by the need to build better alternative systems.

In the I/T software sector, double-digit growth will continue over the long term, driven by an increased interest of corporations in security systems, including firewalls and log-in security systems. In addition, such enterprise applications as ERP and CRM will continue to drive growth. In the short term, New York City-based software manufacturers are apt to see a drop in growth, as New York City based clients spend less on software. Recovery in the software industry is closely tied to the banking sector. Many of the small firms that make up the core of New York City's software industry develop specialized applications for all aspects of the financial services industry.

Demand for I/T services will grow, but at a slower pace than the double-digit growth rates of the 1990s. Pent-up demand for I/T projects, such as systems integration, CRM and supply chain services, is expected to drive double-digit growth of about 10.5% next year. Long-term outsourcing contracts will provide a steady revenue stream. In the near term, revenue from existing multi-year contracts will help New York City-based I/T services firms to avoid an immediate crisis, as a result of the terrorist attack. Looking forward, service companies will find opportunity in all economic environments.

Rebuilding initiatives in Lower Manhattan will require significant amounts of high-end telecom equipment, aiding the recovery in the hardware subsector. Sustained revenue growth will be delayed, because of limited availability of funding for expansions and other business building activities. The overall effect on New York City will be negligible, since no major manufacturers run significant operations here. Voice operations were largely unaffected by the attack. Operators may incur losses if customer migration—that is, the

significant departure of such telecom-intensive industries as banking, real estate, and wholesale—occurs.

Growth in wireless operations is limited by high levels of penetration. Double-digit annual revenue increases are expected, reflecting increased ARPU (average revenue per user), hybrid cellular services, third-generation (3G) applications and adoption of fixed wireless.

For local and long-distance voice telephony, a continued revenue decline is expected, as long-distance price competition erodes revenue streams and as businesses and consumers continue to adopt wireless, pagers, and e-mail as substitutes for telephone calls.

Broadband and other telecom data systems can expect continued high growth rates, with 2005 growth forecasted at 15% to 20%. Most growth will be captured by incumbents, as CLECs providing Digital Subscriber Line (DSL) and Integrated Services Digital Network (ISDN) services continue to suffer from business model issues.

RECOMMENDATIONS

The following measures should be feasible and effective:

- **Reimburse and finance efforts** to allow the installation of modern, up-to-date technology rather than the straight replacement of equipment installed prior to September 11th.
- **Establish consortia** for suppliers of communications services and equipment to address key infrastructure requirements.
- **Establish consortia** of customer groups to help address specific communications and technology needs (e.g., small business "co-ops", build on financial services' Securities Industry Automation Corporation model).
- **Establish new business development region** with advanced technology infrastructure.
- **Channel investments to technologies** critical to established New York City industries such as trading systems for financial services.

Other Initiatives Under Consideration:

- **Help companies with capacity find customers with needs** -- support customer access to key providers/subcontractors for short-term requirements.
- **Establish New York City as a center of technology R&D** by fostering a climate for new technology venturing, specifically in the financial services and media sectors.

Economic Impact of the Attack On the Health Care Sector

This report on the health care sector of the city's economy is based on research and analysis conducted by the Boston Consulting Group.

SUMMARY

New York City's health care sector sustained limited damage, on balance, from the September 11th attack on the World Trade Center. Hospitals, particularly those in Lower Manhattan, have felt the greatest impact, with citywide hospital revenues likely to fall by \$220 million in the near term. Most other health care businesses have emerged relatively unscathed, with the exception of the limited number located in Lower Manhattan.

Nonetheless, the attack has altered the terrain for New York City's health care industry. The accelerated decline in economic activity triggered by the attack will likely increase pressure for health care reform in the city and state, squeezing many health care organizations' revenues, particularly those of hospitals. A likely rise in unemployment threatens to cut revenues of private health insurers, as fewer people are covered by employer-based plans. More immediately, public health agencies, hospitals, pharmaceutical firms and others must quickly prepare themselves for the possibility of large-scale bioterrorism and other terrorism-related threats and complications.

There are actions, however, that can help the industry weather the current uncertainty and significantly strengthen New York City's health care system for the longer term. Steps that can and should be taken immediately include the following:

- ❖ Improve New York City's preparedness for emergencies. Push for federal funding for preparedness for bioterrorism; ensure that local health agencies are adequately trained and funded, commensurate with their responsibilities; and encourage partnership between the public and private sectors to fully leverage the private sector's capabilities.
- ❖ Push for federal reimbursement of hospital costs and lost revenues resulting from the attack.
- ❖ Emphasize and reiterate the effectiveness of the city's response September 11th to rebuild the city's image as an attractive place to live and work, and to increase the sense of security for workers, residents and visitors.
- ❖ Support the provision of mental health services to those severely affected by the attack.

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- ❖ Support biotechnology as an economic development priority.

ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

New York City's health care sector, which comprises hospitals, health insurers, pharmaceutical and biotechnology companies, and a range of smaller businesses, such as home nursing care providers and private physicians, represents approximately 13% of Gross City Product (GCP) and is the source of approximately 345,000 jobs. The city boasts the nation's largest concentration of world class research institutions and teaching hospitals that attract top researchers, physicians and students, capturing a significant share of available research funding. It is also home to several leading health care insurers and global pharmaceutical leaders Pfizer and Bristol-Myers Squibb. New York City has a small but growing presence in commercial biotechnology.

Prior to September 11th, the economic outlook for the city's health care sector was mixed. Pharmaceutical and biotechnology companies appeared to have generally strong prospects. These prospects are driven by steadily rising demand, the relatively recession-proof nature of their products and favorable demographics and keen investor interest, particularly over the possibilities for genomics.

Prospects for hospitals and insurers were less rosy. New York City's hospitals have long been in poor financial shape, falling below the 90th percentile nationwide, according to several traditional hospital operating metrics, such as total margins and current ratios. This fact has left little room for capital improvements and investments in information technology and other efficiency-enhancing measures. Though their financial position has improved, somewhat, in the past several years, most city hospitals had seen a deterioration in 2001. Deterioration has been driven by significant cuts in Medicaid and Medicare funding and increasing competitiveness in the market. The city's teaching hospitals were also vulnerable to cuts in grants for medical education. The public hospitals, which have been in better financial shape than the teaching hospitals in recent years, continue to struggle under the burden of providing free care to patients admitted without medical insurance.

New York City's health insurance firms were in better shape than its hospitals, but still faced challenges. The biggest were posed by the slowing economy. A recessionary environment typically translates into falling revenues from premiums, as workers lose jobs and health care coverage. Revenues are also being pressured as employers shift to cheaper, more restrictive plans in order to save money. At the same time, a slowing economy tends to prompt increased utilization of health care, as employees anticipate the loss of coverage, leading to higher medical loss ratios for insurers.

Economic Impact of the September 11th Attack

Total revenue losses for the health care sector, which includes hospitals, pharmaceutical and biotechnology companies, private health insurers and numerous private health care providers such as physicians, are expected to be \$377 million in 2002 and \$69 million in 2003. Job growth will slow considerably, leading to approximately 700 fewer jobs than forecast before September 11th.

Of all subsectors in the health care industry in New York, the greatest direct impact from the attack has fallen on hospitals. Hospital revenues declined significantly. All of them had unreimbursed standby costs (e.g., discharged patients, cancelled elective surgeries and fewer admissions) as they readied themselves to receive potentially thousands of patients injured in the attack. Revenues will continue to fall in the fourth quarter because of a drop in the patient census. The result is in part, derived from a decline in visits from foreigners and U.S. residents living outside the city. Revenue losses have been exacerbated by ongoing access problems in Lower Manhattan. Third-quarter revenue losses measured approximately \$80 million; fourth quarter losses are projected to be \$140 million. From 2001 through 2003, the hospitals may face a revenue gap of as much as \$435 million. The hospitals also face increased security and other costs (e.g., the cost of carrying higher inventories of pharmaceuticals such as Cipro) related to the attack.

Job losses for hospital employees have been minimal thus far, but are expected to rise to more than 300 in the first quarter of 2002. The rate of job loss should diminish steadily thereafter. In the long-term (that is, after 2002) effects of the attack should be negligible. To the extent that there are hospital closings and associated job losses in the near term, those will be driven more by the hospitals' longstanding financial difficulties than the events of September 11th.

Health insurance and managed care companies have suffered limited direct impact from the attack. The greater challenge for these companies will be the slowing economy. The number of injuries in the attack was relatively small, and the subsequent "wellness effect," often noted in populations that have experienced disasters such as hurricanes or earthquakes, limited the number of physician visits, hospitalizations, and total claims. While demand for mental health care has risen, the claims experienced by managed care companies have not been excessive. This is attributable partly to the fact that mental health is not widely covered, and partly to the free counseling provided through the Red Cross, hospitals and other organizations.

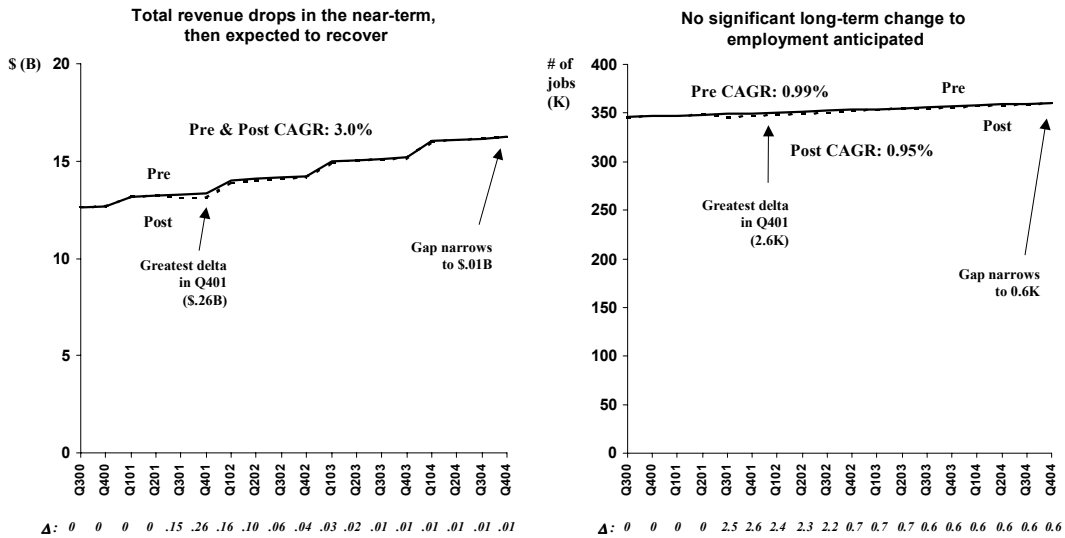
All told, insurance companies experienced no drop in revenues in the third quarter, as premiums were already paid prior to the attack. There was a drop in Lower Manhattan employment of approximately 2,000, reflecting the dislocation of Empire Blue Cross-Blue Shield employees based in the World Trade Center. Insurers will see a slight drop in revenues in the fourth quarter, reflecting a minor decrease in their member pool. This drop will be mitigated by the extension of insurance coverage through COBRA (Consolidated Omnibus Budget Reconciliation Act) and other programs. From 2002 through 2003,

revenues will continue to be pressured by a further shrinking of the member pool resulting from unemployment, a higher percentage of uninsured and a slight drop in population growth following September 11th, but should start to recover thereafter. Employment will begin to recover in the first quarter of 2002 and return to pre-attack levels by year end.

The attack's impact on pharmaceutical firms has likewise been minimal. There has been some stockpiling of pharmaceuticals for emergency preparedness by individuals and health providers. Yet this is likely a short-term effect. Sales of anti-depressants, sleeping aids and other medications to address mental health concerns have also increased somewhat. Demand for antibiotics that could be used to counter anthrax or other bio-terrorist threats have soared, though this is primarily a result of the current anthrax scare, not September 11th. Employment at pharmaceutical companies remains unchanged.

Biotechnology companies have also been spared in terms of revenues and employment, though both revenues and employment were relatively small to begin with. The largest indirect impact on the sector is the further deterioration of the economy, which has weakened the financing environment for the sector. Private equity valuations have dropped from 15% to 20%, though the share of private equity invested in biotechnology is growing. The recent bioterrorism threat has also fueled speculative interest in selected biotechnology stocks, with "bubble-like" increases for shares of companies deemed to have possible applications.

Quantitative Impact on Revenues and Jobs in Health Care Sector



Source: BCG Analysis.

Note: Figures include health care services (hospitals and other), private health insurance companies, biotechnology companies and pharmaceutical companies.

Potential Implications

The attack and subsequent events have shone a spotlight on New York City's entire emergency response system, in particular its hospitals. Clearly, the reaction of the hospitals on September 11th was extremely effective. Patients were discharged or moved to make room for incoming patients, elective surgeries were cancelled and staff was mobilized to respond.

Preparedness, however, is an ongoing process, especially as the threat of crises involving mass casualties increases. To date, hospitals have been preparing for bioterrorism, but not on the scale now envisioned. Hospitals must rapidly expand their efforts. They must provide training for their staff and must work to ensure that the entire logistics and communications chain is up to the task. Hospitals must ensure the availability of backup communications systems (i.e., some hospitals lost telephone service the day of the attack). Hospitals must ensure seamless coordination between FEMA (Federal Emergency Management Agency) and local authorities. There is much to be done, and in a compressed timeframe.

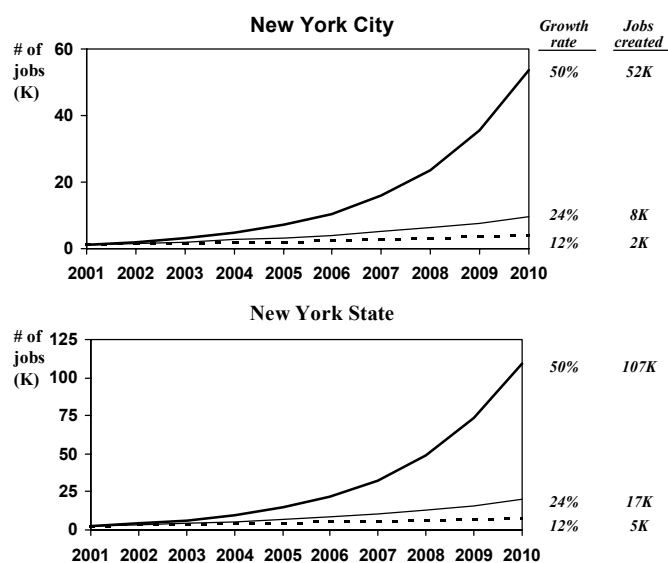
Critical decisions must be made in conjunction with these efforts. Who will fund preparedness for future crises? What level of funding is appropriate? Which responsibilities should fall to federal, state and local authorities? Which should fall to public health officials and hospitals? What level of hospital capacity is appropriate for normal demand and how can the city expand this capacity in times of crisis? Through spare hospital capacity, or through plans to rapidly convert other space?

Beyond preparedness for the next potential crisis, New York City's health care system will have to address mental health concerns stemming from September 11th. Currently, no one knows quite what to expect, who will be affected, to what degree, within what timeframe, and what the appropriate response should be. Based on the experience of health care practitioners in Oklahoma City, there will be fallout. This could have sizable implications for the health care system, as well as the broader community, since mental health problems often manifest themselves as physical problems and associated drops in productivity. Thought should be given now on how to prepare.

City officials and the private sector should also use this moment to step back and decide what they want the face of health care to look like in the New York City over the next several years. The destruction of the World Trade Center did little direct or lasting damage to the health care sector. But it could significantly affect the willingness of companies, doctors, students and researchers to locate here unless steps are taken to maintain the city's top-tier status. Accelerating the development of biotechnological investment in New York City is one avenue with the potential to help attract the mix of doctors, companies and researchers required.

Biotech Has the Potential to Create Employment Partially Filling the Gap Left by Other Sectors

Job creation under various growth rates



Biotech industry still relatively small

Employment	2000	1999	Growth
U.S. – public companies	128,000	114,000	12%
U.S. – private companies	46,000	48,000	(4%)
U.S. – industry	174,000	162,000	7%
San Diego – public	7,976	5,247	52%
San Francisco – public	26,464	20,675	28%
NY State – public	1,997	1,902	5%
NY State ⁽¹⁾ – total industry	2,715		
NYC ⁽¹⁾ – public companies	487		
NYC ⁽¹⁾ – total industry	1,324		
Industry proportion of public companies	74%		
New York proportion of public companies⁽¹⁾	37%		

Biotech presence in NYC may be critical for AMCs, other research institutions to retain their status as leaders in the biomedical field

Source: Literature search, Empire State Development report on technology-driven industries (biotech and pharma), BCG analysis.

Note: •Estimated assuming that proportion of public companies in NYC is half that of the national average given its relative lack of maturity.

**Evaluation of American and European Biotech Clusters
Preliminary Assessment of New York City**

Main topics	Starting points	Munich	Cambridge (UK)	Boston (USA)	Bay Area (USA)	NC (USA)	NYC ⁽¹⁾ (USA)
1. Research	Work groups Publications						
2. Technology transfer	Patent issues Spin-offs/company creation						
3. Capital	Venture capital Government funding						
4. Infrastructure ⁽¹⁾	Incubator space Production space						
5. Work force	Management PhDs CTAs/BTAs						

Source: BCG casework on building biotech clusters in Europe, (1) the NYC estimates are not based on the same quantitative factors as the other regions.

Recommendations

A set of near and longer-term measures is emerging for government officials and the private sector to buttress health care and ultimately strengthen its presence in the city. These fall into three groupings: public health recommendations, steps aimed at accelerating the recovery of businesses affected by the events of September 11th, and recommended private sector actions.

Public Health Recommendations

- **Support efforts to rebuild New York City's image as an attractive place to live, work and visit.** To educate the public on the security matters that trouble them, start by articulating the city's public health and safety plan, as well as its preparedness for crisis.
- **Push for federal funding for public health preparedness (bioterrorism and other public health issues).** As a leader in public health and emergency preparedness, New York City is in a perfect position to help determine the kinds of training, equipment and services cities and metropolitan areas need to handle bioterrorism and other threats.

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- **Pursue health care reform.** Work to ensure adequate funding for local public health agencies, commensurate with their responsibilities for preparedness; continued economic viability of the hospital system; provision of health care for the uninsured; and lower system health care costs.
 - **Evaluate the mental health issues that may develop over the months ahead.** Address the mental needs of those affected (survivors, rescue workers, those who lost family members, co-workers or friends, and those who have existing mental health concerns). Determine how best to treat those who lack access to mental health coverage, volunteer counseling or other programs. Determine whether the situation warrants a move toward mental health parity, in which mental health is covered in the same manner as other diseases and medical problems. And, if so, how to fund it (given the implications for government tax receipts).
 - **Monitor air quality to gauge the impact on long-term health and determine any required remedial actions.** Many who live or work near the World Trade Center complain of various symptoms, though experts believe those symptoms are the body's response to airborne irritants rather than toxins. Persons at increased risk (for example, asthmatics and those with cardiovascular disease) should be aware of health advisories. To date, no risks have been identified for those near the World Trade Center, with the potential exception of recovery workers, who are continuously exposed to the air at Ground Zero.
 - **Support the hospitals' efforts to obtain financial assistance for the costs incurred from the attack.** The hospitals acted in good faith and for the benefit of the public by canceling revenue-generating activities and moving patients to create capacity for the anticipated thousands of injured; they should be made whole. The logic for reimbursement is similar to the case successfully made by the airlines, which canceled all flights and kept all of their aircraft grounded after the Federal Aviation Administration ordered the shutdown of civilian air traffic. Compared to the multi-billion dollar federal relief package secured by the airline industry, the amount in question for the hospitals is insignificant. The hospitals have requested \$340 million for lost revenues and incurred costs.
 - **The pharmaceutical, biotechnology, as well as the health insurance and managed care businesses do not require specific assistance.** Any economic damage to these companies from the attack was limited.
 - **Health care service companies will not require tax breaks or other government incentives are necessary to stay in New York City following the attacks.** The hospitals are, by definition, local and will not leave. To the extent that hospitals undergo further restructuring or merger activity, the cause is not the attack

but longstanding financial problems. Health insurers and pharmaceutical companies based in the city remain committed to it.

Recommended Private Sector Actions

- ***Partner to improve public health.*** Work with public health agencies, hospitals and other government and emergency organizations to ensure preparedness for bioterrorism. Consider contributing private sector capabilities, such as data management and I/T capabilities to track outbreaks and surveillance of prescription data to identify trends. Monitor and support efforts of New York City's hospitals to ensure financial viability. Work with public health agencies to address health care reform in the city and state.
- ***Support biotechnology as an economic development opportunity and priority.*** Advocate the reduction of regulatory obstacles and increased public support of infrastructure projects (e.g., biotech laboratories and other facilities). Publicize reported improvement in technology transfer capabilities of the academic medical centers. Determine whether any space in Lower Manhattan is appropriate for biotechnology companies.
- ***Monitor the mental health consequences of the attack on September 11th.*** Expand short-term mental health benefits for employees. For example, private sector businesses could offer psychiatric evaluations to their employees to determine who could benefit from therapy.
- ***Enhance New York's appeal as a destination for health care professionals.*** Maintain the strength of academic medical centers and other research institutions. Grow the long-term talent pool by encouraging increased emphasis on basic science and math education in the public, charter, private and parochial schools of New York City.

Economic Impact of the Attack on the Media and Entertainment Sector

This report on the media and entertainment sector of New York City's economy is based on research and analysis conducted by PwC Consulting.

SUMMARY

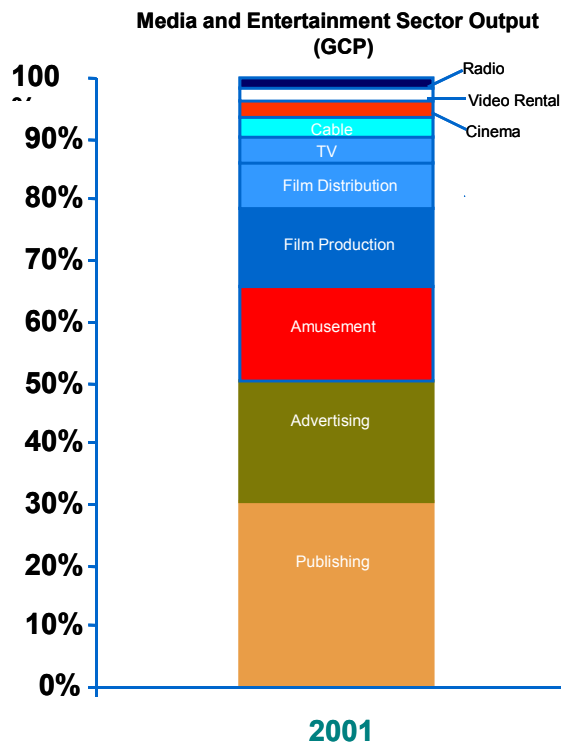
Analysis of the impact of the September 11th events on the media and entertainment sector (M&E) leads to the following conclusions:

- ❖ The events of September 11th exacerbated recessionary effects already weighing heavily on the industry, leading to a projected gross economic output loss of \$1.6 billion over the next two years, including capital losses of \$50 million. Revenue losses are expected to be \$2.4 billion over the next two years, including more than \$1 billion in 2001. Employment is expected to fall by 2% to 3%, which will translate into a loss of 4,000 to 6,000 jobs. Less than 1% of media and entertainment businesses were based in Lower Manhattan. Asset losses, however, of transmitters and antennae affected the broadcasting business.
- ❖ The impact of September 11th will bring further pressure to bear on the industry's profitability. This set of circumstances could translate into layoffs, dispersion and reduction of the specialized talent pool and lower tax revenues for the city and the state. Some companies are likely to reevaluate their rationale for operating in New York City, because of security concerns, profitability pressures and higher levels of uncertainty about new capital investment and advance sales.
- ❖ The M&E sector, however, is positioned to help accelerate New York City's economic recovery, by using its ability to reach the public locally, nationally and abroad. This ability to grab the public's attention can be utilized to inform and educate the public about the return to normal conditions for most of New York's business community, while delivering the message that the city is "open for business." The sector could also assist City Hall in developing a new growth industry to help replace those businesses that have decided to relocate either outside of Lower Manhattan or New York City. In addition, the M&E sector can join with the public sector to support efforts to retain the high quality and diverse talent pool that makes New York City the global capital for commerce and culture.

ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

The M&E sector includes nine subsectors:

- ❖ Broadcast Television
- ❖ Cable (networks and multiple system operators)
- ❖ Motion Picture (production, distribution)
- ❖ Publishing (books, magazines, newspapers)
- ❖ Location-Based Entertainment (theaters, concert halls, sporting venues)
- ❖ Music
- ❖ Radio
- ❖ New Media
- ❖ Advertising Agencies



Source: Bureau of Labor Statistics, PWC Consulting analysis.

The M&E sector has been instrumental to the city's economy, generating \$54 billion of city revenues and a gross city product (GCP) of \$21 billion in FY 2000-01. The city's publishing sector has made itself the "voice" of not only the city, but also the nation (The Wall Street Journal, The New York Times, Newsweek, Time). Madison Avenue is one of the leading influences in advertising. The M&E sector employs 215,000 people in the city, and over the past nine years, has outpaced the city average across sectors by 2.5 times in creating jobs. Sector employees are highly skilled; although they represent only 6% of employees here, they account for 9% of wages. All seven of the major media

conglomerates have a significant presence in the city; four have headquarters in Manhattan. And the sector has invested extensively in new capital infrastructure, leading several efforts to revitalize underdeveloped areas, including Disney's investment in Times Square and Silicon Alley sites like Tech Space and 55 Broad Street.

Prior to the events of September 11th, the M&E industry had begun to feel the impact of recession-like trends in the third quarter of 2000 due to reductions in spending by clients and consumers. Softness in the economy in 2000 and 2001 directly affected M&E profitability, and sector stocks declined an average 27% over the period. Consumer entertainment spending fell as the GDP declined, as did revenues from ad-supported businesses like newspapers, broadcast television and cable television. Moreover, M&E companies were already cutting costs and taking other measures to offset declining revenues.

ECONOMIC IMPACT OF THE SEPTEMBER 11TH ATTACK

The M&E sector's capital loss was minimal compared to other sectors. Sector companies have traditionally been based in Midtown and have only a small presence in Lower Manhattan, with the recent exception of new media and several small production companies. Immediate infrastructure losses, including station loss, antennae, and digital transmitters, resulted in an estimated capital loss of \$50 million, before taking into account real estate and insurance reimbursements.

Business disruption within the sector was severe, particularly during the week immediately following September 11th. Short-term losses in GCP, which through the fourth quarter of 2001 are expected to reach \$750 million, can be attributed to a number of factors:

- ❖ Television, radio, and cable stations ran their programming free of commercials for a week while they provided round-the-clock news coverage.
- ❖ Cancellations of scheduled advertising also resulted in decreased revenues.
- ❖ Theater, movie and other location-based entertainment attendance fell sharply.
- ❖ Security costs increased.
- ❖ Sunk costs (e.g., film production cancellations and content re-editing) were absorbed.

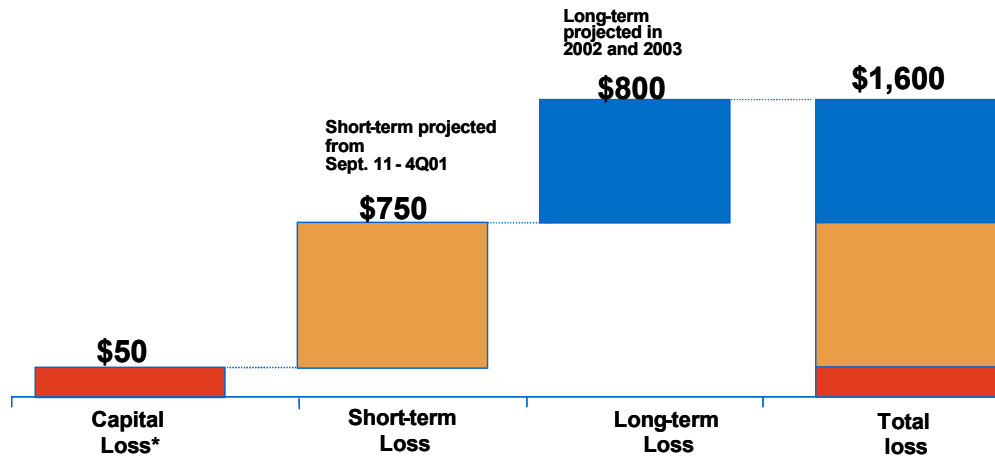
Market valuations for the sector declined an additional 15% for entertainment companies, 8% for media companies and 1% for publishing companies.

Revenues have declined by 2.5% (about \$1 billion in New York City through the fourth quarter of 2001). Cash flows across the M&E subsectors have been damaged by a lack of advance purchases, bookings, and new capital investments, all driven by general levels of uncertainty. Businesses and consumers are unwilling to make long-term spending commitments. Consequently, the M&E sector's short-term operating costs (specifically, labor costs) will come under increasing pressure.

Consumers have started to change their consumption patterns, causing a paradigm shift in their sense of security and life priorities which ultimately affects M&E consumption. For example, changes range from preferences in content (e.g., family fare, comedies, books about anthrax), to location for media consumption (e.g., home-based entertainment vs. large, crowded venues like multiplex theaters), to price sensitivities (cheaper entertainment like movie rentals gained at expense of higher-price consumption like opera).

The total estimated output loss to New York City is \$1.6 billion over the two-year timeframe, including an additional \$800 million loss in output in 2002 and 2003. Sector employment is expected to drop by 2% to 3% (or 4,000 to 6,000 employees) from the pre-September 11th forecasted level; the advertising-dependent subsectors (e.g., advertising agencies, broadcast television, and cable television) will be affected more than others. The corresponding loss in payroll is \$400 million. Sector employment trends should stabilize by the third quarter of 2002, when the direct effects of the September 11th events should have receded and employment growth should resume.

M&E Output Loss Projections (NYC) \$Millions



* Excludes real estate and insurance reimbursement

Source: PwC Consulting analysis.

Note: Estimates based on direct assessment, interviews and comparative analysis.

Costs are likely to increase \$430 million due to incremental expenditures for security, continuing productivity losses and general business disruptions. Cost increases through the remainder of 2001 are expected to total \$165 million, and additional costs of \$250 million are expected in 2002 and 2003.

Potential Implications

Without restoring a sense of security, economic stability and consumer confidence, softness in the economy will continue, extending decreases in advertising and entertainment spending out at least a quarter. If fear and security concerns continue, or possibly escalate, location-based entertainment attendance will continue to decline and tourism and business travel to New York City will continue to fall below levels achieved before September 11th. These potential consequences will result in continued increased expenditures on security. In some subsectors, such security concerns will have specific effects. For example, distribution channels for advertising will continue to shift (away from direct mailing due to the public's concerns about exposure to anthrax), affecting revenue and earnings in the print advertising subsector. Finally, continuing public security concerns may solidify changes already affecting household discretionary spending; at-home entertainment will gain at the expense of movie theaters and other large, crowded types of venues. Video-on-demand, pay-per-view and video rental have already experienced spikes in revenue.

Over time, security concerns, pressures on profitability, and higher levels of uncertainty may cause some companies to reevaluate their rationale for operating in New York City. If these negative effects materialize in the M&E sector, they would slow the city's economic recovery.

RECOMMENDATIONS

The M&E industry should use its ability and capacity to reach the public, here and abroad, to re-establish climate of business normalcy in the city and to assist in efforts to attract new businesses to replace those that have decided to relocate outside of New York City.

Priority actions by the private sector would include:

Short-term: Establish a Normal Business Climate by:

- **Communicating progress** and security measures and programs to the general public and business using M&E's "reach;"

-
- **Creating public relations campaigns** that promote New York City as the business capital of the world and a safe entertainment destination, both within the United States and abroad;
 - **Partnering with other industries** to offer subsidized tourist packages, in which M&E companies would provide discounts to theaters, concert halls and sporting events; and,
 - **Leveraging New York City celebrities** to deliver the message of “Open for Business” and show how limited the damage was for the rest of the city.

Long-term: Create a New Growth Industry for New York City by:

- **Creating a consortium of companies** to invest in shared resources (such as real estate and research and development) with key players in the media, telecommunications and I/T sectors to carve out a niche in new broadband, wireless and other interactive electronic media technologies; and,
- **Obtaining tax incentives** for consortia participants to stimulate capital investment within the new sector to accelerate its development and its financial returns for the city’s tax base.

Private and public sectors also should join forces to retain the high quality and diverse talent pool that makes New York City an excellent place to do business. Joint priorities for the public and private sector include:

Short-term: Maintain M&E Investments by:

- **Working with the public sector** on incentives to companies for developing new capital infrastructure for M&E projects like Times Square and studios in the Brooklyn Navy Yard.

Long-term: Retain and Attract Media Talent Pool by:

- **Providing incentives to universities and other educational institutions** to tailor programs for careers in M&E.

These actions, given urgency and priority by the media and entertainment sector, will restore strength to the sector and facilitate New York City’s recovery efforts.

Economic Impact of the Attack on the Professional Services Sector

This report on the professional services sector is based on research and analysis conducted by PwC Consulting.

SUMMARY

As the world center for finance, media and other industries, New York City has always attracted highly educated and compensated professionals in the legal, accounting, engineering, consulting, public relations and personnel fields. New York is the largest center for accounting, consulting and legal services in the United States. Headquarters for four of the Big Five accounting firms, for instance, and thirty-five of the top 100 law firms are based here. After tremendous job growth through the 1990s, professional services revenue and employment, highly correlated to the health of the overall economy, had already begun to slow before the events of September 11th.

The outlook for stability and growth of the professional services sector is closely tied to the resumption of a normal business environment, the recovery of the national and city economy and the retention of client industries in New York City.

- ❖ Professional services represents approximately 540,000 jobs, one-seventh of the city's total employment, and produces \$61 billion a year of economic output.
- ❖ The estimated total loss to the professional services sector as a consequence of September 11th is \$1.5 billion, driven primarily by short-term losses. Revenue losses are estimated at \$1.4 billion to \$1.6 billion over two years, and net employment losses are projected at 600 positions. Capital losses were modest, estimated at \$25 million, with less than 1% of sector firms being displaced.
- ❖ In the short term, physical dislocation and disruptions to business and travel are the most important problems facing professional services. In the long term, the sector is at risk from client migration and continued security concerns.
- ❖ As professional services is a derivative sector, dependent on clients' confidence and willingness to spend on business services and support, its recovery hinges on the return to normal business conditions. In addition, the sector should collaborate with institutions of higher education to foster growth opportunities and enhance the city's attractiveness to the sector's enviable talent pool.

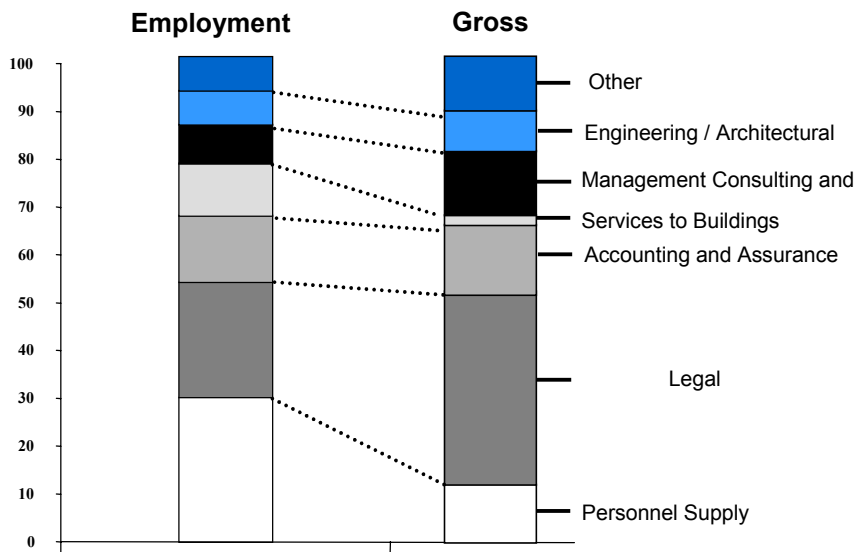
ECONOMIC CONDITIONS PRIOR TO SEPTEMBER 11TH

Professional services is a significant contributor to New York City's economy. Until in late in 2000, the sector had been a growth engine for jobs in the city over the past five years, adding jobs at a rate of 6% a year compared to a 2% rate of job growth for other sectors of the economy.

Professional services accounts for 540,000 of 3.75 million jobs (14%), and contributes \$61 billion (13%) of New York City's \$440 billion gross product. The estimated 2001 sector revenue is \$75 billion. Prior to September 11th, the view of employment, however, was that approximately 40,000 jobs (7%) would be eliminated by end of 2001, reflecting the continued national economic slowdown.

As a derivative sector that serves a broad cross-section of the New York City economy, professional services depends on the health of several key client sectors. Financial services is the most important. A \$1 million increase in financial services GCP translates to \$235,000 in added value to the professional services sector. Construction and hotels are the second most critical sectors; an additional \$1 million increase in these two sectors translates into an added value of \$225,000 and \$180,000 respectively for professional services.

Proportion of Jobs and Output by Subsector



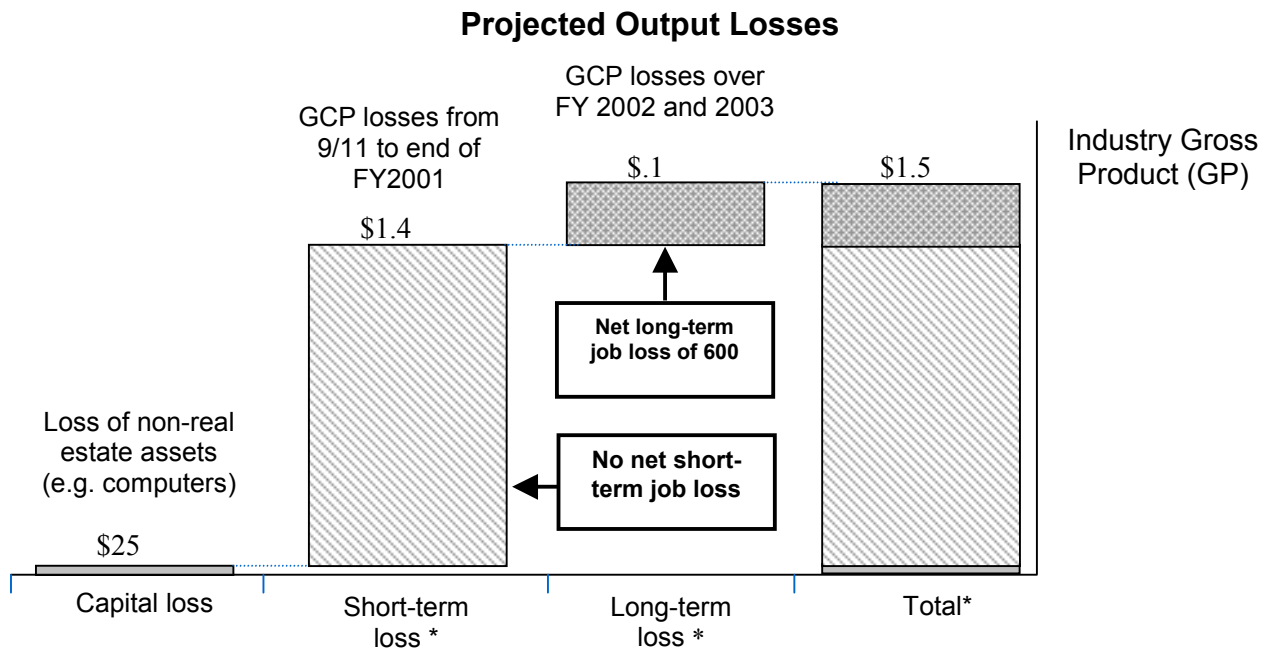
Source: Bureau of Labor Statistics, Federal Reserve Board, PwC Consulting analysis.

The largest single contributor to sector output is legal services, followed by accounting, management consulting and public relations, and personnel supply, such as employment agencies and executive search firms.

ECONOMIC IMPACT OF SEPTEMBER 11TH ATTACK

The attack led to the displacement of an estimated 70 professional services firms, affecting 2,500 employees. About 875,000 square feet of office space was lost at a cost of \$25 million in related office and information technology equipment. Legal services accounts for 25% of the displaced professional services firms.

The most serious output losses will occur over the short term, defined as September 11th to the end of 2001. These losses are estimated to total \$1.4 billion, with the largest subsector losses in legal services (\$575 million), personnel supply (\$380 million), and accounting and assurance services (\$238 million). In percentage terms, these losses represent 6% of annual GCP for personnel supply, 3% for accounting and assurance and 2.5% for legal services. On the other hand, building services output should increase by \$73 million.



Source: Industry interviews, wsj.com, PwC Consulting analysis.

Long-term job losses are expected to reach 600. These job losses are likely to be driven primarily by a dispersion of skills, to the extent that firms and clients move outside of New York City. The projected losses reflect fear and uncertainty regarding the likelihood of future attacks, both of which reduce the desire of professionals to work in the New York City. Increased demand for security guards, construction services, miscellaneous building services and R&D and testing services will help offset lost jobs, predominantly in the personnel supply, legal and accounting and assurance areas.

Productivity has fallen as staff struggle with the psychological impact of the attack, low morale, reluctance to travel and disrupted transportation and communications. Furthermore, many clients remain focused on logistical issues, with long-term uncertainties about the economy and security diverting attention from the kind of business planning that often involves the use of the professional services sector.

Long-term losses, those occurring during 2002 and 2003, should net out to \$100 million in lost economic output. This estimate is based on the assumption that the events of September 11th will push the recovery from the second quarter of 2002 to the third quarter of 2002. General downward economic pressure will be coupled with increased demand for certain professional services.

IMPLICATIONS

New York City has long been a magnet for professional services firms, as a city which enables firms to be close to clients, and which offers an exceptional pool of highly skilled, educated and ambitious workers. The events of September 11th negatively affected these advantages.

Immediate problems center on physical dislocation and disrupted business activity. Longer travel times to local offices and remote clients' offices are reducing revenue and productivity; though one bright spot is a potential increase in productivity that could result from the growth in telecommuting. A shift in clients' short-term priorities could place smaller and less diversified firms in all subsectors at risk of failure.

Perhaps the greatest danger to the city economy over the long term is the possibility of migration. Some client organizations may leave New York City. In that case, professional services firms must then decide whether to relocate near clients, or to assume additional travel time and associated productivity loss. Local professional services firms with national customer bases also may diversify geographically to minimize exposure to further risks. In either case, professional services jobs may be exported.

RECOMMENDATIONS

Initiatives to minimize losses and support the long-term growth of the sector will help to retain the city's professional services clients and staff. To achieve this goal, there is no more important objective than the speediest return possible to normal business operations. This can be accomplished by taking the step outlined below:

- ❖ Introducing a comprehensive, rational and highly publicized security program is a key component to business recovery in the present environment and for the foreseeable future.

In addition, one of this sector's essential components is the pool of highly educated, ambitious people who are drawn to New York for the opportunity to become leaders in such fields as law, media, finance, consulting, accounting and public relations, among others. Collaborative efforts between institutions of higher education and firms dependent on professional services can reinforce the city's attraction for this talented labor pool, even in bad economic times.

- ❖ The professional schools at leading universities (such as Columbia University's Schools of Business, International and Public Affairs, Engineering, Architecture and Journalism and New York University's Stern School of Business and School of Education) can be encouraged to work with representative firms to implement new credential programs, or to introduce modifications of existing programs to upgrade skills to enhance professional credentials.

Such collaboration would provide young professionals with first-hand exposure to leaders in their fields and enhance the city's ability to attract the best and brightest, the cornerstone of New York's dominance in the professional services sector.

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Methodology

This section provides a brief overview of the analytic approach used to estimate the economic impact of the attacks on New York City.

The approach involves three analytic exercises:

Stage I.	Defining the New York City economy (regional and sector based) and establishing the baseline data.
Stage II.	Deriving impacts of the attacks at the industry level.
Stage III.	Aggregating overall impacts of the attacks on the city economy.

STAGE I: DEFINING THE NYC ECONOMY (REGIONAL AND SECTOR BASED) AND ESTABLISHING BASELINE DATA

The team first defined industry sectors (based on the Standard Industrial Classification system) that best represented the New York City economy. For purposes of the overall analysis, New York City was defined as the five boroughs (Bronx, Brooklyn, Manhattan, Queens, and Staten Island). A detailed data set representative of the identified industry sectors, including employment, wages & salaries, productivity, was developed at the NYC level to serve as the foundation for the impact analysis. The team then developed base-line estimates of sector specific pre-attack employment and productivity levels using historical data and pre-attack forecasts using quarterly data from the Bureau of Labor Statistics and DRI-WEFA. The sectors covered in the database cover more than 90% of NYC Employment as identified by the Bureau of Labor Statistics.

STAGE II: DERIVING LOSSES DUE TO THE ATTACK

Estimates of the impact of the attack were made in three categories:

1. Losses associated with the destruction of capital.
2. Estimates of the clean-up costs.
3. Economic losses associated with drops in both employment and productivity.

Losses associated with capital destruction - \$30 Billion

Capital losses were estimated by calculating the replacement/repair costs of the World Trade Center, other destroyed or damaged buildings, public infrastructure (e.g., PATH, MTA), private infrastructure (e.g., Verizon, ConEd), and destroyed technology, business fixtures and retail inventory. Although the true cost of losing human life cannot be calculated, an economic estimate of the value of lives lost was made by considering the productivity lost over the lifetime of the individuals.

Capital Costs Account for \$30* Billion of the Damage

	Dollar impact \$ Billions	Remarks
Destroyed buildings	6.4	* 15.2 million sq. ft. including WTC and other buildings that will be demolished, at a reconstruction cost of \$420 ¹ per sq. ft.
Damaged buildings	2.2	* 3.5 mm sq. ft. of serious damage @ a repair cost of \$350 sq. ft. 10.1 ² mm sq. ft. of non-serious damage @ repair cost of \$100 ³ sq. ft.
Infrastructure	4.5	* \$1 billion ⁴ of capital loss to Port Authority, \$1.5 ⁵ billion to MTA * \$2 billion for phone and power utilities ⁵
Technology and fixtures	6.6	* \$3.7 billion to replace technology (\$3.2 billion at securities firms ⁷ , \$0.5 billion at other firms ⁸) * \$2.3 billion for business fixtures (18.7 million sq. ft. destroyed or seriously damaged at \$125 per sq. ft. ⁶) * \$0.6 billion for retail inventory ⁸
Human capital	10.0	* Discounted lifetime productivity of 5,000 lost people (\$2 million per person) amounts to \$10 B; includes employees living outside the city ⁹ * Sum of life insurance (\$5 B ¹⁰) and federal compensation for lives lost (\$5 B ¹¹) totals \$10 B

¹ The Reuters building at 3 Times Square, with 865,000 sq. ft. of class A office space, is being constructed at a cost of \$360 million (excluding land); older buildings have lesser cost per sq. ft.

² From Insignia/ESG special report, September 24

³ From real estate sector interviews

⁴ Port Authority estimates excluding revenue losses, New York Times, September 21; Transportation team estimates

⁵ Transportation team estimates; Peter Kalikow of the MTA estimates \$1.7 B

⁶ NYC Comptrollers report, Oct 5

⁷ Tower Group report

⁸ Retail team estimates

⁹ \$150,000 average annual productivity for 25 years with 2.5% annual growth and 8% discounting

¹⁰ MSDW insurance report

¹¹ Part of 15B federal aviation bail out package

*Rounded Totals: \$29.7 billion.

Losses associated with cleanup costs - \$14 Billion

The total cost of demolition, debris removal, additional security, medical treatment and victim assistance was added to the gross impact of the disaster.

Cleanup and Emergency Management Costs Account for Another \$14 Billion of the Loss

	Dollar impact \$ Billions	Remarks
Debris removal	6.0	• Debris Removal, demolition, and stabilization, including \$1 billion of privately incurred costs
Security	5.0	• Emergency protective measures, including police and fire overtime and lost equipment
Health	2.7	• Medical costs and leaves of absence for injuries, disabilities, bereavement, and traumatic stress, and litigation compensating pain and suffering
Other	0.7	• Victim assistance and support services, burial costs, aid to educational facilities and miscellaneous agencies
	14.4	

Sources: NYC Comptroller; NYS Governor

Losses Resulting from Changes in Employment and Productivity (9/11/01-12/31/03) – \$39 Billion

Analytic teams were established for each of the key industry sectors. Each team worked with the core analytic team to estimate the impact of the attacks on employment and productivity in their industry.

The impact was segmented along the following dimensions:

1. Near-term impact on employment and productivity. (9/11/01-12/31/01)
2. Medium to longer-term pattern of recovery. (1/1/02-12/31/03)

Each team was encouraged to think of the economic impacts directly associated with the attack as being distinct from those derived from general economic trends that may have been precipitated by the attack. The methodology seeks to enforce this distinction in an

effort to project economic impacts purely related to the attack. The potential for overlap between these sources of economic impact is greater in the longer term. Our analytic approach recognizes this by calibrating our impact estimates progressively over the forecast horizon.

STAGE III: AGGREGATING OVERALL IMPACT OF ATTACK ON NYC ECONOMY

Using these data, overall economy-wide output losses were estimated by adjusting derived sector output by the Bureau of Economic Analysis Regional Input/Output Modeling System (RIMS) Input-Output multipliers for each industry. The RIMS input-output multipliers were developed by the Bureau of Economic Analysis, U.S. Department of Commerce and were specifically calculated for the NYC economy. The regional definition for the NYC economy multipliers were identical to the multi-county definition outlined above. The overall effect on the NYC economy was then aggregated across all sectors. All impact estimates were developed on a quarterly basis beginning Q4-2001 and were adjusted to minimize any potential double-counting effects associated with the comparative static methodology deployed.

INDUSTRY ECONOMIC IMPACT WITH AND WITHOUT MULTIPLIER

Industry sector	Net of Multiplier		With Multiplier	
	Short-term impact	Long-term impact	Short-term impact	Long-term impact
Financial Services	2.5	10.2	4.2	13.8
Tourism / Transport	0.5	3.1	0.9	4.1
Retail	0.7	2.9	1.1	3.7
Manufacturing	0.5	1.9	0.7	2.2
Wholesale Trade	0.3	1.3	0.4	1.6
Professional Services	0.8	0.1	1.4	0.1
Media / Entertainment	0.4	0.5	0.7	0.8
IT / Communications	0.3	0.6	0.4	0.9
Government	0.7	0.1	1.1	0.2
Health Services	0.2	0.3	0.4	0.4
Insurance	0.1	0.0	0.2	0.0
Energy	0.0	0.1	0.0	0.1
Real Estate / Construction	0.0	(1.3)	0.0	(1.3)
Other	0.5	0.0	0.7	0.0
Sub-Total	7.5	19.8	12.2	26.6
Cleanup and Emergency Management costs	7.0	7.0	7.0	7.0
Total	14.5	26.8	19.2	33.6

* Does not break out small business loss, but recognizes significant impact to these businesses in short-term

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Glossary

3G	Third generation wireless format services that will incorporate high speed data and enhanced voice services.
ARPU	Average Revenue Per User is a metric used by telecommunications and utilities companies.
CAGR	The Compounded Annual Growth Rate is the year-over-year growth rate applied to an investment or other part of a company's activities over a multiple-year period.
Capital Loss	Losses of fixed assets, non-fixed depreciable assets, inventory and human capital which took place on September 11th as a direct physical result of the attack.
Class A office space	The most expensive tier of commercial real estate space that typically includes enhanced services such as security and advanced telecommunications infrastructure.
CLEC	Competitive Local Exchange Carrier. An organization offering local telephone services. Although most CLECs are established as a telecommunications service organization, any large company, university or city government has the option of becoming a CLEC and supplying its own staff with dial tone at reduced cost. It must have a telephone switch, satisfy state regulations, pay significant filing fees and also make its services available to outside customers.
Commercial paper	Short-term obligations with maturities ranging from 2 to 270 days issued by banks, corporations and other borrowers to investors with temporary idle cash.
Commercial paper back-stop	Technique used by borrowers to enhance their credit rating and lower the cost of commercial paper issuances.
DSL	Digital Subscriber Line. A technology that dramatically increases the digital capacity of ordinary telephone lines (the local loops) into the home or office. DSL speeds are tied to the distance between the customer and the central office. Unlike ISDN, which is also digital but travels through the switched telephone network, DSL provides "always-on" operation.
Economic Output	Value of goods and services produced by capital and labor in a given period of time (i.e. quarterly, annually).

ERP	Acronym for Enterprise Resource Planning software. An integrated information system that serves all departments within an enterprise. Evolving out of the manufacturing industry, ERP implies the use of packaged software rather than proprietary software written by or for one customer.
FERC	<p>Acronym for Federal Energy Regulatory Commission, an independent regulatory agency within the Department of Energy that:</p> <ul style="list-style-type: none"> • Regulates the transmission and sale of natural gas for resale in interstate commerce; • Regulates the transmission of oil by pipeline in interstate commerce; • Regulates the transmission and wholesale sales of electricity in interstate commerce; • Licenses and inspects private, municipal and state hydroelectric projects; • Oversees environmental matters related to natural gas, oil, electricity and hydroelectric projects; • Administers accounting and financial reporting regulations and conduct of jurisdictional companies, and; • Approves site choices as well as abandonment of interstate pipeline facilities.
Float	Time between the deposit of a payment and the time the payment clears.
Foreign swaps	Cross border exchanges of securities in which one security is exchange for another instead of for currency.
Gross City Product (GCP)	Dollar value of economic output for the five boroughs of New York City.
Gross State Product	Dollar value of economic output for New York State.
ISDN	Acronym for Integrated Services Digital Network. An international telecommunications standard for providing a digital service from the customer's premises to the dial-up telephone network. ISDN turns one existing wire pair into two channels and four wire pairs into 23 channels for the delivery of voice, data or video. Unlike an analog modem, which converts digital signals into an equivalency in audio frequencies, ISDN deals only with digital transmission.
Long Term Loss	Economic losses incurred by the New York City economy between January 1, 2002 and December 31, 2003.

Lower Manhattan	Unless otherwise noted, Lower Manhattan and Downtown are used to refer to the area south of Chambers Street.
MSO	Acronym for Multiple System Operators. Cable companies that operate cable systems in more than one geographic area.
PSC	Acronym for the New York State Public Service Commission. The Commission regulates the state's electric, gas, steam, telecommunications, and cable service. The Commission is charged by law with responsibility for setting rates and ensuring that adequate service is provided by New York's utilities. In addition, the Commission exercises jurisdiction over the siting of major gas and electric transmission facilities and has responsibility for ensuring the safety of natural gas and liquid petroleum pipelines.
Repo	Repurchase agreements between a buyer and seller, typically of U.S. Government securities, whereby the seller agrees to repurchase the securities at an agreed-upon price and, usually, at a stated time.
Short Term Loss	Economic losses incurred between September 11, 2001 and December 31, 2001.
Small Business	Businesses employing less than 100 employees.

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