# Structural changes in Manhattan's post-9/11 economy

Since the terrorist attacks of September 11, 2001, Manhattan's "global economy" has seen its employment diminish while its role as a wage generator has increased; high wages in the global sector may be driving demand in the local sector

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Michael L. Dolfman is Regional Commissioner, New York regional office, Bureau of Labor Statistics; Solidelle F. Wasser is a senior economist, and Kevin Skelly is an economist, also in the New York regional office. Belatures of the U.S. economy. In Manhattan, where there is a concentration of finance, information, and professional services industries, the economic downturn of 2001 started earlier and lasted longer than it did in other parts of the country.<sup>1</sup>

The national economic downturn that hit Manhattan hard in early 2001 was exacerbated by the terrorist attack on the World Trade Center on September 11. As this article will show, the economic decline, lasting from 2001 until 2004, was unique in its contribution to a fundamental shift in Manhattan's economy.

In previous decades, job creation in Manhattan's "global sector" was the economic engine driving the borough's entire economy. Today, as a result of the 2001 downturn, high wages generated by global-sector industries emerge as a new determinant of Manhattan's economy.

#### The Manhattan economy

With approximately 1.8 million private-sector jobs, or about 61 percent of New York City's total job base, and an average annual wage exceeding \$92,000 in 2005,<sup>2</sup> Manhattan is the driving force of the city's and the New York regional economy. While modern-day business is the focus of Manhattan, along with many historical attractions, the borough also has numerous vibrant neighborhoods, each with a unique mix of restaurants, shops, and living accommodations.

The short-term effects of the 9/11 attack on the Manhattan and New York City economies were examined in a previous article.<sup>3</sup> Here, attention will be directed at how Manhattan has fared following the economic decline that gripped the borough immediately after September 11.

In order to assess Manhattan's recovery from the events of 2001, it is essential to understand first that Manhattan's labor market economy is unique. With the prominence of its financial sector and other advanced industries, as well as its focus on international finance, global markets, and transnational enterprises, Manhattan has contributed to the development of a new conception of what global economics implies. In effect, the borough has become a world center for the servicing and financing of international trade, for investment, and for headquarters operations.<sup>4</sup>

However, the rise in importance of these sectors not only has driven the New York regional economy, but also has changed the nature of Manhattan itself. Specifically, the changes have deepened a duality in the borough's economic structure. By virtue of its location, industry, labor markets, and population, Manhattan (though only a county<sup>5</sup>) has become nothing less than a "global city"—a city characterized by a notable number of highly paid workers who exert significant effects on the consumption patterns in the neighborhoods, city, and region in which they work and live.

Having soaring incomes and little time, those global-city workers who live in Manhattan demand and pay for high levels of personal consumer services provided by other workers. Thus, Manhattan—the "global city"—is really two interdependent components, one composed of highly paid workers who focus their activities on international pursuits and another, locally based, that provides services and commodities to the "globally focused" workers and Manhattan's other workers, residents, and visitors.

To assess how Manhattan has recovered from the terrorist attacks and economic downturn of 2001, it is essential not only to examine changes in both aspects of the borough's economy, but also to gain insights into the interrelationship between these two components—that is, how expansion or contraction in the global sector influences developments in the local sector. Although conceptually independent, each sector is unable to support itself; therefore, both must be assessed as an integrated entity.

#### Global and local industries

To understand the interrelationship between Manhattan's global and local economies, it is necessary to define the industries they comprise. Table 1 provides a measure of economic diversification within Manhattan's economy, compared with that of other core counties of major cities throughout the Nation. The figures shown are based on the relative employment concentrations of specific North American Industry Classification System (NAICS) industrial sectors. The table describes which regional economies have greater shares of specific industries, compared with those industries' shares at the national level. As the high location quotients in the table show, Manhattan has a concentration of jobs that is proportionally higher than the U.S. average in several advanced service industries: finance and insurance; information; professional, scientific, and technical services; management of companies; and real estate and leasing sectors. This employment concentration is evidence of Manhattan's robust global sector, because jobs in these industries are more numerous than what is needed to service the local economy.

With high concentrations of employment in these global industries, it is possible to appreciate why they are global and also to understand why Manhattan has become a national and world leader in such services:<sup>6</sup> the rise in importance of the global industries has come to dominate the economic base of Manhattan and to drive the entire New York regional economy.

# Methodology

The analysis that follows focuses on Manhattan's economy, with a special emphasis on the influence of the global sector. Attention will be directed toward answering the question "How have structural changes in that sector affected overall economic performance in Manhattan?" Throughout, the article tests the assumption that the global sector is the foremost cause of regional economic growth and the engine which drives the local economy. Does this assumption hold true during economic booms as well as economic declines? Does it still apply after the latest economic downturn?

In order to gauge how changes in the global sector have influenced the Manhattan economy—particularly its recovery after 2001—a 15-year analytic framework, the period 1990–2004,<sup>7</sup> will be used. An understanding of trends over that timeframe provides both a firm basis for assessing Manhattan's post-2001 recovery and a conceptual foundation for interpreting the results of the analysis.

The article employs the following analytic approach:

- 1. A 15-year overview of Manhattan's economy outlines general trends in employment, in total wages, and in average weekly wages. The data are then partitioned to track the individual 15-year performances of industries in the global and local sectors.
- 2. Recognizing that two downturns and a period of expansion have defined the Manhattan economy during the 15-year period under study, the article examines the impact of each individual business cycle in detail. Particular attention is directed toward assessing not only the performance of the global economy in general, but also that of the specific sectors—and their separate components—which make up the global economy.
- 3. To understand better the relationship between the global and local economies at various points in time, economic-base analytic techniques—that is, base multipliers—are employed. The base multiplier is a statistical tool used in this analysis to quantify the relationship between the global and local sectors. The base multipliers presented are related to the ratios of the global sector's employment and total wages in the first quarter of each year to total employment and total wages in the county and period examined. These ratios are then used to compare patterns of change between periods in order to address the structural dynamics of the changes involved. The analysis does not seek to make long-

Table 1. Location quotients of majo	r cities								
Industry	New York (New York County)		Atlanta (Fulton County)	Miami (Dade County)	Houston (Harris County)	San Francisco (San Francisco County)	(Suffolk	Los Angeles (Los Angeles County)	Dallas (Dallas County)
Agriculture forestry fishing	0.00	0.02	(1)	1.04	0.08	0.00	0.01	01	0.02
Agriculture, forestry, fishing	0.00	0.02	(1)	1.04	8.15	0.08	0.01	.21 .22	0.03
Mining Construction	.00	.08	(1) .52	.79	1.31	.62	.40	.22	.92
Manufacturing	.20	.00	.32	.79	.78	.02	.40	1.05	.92
Wholesale trade	.20	1.00	1.29	1.56	1.28	.22	.24	1.05	1.58
Retail trade	.00	.80	.65	1.00	.85	.55	.39	.84	.79
Transportation and warehousing	.52 ( <sup>1</sup> )	1.47	1.84	(1)	1.43	(1)	.40	1.11	1.25
Information	2.53	1.47	2.73	1.12	.74	1.56	1.14	2.17	1.64
Finance and insurance	2.33	1.44	1.45	1.01	.85	1.98	2.67	.86	1.51
	2.91	1.44	1.45	1.01	.05	1.90	2.07	.00	1.51
Real estate and rental leasing	2.18	1.14	1.52	1.39	1.37	1.38	1.25	1.15	1.51
Professional, scientific, and technical services	2.29	1.37	1.77	1.14	1.36	2.14	1.77	1.13	1.35
Management	1.81	1.29	1.64	.57	.44	2.04	1.06	1.32	.69
Administrative and support services	1.02	1.10	1.36	1.15	1.22	.93	1.05	1.00	1.32
Educational services	2.19	1.59	.98	1.13	.84	1.56	3.12	1.28	.68
Healthcare and social assistance	.86	1.00	.69	.99	.79	.71	1.61	.83	.69
Arts, entertainment, and recreation	1.58	.89	.03	.84	.74	1.49	.96	1.15	.65
Accommodation and food services	.81	.87	1.05	1.04	.90	1.42	.92	.89	.89
Other services, except public administration	1.17	1.09	.80	1.04	.91	1.85	1.03	1.61	.80
outor controod, except public duministration		1.00	.50			1.55		1.01	.00

<sup>1</sup> Data not available.

NOTE: The location quotient of a city with respect to an industry is that city's

share of the industry, compared with that industry's share of the national economy. BLS QCEW Program, 2004 annual averages, private ownership. SOURCE:

Philadelphia

(Philadelphia

County)

(<sup>1</sup>)

(1)

.33́

.47

.63

67

1.06

.90 1.39

.91

1 37

1.13

5 31

176

1.01

87

1.11

.74

term predictions using the base multipliers, but rather focuses on the extent to which the labor market realities in a particular year in Manhattan have tracked the predictions of the base multipliers.<sup>8</sup>

- 4. An analytic framework critically examines how the Manhattan economy-particularly those components which have powered the global economyhas fared during the 15-year period studied and assesses how the Manhattan economy of 2004 has changed over those 15 years.
- The framework developed is used to analyze and 5. describe the Manhattan economy of the first quarter of 2005 and to assess the overall recovery of the borough's economy.

#### The Manhattan economy over 15 years

To quantify the significance of the global sector on Manhattan's economic structure and performance, tables 2 and 3 and charts 1 and 2 provide a 15-year summary (from 1990 to 2004) of first quarter employment, total wages (exclusive of benefits), and average weekly wages of Manhattan workers.

In the aggregate, during the 15-year period, the Manhattan economy lost 102,973 jobs, or 5.7 percent of its 1990 job base. Despite these job losses, total wages in Manhattan increased by \$28.5 billion, a gain of 143.1 percent, while the average weekly wage increased 157.8 percent, from \$846 to \$2,181. (The increase in the real average weekly wage, discounting inflation, was 73.0 percent.)

A comparison with the overall American economy during this same 15-year period reveals a different pattern: nationwide, the economy gained 16 million jobs, for an increase of 19.1 percent; at 106.0 percent, total wage growth was lower than in Manhattan, and the average weekly U.S. wage increased 73.0 percent (15.0 percent after accounting for inflation), to \$756.

### Global and local sectors

During the 15 years studied, Manhattan's global sector lost 87,403 jobs, or 10.2 percent of its 1990 job base. Still, total wages increased \$24.4 billion (184.3 percent), while the average weekly sector wage rose 216.6 percent, to \$3,764.9 (Real wages increased 112.6 percent.)

Unlike the situation in Manhattan, global-sector industries' employment grew by 25.9 percent nationally, total wages increased by 164.7 percent, and average weekly wages increased by 110.1 percent, to \$1,315. (Real wages rose 44.2 percent.)

Changes in Manhattan's local sector were less striking. Job losses totaled 15,569 (only 1.6 percent of the 1990 job base), while total wages increased \$4.1 billion (61.6 percent) and the average sector wage increased 64.2 percent (10.2 percent discounting inflation), to \$885.

# Table 2. Total Manhattan private employment and wages, first quarter, 1990 and 2004

	Emplo	yment	Wages		
Industry	Average	Percent	Total	Percent	Average weekly
1990					
Total	1,810,920	100.0	\$19,915,863,831	100.0	\$846
onstruction	37,758	2.1	414,014,202	2.1	843
anufacturing	117,013	6.5	796,762,623	4.0	524
holesale trade	113,082	6.2	1,291,708,554	6.5	879
etail trade	126.858	7.0	806.270.038	4.0	489
formation	139,338	7.7	2,090,291,662	10.5	1,154
inance and insurance	373,428	20.6	6,881,044,535	34.6	1,417
eal estate	71,684	4.0	619,760,134	3.1	665
rofessional, scientific, and technical	229,656	12.7	2,815,387,662	14.1	943
anagement	41,913	2.3	822,815,337	4.1	1,510
dministrative and support	140,626	7.8	855,323,758	4.3	468
ducational services	57,045	3.2	349,259,043	1.8	471
ealthcare and social assistance	139,762	7.7	989,446,159	5.0	545
rts, entertainment, and recreation	36,545	2.0	276,404,604	1.4	582
ccommodation and food services	110,027	6.1	457,117,222	2.3	320
ther services	76,186	4.2	450,258,298	2.3	455
2004					
Total	1.707.947	100.0	48.416.427.606	100.0	2.181
onstruction	27,878	1.6	467,803,515	1.0	1,291
lanufacturing	45,866	2.7	686,990,305	1.4	1,152
/holesale trade	80,198	4.7	1,603,067,528	3.3	1,538
etail trade	122,191	7.2	1.176.452.914	2.4	741
formation	126,037	7.4	3,484,674,099	7.2	2.127
inance and insurance	274,435	16.1	24,476,080,725	50.6	6,861
eal estate	72,512	4.2	1,102,064,720	2.3	1,169
rofessional, scientific, and technical	245,860	14.4	5,720,937,946	11.8	1,790
lanagement	49,771	2.9	2,824,838,237	5.8	4,366
dministrative and support	129,517	7.6	1,424,237,667	2.9	846
ducational services	76,304	4.5	845,335,900	1.7	852
ealthcare and social assistance	193,887	11.4	2,151,564,674	4.4	854
rts, entertainment, and recreation	47,419	2.8	660,495,046	1.4	1,071
ccommodation and food services	135,444	7.9	942,967,086	1.9	536
Other services	80.629	4.7	848.917.244	1.8	810

NOTE: Detailed entries may not sum to totals due to rounding.

SOURCE: BLS QCEW Program.

#### Table 3. Manhattan global industries employment and wages, first quarter, 1990 and 2004

	Employ	rment		Wages	
Industriy	Average	Percent	Total	Percent	Average weekly
1990					
Total	856,018	100.0	\$13,229,299,330	100.0	\$1,189
inance and insurance	373,428	43.6	6,881,044,535	52.0	1,417
rofessional, scientific, and technical	229,656	26.8	2,815,387,662	21.3	943
formation	139,338	16.3	2,090,291,662	15.8	1,154
anagement	41,913	4.9	822,815,337	6.2	1,510
eal estate	71,684	8.4	619,760,134	4.7	665
2004					
Total	768,615	100.0	37,608,595,727	100.0	3,764
nance and insurance	274,435	35.7	24,476,080,725	65.1	6,861
rofessional, scientific, and technical	245,860	32.0	5,720,937,946	15.2	1,790
formation	126,037	16.4	3,484,674,099	9.3	2,127
anagement	49,771	6.5	2,824,838,237	7.5	4,366
eal estate	72,512	9.4	1,102,064,720	2.9	1,169



Table	e 4
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#### Total Manhattan private employment and wages, first quarter, 2001 and 2004

	Employ	ment	Wages		
Industry	Average	Percent	Total	Percent	Average weekly
2001					
Total	1,885,692	100.0	\$53,118,702,973	100.0	\$2.167
Construction	35,579	1.9	589,751,963	1.1	1.275
Ianufacuring	63,970	3.4	782,347,651	1.5	941
Vholesale trade	88,996	4.7	1,637,581,248	3.1	1,415
tetail trade	131.332	7.0	1.161.136.044	2.2	680
nformation	161,490	8.6	3,813,144,810	7.2	1.816
inance and insurance	331,300	17.6	28,759,821,427	54.1	6.678
leal estate	74,920	4.0	1,123,941,016	2.1	1,154
	14,320	4.0	1,123,341,010	2.1	1,134
Professional, scientific, and technical	281.757	14.9	6.183.477.512	11.6	1.688
lanagement	45.325	2.4	2.638.368.816	5.0	4,478
dministrative and support	153,167	8.1	1,584,845,255	3.0	796
ducational services	70,989	3.8	717,057,945	1.3	730
lealthcare and social assistance	181.255	9.6	1.809.707.141	3.4	768
its, entertainment, and recreation	45.711	2.4	604,795,849	1.1	1.018
ccommodation and food services	137,419	7.3	948,001,225	1.8	531
other services	82,481	4.4	764,725,071	1.4	713
	02,401	4.4	704,723,071	1.4	713
2004					
Total	1,707,947	100.0	48,416,427,606	100.0	2,181
Construction	27,878	1.6	467,803,515	1.0	1,291
1anufacturing	45,866	2.7	686,990,305	1.4	1,152
Vholesale trade	80,198	4.7	1.603.067.528	3.3	1.538
tetail trade	122,191	7.2	1,176,452,914	2.4	741
nformation	126,037	7.4	3,484,674,099	7.2	2,127
inance and insurance	274,435	16.1	24,476,080,725	50.6	6,861
eal estate	72,512	4.2	1,102,064,720	2.3	1,169
rofessional, scientific, and technical	245.860	14.4	5,720,937,946	11.8	1.790
lanagement	49.771	2.9	2,824,838,237	5.8	4,366
dministrative and support	129,517	7.6	1,424,237,667	2.9	4,300
ducational services	76,304	4.5	845,335,900	1.7	852
lealthcare and social assistance	193.887	4.5	2,151,564,674	4.4	854
its, entertainment, and recreation	47,419	2.8	660,495,046	4.4	1.071
ccommodation and food services	135,444	2.8 7.9	942,967,086	1.4	536
Other services	80,629	7.9 4.7	848,917,244	1.9	810

Nationally, employment in those industries characterized as local-sector industries in Manhattan grew by 17.6 percent, total wages increased by 85.1 percent, and average weekly wages rose by 57.5 percent, to \$622. (Real wages increased 8.0 percent.)

In assessing the 15-year trend, the influence of the global sector on the overall Manhattan economy becomes apparent: 84.9 percent of all jobs lost and 85.5 percent of all wages gained were in that sector.

#### **Business cycles**

Although an examination of the beginning and end of the 15year period under study provides insights into the Manhattan economy, it does not focus adequate attention on the economic fluctuations and disruptions that occurred *during* that period—specifically, the effects of two economic declines and an economic expansion. From 1990 to 1993, Manhattan's economy contracted; from 1993 to 2001, the economy expanded; and beginning in 2001 and continuing to the end of the 15year timeframe in 2004, the economy entered another decline.<sup>10</sup> Manhattan's economic response to each of these three business cycles was different.

The analysis begins with the 2001–04 downturn in order to identify the fact that structural change, the focus of the article, did occur. The change is specified by contrasting the 2001–04 period (see table 4) with the earlier downturn that occurred between 1990 and 1993. The expansionary period from 1993 to 2001 is then examined to determine whether the recently emerging recovery in Manhattan differs in its characteristics from that following 1993.

#### Manhattan's downturns

*The latest downturn, 2001–04: the determinant of structural change.* By the dawn of the 21st century, the economic

	Employ	rment	Wages		
Industry	Average	Percent	Total	Percent	Average weekly
2001					
Total	894,792	100.0	\$42,518,753,581	100.0	\$3,655
Finance and insurance	331,300	37.0	28,759,821,427	67.6	6,678
Professional, scientific, and technical	281,757	31.5	6,183,477,512	14.5	1,688
Information	161,490	18.0	3,813,144,810	9.0	1,816
Management Real estate	45,325 74,920	5.1 8.4	2,638,368,816 1,123,941,016	6.2 2.6	4,478 1,154
	74,920	0.4	1,123,941,010	2.0	1,154
2004					
Total	768,615	100.0	37,608,595,727	100.0	3,764
Finance and insurance	274,435	35.7	24,476,080,725	65.1	6,861
Professional, scientific, and technical	245,860	32.0	5,720,937,946	15.2	1,790
Information	126,037	16.4	3,484,674,099	9.3	2,127
Management	49,771	6.5	2,824,838,237	7.5	4,366
Real estate	72,512	9.4	1,102,064,720	2.9	1,169

expansion that had defined much of the 1990s began to falter. A recession enveloped Manhattan and the Nation when the tech-stock bubble burst on Wall Street at the beginning of 2001. This event was followed by the attacks on the World Trade Towers on September 11, a spate of corporate scandals, and a drop in overall consumer confidence throughout the country, all of which had a detrimental effect on the Manhattan economy.

During this economic downturn, the Manhattan economy lost 177,745 jobs, or 9.4 percent of its 2001 private-sector job base. Total wages decreased 8.9 percent, or \$4.7 billion, while the average weekly wage increased 0.7 percent, from 2001 to 2004.

In Manhattan, the 2001 resident unemployment rate of 5.0 percent increased to 7.9 percent in 2002, decreased to 7.5 percent in 2003, and decreased further to 7.1 percent in 2004.<sup>11</sup> It remained above the Nation's average rate despite the fact that the number of payroll jobs in the borough exceeded the number of local residents.

During the 2001–04 downturn, all lost wages were in globalsector industries. The global sector lost \$4.9 billion in total wages (104 percent of all lost wages), while the local sector had a net gain of \$0.21 billion in total wages, somewhat mitigating the overall economic effect of the downturn. (Some local-sector industries did lose wages.) Average weekly wages in the global sector increased 3.0 percent, to \$3,764, while average weekly wages in the local sector rose 7.5 percent, to \$885. (All wages are nominal unless otherwise specified.)

In 2004, the average first-quarter weekly wage in the local sector was just 23.5 percent of that in the global sector. (This

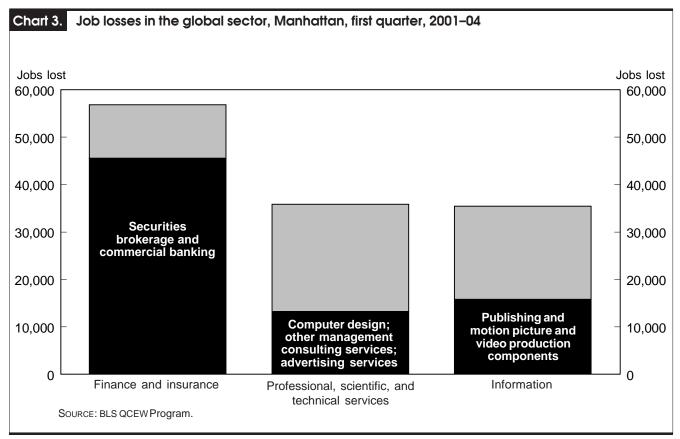
differential was influenced by the spike effect of bonuses; see note 9.)

*The global sector*, 2001–04. With the global sector accounting for more than 70 percent of all lost jobs from 2001 to 2004, the effect of the economic decline was focused principally on Manhattan's role as a global city and thus had consequences felt throughout the world economy.

Table 5 shows that 101.6 percent of all lost global-economy jobs were associated with three sectors: finance and insurance; professional, scientific, and technical services; and information. Job gains were recorded in the management of companies, as indicated by an increase from 1.6 to 1.8 in the Manhattan location quotient for that industry between 2001 and 2004. Real estate also improved, with its Manhattan location quotient moving from 2.1 to 2.2 over the same period.

The overall financial impact of the job losses on the Manhattan economy was significant. With 2004 first-quarter average weekly wages of \$6,861 in finance and insurance (see note 9), \$1,790 in professional, scientific, and technical services, and \$2,127 in information, these highly paid segments of the Manhattan workforce bore the brunt of the decline. In examining each of these sectors in detail, it is possible to gain a clearer perspective of the economic and structural effect of the downturn. (See chart 3.)

*1. Finance and insurance.* Job losses in the finance and insurance sector accounted for 45.1 percent of all global-sector job losses. Two components—securities brokerage and commercial banking—accounted for 80.0 percent of all lost jobs in finance and insurance.



2. Professional, scientific, and technical services. Job losses in the professional, scientific, and technical services sector accounted for 28.4 percent of all global-economy job losses. Negative economic effects felt in finance and insurance often spill over into the professional, scientific, and technical sector. These effects were clearly present in the 2001–04 downturn, most notably in computer systems design components (possibly compounded by the aftermath of preparing for Y2K), other management consulting services, and advertising services.

*3. Information.* Job losses in information represented 28.1 percent of all lost global-sector jobs. Both publishing components and the motion picture and video production component were particularly affected by the economic downturn.

*The 1990–93 downturn.* During the 1990–93 downturn (see table 6), job losses were shared equally by the global and local sectors. The shock that precipitated the downturn can be traced to the 1987 stock market crash, which sent waves throughout the financial world and led to a downsizing in the securities industry. During the early 1990s, a national economic downturn and widespread downsizing in the corporate realm had significant effects on both the Nation's and Manhattan's economic structure.

The 1990-93 business downturn saw the Manhattan

economy lose 221,775 jobs, or 12.2 percent of its 1990 job base. By contrast, in the later recession, the job loss was 177,745, or 9.4 percent of the borough's 2001 job base. Total wages during the 1990–93 period decreased by about \$759 million, or 3.8 percent, while the average weekly wage increased by 9.6 percent, to \$927. In Manhattan, the 1990 resident unemployment rate of 6.0 percent increased to 7.7 percent in 1991, increased further to 9.5 percent in 1992, and declined slightly to 9.0 percent in 1993. (See note 11.)

In 1990, 47.3 percent of all Manhattan jobs were in the global sector. During the 3 years of economic stagnation, this sector lost 100,801 jobs (45.5 percent of all jobs lost), or 11.8 percent of its job base. In 1993, despite the job losses, the global sector still represented 47.5 percent of all Manhattan private-sector jobs.

The local sector, which accounted for 52.7 percent of Manhattan jobs in 1990, lost 12.7 percent of its job base (120,975 jobs) during the 3-year downturn. Nonetheless, the sector still accounted for 52.5 percent of all Manhattan private-sector jobs in 1993.

Differences, however, were apparent in the effect of the economic decline on total wages and average weekly wages. Although the global sector represented less than 50 percent of all Manhattan jobs, the sector accounted for 53.4 percent (\$405 million) of the decline in total wages—obviously the effect of the

	Emplo	Employment		Wages		
Industry	Average	Percent	Total	Percent	Average weekly	
1990						
Total	1,810,920	100.0	\$19,915,863,831	100.0	\$846	
Construction	,,	2.1	414,014,202	2.1	843	
Aanufacturing		6.5	796,762,623	4.0	524	
Nholesale trade	- /	6.2	1,291,708,554	6.5	879	
Retail trade		7.0	806,270,038	4.0	489	
nformation		7.7	2,090,291,662	10.5	1,154	
Finance and insurance	, -	20.6	6,881,044,535	34.6	1,417	
Real estate	71,684	4.0	619,760,134	3.1	665	
Professional, scientific, and technical	229,656	12.7	2,815,387,662	14.1	943	
Vanagement	41,913	2.3	822,815,337	4.1	1,510	
Administrative and support	140,626	7.8	855,323,758	4.3	468	
Educational services	57,045	3.2	349,259,043	1.8	471	
Healthcare and social assistance	139,762	7.7	989,446,159	5.0	545	
Arts, entertainment, and recreation	36,545	2.0	276,404,604	1.4	582	
Accommodation and food services		6.1	457,117,222	2.3	320	
Other services		4.2	450,258,298	2.3	455	
1993						
Total	1,589,145	100.0	19,156,615,318	100.0	927	
Construction	24,763	1.6	281,933,333	1.5	876	
Manufacturing	,	6.0	677,696,484	3.5	549	
Wholesale trade	,	6.0	1,164,466,514	6.1	944	
Retail trade		6.6	664,143,086	3.5	484	
nformation	'	7.9	1,653,959,555	8.6	1,009	
Finance and insurance	· · · · ·	20.2	7,043,145,847	36.8	1,690	
Real estate		4.2	562,769,347	2.9	653	
Professional, scientific, and technical	202.418	12.7	2.726.502.787	14.2	1.036	
Vanagement	'	2.5	837.517.659	4.4	1,612	
Administrative and support	/	6.9	783,141,326	4.1	547	
ducational services		3.4	390,169,651	2.0	560	
Healthcare and social assistance		3.4 9.5	1,195,787,684	6.2	612	
Arts, entertainment, and recreation		9.5 2.0	268,855,200	1.4	667	
			, ,			
Accommodation and food services Other services		6.2 4.4	448,594,538 457,932,307	2.3 2.4	350 502	

higher average weekly wages earned by global-economy workers. (Total wages in the sector declined by 3.1 percent; average weekly wages increased by 9.8 percent, to \$1,306.)

In the local-economy sector, total wages declined by 5.3 percent (\$354 million) and accounted for 46.6 percent of the total loss in wages. Average weekly wages, by contrast, increased by 8.3 percent to \$584, but were just 44.7 percent of the global-sector average weekly wage.

*The global economy, 1990–93.* Although the 1990–93 recession produced job losses in both the global and local economies, its effect on the global economy was concentrated in the same three sectors it would be concentrated in during 2001–04.

As can be seen in table 7, more than 90 percent of all globaleconomy job losses occurred in three sectors: finance and insurance, 52.5 percent; professional, scientific, and technical services, 27.0 percent; and information, 13.2 percent. These lost jobs represented 42.1 percent of all the jobs lost in Manhattan during the 1990–93 downturn. With 1993 first-quarter average weekly wages of \$1,690 in finance and insurance, \$1,036 in professional, scientific, and technical services, and \$1,009 in information, the financial impact of the job losses in these sectors was notable.

*1. Finance and insurance.* Within the finance and insurance sector, the most deeply affected components were commercial banking, savings institutions, credit intermediation, securities brokerage, and investment banking. The commercial banking component lost 28.9 percent of its job base (20,144 jobs), while savings institutions lost 47.2 percent (2,271 jobs.) In spite of these job losses, average weekly wages in commercial banking rose 23.5 percent, to \$1,413, while average weekly wages

_	Employ	rment	Wages		
Industry	Average	Percent	Total	Percent	Average weekly
1990					
Total	856.018	100.0	\$13,229,299,330	100.0	\$1.189
inance and insurance	373,428	43.6	6,881,044,535	52.0	1,417
Professional, scientific, and technical	229,656	26.8	2,815,387,662	21.3	943
nformation	139,338	16.3	2,090,291,662	15.8	1,154
Nanagement	41,913	4.9	822,815,337	6.2	1,510
teal estate	71,684	8.4	619,760,134	4.7	665
1993					
Total	755,218	100.0	12,823,895,195	100.0	1,306
inance and insurance	320,523	42.4	7,043,145,847	54.9	1,690
Professional, scientific, and technical	202,418	26.8	2,726,502,787	21.3	1,036
nformation	126,057	16.7	1,653,959,555	12.9	1,009
Management	39,969	5.3	837,517,659	6.5	1,612
Real estate	66,249	8.8	562,769,347	4.4	653

in savings institutions increased 22.5 percent, to \$653.

Of the 52,905 jobs lost in finance and insurance between 1990 and 1993, 42.4 percent (22,415) were in commercial banking and savings institutions alone.

2. *Professional, scientific, and techical services.* Wall Street is a voracious user of legal, accounting, consulting, and other services. As the downturn befell Wall Street, its effect was felt directly throughout the entire professional, scientific, and technical services sector. Particularly affected were the legal, accounting, marketing, human resource, engineering, architectural, and marketing research components, which together represented 71.1 percent of all lost jobs in the sector.

*3. Information.* Within the information sector, the publishing components and the wired telecommunications component together accounted for more than 90 percent of job losses.

### How do the two downturns differ?

With a vastly superior capacity for generating profits than that of traditional economic sectors, the global economy has produced a sharp polarization within Manhattan. As mentioned earlier, the global sector is distinguished from the local sector by the preponderance of high wage earners in the former, compared with workers employed in the latter. However, no matter how disparate this division may be, neither sector can exist independently of the other. Of interest is how their relationship can be quantified. Specifically, during the 1990–93 and 2001–04 downturns, what effect did a lost job in the global sector exert on jobs in the local economy? And what effect did a dollar in lost global economy wages exert on wages in the local sector?

The following tabulation provides the base multipliers for jobs and wages in the global economy for 1990–93 and offers insights into the interrelationship between the two sectors:

Year	Employment	Wages
1990	2.1	1.5
1991	2.1	1.5
1992	2.1	1.4
1993	2.1	1.5

As the next subsection shows, the base multipliers give estimates as to how jobs and total wages in the local sector would be affected by explicit changes in employment and pay in the global sector. Simply stated, they help answer the question, What effect would one lost job and one lost dollar in wages in the global economy exert on the local economy?

1990–93 downturn base multipliers. With an employment base multiplier of 2.1 during the 1990–93 decline, every lost job in the global sector would result in the loss of 1.1 jobs in the local sector. In addition, with a wage base multiplier of 1.5, every dollar in lost global-sector wages would result in the loss of 50 cents in local-economy wages.

	Emplo	yment	Change	9, 1990–93	Average we	eekly wages
Industry	1990	1993	Number	Percent	1990	1993
Total	954,902	833,927	-120,975	-12.7	\$539	\$584
Construction	37,758	24,763	-12,994	-34.4	843	876
Manufacturing	117,013	94,973	-22,040	-18.8	524	549
Wholesale trade	113,082	94,859	-18,223	-16.1	879	944
Retail trade	126,858	105,447	-21,411	-16.9	489	484
Administrative and support	140,626	110,151	-30,475	-21.7	468	547
Educational services	57,045	53,638	-3,407	-6.0	471	560
Healthcare and social assistance	139,762	150,202	10,440	7.5	545	612
Arts, entertainment, and recreation	36,545	31,024	-5,521	-15.1	582	667
Accommodation and food services	110,027	98,658	-11,369	-10.3	320	350
Other services	76,186	70,212	-5,975	-7.8	455	502

The actual situation indicates that the relationship was basically correct; that is, 100,801 jobs were lost in the global economy, resulting in a loss of 120,975 local-economy jobs (a ratio of 1:1.2).

A different story, however, emerges when the relationship involving total lost wages is considered. The base multipliers estimate that, during the 1990–93 downturn, every dollar in lost global-sector wages would result in a loss of 50 cents in local-economy wages. In actuality, a loss of \$405,404,135 in the export sector and \$353,844,378 in lost local-economy wages indicates that every lost dollar in global-economy wages yielded a loss of 87 cents in local-economy wages.

Table 8 helps explain this discrepancy. As can be seen, the construction sector lost 34.4 percent of its job base, and wholesale trade lost 16.1 percent of its job base, during the economic decline. With 1993 average weekly wages in construction 50.0 percent higher, and in wholesale trade 61.6 percent higher, than the average local-sector wage, the total dollar loss was greater than the figure predicted by the base multiplier.

2001–04 downturn base multipliers. The following tabulation provides the base multipliers for jobs and wages in the global economy for 2001–04 and, like the previous tabulation, offers insights into the interrelationship between the global and local sectors:

Year	Employment	Wages
2001	2.1	12
2002		1.2
2003	2.2	1.3
2004	2.2	1.3

With an employment base multiplier of 2.2 in 2004, it would have been expected that for every global-sector job lost during the 2001–04 period of decline, there would be a loss of 1.2 local-sector jobs. In addition, with a wage base multiplier of 1.3, the expectation would be that for every dollar lost in global-sector wages, there would be a loss of 30 cents in local-economy wages.

In actuality, however, these relationships do not hold. First, for every global-economy job lost, only 0.4 of a local-economy job was lost, not the expected 1.2 jobs. Second, as regards lost wages, the relationship breaks down completely: the global economy lost \$4.9 billion, while total local-economy wages increased by \$0.21 billion.

The effect of the 2001–04 downturn was markedly different in terms of jobs, compared with the previous downturn. Unlike the situation in the 1990–93 decline, in which job losses and gains were shared proportionally by the global and local sectors, job losses between 2001 and 2004 were mainly in the global sector: of the 177,745 jobs that were lost, 71.0 percent (126,177 jobs) were global-sector jobs.

#### The 1993–2001 economic expansion

Turning to the pattern of recovery within the Manhattan economy during the 1993–2001 expansion provides additional insight into the changes that would follow. Did the recovery influence both the global and local sectors, as the 1990–93 downturn did? Or did the recovery influence just the global sector, as occurred during the 2001–04 downturn? In order to understand fully the economic effects of the 1993–2001 expansion on Manhattan, it is important first to consider the events that drove the growth.

In 1994, the Internet came to the public's attention, and with it arose a speculative frenzy in Internet-related stocks and enterprises. This dot-com boom, with it's growth-overprofits philosophy, led to both a soaring stock market and a bubble in technology-focused stocks. In addition, a period of low interest rates and significant job growth helped fuel the economic expansion.

As table 9 shows, during the 1993–2001 expansion the Manhattan economy gained 296,547 jobs, more than erasing the 221,775 jobs lost during the 1990–93 decline. Total wages, \$53.1 billion in 2001, increased by 177.3 percent, with average first-quarter weekly wages growing by 133.8 percent, to \$2,167. As the following tabulation indicates, this increase in job growth had the effect of lowering the unemployment rate in Manhattan from the high levels recorded in the early 1990s:

	Unemployment rate				
Year	Manhattan	United States			
1993	9.0	7.4			
1994	8.4	6.8			
1995	6.7	5.7			
1996	7.6	5.8			
1997	8.2	5.5			
1998	7.3	5.0			
1999	5.9	4.4			
2000	5.4	4.3			
2001	5.0	4.5			

Like the 1990–93 downturn, the expansion saw payroll changes shared almost equally between the global and local economies. During the 1993–2001 growth cycle, 47.1 percent of all job gains (compared with 45.5 percent of the job losses during the earlier recession) occurred in the global economy, while 52.9 percent of the gains (compared with 54.5 percent of the losses during the downturn) were associated with the local economy.

Significant differences, however, were recorded in growth in total wages, a pattern also noted during the 1990–93 economic decline. In this regard, of the \$34.0 billion increase in total wages registered from 1993 to 2001, 87.4 percent (\$29.7 billion) was generated by increases in global-economy jobs. Average weekly wages in that sector increased 179.9 percent, to \$3,655. The corresponding increase in local-sector average weekly wages was 40.9 percent, to \$823. Indeed, average local sector wages were just 22.5 percent of average weekly firstquarter wages in the global sector, further emphasizing the dual nature of Manhattan's economy.

*The global economy, 1993–2001.* Unlike the 1990–93 downturn, in which the finance and insurance industry suffered more than 50 percent of all global-sector job losses, the 1993–2001 job expansion recorded little job growth for that industry—just 10,777 jobs, or 3.4 percent, of all global-sector job gains. Two-thirds of global-economy job growth (82.2 percent) occurred in two sectors: professional, scientific, and technical services; and information. Table 10 shows Manhattan's global-sector employment and wages for 1993 and 2001.

Despite the relatively insignificant job growth within

finance and insurance, a notable volatility took place among the components making up the sector. Although overall sector growth was slight, employment shifts were recorded by specific categories.

*1. Finance and insurance.* The soaring stock market of the 1990s stimulated employment growth in the securities brokerage component, which registered a job increase of 26,806, or 34.9 percent. In addition, during the expansion average first-quarter weekly wages increased 324.0 percent, to \$10,820 (see note 9), the highest first-quarter pay of any individual component in the entire Manhattan economy.

Job growth and significant increases in average weekly wages were associated with almost every component linked with securities, commodity contracts, and other financial instruments and activities. For example, employment increased 55.8 percent (4,637 jobs) in portfolio management, while average weekly wages increased 190.7 percent, to \$5,674. A similar pattern was recorded in investment advice, in which employment increased 78.1 percent (5,285 jobs) and weekly wages increased 254.2 percent, to \$7,718.

However, job losses persisted in the commercial banking and savings institutions components. During the expansion, commercial banking lost an additional 14.2 percent (7,059 jobs) of its job base, while employment in savings institutions decreased an additional 59.8 percent (1,520 jobs). Average weekly wages increased 172.8 percent, to \$3,855, in commercial banking and 156.7 percent, to \$1,676, in the savings institutions component. Table 11 gives a breakdown of average employment and average weekly wages in the Manhattan finance and insurance sector for 1993 and 2001.

2. Professional, scientific, and technical services. As noted earlier, many of the components that make up this sector were adversely affected by the period of job losses between 1990 and 1993. During the 1993–2001 expansion, however, the sector gained 79,339 jobs—far more than the 27,238 jobs lost during the downturn of the early 1990s. This job gain represented 56.8 percent of all job gains in the global sector. Many components, including offices of lawyers, offices of certified public accountants, advertising agencies, architectural services, and marketing research, experienced job gains. (See table 12.)

*3. Information.* During the 1993–2001 expansion, the information sector gained 35,433 jobs—more than 2.5 times the number of jobs (13,281) lost during the 1990–93 decline. Job gains were recorded in components throughout the sector, but were particularly strong in those associated with the Internet, undoubtedly an effect of the dot-com bubble. The Internet service provider industry gained 6,223 jobs, while Internet publishing and broadcasting added 3,529 jobs, over

Average Descent Total Descent		Employ	yment	Wages			
Total         1,589,145         100.0         \$19,156,615,318         100.0         \$227           Construction         24,763         1.6         281,933,333         1.5         876           Manufacturing         94,973         6.0         677,664,644         3.5         549           Wholesale trade         105,447         6.6         664,143,066         3.5         484           Information         126,057         7.9         1.653,959,555         8.6         1.009           France and insurance         320,523         20.2         7,043,145,847         36.8         1.690           Real estate         66,249         4.2         562,769,347         2.9         653           Professional, scientific, and technical         202,418         12.7         2,726,502,787         14.2         1,036           Vanagement         39,969         2.5         837,517,659         4.4         1.612           Vanisstative and support         110,151         6.9         783,141,326         4.1         547           Catuational services         753,638         3.4         390,169,651         2.0         560           Attrix entertainment, and recreation         31,024         2.0         288,855,200	Industry	Average	Percent	Total	Percent	Average weekly	
Total         1,589,145         100.0         \$19,156,615,318         100.0         \$227           Construction         24,763         1.6         281,933,333         1.5         876           Manufacturing         94,973         6.0         6.77,664,644         3.5         549           Wholesale trade         105,447         6.6         664,143,066         3.5         484           Infrance and insurance         320,523         20.2         7,043,145,847         36.8         1.099           Professional, scientific, and technical         202,418         12.7         2,726,502,787         14.2         1,036           Vanagement         39,969         2.5         837,517,659         4.4         1,612           Vanistrative and social assistance         150,202         9.5         1,187,7684         6.2         612           Vational services         79,8658         6.2         448,594,538         2.3         350           Other services         70,212         4.4         457,932,307         2.4         502           Vanagement         .10,577         19         589,751,663         1.1         1,275           datamagement         .00,113,187         2.9         653         4.4	1993						
Donstruction         24,763         1.6         281,933,333         1.5         876           danufacturing         94,873         6.0         677,686,484         3.5         549           Nolesale trade         94,859         6.0         1.164,466,514         6.1         944           Vetail trade         105,447         6.6         664,143,086         3.5         484           Normation         126,057         7.9         1.653,959,555         8.6         1.009           Real estate         320,523         20.2         7,043,145,847         36.8         1.690           Anagement         39,969         2.5         837,517,659         4.4         1.617           Anagement         39,969         2.5         1.197,7659         4.4         1.612           Administrative and support         110,151         6.9         783,141,326         4.1         547           Vicucational services         53,638         3.4         390,169,651         2.0         560           totalitrative and support         131,024         2.0         288,855,200         1.4         667           coormotaction and food services         98,658         6.2         144,553,23         300         2.4		1 589 145	100.0	\$19 156 615 318	100.0	\$927	
tanufacturing       94,973       6.0       677,696,484       3.5       549         vholesale trade       94,859       6.0       1,164,466,514       6.1       944         vholesale trade       105,447       6.6       664,143,086       3.5       484         tormation       126,057       7.9       1,653,959,555       8.6       1,099         teal estate       66,249       4.2       562,769,347       2.9       653         trofessional, scientific, and technical       202,418       12.7       2,726,502,787       14.2       1,036         tanagement       39,969       2.5       837,517,659       4.4       1,612         dimistrative and support       110,151       6.9       783,141,326       4.1       547         ducational services       31,024       2.0       268,852,200       1.4       667         test, entertainment, and recreation       31,024       2.0       288,852,200       1.4       667         test, entertainment, and recreation       31,024       2.0       288,852,200       1.4       667         test, entertainment, and recreation       31,024       2.0       288,651,963       1.1       1.275         test, entertainment, and recretaiton		, , .				• -	
tholesale trade       94,859       6.0       1,164,466,514       6.1       944         trade       105,447       6.6       664,143,086       3.5       484         tormation       126,057       7.9       1,653,959,555       8.6       1,009         nance and insurance       320,523       20.2       7,043,145,847       36.8       1,690         eal estate       66,249       4.2       562,769,347       2.9       653         rofessional, scientific, and technical       39,969       2.5       837,517,659       4.4       1,612         dministrative and support       39,969       2.5       837,517,659       4.4       1,612         ducational services       100,151       6.9       783,141,326       4.1       547         ducational services       150,202       9.5       1,195,786,84       6.2       612         ccommodation and food services       70,212       4.4       457,932,307       2.4       500         Total       1.885,692       1000.0       53,118,702,973       100.0       2,167         onstruction       36,579       1.9       589,751,963       1.1       1,275         anufacturing       63,970       3.4			-				
etail trade       105,447       6.6       664,143,086       3.5       484         formation       105,447       6.6       666,143,086       3.5       484         formation       105,447       6.6       666,143,086       3.5       484         nance and insurance       320,523       20.2       7,043,145,847       36.8       1,690         eal estate       66,249       4.2       562,769,347       2.9       653         rofessional, scientific, and technical       202,418       12.7       2,726,502,787       14.2       1,036         anagement       39,969       2.5       837,517,659       4.4       1,612         ducational services       100,151       6.9       783,141,326       4.1       547         ducational services       130,24       2.0       268,855,200       1.4       667         commodation and food services       38,658       6.2       448,594,538       2.3       350         ofstruction       1,885,692       100.0       53,118,702,973       100.0       2,167         notacuturing       36,370       3.4       782,347,651       1.5       941         holesale trade       131,322       7.0       1,161,36,044		- /					
formation         126,057         7.9         1,653,959,555         8.6         1,009           nance and insurance         320,523         20.2         7,043,145,847         36.8         1,690           eal estate         66,249         4.2         562,769,347         2.9         653           rofessional, scientific, and technical         202,418         12.7         2,726,502,787         14.2         1,036           anagement         39,969         2.5         837,517,659         4.4         1,612           ducational services         53,638         3.4         390,169,651         2.0         560           ealthcare and social assistance         130,24         2.0         268,855,200         1.4         667           commodiation and food services         98,658         6.2         448,594,538         2.3         350           rotal         1,885,692         100.0         53,118,702,973         100.0         2,167           onstruction         33,300         3,4         782,347,651         1.5         941           holesale trade         89,96         4.7         1,637,581,248         3.1         1,415           eal estate         74,920         4.0         1,123,941,016         2.1 </td <td></td> <td></td> <td></td> <td>, - ,,-</td> <td>•••</td> <td></td>				, - ,,-	•••		
nance and insurance       320,523       20.2       7,043,145,847       36.8       1,690         ceal estate       66,249       4.2       562,769,347       2.9       653         ordessional, scientific, and technical       202,418       12,7       2,726,502,787       14.2       1,036         aragement       39,969       2.5       837,517,659       4.4       1,612         tiministrative and support       110,151       6.9       783,141,326       4.1       547         ducational services       53,638       3.4       390,169,651       2.0       560         scientment, and recreation       31,024       2.0       268,855,200       1.4       667         commodation and food services       98,658       6.2       448,594,538       2.3       350         Total       1,885,692       100.0       53,118,702,973       100.0       2,167         onstruction       33,320       7,0       3.4       782,347,651       1.5       941         holesale trade       13,322       7.0       1,161,136,044       2.2       680       677       1,637,581,248       3.1       1,415         diraufacturing       161,490       8,637,00       3.4 <td< td=""><td></td><td>,</td><td></td><td></td><td></td><td>-</td></td<>		,				-	
eal estate       66,249       4.2       562,769,347       2.9       653         ordessional, scientific, and technical       202,418       12.7       2,726,502,787       14.2       1,036         anagement       39,969       2.5       837,517,659       4.4       1,612         dministrative and support       110,151       6.9       783,141,326       4.1       547         tucational services       53,638       3.4       390,169,651       2.0       560         seathcare and social assistance       150,202       9.5       1,195,787,684       6.2       612         ts, entertainment, and recreation       31,024       2.0       268,855,200       1.4       667         commodation and food services       70,212       4.4       457,932,307       2.4       502         2001         Total       1,885,692       100.0       53,118,702,973       100.0       2,167         anufacturing       63,970       3.4       782,347,651       1.5       941         holesale trade       131,332       7.0       1,161,136,044       2.2       680         formation       161,490       8.6       3,813,144,810       7.2       1,816			-	, , ,		,	
anagement       39,969       2.5       837,517,659       4.4       1,612         dministrative and support       110,151       6.9       783,141,326       4.1       547         ducational services       53,638       3.4       309,169,651       2.0       560         ealthcare and social assistance       150,202       9.5       1,195,787,684       6.2       612         trs, entertainment, and recreation       31,024       2.0       268,855,200       1.4       667         commodation and food services       98,658       6.2       446,594,538       2.3       350         ther services       70,212       4.4       457,932,307       2.4       502         2001         Total       1,885,692       100.0       53,118,702,973       100.0       2,167         onstruction       35,579       1.9       589,751,965       1.1       1,275         anufacturing       63,970       3.4       782,347,651       1.5       941         holesale trade       131,332       7.0       1,161,136,044       2.2       680         formation       161,490       8.6       3,813,144,810       7.2       1,816         nande and insurance </td <td></td> <td></td> <td></td> <td>//-</td> <td></td> <td>,</td>				//-		,	
dministrative and support       110,151       6.9       783,141,326       4.1       547         ducational services       53,638       3.4       390,169,651       2.0       560         eathcare and social assistance       130,222       9.5       1,195,787,684       6.2       612         ts, entertainment, and recreation       31,024       2.0       268,855,200       1.4       667         ccommodation and food services       98,658       6.2       448,594,538       2.3       350         ther services       70,212       4.4       457,932,307       2.4       502         2001         Total       1,885,692       100.0       53,118,702,973       100.0       2,167         onstruction       35,579       1.9       589,751,963       1.1       1,275         anufacturing       63,970       3.4       782,347,651       1.5       941         'holesale trade       13,332       7.0       1,161,136,044       2.2       680         formation       161,490       8.6       3,813,144,810       7.2       1,816         nance and insurance       281,757       14.9       6,183,477,512       11.6       1,688         anageme	rofessional, scientific, and technical	202,418	12.7	2,726,502,787	14.2	1,036	
ducational services       53,638       3.4       390,169,651       2.0       560         ealthcare and social assistance       150,202       9.5       1,195,787,684       6.2       612         tts, entertainment, and recreation       31,024       2.0       268,855,200       1.4       667         ccommodation and food services       98,658       6.2       448,594,538       2.3       350         ther services       70,212       4.4       457,932,307       2.4       502         Dostruction         anufacturing       63,970       3.4       782,347,651       1.5       941         holesale trade       88,996       4.7       1,637,581,248       3.1       1,415         tormation       161,490       8.6       3,813,144,810       7.2       1,816         nance and insurance       331,300       17.6       28,759,821,427       54.1       6,678         eal estate       74,920       4.0       1,123,941,016       2.1       1,154         rofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         anagement       45,325       2.4       2,638,368,816       5.0       4,478	anagement	39,969	2.5	837,517,659	4.4	1,612	
ealthcare and social assistance       150,202       9.5       1,195,787,684       6.2       612         ts, entertainment, and recreation       31,024       2.0       268,855,200       1.4       667         scommodation and food services       98,658       6.2       448,594,538       2.3       350         ther services       70,212       4.4       457,932,307       2.4       502         2001         Total       1,885,692       100.0       53,118,702,973       100.0       2,167         onstruction       35,579       1.9       589,751,963       1.1       1,275         anufacturing       63,970       3.4       782,347,651       1.5       941         holesale trade       88,996       4.7       1,637,581,248       3.1       1,415         atiltarde       131,332       7.0       1,161,136,044       2.2       680         formation       161,490       8.6       3,813,144,810       7.2       1,816         ofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         and social assistance       281,757       14.9       <	dministrative and support	110,151	6.9	783,141,326	4.1	547	
ts, entertainment, and recreation       31,024       2.0       268,855,200       1.4       667         ccommodation and food services       98,658       6.2       448,594,538       2.3       350         ther services       70,212       4.4       457,932,307       2.4       502         ther services         1,885,692       100.0       53,118,702,973       100.0       2,167         onstruction         anufacturing       1,885,692       100.0       53,118,702,973       100.0       2,167         formation       1,885,692       10.0       53,118,702,973       100.0       2,167         formation       161,490       8.6       3,813,144,810       7.2       1,816	ducational services	53,638	3.4	390,169,651	2.0	560	
bits         98,658         6.2         448,594,538         2.3         350           ccommodation and food services         98,658         6.2         448,594,538         2.3         350           ccommodation and food services         2001         1         4.4         457,932,307         2.4         502           construction         1,885,692         100.0         53,118,702,973         100.0         2,167           onstruction         35,579         1.9         589,751,963         1.1         1,275           anufacturing         63,970         3.4         782,347,651         1.5         941           holesale trade         88,996         4.7         1,637,581,248         3.1         1,415           formation         131,332         7.0         1,161,136,044         2.2         680           formation         131,300         17.6         28,759,821,427         54.1         6,678           eal estate         74,920         4.0         1,123,941,016         2.1         1,154           rofessional, scientific, and technical         281,757         14.9         6,183,477,512         11.6         1,688           dministrative and support         281,755         14.9         6,183,477,512<	ealthcare and social assistance	150,202	9.5	1,195,787,684	6.2	612	
ther services         70,212         4.4         457,932,307         2.4         502           2001         1,885,692         100.0         53,118,702,973         100.0         2,167           onstruction         35,579         1.9         589,751,963         1.1         1,275           anufacturing         63,970         3.4         782,347,651         1.5         941           holesale trade         131,332         7.0         1,161,136,044         2.2         680           formation         161,490         8.6         3,813,144,810         7.2         1,816           nance and insurance         331,300         17.6         28,759,821,427         54.1         6,678           eal estate         74,920         4.0         1,123,941,016         2.1         1,154           rofessional, scientific, and technical         281,757         14.9         6,183,477,512         11.6         1,688           anagement         45,325         2.4         2,638,368,816         5.0         4,478           ducational services         70,989         3.8         717,057,945         1.3         777           ealthcare and social assistance         70,989         3.8         717,057,945         1.3	rts, entertainment, and recreation	31,024	2.0	268,855,200	1.4	667	
2001         1,885,692         100.0         53,118,702,973         100.0         2,167           onstruction         35,579         1.9         589,751,963         1.1         1,275           anufacturing         63,970         3.4         782,347,651         1.5         941           /holesale trade         88,996         4.7         1,637,581,248         3.1         1,415           etail trade         131,332         7.0         1,161,136,044         2.2         680           formation         161,490         8.6         3,813,144,810         7.2         1,816           nance and insurance         331,300         17.6         28,759,821,427         54.1         6,678           eal estate         74,920         4.0         1,123,941,016         2.1         1,154           rofessional, scientific, and technical         281,757         14.9         6,183,477,512         11.6         1,688           anagement         45,325         2.4         2,638,368,816         5.0         4,478           dministrative and support         153,167         8.1         1,584,845,255         3.0         796           ducational services         70,989         3.8         717,057,945         1.3	ccommodation and food services	98,658	6.2	448,594,538	2.3	350	
Total1,885,692100.053,118,702,973100.02,167onstruction35,5791.9589,751,9631.11,275anufacturing63,9703.4782,347,6511.5941holesale trade88,9964.71,637,581,2483.11,415etail trade131,3327.01,161,136,0442.2680formation161,4908.63,813,144,8107.21,816nance and insurance331,30017.628,759,821,42754.16,678eal estate74,9204.01,123,941,0162.11,154rofessional, scientific, and technical281,75714.96,183,477,51211.61,688anagement45,3252.42,638,368,8165.04,478ducational services70,9893.8717,057,9451.3777ealthcare and social assistance181,2559.61,809,707,1413.4768rts, entertainment, and recreation45,7112.4604,795,8491.11,018	ther services	70,212	4.4	457,932,307	2.4	502	
Construction35,5791.9589,751,9631.11,275Aanufacturing63,9703.4782,347,6511.5941Vholesale trade88,9964.71,637,581,2483.11,415tetail trade131,3327.01,161,136,0442.2680iformation161,4908.63,813,144,8107.21,816inance and insurance331,30017.628,759,821,42754.16,678teal estate74,9204.01,123,941,0162.11,154Professional, scientific, and technical281,75714.96,183,477,51211.61,688danagement45,3252.42,638,368,8165.04,478ducational services70,9893.8717,057,9451.3777elalthcare and social assistance781,2559.61,809,707,1413.4768vits, entertainment, and recreation45,7112.4604,795,8491.11,018	2001						
lanufacturing63,9703.4782,347,6511.5941/holesale trade88,9964.71,637,581,2483.11,415etail trade131,3327.01,161,136,0442.2680information161,4908.63,813,144,8107.21,816inance and insurance331,30017.628,759,821,42754.16,678eal estate74,9204.01,123,941,0162.11,154rofessional, scientific, and technical281,75714.96,183,477,51211.61,688lanagement45,3252.42,638,368,8165.04,478ducational services70,9893.8717,057,9451.3777ealthcare and social assistance181,2559.61,809,707,1413.4768rts, entertainment, and recreation45,7112.4604,795,8491.11,018	Total	1,885,692	100.0	53,118,702,973	100.0	2,167	
Tholesale trade       88,996       4.7       1,637,581,248       3.1       1,415         etail trade       131,332       7.0       1,161,136,044       2.2       680         formation       161,490       8.6       3,813,144,810       7.2       1,816         nance and insurance       331,300       17.6       28,759,821,427       54.1       6,678         eal estate       74,920       4.0       1,123,941,016       2.1       1,154         rofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         anagement       45,325       2.4       2,638,368,816       5.0       4,478         dministrative and support       153,167       8.1       1,584,845,255       3.0       796         ducational services       70,989       3.8       717,057,945       1.3       777         ealthcare and social assistance       181,255       9.6       1,809,707,141       3.4       768         tts, entertainment, and recreation       45,711       2.4       604,795,849       1.1       1,018	onstruction	35,579	1.9	589,751,963	1.1	1,275	
etail trade       131,332       7.0       1,161,136,044       2.2       680         formation       161,490       8.6       3,813,144,810       7.2       1,816         nance and insurance       331,300       17.6       28,759,821,427       54.1       6,678         eal estate       74,920       4.0       1,123,941,016       2.1       1,154         rofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         anagement       45,325       2.4       2,638,368,816       5.0       4,478         dministrative and support       153,167       8.1       1,584,845,255       3.0       796         ducational services       70,989       3.8       717,057,945       1.3       777         ealthcare and social assistance       181,255       9.6       1,809,707,141       3.4       768         rts, entertainment, and recreation       45,711       2.4       604,795,849       1.1       1,018	anufacturing	63,970	3.4	782,347,651	1.5	941	
formation         161,490         8.6         3,813,144,810         7.2         1,816           nance and insurance         331,300         17.6         28,759,821,427         54.1         6,678           eal estate         74,920         4.0         1,123,941,016         2.1         1,154           rofessional, scientific, and technical         281,757         14.9         6,183,477,512         11.6         1,688           anagement         45,325         2.4         2,638,368,816         5.0         4,478           dministrative and support         133,167         8.1         1,584,845,255         3.0         796           ducational services         70,989         3.8         717,057,945         1.3         777           ealthcare and social assistance         181,255         9.6         1,809,707,141         3.4         768           rts, entertainment, and recreation         45,711         2.4         604,795,849         1.1         1,018	holesale trade	88,996	4.7	1,637,581,248	3.1	1,415	
inance and insurance       331,300       17.6       28,759,821,427       54.1       6,678         eal estate       74,920       4.0       1,123,941,016       2.1       1,154         rofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         anagement       45,325       2.4       2,638,368,816       5.0       4,478         dministrative and support       153,167       8.1       1,584,845,255       3.0       796         ducational services       70,989       3.8       717,057,945       1.3       777         ealthcare and social assistance       181,255       9.6       1,809,707,141       3.4       768         rts, entertainment, and recreation       45,711       2.4       604,795,849       1.1       1,018	etail trade	131,332	7.0	1,161,136,044	2.2	680	
eal estate       74,920       4.0       1,123,941,016       2.1       1,154         rofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         anagement       45,325       2.4       2,638,368,816       5.0       4,478         ducational services       70,989       3.8       717,057,945       1.3       777         ealthcare and social assistance       181,255       9.6       1,809,707,141       3.4       768         rts, entertainment, and recreation       45,711       2.4       604,795,849       1.1       1,018	formation	161,490	8.6	3,813,144,810	7.2	1,816	
rofessional, scientific, and technical       281,757       14.9       6,183,477,512       11.6       1,688         anagement       45,325       2.4       2,638,368,816       5.0       4,478         dministrative and support       153,167       8.1       1,584,845,255       3.0       796         ducational services       70,989       3.8       717,057,945       1.3       777         ealthcare and social assistance       181,255       9.6       1,809,707,141       3.4       768         rts, entertainment, and recreation       45,711       2.4       604,795,849       1.1       1,018	nance and insurance	331,300	17.6	28,759,821,427	54.1	6,678	
Ianagement         45,325         2.4         2,638,368,816         5.0         4,478           dministrative and support         153,167         8.1         1,584,845,255         3.0         796           ducational services         70,989         3.8         717,057,945         1.3         777           ealthcare and social assistance         181,255         9.6         1,809,707,141         3.4         768           rts, entertainment, and recreation         45,711         2.4         604,795,849         1.1         1,018	eal estate	74,920	4.0	1,123,941,016	2.1	1,154	
Image: dministrative and support         153,167         8.1         1,584,845,255         3.0         796           ducational services         70,989         3.8         717,057,945         1.3         777           ealthcare and social assistance         181,255         9.6         1,809,707,141         3.4         768           rts, entertainment, and recreation         45,711         2.4         604,795,849         1.1         1,018		'					
ducational services         70,989         3.8         717,057,945         1.3         777           ealthcare and social assistance         181,255         9.6         1,809,707,141         3.4         768           rts, entertainment, and recreation         45,711         2.4         604,795,849         1.1         1,018		· · ·		, , ,		, ,	
ealthcare and social assistance         181,255         9.6         1,809,707,141         3.4         768           rts, entertainment, and recreation         45,711         2.4         604,795,849         1.1         1,018			••••	, , ,			
ts, entertainment, and recreation		- /		, ,			
		· · ·		, , ,			
ccommodation and food services 137,419 7.3 948,001,225 1.8 531				604,795,849	1.1	,	
ther services		- / -	-				

	Employ	/ment		Wages			
Industry	Average	Percent	Total	Percent	Average weekly		
1993							
Total	755,218	100.0	\$12,823,895,195	100.0	\$1,306		
Finance and insurance	320,523	42.4	7,043,145,847	54.9	1,690		
Professional, scientific, and technical	202,418	26.8	2,726,502,787	21.3	1,036		
nformation	126,057	16.7	1,653,959,555	12.9	1,009		
Management	39,969	5.3	837,517,659	6.5	1,612		
Real estate	66,249	8.8	562,769,347	4.4	653		
2001							
Total	894,792	100.0	42,518,753,581	100.0	3,655		
Finance and insurance	331,300	37.0	28,759,821,427	67.6	6,678		
Professional, scientific, and technical	281,757	31.5	6,183,477,512	14.5	1,688		
nformation	161,490	18.0	3,813,144,810	9.0	1,816		
Management	45,325	5.1	2,638,368,816	6.2	4,478		
Real estate	74,920	8.4	1,123,941,016	2.6	1,154		

#### Table 11. Manhattan finance and insurance detailed industries employment and wages, first quarter, 1993 and 2001

	Average	employment	Numeric change		Average weekly wage		No. of Contract	Baaraa
Industry	1993	2001		Percent change	1993	2001	Numeric change	Percen change
Commercial banking	49,573	42,514	-7,059	-14.2	\$1,413	\$3.855	\$2,442	172.8
Savings institutions	2,541	1.020	-1.520	-59.8	653	1.676	1.023	156.7
Credit unions	453	515	62	13.7	465	812	347	74.
Other depository intermediation	454	412	-42	-9.2	793	1.483	690	87.
Real estate credit	575	907	332	57.7	1,916	7,067	5,151	268.
nternational trade financing	6.449	3.724	-2.725	-42.3	1.415	5,521	4.106	290.
All other nondepository credit intermediation	4,337	3.793	-543	-12.5	1,229	2,994	1.765	143.0
fortgage and nonmortgage loan brokers	499	904	406	81.4	1.636	3,016	1,380	84.
Financial transactions processing, reserve, and	+55	504	400	01.4	1,000	0,010	1,000	04.
clearinghouse activities	585	1,378	793	135.6	1,177	2,269	1,092	92.
Other activities related to credit intermediation	5.880	4,417	-1.463	-24.9	1.210	3.251	2,041	168.
	0,000	-,-17	1,400	24.5	1,210	0,201	2,041	100.
nvestment banking and securities dealing	33.319	39.292	5.973	17.9	2.642	9.860	7,218	273.
Securities brokerage	76,802	103,608	26,806	34.9	2,552	10,820	8,268	324.
Commodity contracts dealing	1,546	1,199	-347	-22.4	1,607	7,456	5,849	364.
Commodity contracts brokerage	2,324	2,427	102	4.4	1.016	2.911	1,895	186.
Securities and commodity exchanges	2,862	3,301	439	15.3	1,279	4,008	2,729	213.
Aiscellaneous intermediation	2,002	3,282	1,231	60.0	1,934	3.916	1.982	102.
Portfolio management	8,311	12,948	4,637	55.8	1,952	5,674	3,722	190.
nvestment advice	6.769	12,054	5.285	78.1	2.179	7.718	5.539	254.
rust, fiduciary, and custody activities	5,280	6,275	995	18.8	1,021	3,048	2,027	198.
Aiscellaneous financial investment activities	4,405	6,601	2,196	49.8	1,332	3,669	2,027	175.
	4,403	0,001	2,190	49.0	1,552	3,009	2,337	175.
Direct life insurance carriers	17,101	13,858	-3,243	-19.0	1,052	3,567	2,515	239.
Direct health and medical insurance carriers	8.603	6.963	-1.641	-19.1	663	1.088	425	64.
Direct property and casualty insurance carriers	12,155	8,919	-3,237	-26.6	1,002	2,063	1,061	105.
Reinsurance carriers	2.044	2.274	230	11.3	1.193	4.939	3.746	314.
nsurance agencies and brokerages	12,964	13,607	642	5.0	1,032	2,369	1,337	129.
Claims adjusting	1,464	1,961	496	33.9	756	1,372	616	81.
hird-party administration of insurance and pension	1,101	1,001	100	00.0	,	1,012	010	01.
funds	3.949	2,358	-1,590	-40.3	1,044	1,401	357	34.
Il other insurance-related activities	3.078	2,805	-273	-8.9	1.173	7.863	6.690	570.
lealth and welfare funds	1,492	2,005	650	43.6	548	782	234	42.
Dpen-end investment funds	1,432	142	123	672.7	2,435	10,384	7,949	326.
Other financial vehicles	169	162	-7	-4.2	1,281	4,283	3,002	234.
	109	102	-,	-4.2	1,201	4,205	3,002	2.54.

the expansion years. (See table 13.)

*1993–2001 recovery base multipliers.* The following tabulation lists the base employment and total-wages multipliers for Manhattan's global sector for the 1993–2001 period:

Year	Employment	Total wages
1993	2.1	1.5
1994	2.1	1.5
1995	2.1	1.4
1996	2.1	1.3
1997	2.1	1.3
1998	2.1	1.3
1999	2.1	1.3
2000	2.1	1.3
2001	2.1	1.2

With a base multiplier of 2.1 for employment, it would have

been expected that for every new job created in the global sector, there would be 1.1 jobs created in the local sector. In addition, with an average base multiplier of 1.34 for total wages, for every dollar gained in global-sector wages, there would be a gain of 34 cents in local-economy wages.

Real-world outcomes indicate that the relationship held for employment during 1993–2001: 139,574 new jobs were created in the global sector and 156,973 in the local sector (a ratio of 1 to 1.1). However, the relationship did not hold for wages: with a gain in wages of \$29.7 billion in the global sector, compared with \$4.3 billion in the local sector, every dollar of new wages in the global sector led to an increase of 14 cents in the local economy, not the expected 34 cents.

An examination of job growth in the local-economy sector from 1993 to 2001 reveals that more than 50 percent of all new jobs were in just two sectors: (1) administrative and support (27.4 percent of new jobs) and (2) accommodation and food services (24.7 percent of new jobs). Average 2001 weekly Table 12.

Manhattan professional, scientific, and technical services detailed industries employment and wages, first quarter, 1993 and 2001

	Average	employment	Number	<b>D</b>	Average weekly wage		Numeric	
Industry	1993	2001	Numeric change	Percent change	1993	2001	Numeric change	Percer chang
Offices of lawyers	63,439	71,315	7,876	12.4	\$1,051	\$1,745	694	66.0
itle abstract and settlement offices	511	394	-118	-23.0	1,079	1,212	133	12.3
Il other legal services		1,309	-188	-12.5	564	989	425	75.
Offices of certified public accountants	1 '	19,337	4.847	33.5	875	1.318	443	50.
ax preparation services	1 '	770	-194	-20.1	619	474	-145	-23.
Payroll services		3,937	-175	-4.3	1,092	1,121	29	2.
Other accounting services		9,156	1,495	19.5	1,032	1,719	690	67.
rchitectural services	1 '	10,327	4,554	78.9	788	1,103	315	40.
andscape architectural services	123	273	150	122.2	624	1,298	674	108.
•	8,626	7.480	-1,146	-13.3	932	1,334	402	43.
ingineering services		,	· · ·				-	-
Prafting services	572	628	56	9.8	679	1,312	633	93.
urveying and mapping services		103	-12	-10.4	780	1,486	706	90.
esting labratories	371	192	-179	-48.3	652	886	234	35.
nterior design services	1,507	2,358	851	56.4	806	1,046	240	29
ndustrial design services	365	372	7	1.9	916	1,348	432	47.
raphic design services	3,968	6,627	2,659	67.0	822	1,202	380	46
Other specialized design services	1,161	1,922	760	65.5	890	1,114	224	25
Custom computer programming services	4,693	19,437	14,744	314.2	1,420	1,862	442	31
Computer systems design services	4.663	15,086	10,423	223.5	1,186	1.743	557	47
computer facilities management services	5,107	4,338	-769	-15.1	1,353	2,368	1015	75
other computer-related services		3,640	2,287	169.0	1,084	1,676	592	54.
dministrative management and general management	1,000	0,010	2,201	100.0	1,001	1,070	002	01.
consulting services	5,746	12,297	6,551	114.0	1,615	2,138	523	32.
luman resource and executive search consulting services	3,431	6,755	3,324	96.9	1,203	2.496	1293	107.
farketing consulting services	1,615	2,585	970	60.0	1,203	1,496	443	42
rocess physical distribution and logistics consulting					, í			
services	516	579	62	12.1	1,194	1,559	365	30.
Other management consulting services	1,277	2,741	1,464	114.6	995	1,863	868	87.
nvironmental consulting services	341	624	282	82.7	748	907	159	21
Other scientific and technical consulting services	500	805	305	60.9	1,389	1,332	-57	-4
and life sciences esearch and development in the social sciences	4,266	4,943	677	15.9	682	1,070	388	56
and humanities	6,930	6,616	-313	-4.5	606	838	232	38
dvertising agencies	25,915	36,163	10,248	39.5	1,206	2,133	927	76
ublic relations agencies	5,263	9,308	4,045	76.9	1,017	1,638	621	61
ledia buying agencies	987	1,738	751	76.1	1,019	1,707	688	67
edia representatives	4,782	4,861	79	1.7	1,103	2,234	1131	102
lisplay advertising	571	809	238	41.7	978	1,702	724	74
irect mail advertising	1,587	1,479	-108	-6.8	854	1,301	447	52
dvertising material distribution	1,587	344	175	-0.8 104.0	801	590	-211	-26
ther services related to advertising	750	800	50	6.7	799	1,403	604	-26.
	3,433	4,394	961	28.0	952	1,403	790	83
larketing research and public opinion polling				28.0 41.7				
hotography studios, portrait	274	388	114		598	815	217	36
commercial photography	1,540	1,759	219	14.2	839	1,147	308	36
ranslation and interpretation services	166	626	460	277.9	603	860	257	42
/eterinary services	730 377	1,214 878	484 501	66.3 133.0	531 740	647 1,092	116 352	21. 47.
	1 377	878	601	11440	1 (4()	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	360	17

wages were \$796 in the former and \$531 in the latter. Average 2001 weekly wages for the entire local-economy sector were \$823.

### Analytical discussion

The Manhattan economy has been subject to the effects of two periods of economic contraction and a relatively longer period of expansion over a 15-year timeframe. For example, from 1990 to 2004, Manhattan lost 102,973 private-sector jobs, or 5.7 percent of its employment base, with 84.9 percent (87,403) of the jobs coming from the global sector. As noted throughout this article, these global-sector jobs have made Manhattan unique, and their loss has placed strains on the economic fabric not only of Manhattan, but also of the entire regional economy.

 Table 13.
 Manhattan information sector detailed industries employment and wages, first quarter, 1993 and 2001

	Average employment				Average weekly wage		1	
Industry	1993	2001	Numeric change		1993	2001	Numeric change	Percent change
Newspaper publishers	8.891	8.067	-825	-9.3	\$1.107	\$1,927	820	74.1
Periodical publishers	25.090	31.267	6.177	24.6	1.174	2.461	1.287	109.6
Book publishers	12,982	13,445	463	3.6	838	1.393	555	66.2
	12,962	1.349	403 	-12.6	862	1,393	245	28.4
Directory and mailing list publishers	1,543	2.461	-194 1.415	135.3	1.554	1,107	245 375	20.4
Software publishers				37.1	798	1,929	375 930	116.5
Motion picture and video production	17,718	24,293	6,575			, -		
Motion picture and video distribution	940	975	35	3.8	1,652	2,393	741	44.9
Teleproduction and other postproduction services	1,733	2,164	431	24.9	965	1,460	495	51.3
Other motion picture and video industries	637	886	249	39.1	706	1,099	393	55.7
Record production	86	452	366	425.6	597	1,685	1,088	182.
ntegrated record production/distribution	2,155	2,396	241	11.2	1,282	3,459	2,177	169.
Ausic publishers	539	630	91	16.8	943	1,666	723	76.
Sound-recording studios	614	738	124	20.1	659	913	254	38.5
Other sound-recording industries	201	219	18	9.0	1,116	1,802	686	61.5
Radio networks	819	815	-4	5	1,173	1,570	397	33.8
Radio stations	970	1,177	207	21.4	977	2,824	1,847	189.0
Television broadcasting	16,040	15,950	-90	6	1,130	1,733	603	53.4
Cable and other subscription programming	4,028	5,297	1,269	31.5	1,157	2,210	1,053	91.0
nternet publishing and broadcasting	457	3,986	3.529	772.2	1.049	1.620	571	54.4
Vired telecommunications carriers	17,538	18,941	1,403	8.0	1,092	1.529	437	40.0
Cellular and other wireless telecommunications	282	519	238	84.4	711	1.263	552	77.6
Felecommunications resellers	510	2.564	2,054	402.7	939	1.428	489	52.1
Cable and other program distribution	653	943	290	44.4	813	1.567	754	92.7
nternet service providers	550	6.773	6.223	1131.5	1.164	1.862	698	60.0
Data processing, hosting, and related services	2,738	6,157	3,419	124.9	716	1,523	807	112.
News syndicates	1.501	1,435	-65	-4.4	1.109	2.038	929	83.8
ibraries and archives	2.844	3,142	297	10.5	445	564	119	26.7
All other information services	390	675	285	73.0	653	1,101	448	68.6

Of the three periods examined, the 2001–04 decline is the pivotal one. With its focus on the global sector (126,177 global-sector jobs were lost during the 3-year period), this recession disrupted the economic base of Manhattan, altered its character, and accelerated trends that had been developing for years. Whereas the economic expansion of the mid- to late 1990s more than made up for the job losses of the early 1990s downturn, a similar economic rebound in employment has not yet occurred.

In the past decade, the vitality of Manhattan was dependent in large measure on the vigor of its global economy. Job growth there stimulated and influenced job creation throughout the entire local sector. This relationship, however, appeared to dissipate at the beginning of the 21st century.

Today, the global economy is still the driving force in the regional economy. But it is the high wages associated with global-sector industries that constitute the new economic dynamic. These elevated salaries, not new global-sector jobs, appear to be stimulating the development of new employment opportunities in the local sector, as well as mitigating overall local-sector job losses.

Highly paid global-economy workers, with limited time,

Industry	2001	2004
Vomen's and children's clothing		
merchant wholesalers	16.72	19.05
lewelry merchant wholesalers	15.11	16.95
Agents and managers for public figures	11.05	11.68
ewelry, except costume, manufacturing	10.69	11.23
Vomen's cut-and-sew apparel manufacturing.	8.01	10.25
ewelry and silverware manufacturing	9.08	9.75
heater companies and dinner theaters Ien's and boys' clothing merchant	7.03	8.16
wholesalers	5.67	6.51
Grantmaking foundations	5.76	6.22
Art dealers	4.28	5.13
uggage and leather goods stores	3.28	4.66
Camera and photographic supplies stores	3.23	4.51
luseums	3.69	3.95
Children's and infants' clothing stores	1.77	2.94
Iusical groups and artists	2.54	2.93
Social advocacy organizations	2.35	2.49
ewelry stores	2.06	2.29
Other clothing stores	1.19	1.31

Table 15.

Industry	2001	2004	Percent increase
Direct property and casualty insurance carriers	\$2,063	\$3,444	66.9
Direct health and medical insurance	ψ2,000	ψ0,+++	00.3
carriers	1,088	1,748	60.7
Reinsurance carriers	4.939	6.914	40.0
Commodity contracts brokerage	2,911	3,823	31.3
Portfolio management	5,674	7,353	29.6
Commodity contracts dealing	7,456	9,461	26.9
Savings institutions	1,676	2,119	26.4
Miscellaneous financial investment			
activities	3,669	4,636	26.4
Other activities related to credit			
intermediation	3,251	4,056	24.8
All other insurance-related activities	7,863	9,810	24.8
Financial transactions processing,			
reserve, and clearinghouse activities	2,269	2,826	24.5
Miscellaneous intermediation	3,916	4,856	24.0
International trade financing	5,521	6,567	18.9
Health and welfare funds	782	916	17.1
Securities brokerage	10,820	11,863	9.6

Average weekly wages, finance and

demand high levels of personal and consumer services from local-economy workers, and those demands translate into new local-sector jobs or a realignment of existing jobs. Table 14 documents some of the effects of these changes.

High wages in Manhattan appear to be stimulating job growth and employment shifts into areas that contribute to higher living standards or demand labor-intensive services. Although the local sector lost jobs during the 2001–04 downturn (51,568 jobs, or 5.2 percent of its job base), these losses were significantly less than the 120,975 (12.7 percent of the local sector's job base) experienced during the 1990–93 downturn.

As noted earlier, three global sectors—finance and insurance; professional, scientific, and technical services; and information—have been the drivers of the Manhattan economy, providing the high-paying jobs, contributing substantially to the borough's wealth, influencing job creation, and mitigating job loss in the local economy. Together, they bore the brunt of the 2001–04 job loss, although their separate reactions to that downturn were not uniform. An examination of each sector affords insights into structural changes within the Manhattan labor market economy.

*Finance and insurance.* By 2004, this sector dominated the entire global economy, accounting for 65.1 percent of total global-sector wages and representing 35.7 percent of the sector's jobs. To place these figures in a clearer perspective, in Manhattan the sector's employment location quotient decreased from 3.34 in 2001 to 2.91 in 2004. However, the location quotient for total wages remained high in 2004, at

39.8, although off its 2001 peak of 44.8. The latter change represented a slight shift within global-sector total wages.

Table 15 points out those sector components experiencing significant wage increases during the 2001–04 economic downturn; table 16 identifies sector jobs with high first-quarter average weekly wages. The latter jobs are in some of the high-paying industries that powered and influenced the local economy from 2001 to 2004.

*Professional, scientific, and technical services.* By 2004, this sector accounted for 32.0 percent of all global-sector jobs, but represented only 15.2 percent of wages. The sector's employment location quotient decreased slightly between 2001 and 2004, from 2.38 to 2.36, while its location quotient for wages increased markedly, from 1.22 to 1.41.

During the 15-year period examined, the sector was among those with the fastest-growing employment in the global economy. As regards total wages, however, the relative influence of the sector was diminished by the significant wage increases registered by the finance and insurance sector.

Table 17 highlights those sector components experiencing wage increases greater than 10.0 percent during the 2001–04 downturn. Table 18 identifies specific jobs with high first-quarter average weekly wages.

*Information.* By 2004, the information sector represented 16.4 percent of all global-economy jobs (just about equivalent to its 1990 share of 16.3 percent), but only 9.3 percent of sector wages, down from 15.8 percent in 1990. Again, over the 15-year period, wage increases in the finance and insurance sector diminished the relative value of the sector's financial impact.

Between 2001 and 2004, the sector's employment location quotient decreased slightly, from 2.17 to 2.14; however, its total wages location quotient increased from 1.10 to 1.17.

Finance and insurance industries with high

Table 16.

Industry	2001	2004	Percent increase
	¢10.000	¢44.000	0.0
Securities brokerage All other insurance-related activities		\$11,863 9,810	9.6 24.8
	.,		-
Commodity contracts dealing Investment banking and securities	7,456	9,461	26.9
dealing	9,860	9,439	-4.3
Portfolio management	5,674	7,353	29.6
Investment advice	7,718	7,128	-7.6
Reinsurance carriers	4,939	6,914	40.0
International trade financing	5,521	6,567	18.9
Miscellaneous intermediation Miscellaneous financial investment	3,916	4,856	24.0
activities	3,669	4,636	26.4

#### Table 17. Average weekly wages in professional and business services, Manhattan, first quarter, 2001 and 2004

Industry	2001	2004	Percent increase
Payroll services	\$1,121	\$1,941	73.1
All other legal services	989	1,275	28.9
Media buying agencies	1,707	2,188	28.2
Computer facilities management	, -	,	
services	2,368	2,922	23.4
Administrative management and general	_,	_,	
management consulting services	2,138	2,616	22.4
Veterinary services	647	787	21.6
	1.114	1.355	21.6
	'	,	21.4
	'	,	20.0
	'	,	19.5
	,	,	
	1.070	1.241	16.0
	'	1.545	15.8
		,	11.5
	,	,	11.3
	.,002	_,0.2	
Veterinary services Other specialized design services Other accounting services Marketing consulting services Offices of certified public accountants Research and development in the physical, engineering, and life sciences Engineering services Commercial photography Custom computer programming services .	647 1,114 1,719 1,496 1,318 1,070 1,334 1,147 1,862	1,355 2,087 1,795 1,575 1,241	21.6 21.4 20.0 19.5 16.0 15.8 11.5

SOURCE: BLS QCEW Program.

Table 18.Professional and business services industries<br/>with high average weekly wages, Manhattan,<br/>first quarter, 2001 and 2004

Industry	2001	2004	Percent increase
Computer facilities management			
services	\$2,368	\$2,922	23.4
Administrative management and general			
management consulting services	2,138	2,616	22.4
Media buying agencies	1,707	2,188	28.2
Other accounting services	1,719	2,087	21.4
Custom computer programming services	1,862	2,072	11.3
Media representatives	2,234	2,030	-9.1
Human resource and executive search			
consulting services	2.496	2.029	-18.7
Advertising agencies	2,133	2.016	-5.5
Payroll services	1,121	1,941	73.1
Offices of lawyers	1,745	1,849	6.0

Table 19 shows information sector components with wage increases greater than 12.0 percent during the 2001–04 down-turn. Table 20 lists specific jobs with high first-quarter average weekly wages. Chart 4 shows the employment distribution and the wage distribution in Manhattan's global sector for 1990 and 2004.

## Effects

Manhattan's economy is still feeling the influence of the economic downturn of the early 21st century. With job losses totaling 177,745 between 2001 and 2004 alone, the economic decline did more than just reduce employment in the borough: because its effect was felt almost exclusively in the global

sector, it struck at the heart of Manhattan's economic structure. For example, more than half (57.4 percent) of all job losses in the finance and insurance sector during the 15-year period studied occurred from 2001 to 2004.

Decreases in employment and increases in the average weekly wages of global-sector workers have clearly altered the labor structure of Manhattan's economy. Whereas 47.3 percent of jobs and 66.4 percent of wages were associated with the global economy in 1990, the percentages had shifted to 45.0 percent and 77.7 percent, respectively, by 2004.

This decreasing job base and increasing average weekly wages have altered the economic relation between the local and global sectors in Manhattan. The impact of global employment growth has diminished; Manhattan's energy and vigor now are related almost exclusively to the considerable incomes earned by global-sector workers. Whereas in the past

Table 19.

Average weekly wages in information services, Manhattan, first quarter, 2001 and 2004

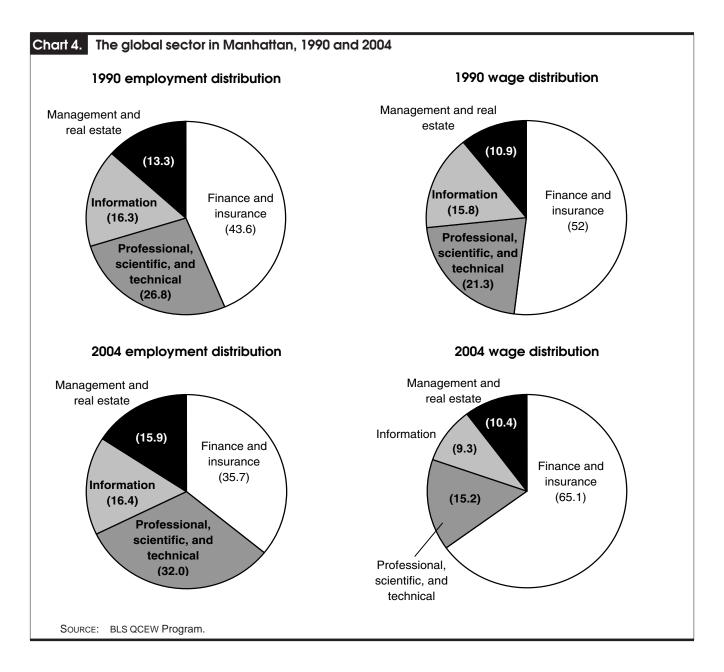
Industry	2001	2004	Percent increase
Cable and other subscription			
programming	\$2,210	\$3,478	57.4
Motion picture and video production Data processing, hosting, and related	1,728	2,634	52.4
services	1,523	2,063	35.5
Book publishers	1,393	1,726	23.9
Nired telecommunications carriers	1,529	1,888	23.5
Directory and mailing list publishers	1,107	1,338	20.9
News syndicates	2,038	2,350	15.3
Libraries and archives	564	640	13.5
nternet publishing and broadcasting	1,620	1,823	12.5
Television broadcasting	1,733	1,947	12.3

SOURCE: BLS QCEW Program.

Table 20. Informa Manhat

Information industries with high wages, Manhattan, first quarter, 2001 and 2004

Industry	2001	2004	Percent increase
Cable and other subscription			
programming	\$2,210	\$3,478	57.4
Integrated record production/distribution	3,459	3,018	-12.7
Motion picture and video production	1,728	2,634	52.4
Periodical publishers	2,461	2,495	1.4
News syndicates	2,038	2,350	15.3
Data processing, hosting, and related			
services	1,523	2,063	35.5
Television broadcasting	1,733	1,947	12.3
Software publishers	1,929	1,938	.5
Internet service providers	1.862	1,889	1.5
Wired telecommunications carriers	1,529	1,888	23.5



jobs created in the local sector were responsive to new globalsector *jobs*, today new local-economy jobs are perhaps more directly related to increases in global-sector *wages*.

### 2005: bottoming out and new beginnings?

During the first quarter of 2005, the Manhattan economy demonstrated signs of recovery. Comparing first-quarter employment numbers with those recorded in 2004 reveals that Manhattan experienced its first overall job gains since the 2001–04 downturn. Employment increased slightly, a scant 0.1 percent (1,209 jobs). Adding to these positive job numbers was the fact that total wages increased by 5.9 percent and the average weekly wage increased by 5.8 percent.

Obviously, any single-year increase in employment especially such a small one—needs to be assessed with caution, because it is certainly not a trend and it may not be indicative of any notable change—just a normal statistical fluctuation. However, it might be an early sign that the decline in employment is bottoming out, or at least decelerating, in Manhattan.

In examining this one-year change in employment (see table 21), it becomes evident that the proportion of employment continues to shift from the global sector. Global-sector em-

Ta	b	e	21

#### Total Manhattan private employment and wages, first quarter, 2004 and 2005

	Employment		Wages		
Industry	Average	Percent	Total	Percent	Average weekly
2004					
Total	1,707,947	100.0	48,416,427,606	100.0	\$2,181
Construction	27.878	1.6	467.803.515	1.0	1.291
Vanufacturing	45,866	2.7	686,990,305	1.4	1,152
Vholesale trade	80,198	4.7	1,603,067,528	3.3	1,538
Retail trade	122,191	7.2	1,176,452,914	2.4	741
nformation	126.037	7.4	3.484.674.099	7.2	2.127
Finance and insurance	274,435	16.1	24,476,080,725	50.6	6,861
Real estate	72,512	4.2	1,102,064,720	2.3	1,169
	12,012	4.2	1,102,004,720	2.0	1,103
Professional, scientific, and technical	245.860	14.4	5,720,937,946	11.8	1,790
Management	49.771	2.9	2.824.838.237	5.8	4.366
Administrative and support	129,517	7.6	1,424,237,667	2.9	846
Educational services	76,304	4.5	845,335,900	1.7	852
Healthcare and social assistance	193.887	11.4	2,151,564,674	4.4	854
Arts, entertainment, and recreation	47.419	2.8	660.495.046	1.4	1.071
Accommodation and food services	135,444	7.9	942,967,086	1.4	536
Other services	80.629	4.7	848,917,244	1.8	810
2005	00,020	4.7	040,517,244	1.0	010
Total	1,709,156	100.0	51,249,961,087	100.0	\$2,307
Construction	27,881	1.6	483,598,352	.9	1,334
Manufacturing	39,802	2.3	536,822,762	1.0	1,037
Wholesale trade	79,654	4.7	1,664,819,490	3.2	1,608
Retail trade	128,135	7.5	1,255,181,725	2.4	754
nformation	123,310	7.2	3,660,906,126	7.1	2,284
Finance and insurance	257,564	15.1	26,118,917,410	51.0	7,801
Real estate	74,570	4.4	1,238,353,888	2.4	1,277
Professional, scientific, and technical	255,485	14.9	6,365,268,094	12.4	1,916
Vanagement	51,146	3.0	2,666,616,265	5.2	4,011
Administrative and support	130,299	7.6	1,579,881,824	3.1	933
Educational services	75,334	4.4	937,151,905	1.8	957
lealthcare and social assistance	196,958	11.5	2,190,264,741	4.3	855
Arts, entertainment, and recreation	46,542	2.7	646,060,510	1.3	1,068
Accommodation and food services	140,219	8.2	992,428,061	1.9	544
Other services	82,257	4.8	913,689,934	1.8	854

ployment dropped from 45.0 percent of Manhattan's total employment in the first quarter of 2004 to 44.6 percent in the same quarter of 2005—even as the wage portion rose from 77.8 percent to 78.1 percent. Table 22 presents employment and wages in Manhattan's global sector for the first quarters of 2004 and 2005.

In contrast to the employment situation, both the global and the local sector generated gains in wages. In the global sector, total wages increased by 6.5 percent, with average weekly wages rising by 7.4 percent; in the local sector, the increases were 3.6 percent and 2.8 percent, respectively.

Within the two economies, there were important differences at the sector level. In the global sector, finance and insurance continued to lose jobs (16,871, or 6.1 percent), while average weekly wages increased 13.7 percent, to \$7,801. In professional, scientific, and technical services, an additional 9,625 jobs (3.9 percent) were created, especially in finance-related legal and accounting services, which saw average weekly wages increase 7.1 percent, to \$1,916. In the information sector, employment decreased by 2.2 percent (2,727 jobs), while average weekly wages increased by 7.4 percent, to \$2,284.

Within the local economy, job gains in four specific sectors—retail trade; healthcare and social assistance; accommodation and food services; and other services—accounted for Manhattan's 2005 employment increase. Retail trade had an increase of 5,944 jobs (4.9 percent), while average weekly wages rose 1.7 percent, to \$754. Healthcare and social assistance generated 3,071 new jobs (1.6 percent), with an increase in average weekly wages of just \$1, to \$855. In the accommodation and food services sector, employment increased 3.5 percent (4,775 jobs), while average weekly wages increased 1.7 percent, to \$544. The "other services" industry group

Industry	Employment		Wages		
	Average	Percent	Total	Percent	Average weekly
2004					
Total	768,615	100.0	\$37,608,595,727	100.0	\$3,764
Finance and insurance	274,435	35.7	24,476,080,725	65.1	6,861
Professional, scientific, and technical	245,860	32.0	5,720,937,946	15.2	1,790
nformation	126,037	16.4	3,484,674,099	9.3	2,127
Management	49,771	6.5	2,824,838,237	7.5	4,366
Real estate	72,512	9.4	1,102,064,720	2.9	1,169
2005					
Total	762,075	100.0	40,050,061,783	100.0	\$4,043
Finance and insurance	257,564	33.8	26,118,917,410	65.2	7,801
Professional, scientific, and technical	255,485	33.5	6,365,268,094	15.9	1,916
nformation	123,310	16.2	3,660,906,126	9.1	2,284
Management	51,146	6.7	2,666,616,265	6.7	4,011
Real estate	74,570	9.8	1,238,353,888	3.1	1,277

registered job gains of 2.0 percent (1,628 jobs), while its average weekly wages rose 5.5 percent, to \$854.

It is apparent that, as of 2005, the historical job engine of the Manhattan economy—the global sector—remained in decline. Still, global-sector wages recorded strong growth, and overall employment, at the very least, stopped falling.

GLOBALIZATION HAS CHANGED THE NATURE OF THE MANHATTAN ECONOMY. With its focus on information technologies and with the mobility and liquidity of capital, the world economy needs strategic locations with vast concentrations of resources and infrastructure. During the past 40 years, given its industry mix, Manhattan has developed as such a site.

The emergence of global markets for the services that Manhattan produces, however, has not been without consequences. Instead of having a single, homogeneous structure, Manhattan's economy has bifurcated. On the one side is a global component whose high-paying jobs in finance, professional services, and information, among other sectors, have helped define what globalization implies in the 21st century. On the other side is the necessary component made up of workers who provide services and commodities essential to the well-being of the global city. Each exists independently, but each cannot exist without the other. Given this relationship, the creation of jobs in the global sector over past decades has led to the establishment of new local-economy jobs.

Throughout the past 15 years, two downturns and a period of economic expansion have altered Manhattan's economic structure. It appears that the 2001–04 economic downturn and the 9/11 terrorist attacks were critical events. Focused almost exclusively on Manhattan's global economy, this pair of events has reduced employment significantly in sectors that had defined 20th-century Manhattan. Mitigating these job losses have been extraordinary increases in wages, particularly in the finance sector.

Whereas in the past, employment levels in the globaleconomy sector may have been an instrumental element in assessing employment levels in the local economy sector, that may not be the case today. Now, high wage levels, not the number of jobs, may be driving employment in the local sector.

Although it is too early to assess the full implications of the job growth recorded in 2005 (that is, whether it indicates that the economic downturn has abated), a restructuring of Manhattan's economy clearly has taken place. In terms of employment, the global economy has diminished in importance; in terms of wage generation, its value has increased. In assessing new job creation, for now it is important to note that it is centered in the local economy, with its growing source of demand found in the high wages and wealth generated by the global sector. In other words, the rising income in the global sector is what is spurring demand for more labor intensive local-sector jobs.<sup>12</sup>

### Notes

<sup>1</sup> Data from the Web site **www.nber.org/cycles/cyclesmain.html** of the National Bureau of Economic Research (NBER) indicate that the national 2001 recession started in March 2001 and ended in November

2001. In New York, it started earlier—in January 2001—and lasted longer. (See Jason Bram, "Identification of the Beginning of the Economic Downturn in New York City," *Current Issues* (Federal Reserve Bank of New York, February 2003), pp. 2, 3.

 $^2$  Data are from the BLs Quarterly Census of Employment and Wages (qcEw) Program. The wage figure is for total private industry in New York county.

<sup>3</sup> Michael L. Dolfman and Solidelle F. Wasser, "9/11 and the New York City economy: a borough-by-borough analysis," *Monthly Labor Review*, June 2004, pp. 3–33.

<sup>4</sup> Saskia Sassen, "Cities, Foreign Policy and the Global Economy," in Margaret E. Crahan and Alberto Vourvoulias-Bush, eds., *The City and the World: New York's Global Future* (New York, Council on Foreign Relations, 1997), pp. 171–87.

<sup>5</sup> Manhattan is both the Borough of Manhattan and New York County.

<sup>6</sup> In this article, global-sector industries are selected from those industries with location quotients of approximately 2.0 or higher. (Education is considered a local industry because its high location quotient may be related to local demand coming from the global sector.)

 $^7$  The BLs data source used for the analysis is the qcew. First-quarter data from each year back to 1990 constitute the data set analyzed in this article.

<sup>8</sup> Economic-base analysis aims at identifying overall changes in a region's economy resulting from either positive or negative impacts to a particular segment of that economy. Economic-base analysis rests on the assumption that regional economies can be divided into two general sectors—a basic sector, identified as the global sector in this article, and a nonbasic sector, identified as the local sector—and that the global sector is the engine which drives the regional or local economy.

*Economic-base theory* is used to predict or measure the relative impact of the global sector on the local sector. (That is, for a given region, what are the overall gains or losses in employment or income associated with changes in global sector employment or income?) The measurement of economic impact is assessed by two indicators known as the *economic-base multiplier* and the *economic-base ratio*. The economic-base multiplier calculates the number of local-sector jobs that are, theoretically, created from one additional job in the global

sector. The economic-base ratio is the ratio of employment in the global sector to that in the local sector.

Two quantitative techniques used to measure the interrelationship between the global and local sectors are the location quotients provided by the BLS QCEW program in table 1 and base multipliers. Base multipliers answer the question, What effect do increases or decreases in globalsector jobs or wages have on local-sector jobs or wages? The formula used to measure this effect is

Base multiplier = total regional employment or wages  $\div$  total global sector employment or wages

Note that this article does not use economic-base analysis as a predictor of future economic activity in Manhattan. Rather, that analytic tool is used to help explain what already had taken place and to put those changes in a contextual framework.

<sup>9</sup> In Manhattan, average weekly wages tend to be high during the first and fourth quarters, due to bonuses paid in certain industries. This "spike effect" needs to be considered in evaluating first-quarter average weekly wages. In addition, first-quarter wages should not be used as the sole basis for calculating yearly wages.

<sup>10</sup> Nationally, the NBER defines the 1990 recession as having begun in July 1990 and having lasted until March 1991. (See note 1 for the time line for the 2001 recession.) According to the NBER (www.nber.org/cycles/cyclesmain.html),

The NBER does not define a recession in terms of two consecutive quarters of decline in real GDP. Rather, a recession is a significant decline in economic activity spread across the economy, lasting more than a few months, [and] normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.

The analysis presented in this article uses declines and increases in total employment as a proxy for economic activity and as the basis for determining troughs and peaks of economic downturns and expansions.

<sup>11</sup> Data from the BLS CPS Program.

<sup>12</sup> For further insights, see W. J. Baumol and W. G. Bowen, "On the Performing Arts: The Anatomy of Their Economic Problems," *American Economic Review*, March 1965, pp. 495–502.