THE GLOBAL METROMONITOR

The global financial crisis of the late 2000s precipitated an economic downturn of such magnitude and reach that many now refer to the period as the "Great Recession." According to the International Monetary Fund, global economic output, which had grown at an annual rate of 3.2 percent from 1993 to 2007, actually shrank by 2 percent from 2008 to 2009. A precarious economic recovery is now underway.

Aggregate views of the global economy, however, mask the distinct experiences of its real hubs—major metropolitan areas. Metro areas are economically integrated collections of cities and their surrounding areas, and are centers of high-value economic activity in their respective nations and worldwide. And because metros form the fundamental bases for national and international economies, understanding their relative positioning before, during, and after the Great Recession provides important evidence on emerging shifts in the location of global economic resilience and future growth. The *Global MetroMonitor* examines data on economic output and employment in 150 of the world's largest metropolitan economies, located in 52 countries, from 1993 to 2010, and makes the following findings.

The Global Economy Is Metropolitan-led

The 150 metropolitan economies profiled in the *Global MetroMonitor* exhibit highly diverse stages of development. Their per capita measures of Gross Value Added (GVA) range widely, from under $1,000 in Hyderabad and Kolkata, to roughly $70,000 in San Jose, and Zurich.

What is consistent about these metropolitan areas, however, is their function as locations for high-value economic activity in their respective nations and world regions. Nearly four in five boast per capita Gross Value Added (GVA) measures that exceed averages for their nations. This is particularly true in rapidly emerging areas of Eastern Europe and Asia, where major metro incomes exceed those for nations by average margins of at least 80 percent.

As a result, these metro areas punch above their weight in national and global economic output. In 2007, they accounted for just under 12 percent of global population, but generated approximately 46 percent of world GDP.

Downturn and Recovery Are Shifting Growth

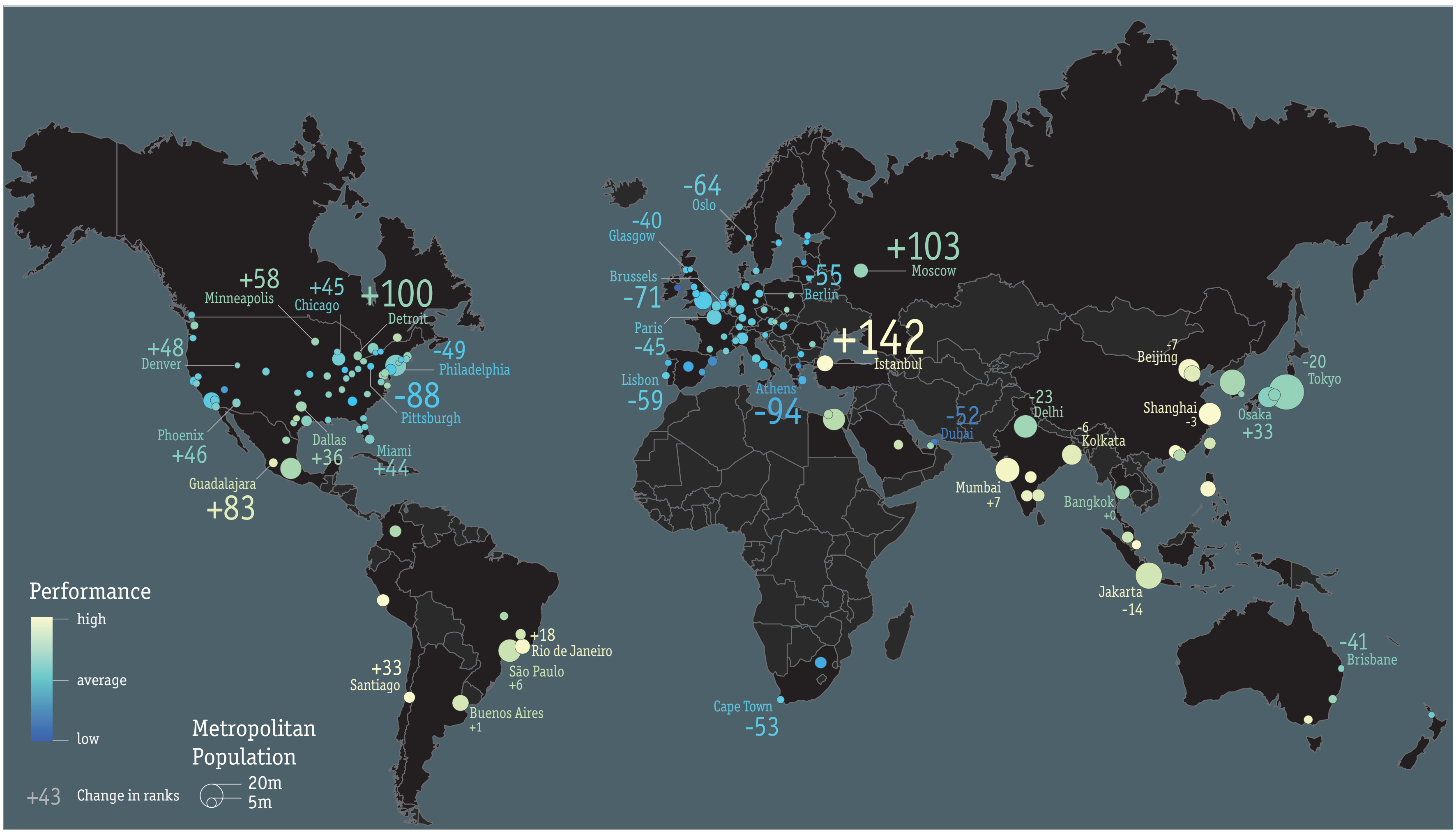
Virtually no place completely escaped the effects of the global financial crisis and ensuing economic downturn in the late 2000s. Yet impacts across the 150 global metropolitan areas were highly uneven, as illustrated through the *Global MetroMonitor's* focus on the employment performance of these places during three distinct economic periods from the past two decades.

Pre-recession

Between 1993 and 2007, roughly half of the metro areas that achieved the strongest growth in income and employment were located in rising nations of Asia, Latin America, and the Middle East that benefited from new heights of global economic integration. Metro areas such as Shenzhen and Bangalore roughly tripled their income, and employment in Singapore and Belo Horizonte grew by more than half over the 14-year period.

Portions of the world's more industrialized regions, including the United States and Europe, also registered strong metro performers during that time. Eastern European metros such as Sofia and Krakow, as well as Dublin in Western Europe, achieved rapid growth in income. In the United States, Las Vegas, Phoenix, and Austin posted major employment gains over the same period. Overall, however, U.S. metros on average ranked slightly behind their European counterparts, and well behind their counterparts in the rest of the world, on economic performance through much of the 1990s and early- to mid-2000s.

Below
Performance during recovery and change in ranking: from recession to recovery period
U.S. and European metros were greatly weakened by the recession, while most Asian and Latin American metros were impacted far less.



Recession

The negative impact of the global economic downturn, commencing in 2008, was widespread among the 150 metro areas. Seven in eight lost either employment or income in at least one year between 2007–2008 and 2009–2010.

But for several global metropolitan areas, the late 2000s marked more of a temporary slowdown than a Great Recession. The top metro performers for the most part experienced no decline in either employment or income from 2007 to 2010. Fully 28 of the 30 top-ranked metros during that period were located outside of the United States and Europe, with China accounting for the top five. Australian metros (Melbourne, Brisbane, and Sydney) registered strong performance, due to their important economic linkages with stable East Asian economies. Latin American metros proved resilient as well, with Lima, Buenos Aires, Bogotá and three Brazilian metros ranking among the top 30.

By contrast, many of the metros in the United States and Europe that flew highest before the recession experienced tremendous falls. Dublin, Madrid, and the three Baltic capitals (Riga, Tallinn, and Vilnius), along with Las Vegas and Riverside in the United States, moved from the top 30 spots pre-recession to the bottom 30 spots during the recession. These regions exhibited significant asset bubbles in the 2000s, as evidenced by the fall in home prices in their respective nations in recent years. Overall, the Great Recession appeared to hit U.S. metros hardest, while it improved the relative position of metros outside the United States and Europe.

Recovery

The most recent year, from 2009 to 2010, appears to have further strengthened the relative economic standing of metro areas in the rising nations of Asia, Latin America, and the Middle East. Of the top 30 ranked metros, a diverse group of 29 was located outside the United States and Europe. China and India alone accounted for ten, Latin America registered seven, and the Middle East recorded four. Most of these metros posted annual growth rates of at least 2 percent in employment, and 5 percent in income, in the first year of worldwide recovery.

While the recession hit U.S. metros harder than their European counterparts, the recovery seems slower to take hold in European than American metros. Metros along Europe's western, eastern, and northern peripheries, from Porto and Valencia, to Thessaloniki and Sofia, to Helsinki and Stockholm, anchor the bottom 30 economic performers from 2009 to 2010. Meanwhile, several U.S. metros that suffered severe declines during the recession, such as Detroit and Cleveland, posted significant rebounds in their rankings on the strength of robust output growth, even as Atlanta and Las Vegas await signs of growth.

The upshot: The past two decades have seen lower-income metro areas in the global East and South "close the gap" with higher-income metros in Europe and the United States, and the worldwide economic upheaval has only accelerated the shift in growth toward metros in those regions of the world.

Other Factors Shape Metro Performance

Beyond indicating economic opportunities within broad world regions and different stages of development, metros' recent performance also reflects intrinsic factors such as their industrial base, and the impact of national fiscal, monetary, and trade policies.

First, the presence and magnitude of certain industries within metro areas related strongly to economic performance, though these differed by period and world region. Metros with high shares of their output in *construction* performed much better than average in the pre-recession period, particularly in the United States, but much worse than average in the recovery, particularly in Western Europe and other high-income regions. Before the recession, *energy and manufacturing* was associated with strong performance of lower-income metro areas, particularly in China and the Middle East, and weaker performance of U.S. metros. And high output in *non-market services*, such as government, health, and education, was a boon for European and American metros in the recession, signaling that those industries remained relatively healthy amid market turmoil.

Second, national context does matter. In any given period, roughly half to three-quarters of metro economic performance was associated with respective national economic performance. The analyses above point to distinct economic dynamics across U.S. metros that made their recession generally deeper than in other world regions, but that may also account for the stronger rebound some U.S. metros are posting compared to their European counterparts. Examining national economies alone, however, overlooks the important variations in metro performance that separated nearby metros such as Leipzig (#77) and Berlin (#144) in the pre-recession period; Abu Dhabi (#16) and Dubai (#97) during the recession; and Cleveland (#49) and Buffalo (#120) in the recovery.

As global metro areas emerge from the shadow of the Great Recession, they also find themselves in markedly different places along their own growth trajectories. Many in Asia and Latin America were scarcely affected by the recession at all, or have posted a full recovery. Several in the United States and other high-income regions have rebounded to their prior employment or income level, but not yet both. About half of the 150 continue to lose ground on one of the key measures, in most cases employment, and the bulk of these metros are in Western Europe and the United States. A small handful of metros, most in Europe, continued to decline in employment and income through 2010 as the recession raged on.

The *Global MetroMonitor* thus portrays a world economy whose continued transition will be driven in large part by the distinct experiences of its powerful network of major metropolitan economies. As metropolitan leaders worldwide confront the challenges and opportunities that accompany continued global economic integration, and many seek new growth models to replace the old ones, the shifting metro map points toward an emerging array of productive, metro-based economic relationships that could drive regional and national prosperity in the decades to come. On the following page, 150 of the largest metropolitan economies worldwide are ranked by their performance before, during, and after the Great Recession.

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METRO PERFORMANCE

BEFORE, DURING, AND AFTER THE GREAT RECESSION

The *Global MetroMonitor* ranks 150 of the largest metropolitan economies worldwide on their combined employment and income growth in three periods: pre-recession (1993 to 2007); recession (year of minimum growth 2007 to 2010); and recovery (2009 to 2010). Metropolitan economic performance is also analyzed within the context of broad world regions. The table below ranks metro areas by their performance in the recovery period, demonstrating differences among metros in the United States, Europe, and other parts of the world.

Metro areas outside the United States and Europe, especially emerging lower-income Asian and Latin American markets, dominate the list of strongest economic performers in the early stages of worldwide recovery. Some U.S. metros are bouncing back from a deep recession with increasing incomes, though most continue to shed employment. Europe accounts for most of the weakest metro performers, reflecting the impacts of the debt crisis in early 2010 as well as the rapid decline of housing-bubble markets in Spain, Ireland, and portions of Eastern Europe.

RECOVERY 2009-2010		PRE-RECESSION 1993-2007	RECESSION YEAR OF MINIMUM GROWTH 2007-2010
1	Istanbul	44	143
2	Shenzhen	1	4
3	Lima	16	11
4	Singapore	18	33
5	Santiago	41	38
6	Shanghai	8	3
7	Guangzhou	3	2
8	Beijing	4	1
9	Manila	34	24
10	Rio de Janeiro	100	28
11	Hyderabad	15	14
12	Mumbai	24	19
13	Bangalore	7	9
14	Melbourne	47	22
15	Guadalajara	69	98
16	Kolkata	39	10
17	Chennai	31	12
18	Tianjin	12	5
19	Buenos Aires	60	18
20	Jakarta	123	6
21	Taipei	53	39
22	Belo Horizonte	42	27
23	Kuala Lumpur	17	37
24	Riyadh	129	21
25	São Paulo	70	31
26	Austin	25	40
27	Montreal	74	45
28	Alexandria	36	8
29	Cairo	37	7
30	Hong Kong	72	48
31	Bogotá	46	25
32	Brasilia	95	20
33	Seoul	32	26
34	Mexico City	88	66
35	Bangkok	150	35
36	Virginia Beach	92	42
37	Washington	85	36
38	Krakow	23	13
39	Dallas	71	75
40	New Delhi	30	17
41	Monterrey	58	124
42	Baltimore	109	89
43	Abu Dhabi	5	16
44	Minneapolis	98	102
45	Sydney	76	30
46	Detroit	147	146
47	Moscow	9	150
48	Nashville	61	129
49	Cleveland	135	131
50	Seattle	79	60
51	San Antonio	78	32
52	Tokyo	143	72
53	Charlotte	65	141
54	St. Louis	133	68
55	Bratislava	26	52
56	Warsaw	38	15
57	Boston	94	92
58	Nagoya	146	109
59	Busan	89	29
60	Osaka	149	93
61	Houston	91	84
62	Cincinnati	118	118
63	Toronto	67	82
64	Brisbane	27	23
65	Bucharest	29	73
66	Memphis	107	121
67	Salt Lake City	48	123
68	Phoenix	20	114
69	Richmond	103	90
70	Bridgeport	110	91
71	Louisville	139	110
72	San Diego	43	112
73	Providence	105	103
74	Tampa	83	120
75	San Jose	73	142

METRO WORLD REGION

- UNITED STATES
- EUROPE
- REST OF THE WORLD

Source: Oxford Economics, Moody's Economy.com, and Cambridge Econometrics data. Some values based on forecasted estimates, please see Data and Methods section in the *Global MetroMonitor* for further details.

RECOVERY 2009-2010		PRE-RECESSION 1993-2007	RECESSION YEAR OF MINIMUM GROWTH 2007-2010
76	Oklahoma City	132	46
77	New York	90	88
78	Miami	66	122
79	Prague	33	50
80	Toulouse	52	44
81	Columbus	111	104
82	Chicago	115	127
83	Milwaukee	141	135
84	Denver	64	132
85	Orlando	40	119
86	Marseille	84	43
87	New Orleans	148	107
88	Vienna	122	49
89	Dusseldorf	126	85
90	Jacksonville	80	125
91	Auckland	55	55
92	Vancouver	63	95
93	Lyon	93	63
94	Hamburg	127	61
95	Sacramento	50	115
96	Paris	114	51
97	Lille	104	54
98	Oslo	106	34
99	Leipzig	77	65
100	Copenhagen	101	99
101	Zurich	142	58
102	Portland	45	139
103	Torino	137	105
104	Cologne	131	81
105	Budapest	57	86
106	Rome	116	67
107	Riverside	28	130
108	Stuttgart	134	113
109	Munich	102	76
110	Milan	120	111
111	Berlin	144	56
112	Lisbon	96	53

RECOVERY 2009-2010		PRE-RECESSION 1993-2007	RECESSION MINIMUM YEARLY GROWTH 2007-2010
113	Frankfurt	130	83
114	Ljubljana	81	106
115	Edinburgh	62	70
116	Los Angeles	82	137
117	Cape Town	75	64
118	Vilnius	13	147
119	Glasgow	86	79
120	Buffalo	117	69
121	Hartford	138	101
122	Kansas City	124	59
123	London	68	100
124	Helsinki	59	138
125	San Francisco	112	133
126	Rotterdam	125	71
127	Philadelphia	119	78
128	Rochester	136	77
129	Pittsburgh	128	41
130	Stockholm	87	108
131	Birmingham	121	117
132	Amsterdam	113	74
133	Brussels	97	62
134	Manchester	108	96
135	Naples	140	94
136	Sofia	10	80
137	Indianapolis	99	126
138	Tallinn	21	149
139	Atlanta	56	136
140	Oporto	145	87
141	Athens	19	47
142	Madrid	22	134
143	Johannesburg	54	116
144	Riga	11	148
145	Valencia	49	140
146	Las Vegas	14	128
147	Thessaloniki	51	57
148	Barcelona	35	145
149	Dubai	2	97
150	Dublin	6	144