

The Economic Impact of Sandy

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Region Impacted by Hurricane Sandy

Region	Nominal GDP, bil \$	Employment, ths	Households, ths	Value of housing stock, mil \$	Average household income, ths	Unemployment rate, %
Bridgeport	65.5	416.7	340.3	86,452.7	211.3	8.1
New York City	1,217.6	8,525.0	6,973.3	1,332,910.3	159.5	9.3
New Jersey ex New York City	53.9	483.9	329.9	228,960.5	483.3	11.4
Philadelphia	325.0	2,711.5	2,280.4	396,970.1	130.9	8.8
Washington	416.6	3,036.3	2,145.9	533,994.3	162.5	5.6
Total of all regions	2,078.6	15,173.4	12,069.8	2,579,287.9	229.5	8.5
US	15,775.7	133,376.7	119,736.4	16,079,067.0	112.3	8.1
% of US	13.2	11.4	10.1	16.0	NA	NA
*All figures are for 2012q3 excepting unemployment rate which is for Aug 2012						

Sources: Census Bureau, BLS, BEA, Moody's Analytics

Sandy Results in \$50 Billion in Economic Loss

Lost Output	\$ billions	Damages	\$ billions
Transportation/utilities	0.7	Households	11.0
Retail	0.2	Housing	10.5
Prof./business services	4.6	Vehicles	0.5
Information	1.8	Businesses	10.0
Financial activities	7.0	Infrastructure	9.0
Education/healthcare	1.7		
Leisure/hospitality	0.9		
Other services	0.5		
Government	2.6		
Total net loss	19.9	Total	30.0

Source: Moody's Analytics

Lost Output Due to Sandy...

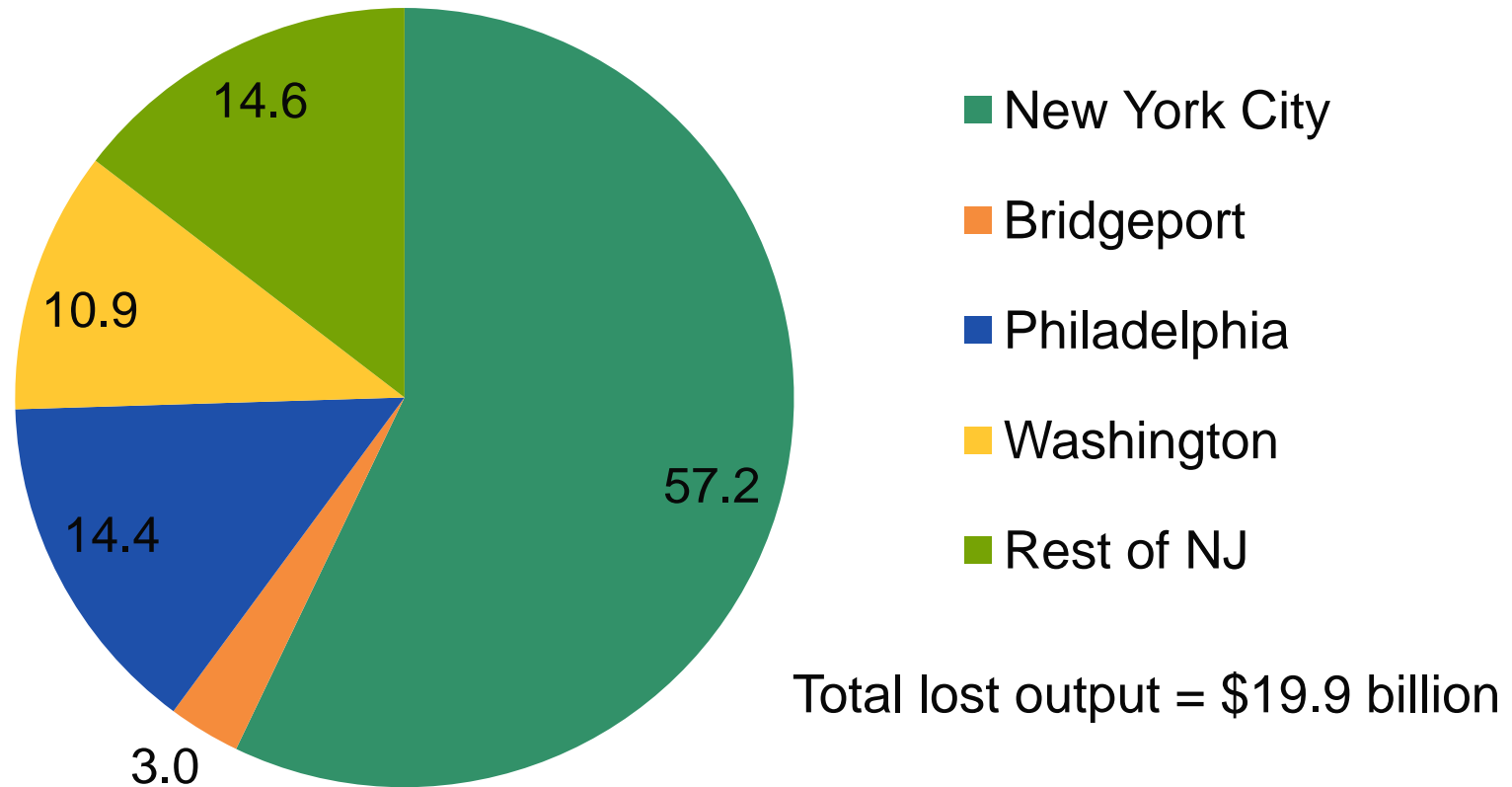
Current \$, billions, affected region

Industry	Annual GDP	Net loss	IMPLAN multiplier	Total net loss	Industry loss as % of total
Transportation/utilities	67.2	0.4	1.8	0.7	3.4
Retail	99.9	0.1	1.6	0.2	1.1
Prof./business services	364.9	2.4	1.9	4.6	22.9
Information	129.8	1.0	1.9	1.8	9.2
Financial activities	579.8	3.9	1.8	7.0	34.9
Education/healthcare	184.9	0.9	1.9	1.7	8.3
Leisure/hospitality	73.7	0.5	1.9	0.9	4.7
Other services	51.0	0.3	1.9	0.5	2.5
Government	254.4	1.15	2.2	2.6	12.9
Total	1,805.5	10.5	1.8	19.9	100.0

Source: Moody's Analytics

...Is Largely in the Broad New York City Metro

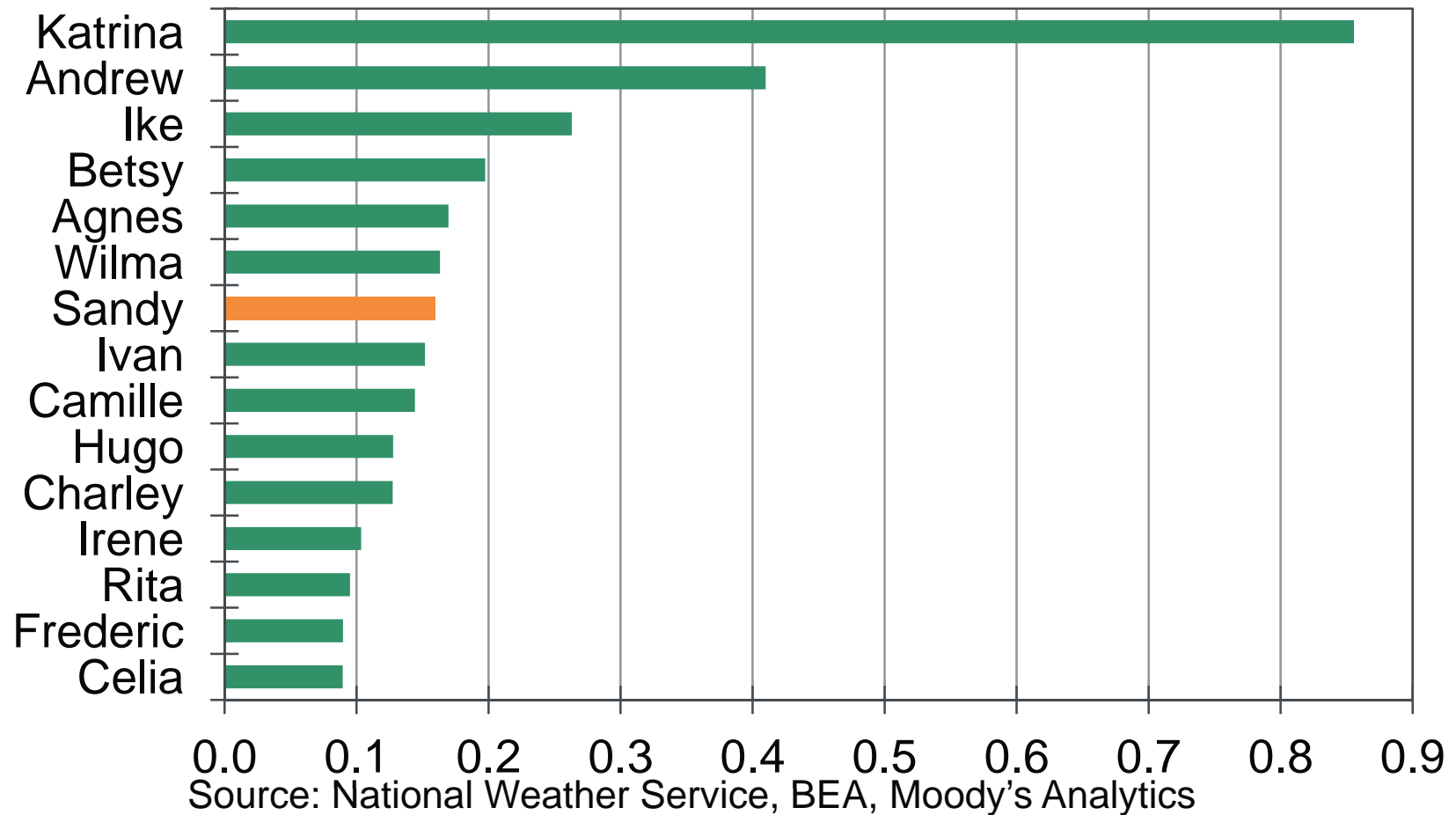
Share of lost output, %



Source: Moody's Analytics

Serious Property Damage...

Property damage as a % of GDP



...And Among the Costliest Disasters

Billions \$

Disaster	Impacted Region	Date	Economic Loss			Economic Aid		
			Destruction	Lost Output	Total Loss	Insurance	Government Aid	Total Aid
Hurricane Irene	Northeast U.S.	August 2011	10.1	2.5	12.6	4.9	1.7	6.6
Hurricane Katrina	Gulf of Mexico	August 2005	129.3	27.8	157.1	45.0	122.1	167.2
Hurricane Ivan	Gulf of Mexico	September 2004	8.1	7.3	15.4	8.2	7.1	15.3
9/11	Entire Nation	September 2001	29.0	69.6	98.6	22.7	75.7	98.4
Los Angeles Northridge Quake	Los Angeles	January 1994	26.6	14.1	40.7	18.2	17.4	35.6
Midwest Floods	MN to MO	Summer 1993	6.8	10.6	17.5	1.5	7.9	9.4
Hurricane Andrew	Miami, FL	August 1992	41.3	13.1	54.5	24.0	12.2	36.1
Loma Prieta Quake	Bay Area, CA	October 1989	11.9	6.1	18.0	1.8	8.6	10.3
Hurricane Hugo	Charleston, SC	September 1989	16.4	5.3	21.7	7.4	3.5	10.9
Notes:								
Lost output associated with the Midwest floods includes \$5 billion in crop losses								
The Bay Area includes the metro areas of San Francisco, Oakland, San Jose and Santa Cruz								
9/11 insurance includes only property coverage								
Lost output due to Katrina does not include the impact of higher energy prices								
Sources: ISO, Insurance Information Institute, Moody's Analytics								

New York is Very Exposed to Flooding...

Assets exposed to coastal flooding, Bil. \$ 2007

	Assets
Miami	416
New York	320
New Orleans	234
Osaka-Kobe	216
Tokyo	174
Amsterdam	128
Rotterdam	115
Nagoya	109
Guangzhou	84
Shanghai	73

Source: University of Southampton (UK), OECD, Moody's Analytics

...and is Not Well Prepared

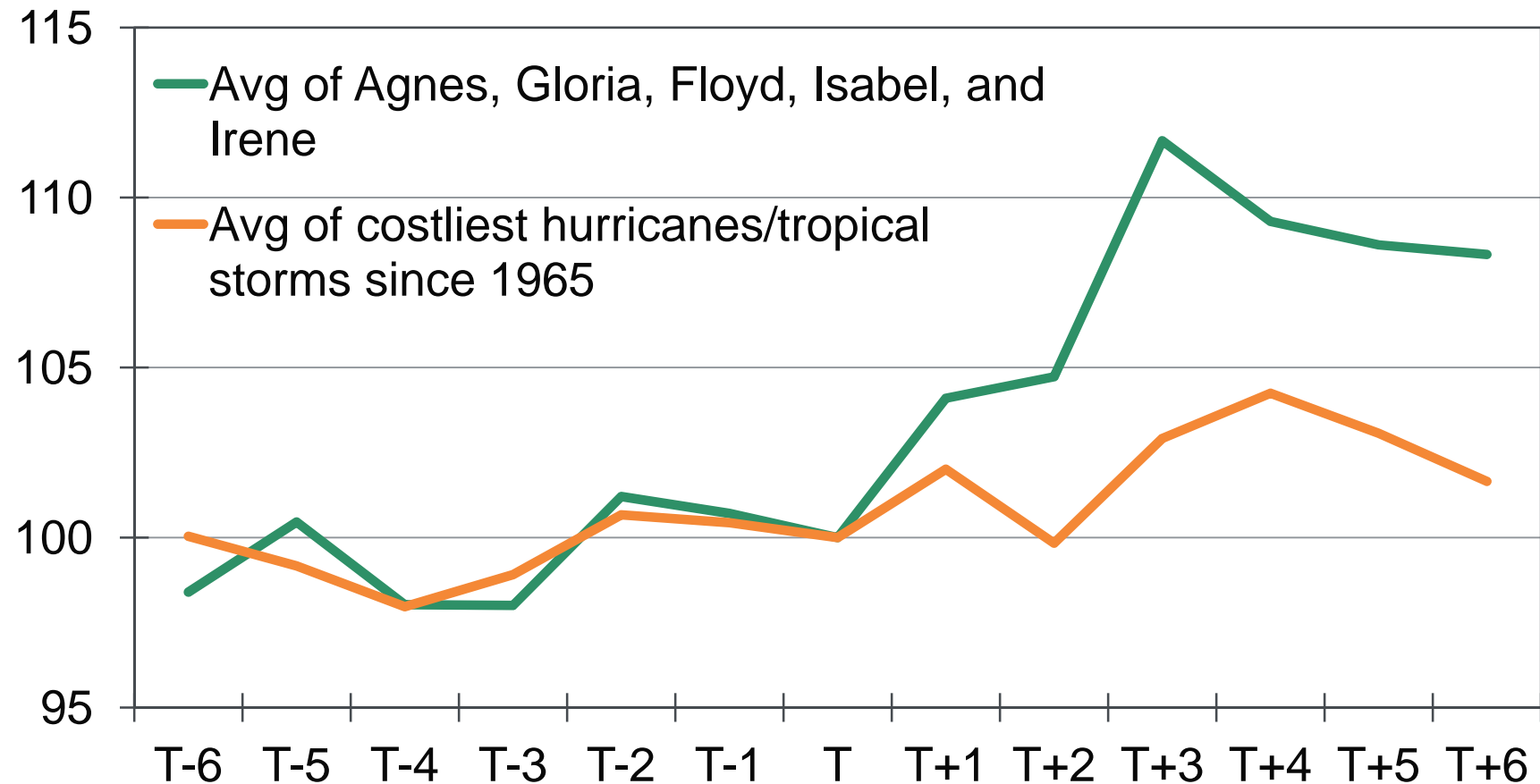
Flood Protection Standard

	Worst storm per # of years
Amsterdam	1:10,000
Rotterdam	1:10,000
Shanghai	1:1,000
London	1:1,000
Tokyo	1:1,000
Osaka	1:300
New York	1:100

Source: University of Southampton (UK), OECD, Moody's Analytics

Rebuilding Begins Quickly

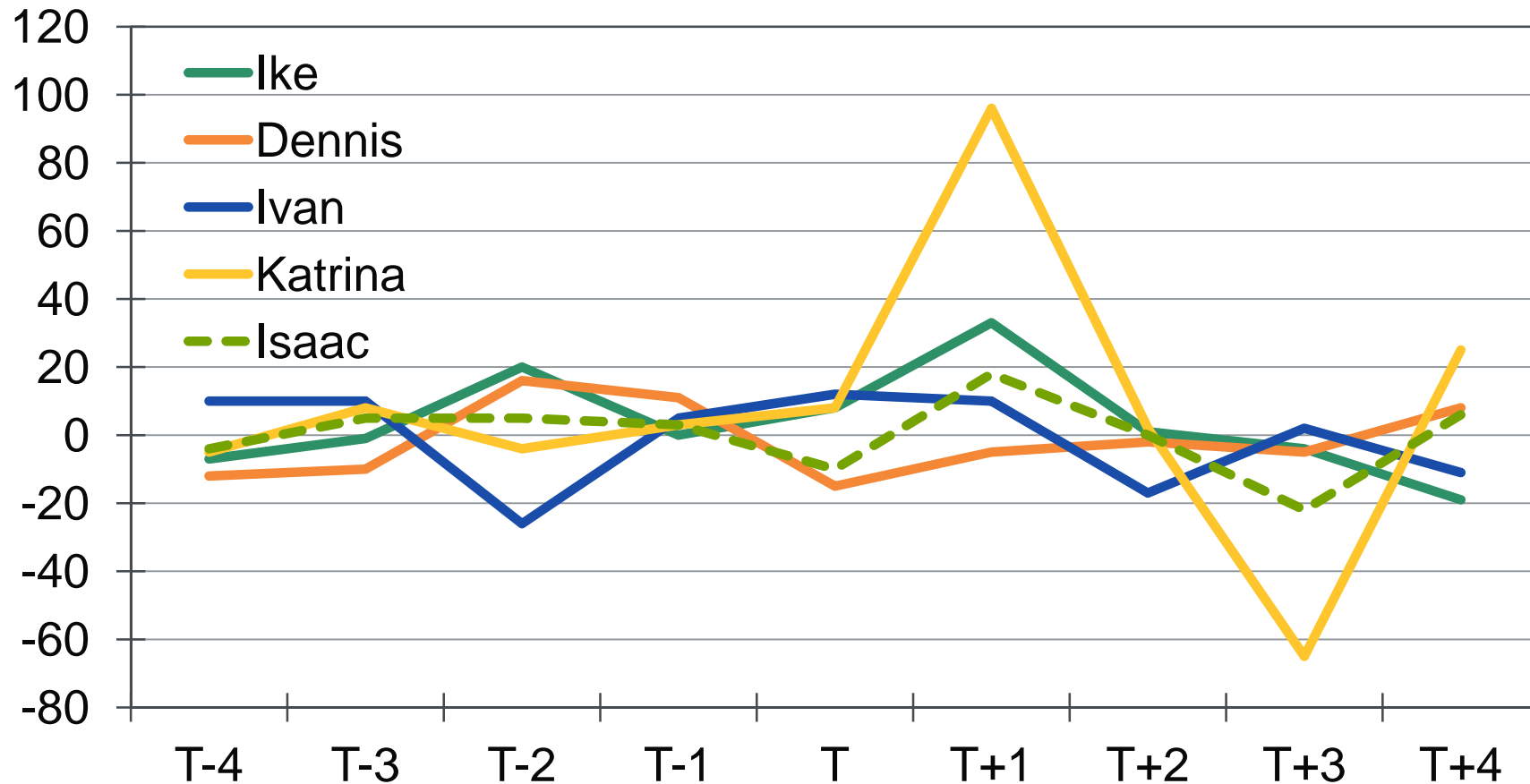
U.S. housing starts, indexed to month of storm impact, T=100



Sources: NOAA, Census Bureau, Moody's Analytics

Monthly and Weekly Data Will Be Impacted...

Initial claims, change, ths, T=week including Hurricane



Sources: Department of Labor, Moody's Analytics

...But the GDP Impact Will Be Small

Lost Output = \$20 Billion in 2012q4

Property Damage = \$30 billion

- » Assume \$17.5 billion is rebuilt in 2012q4
- » Assume \$12.5 billion is rebuilt in rest of 2013

Real GDP impact is very small – we have not changed our GDP outlook as a result of Sandy

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