

# Competitiveness Scorecard



## **New York City's Competitiveness in Attracting Talent**

September 28, 2016

# Project Overview

## **Focus on human capital**

Continuing to attract and retain a highly talented workforce will be essential to NYC's continued economic growth

## **Identify attractive characteristics**

Assess performance on indicators that make an area attractive to residents

## **Assess urban competitiveness quantitatively**

Review data from large domestic urban centers to capture presence and growth of highly-educated demographic base

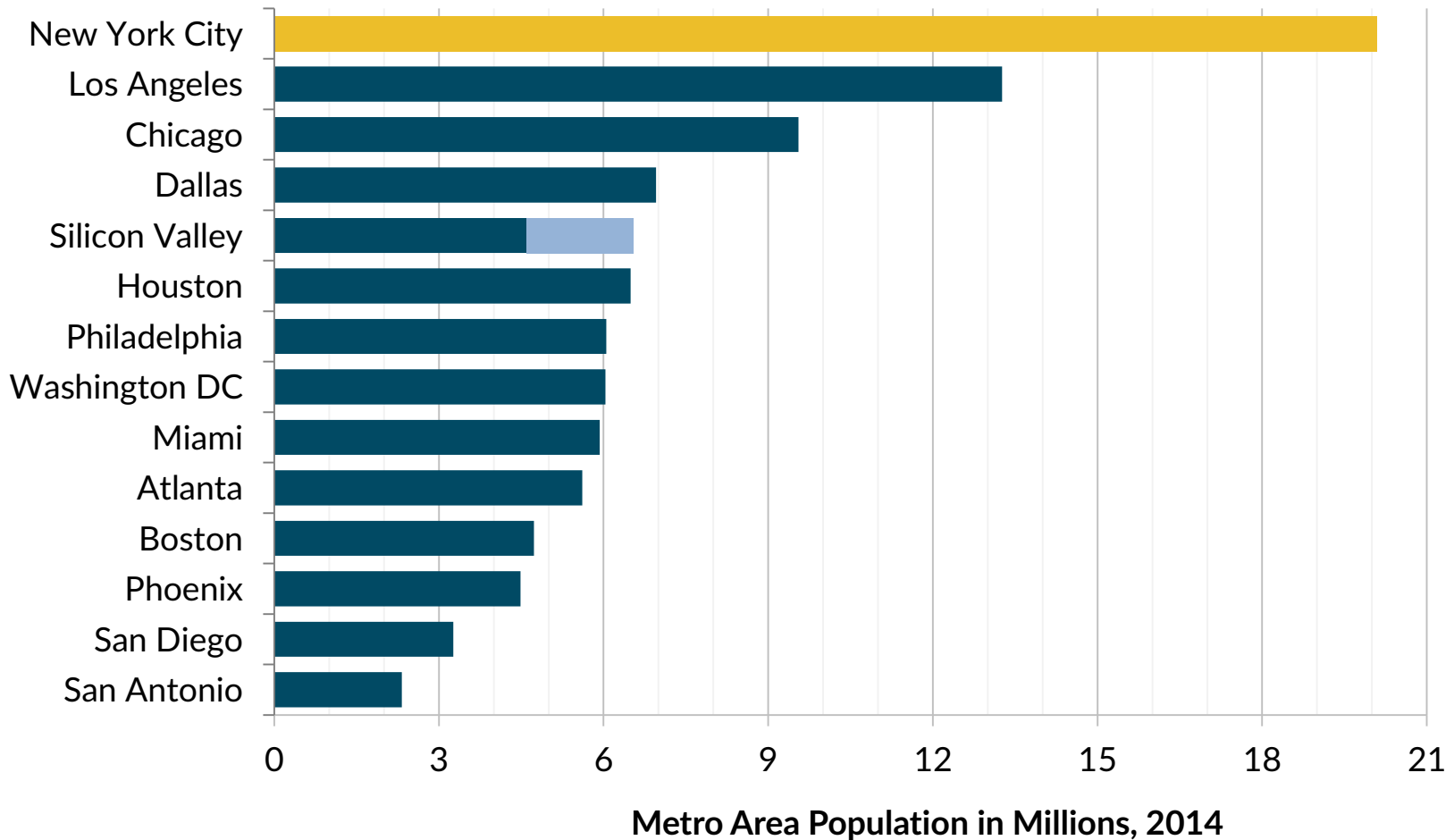
# Why Human Capital?

- Cities compete for talent: Talent is mobile and technology has enabled a broader range of location choices
- Cities with high levels of human capital are the fastest-growing and most productive
- Information economy requires specialized knowledge and expertise that require high levels of education
- Continuing to cultivate, attract, and retain a highly-educated workforce is critical to NYC's continued economic prosperity

# Who Are Our Competitors?

- **14 metropolitan areas that include ten largest metro regions and ten largest cities**
  - San Jose & San Francisco combined as “Silicon Valley”
- Urban areas have been leading population growth since the Great Recession
- Size and density of large cities offer benefits and challenges not comparable to smaller areas
- Analysis of metropolitan areas, rather than cities: more appropriate boundaries of local economic activity

# Competitors: Largest 14 Metro Areas



Note: San Francisco and San Jose metro areas combined and represented together as "Silicon Valley." Includes Bay Area.  
Source: U.S. Census Bureau, American Community Survey, 2014 One-Year Estimates, Table B01003.

# CBC Scorecard

RESEARCH QUESTIONS	SCORECARD CATEGORIES
Where are the highly educated and where are they headed?	DEMOGRAPHICS
	People and Net In-Migration
What channels exist to build knowledge, expand skills, and foster innovation?	HUMAN CAPITAL
	Higher Education, Employment, and Entrepreneurship
Is that area an attractive place to live, play, and work?	QUALITY OF LIFE
	Public Services and Amenities

## Performance Ranks





# Demographics

# Demographics: Competition is Tightening

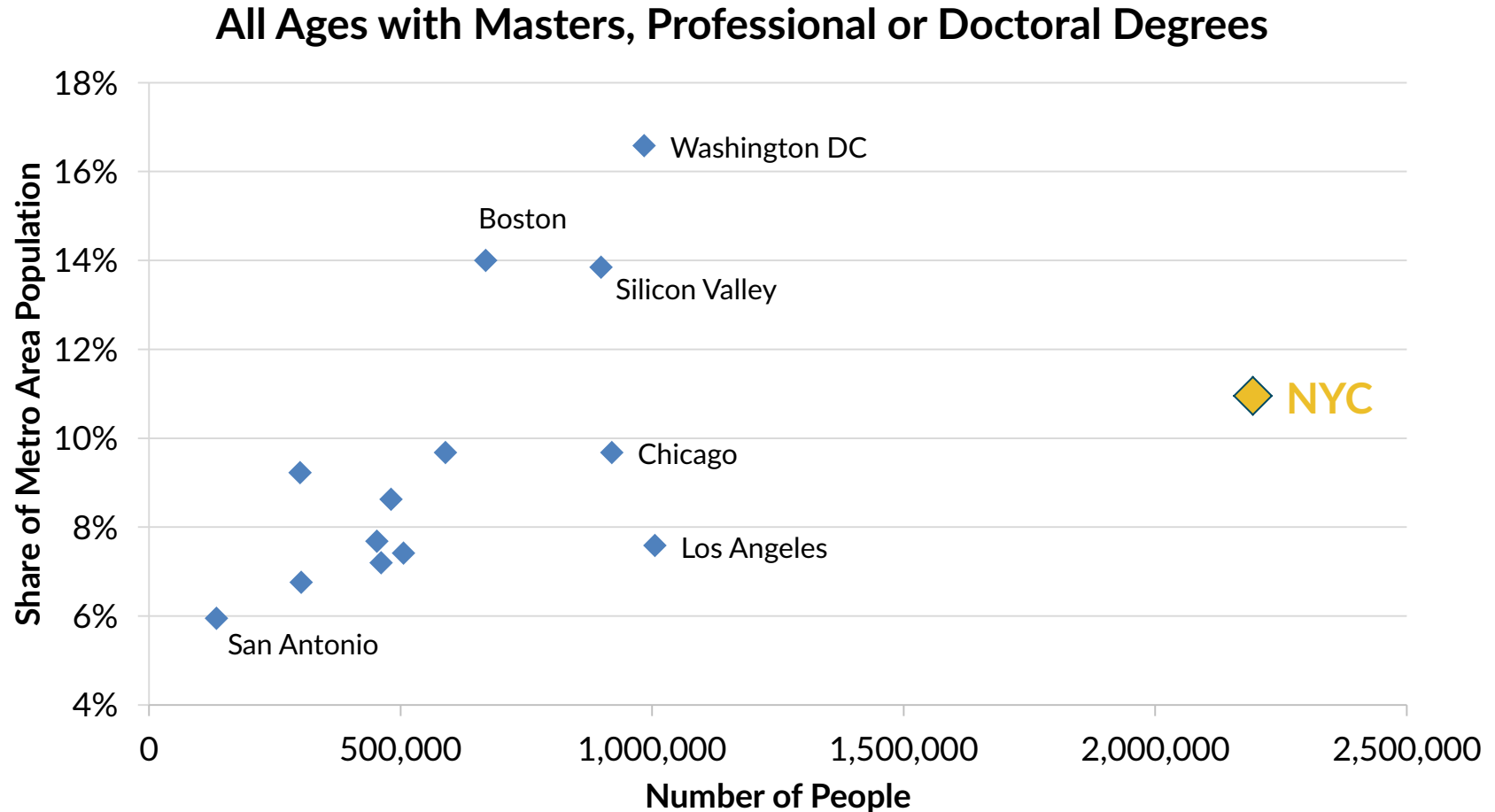
**Strength in Numbers:** NYC metro has the greatest number of highly educated and young and highly educated

**The Talent Competition is Tightening:** Washington DC, Silicon Valley, and Boston have higher concentrations of highly educated people. All competitor metros other than San Antonio attracted the highly educated at faster rates.

		New York City	Los Angeles	Chicago	Dallas	Silicon Valley	Houston	Philadelphia	Washington	Miami	Atlanta	Boston	Phoenix	San Diego	San Antonio
People	Number of Young and Highly Educated	1	3	4	8	5	9	7	2	11	10	6	13	12	14
	Young and Highly Educated as Share of the Population	4	11	5	10	3	9	6	1	12	8	2	13	7	14
	Number of Highly Educated	1	2	4	8	5	10	7	3	11	9	6	12	13	14
	Highly Educated as Share of the Population	4	10	6	11	3	12	5	1	9	8	2	13	7	14
Net Migration	Young and Highly Educated	2	9	6	4	1	3	14	5	13	8	7	10	11	12
	Percent Change in Young and Highly Educated	10	11	7	3	2	1	14	6	13	4	8	5	9	12
	Highly Educated	6	10	7	4	3	2	13	1	12	5	9	8	11	14
	Percent Change in Highly Educated	13	11	9	2	6	1	12	3	10	5	8	4	7	14



# NYC Metro Has a High Concentration of Highly Educated

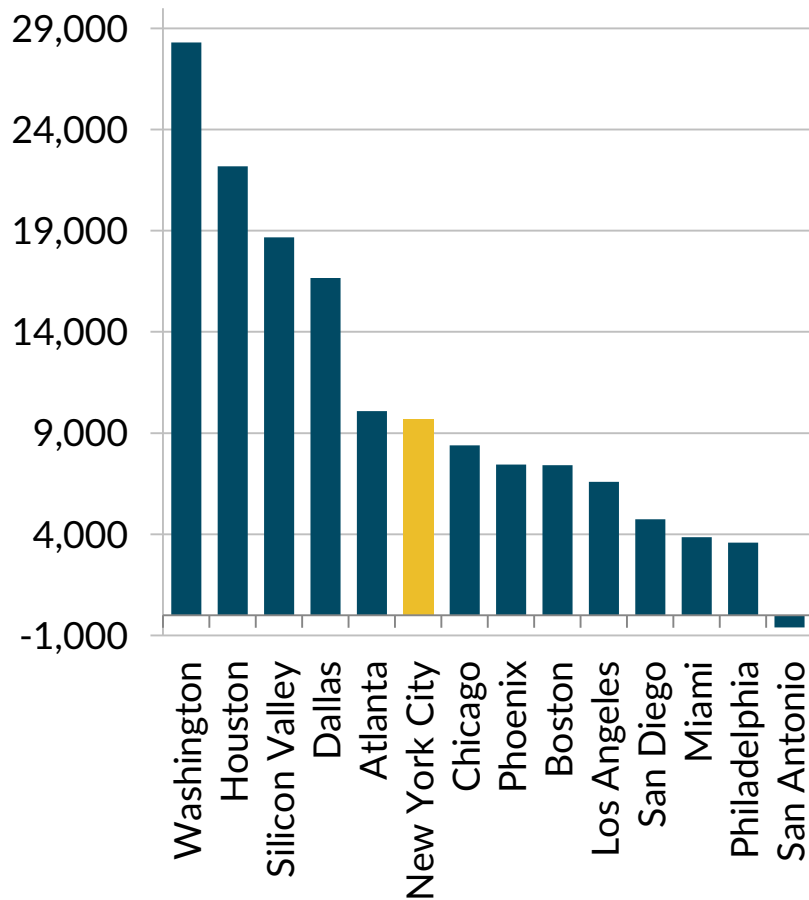


Source: U.S. Census Bureau, American Community Survey, 2014 One-Year Estimates.

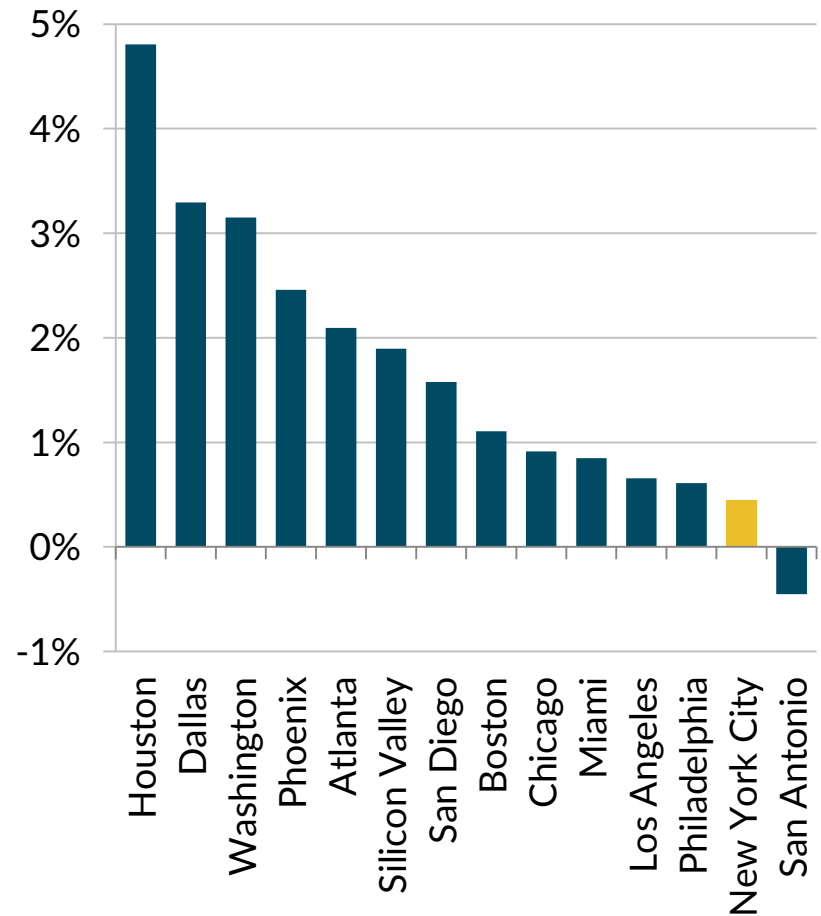
Demographic data was retrieved through support from IPUMS: Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover and Matthew Sobek. Integrated Public Use Microdata Series: Version 6.0 [Machine-Readable Database]. Minneapolis: University of Minnesota, 2015.

# NYC Lags Other Metros on Net Migration of Highly Educated

## Net Migration of People with Advanced Degrees

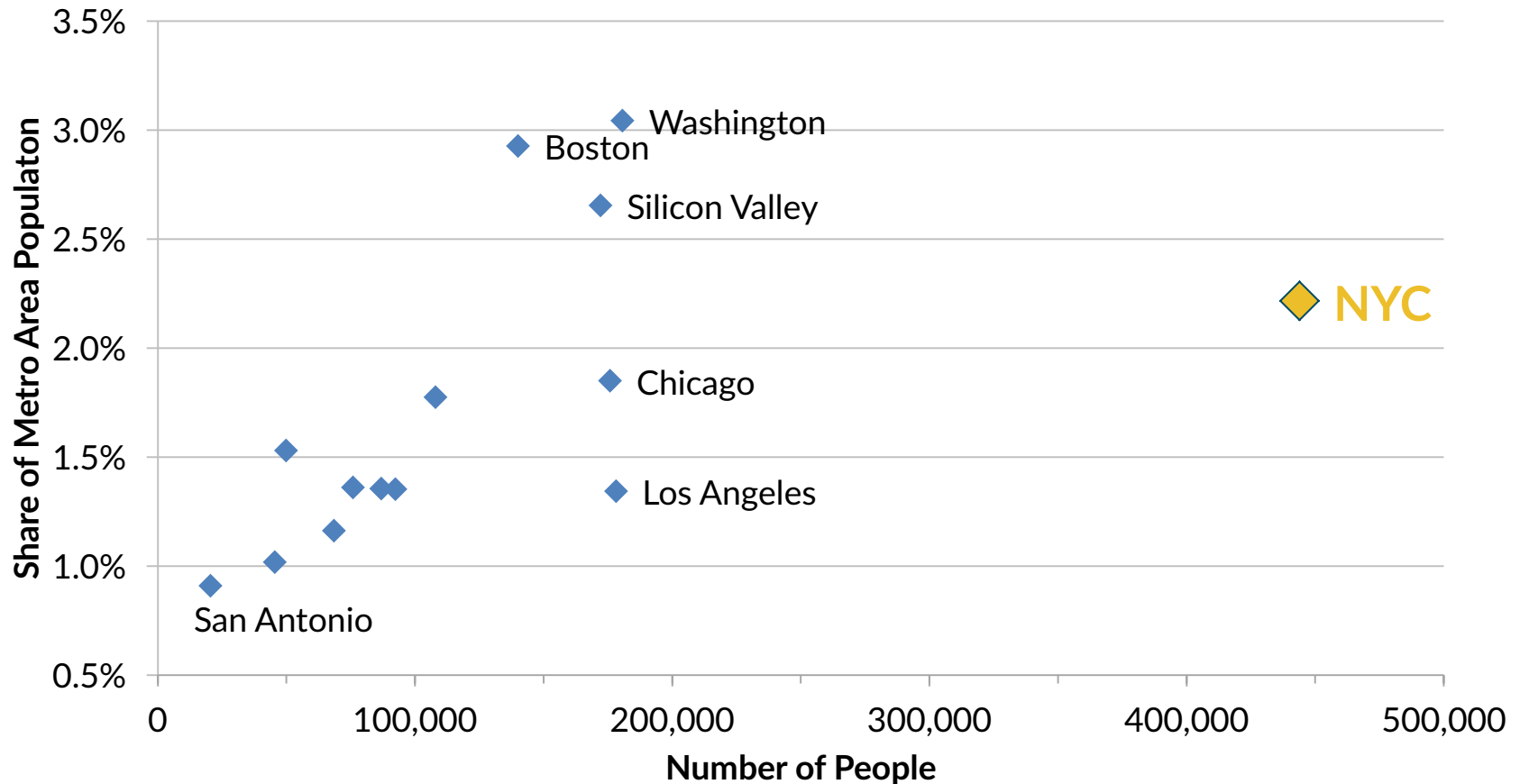


## Net Migration as a Share of People with Advanced Degrees



# NYC Metro Has a High Concentration of Young and Highly Educated

## 18-33 Year Olds with Advanced Degrees

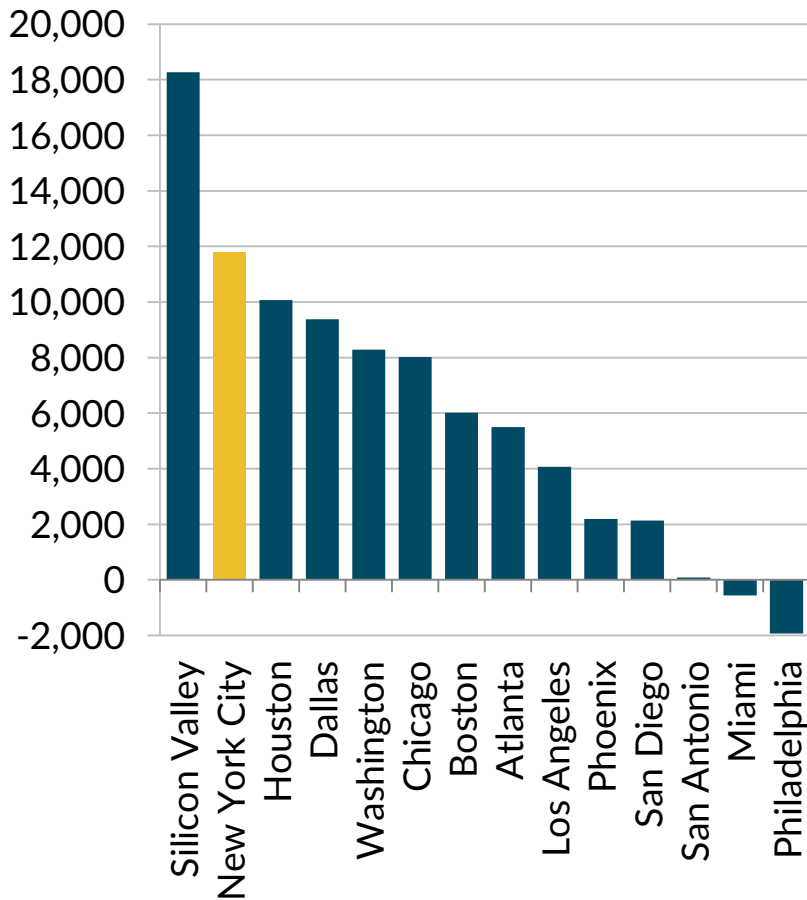


Source: U.S. Census Bureau, American Community Survey, 2014 One-Year Estimates.

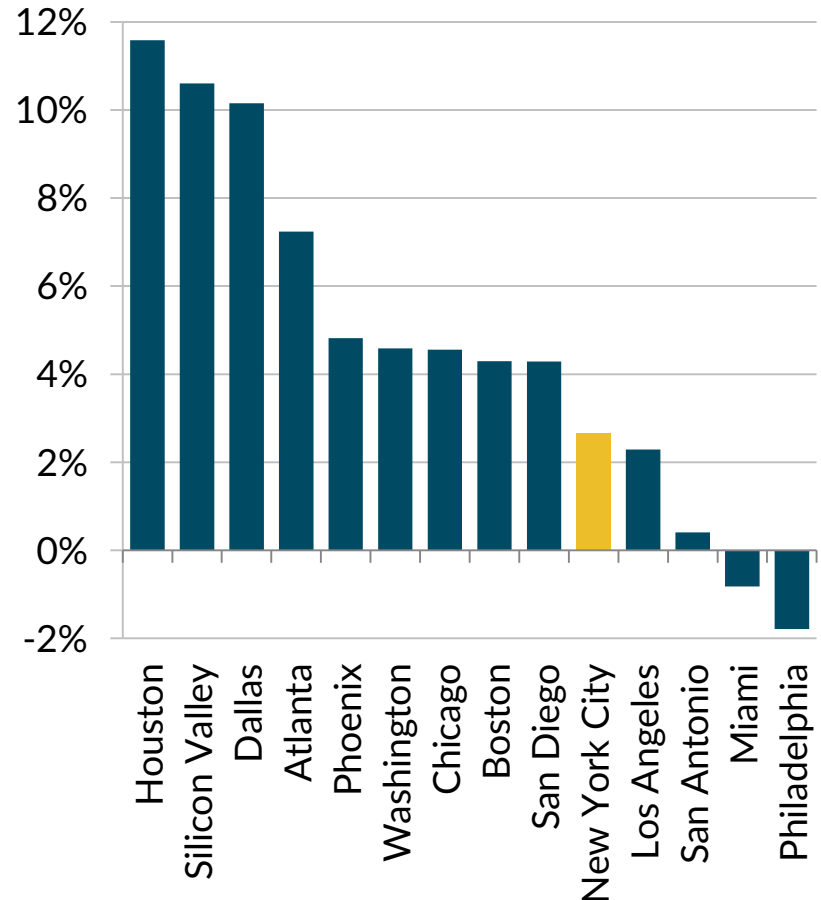
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# NYC Metro Lags on Net Migration Rate of the Young and Highly Educated

## Net Migration of 18-33 Year Olds with Advanced Degrees



## Net Migration as Share of 18-33 Year Olds with Advanced Degrees





# Human Capital

# Human Capital Snapshot

		New York City	Los Angeles	Chicago	Dallas	Silicon Valley	Houston	Philadelphia	Washington	Miami	Atlanta	Boston	Phoenix	San Diego	San Antonio
Higher Education	Number of Educational Institutions	1	2	3	9	6	13	5	7	10	8	4	12	11	14
	Number of Undergraduate and Graduate Students	1	2	4	9	8	13	7	5	12	11	6	3	10	14
	Number of International Students	1	2	5	7	4	9	8	6	10	11	3	12	13	14
Employment	Number of Jobs in Key Industries	1	2	3	6	4	10	9	5	11	7	8	12	13	14
	Share of Employment in Key Industries	4	10	8	6	2	14	12	1	9	3	7	5	11	13
	Average Annual Pay	2	9	6	8	1	5	7	4	13	11	3	12	10	14
	Number of Fortune 500 Companies	1	6	3	5	2	4	9	8	11	7	9	13	14	12
Entrepreneurship	Number of Self-Employed	1	2	4	7	8	10	9	6	3	5	11	12	13	14
	Number of Self-Employed as a Share of All Employment	3	4	5	12	11	13	9	8	1	2	10	7	6	14
	Rate of Business Creation (Kauffman Index)	6	2	12	10	3	4	13	14	1	5	11	8	7	9
	Venture Capital, Dollars Invested, 2012-2016	2	4	5	6	1	6	11	9			3		10	6
	Venture Capital, Number of Deals, 2012-2016	2	5	4	7	1	7	10	6			3		11	7

# Human Capital: NYC Remains Dominant

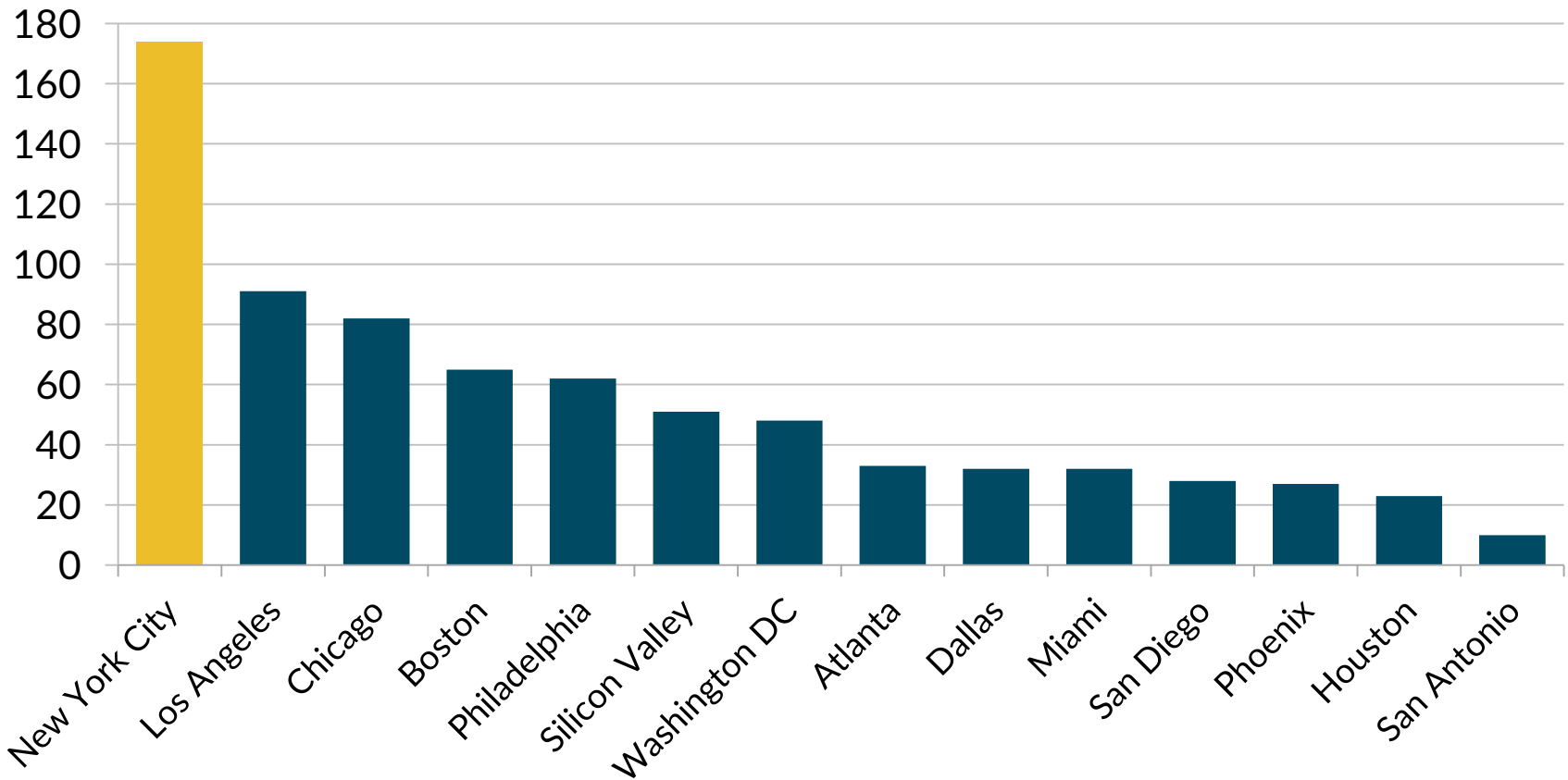
**High Marks in Higher Ed:** Number and strength of educational institutions are important for attracting domestic and foreign talent; graduates likely to remain

**Land of Opportunity:** Robust employment options and competitive pay are strengths

**Making Strides:** NYC metro still trails Silicon Valley in venture capital deals and dollars, but is now solidly in second place as the tech sector's NYC presence grows

# NYC Metro Has the Greatest Number of Academic Institutions

Number of Higher Education Institutions, Fall 2014



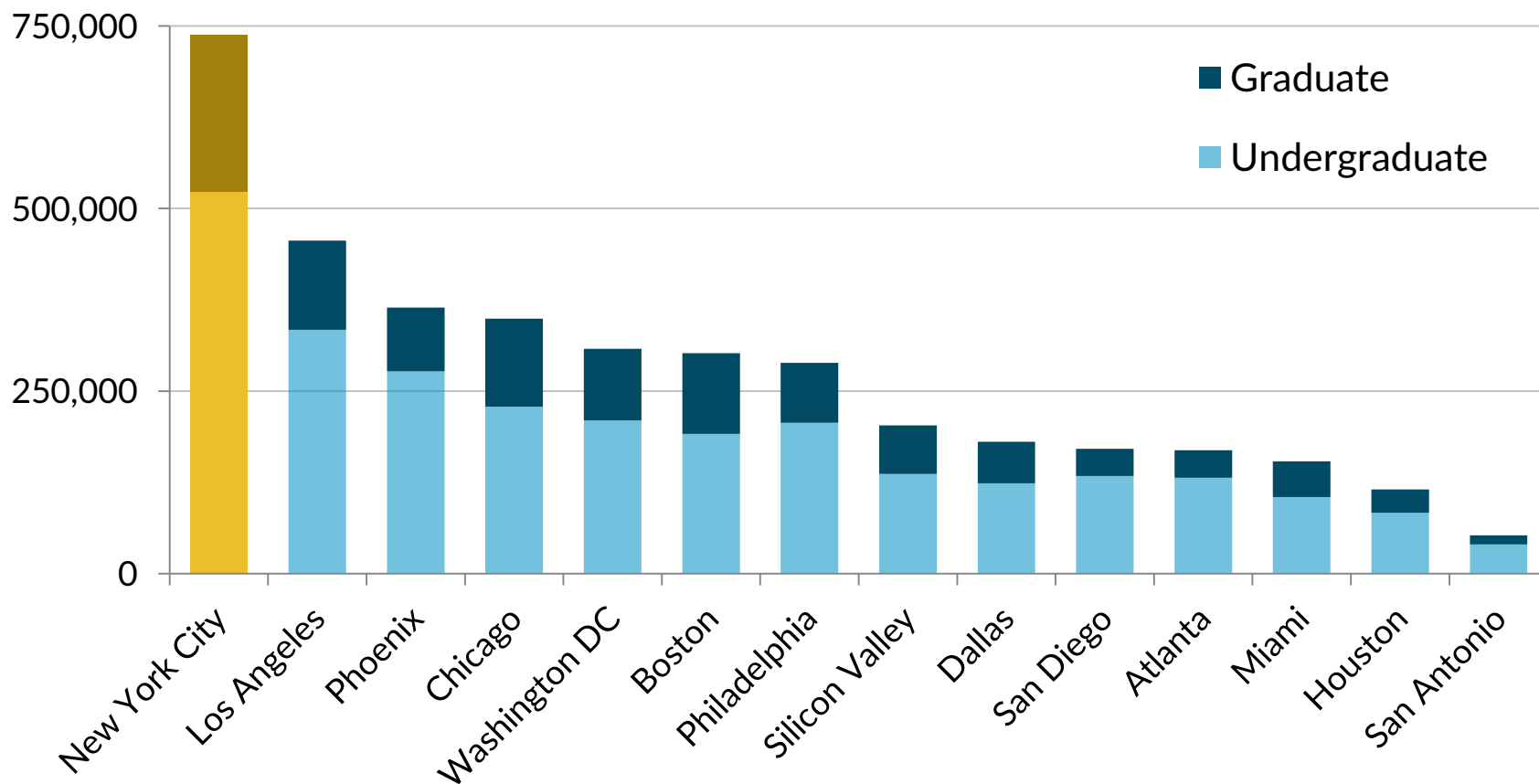
Note: Includes baccalaureate-granting institutions and above within the MSA.

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, Institutional Characteristics 2014.



# NYC Metro Attracts the Greatest Number of Undergraduate and Graduate Students

## Fall 2014 Enrollment



Note: Data includes baccalaureate-granting institutions and above in MSA. Online enrollment is included in University of Phoenix's campus enrollment.  
Source: National Center for Education Statistics, Integrated Postsecondary Education Data System, Fall 2014 Enrollment.

# NYC Metro Attracts the Greatest Share of International Students

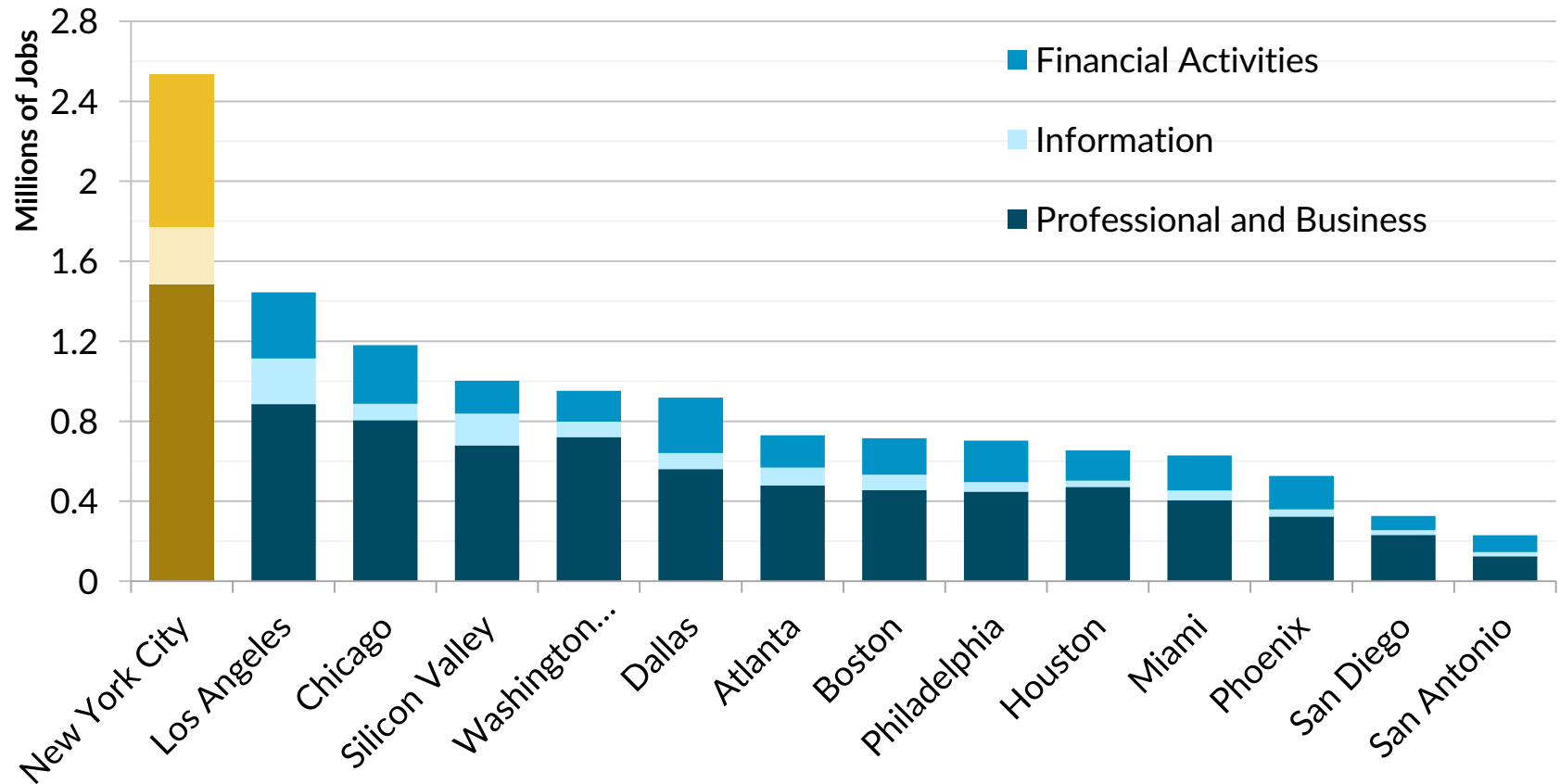
Metro Area	International Student Enrollment, 2013-2014	Share of U.S. International Student Enrollment	Share of Total Metro Enrollment, 2013-2014
<b>New York City</b>	<b>77,779</b>	<b>10.0%</b>	<b>7.1%</b>
Los Angeles	54,891	7.0%	5.4%
Boston	43,801	5.6%	11.8%
Silicon Valley	37,435	4.8%	8.3%
Chicago	26,437	3.4%	4.4%
Washington DC	21,663	2.8%	5.3%
Dallas	20,414	2.6%	5.8%
Philadelphia	20,168	2.6%	5.1%
Houston	16,983	2.2%	6.0%
Miami	12,800	1.6%	3.8%
Atlanta	11,425	1.5%	4.8%
Phoenix	10,105	1.3%	3.2%
San Diego	10,095	1.3%	3.8%

Note: San Antonio was not one of the top 50 metro areas to attract international students. Data not reported.

Source: Institute for International Education, *Open Doors 2014: Report on International Educational Exchange*, Table 1.18; and National Center for Education Statistics, Integrated Postsecondary Education Data System, Fall 2014 Enrollment.

# NYC Metro Has the Most Jobs in Three Key Sectors

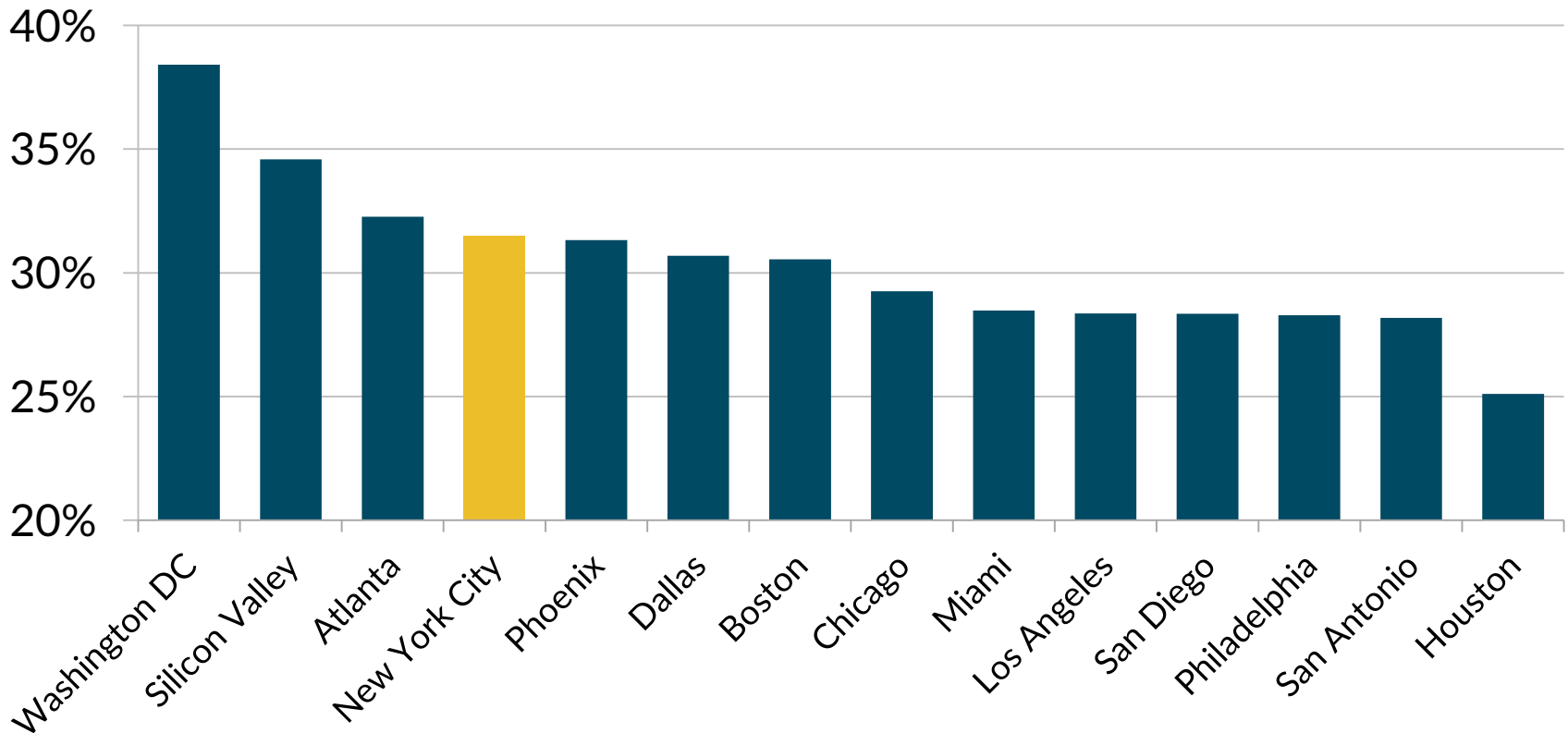
## Metro Area Employment in Key Sectors, 2015



Source: US Bureau of Labor Statistics, *Current Employment Statistics*, 2015 Annual Estimates.

# NYC Metro Maintains a High Share of Employment In These Sectors

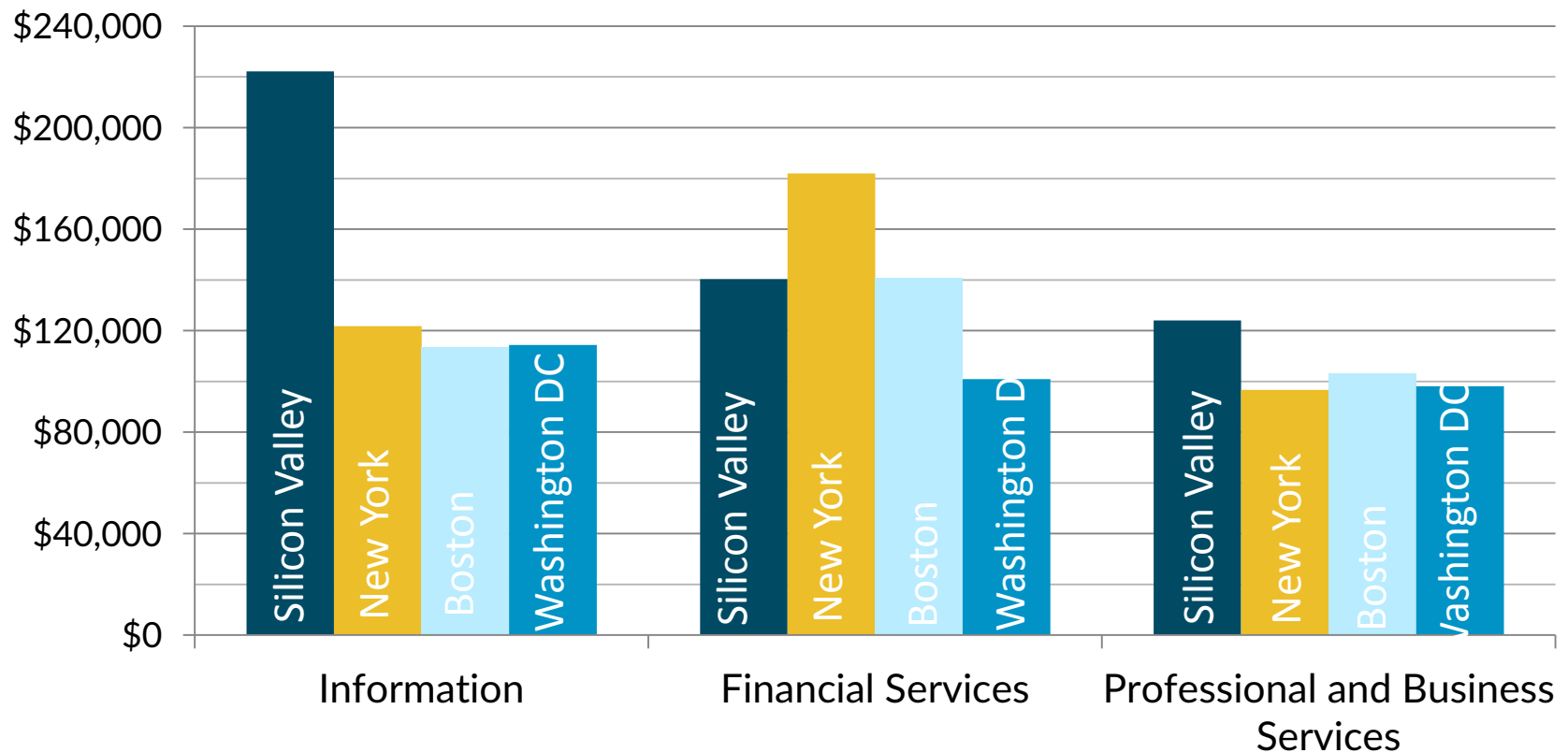
Share of Total Private Metro Area Employment in Three Key Sectors, 2015



Source: U.S. Bureau of Labor Statistics, *Current Employment Statistics*, 2015 Annual Estimates.

# Average Annual Pay in Key Sectors Is Very Competitive

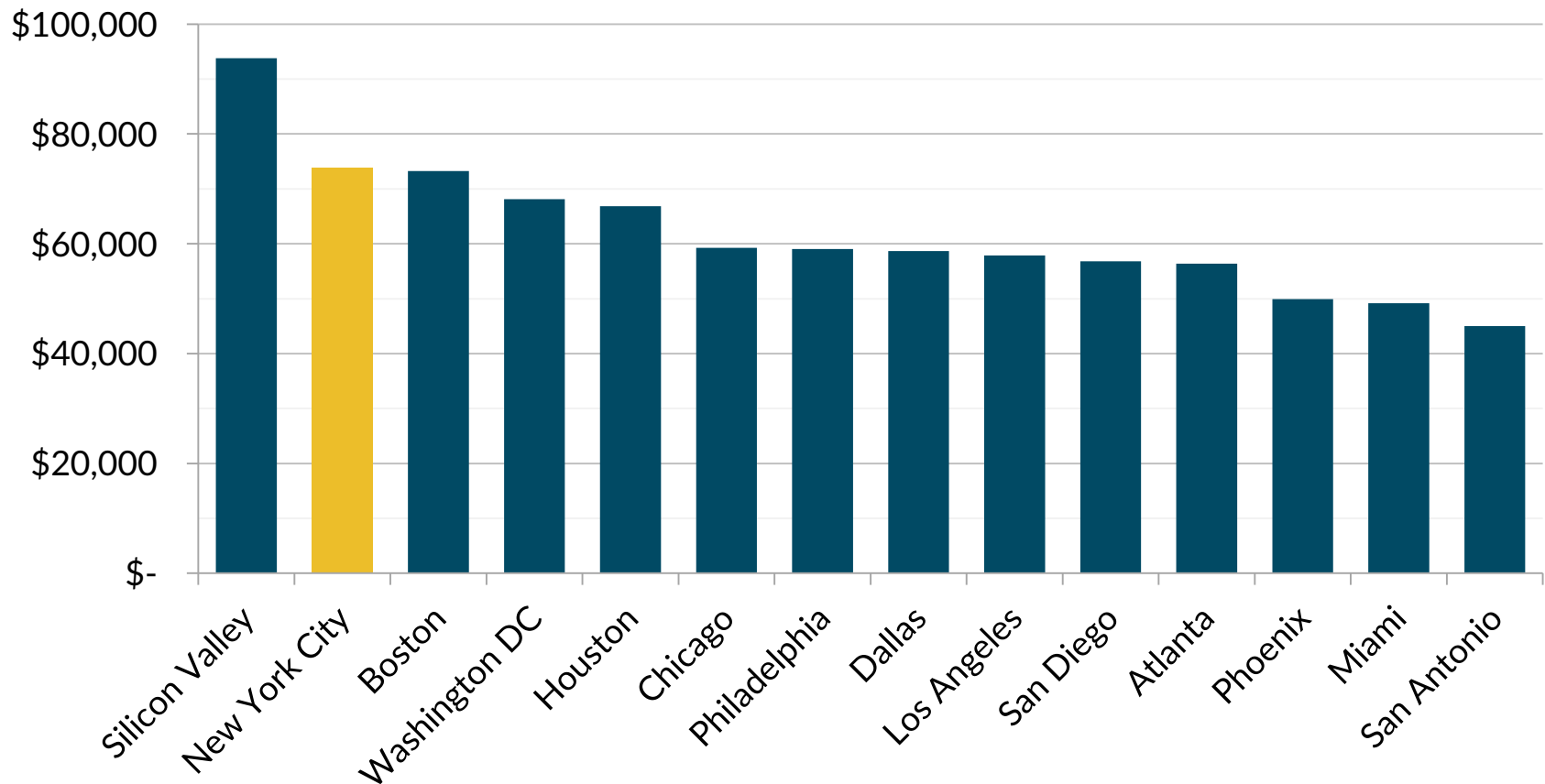
## Average Annual Pay by Sector, 2015



Note: Top four in each category. Chicago ranks 4<sup>th</sup> in average annual pay for financial services (Washington DC ranks 5<sup>th</sup>).  
Source: US Bureau of Labor Statistics, *Quarterly Census of Employment and Wages*, 2015. Private employment only.

# Average Annual Pay is High Overall Relative to Competitors

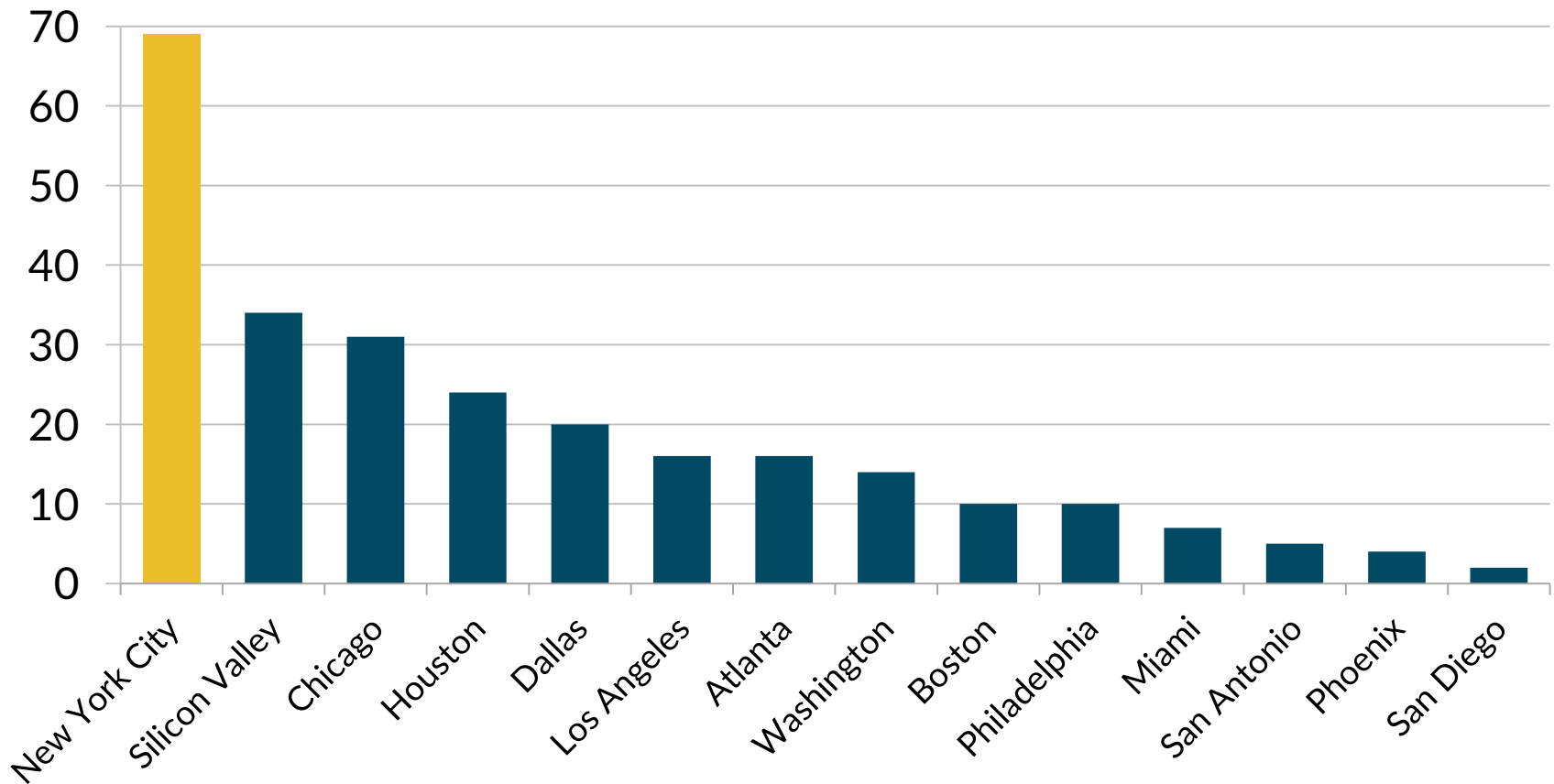
## Average Annual Pay, 2015



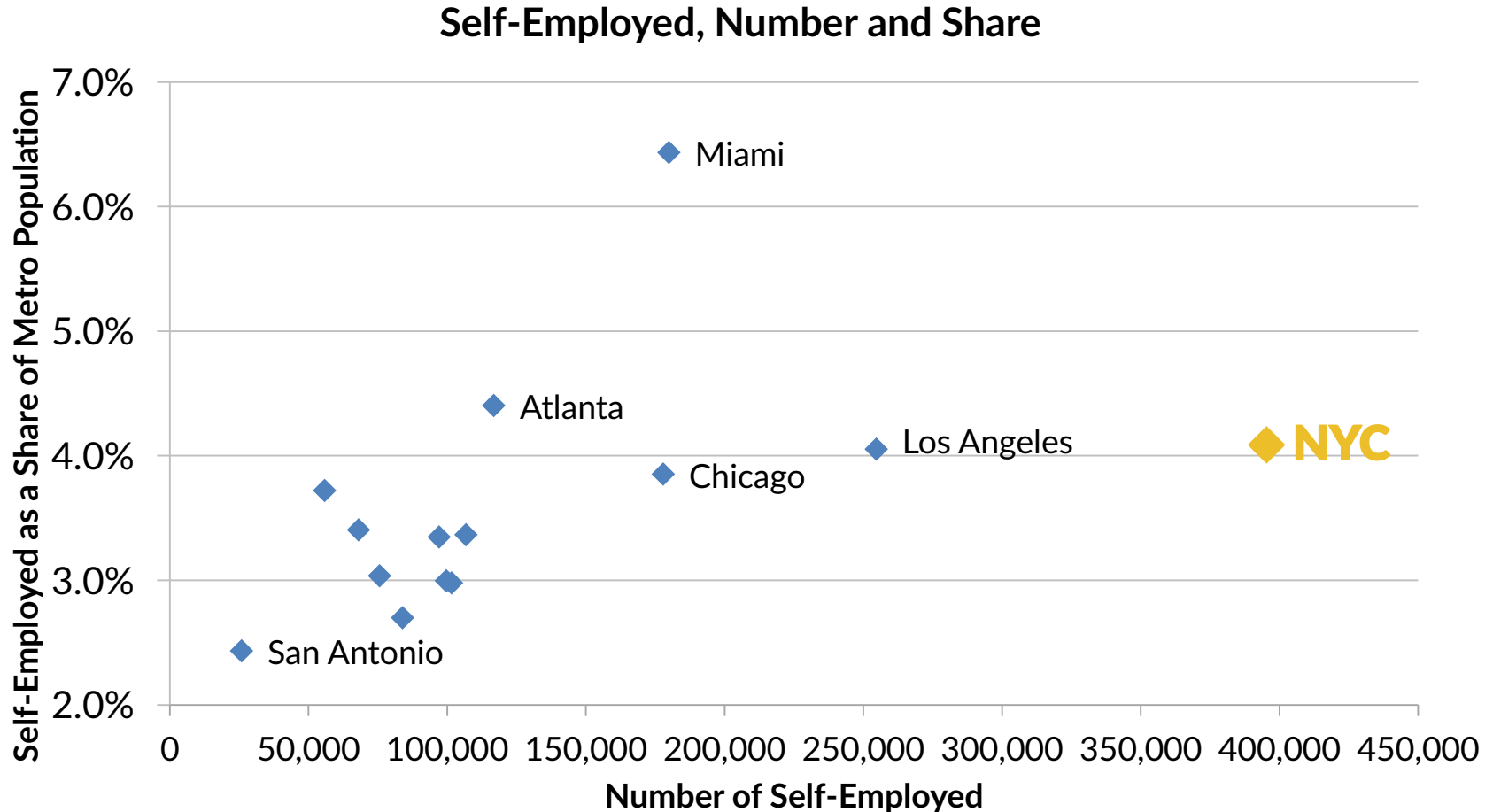
Source: US Bureau of Labor Statistics, *Quarterly Census of Employment and Wages*, 2014. Private employment only.

# NYC Metro Is a Center for Large Employers

Fortune 500 Companies, 2016



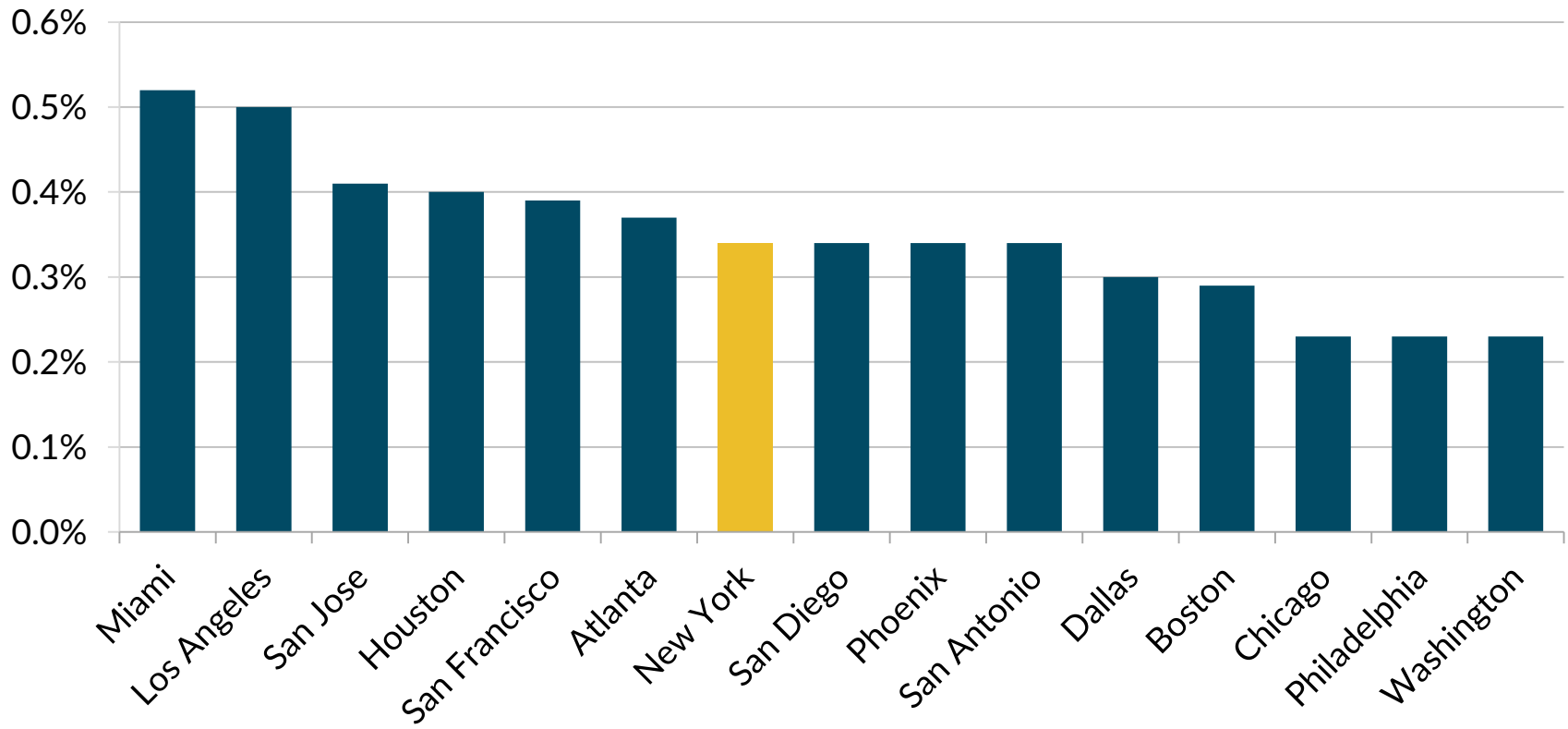
# NYC Metro has a High Share of Self-Employed





# Other Metro Areas Have Higher Rates of Business Creation

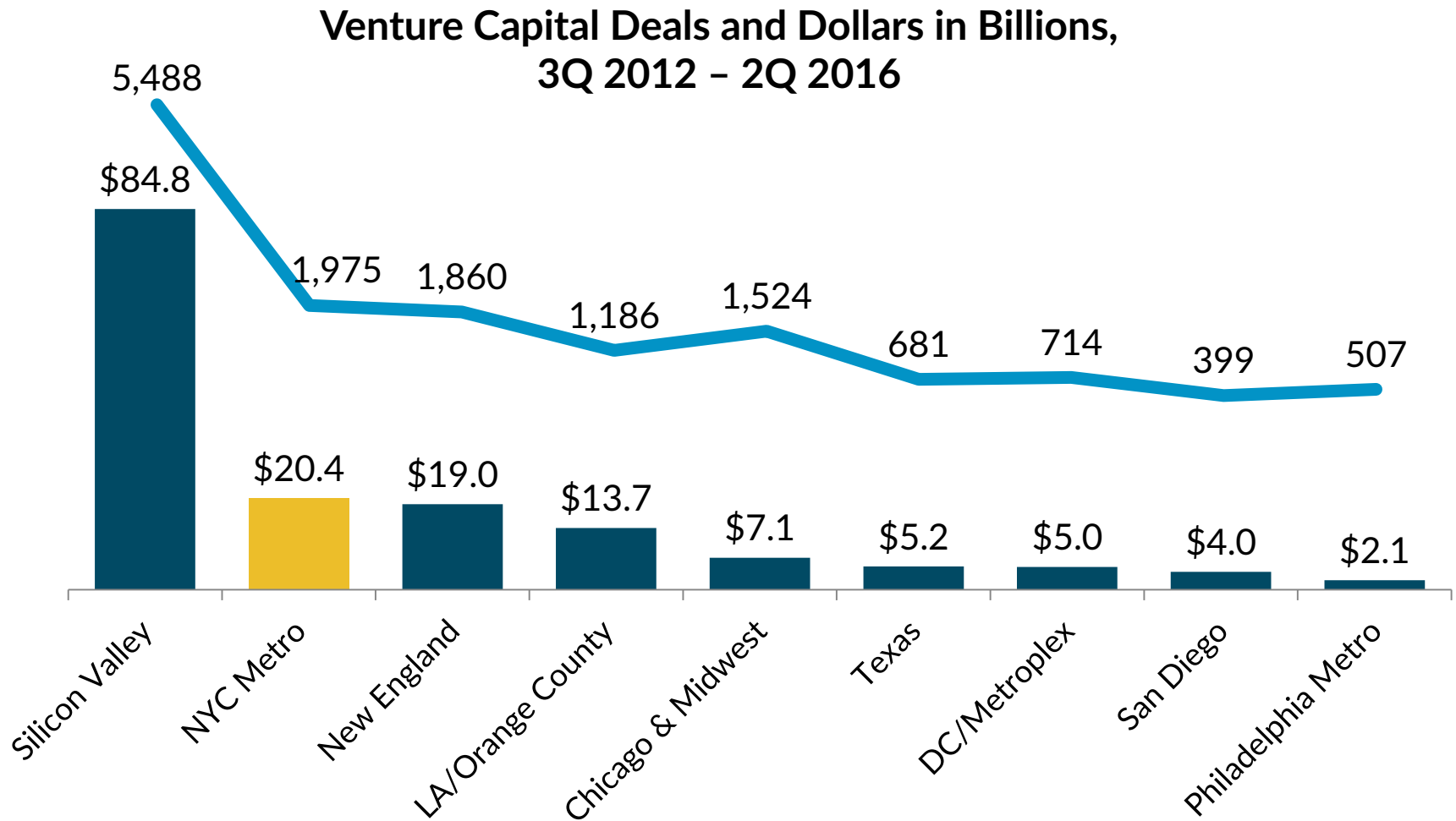
**Kauffman Index 2015**  
**Monthly Rate of New Entrepreneurs**



Note: San Jose and San Francisco listed separately.

Source: Robert W. Fairlie, "Kauffman Index of Main Street Entrepreneurship: Metropolitan Area and City Trends 2015," December 2015.

# Silicon Valley Continues to Lead in Attracting Venture Capital



Source: PricewaterhouseCoopers & National Venture Capital Association, "MoneyTree Report," September 12, 2016.



# Quality of Life

# Quality of Life Snapshot

		New York City	Los Angeles	Chicago	Dallas	Silicon Valley	Houston	Philadelphia	Washington	Miami	Atlanta	Boston	Phoenix	San Diego	San Antonio
Quality of Life	Public Services														
	Crime Rates (1=Lowest)	1	3	5	7	9	10	6	13	12	14	4	8	2	11
	Percent Proficient on NAEP, Grade 8 Reading	4	6	5	10		6	11	9	1	6	3		1	
	Percent Proficient on NAEP Grade 8 Math	3	11	6	7		3	7	10	5	7	1		2	
	Rent Affordability (1=Most Affordable)	11	13	8	2	4	1	10	6	14	9	7	5	12	3
	Location Affordability (1=Most Affordable)	4	10	8	5	2	9	6	1	14	11	3	13	7	12
	Commuter Times	14	6	12	5	1	8	7	2	4	10	11	3	1	2
Amenities	Park Space, Acreage Per Capita	12	9	13	4	7	3	11	6	14	8	10	2	1	5
	Entertainment and Arts Establishments Per Capita	3	1	5	12	6	14	7	8	2	10	4	11	9	13
	Bars & Restaurants Per Capita	2	8	4	11	3	13	6	7	5	10	1	14	9	12
	Broadband Access	7	6	8	11	2	12	9	1	13	5	4	10	3	14

# Quality of Life: A Mixed Bag

**Safety First:** Crimes rates continue to be lowest in NYC

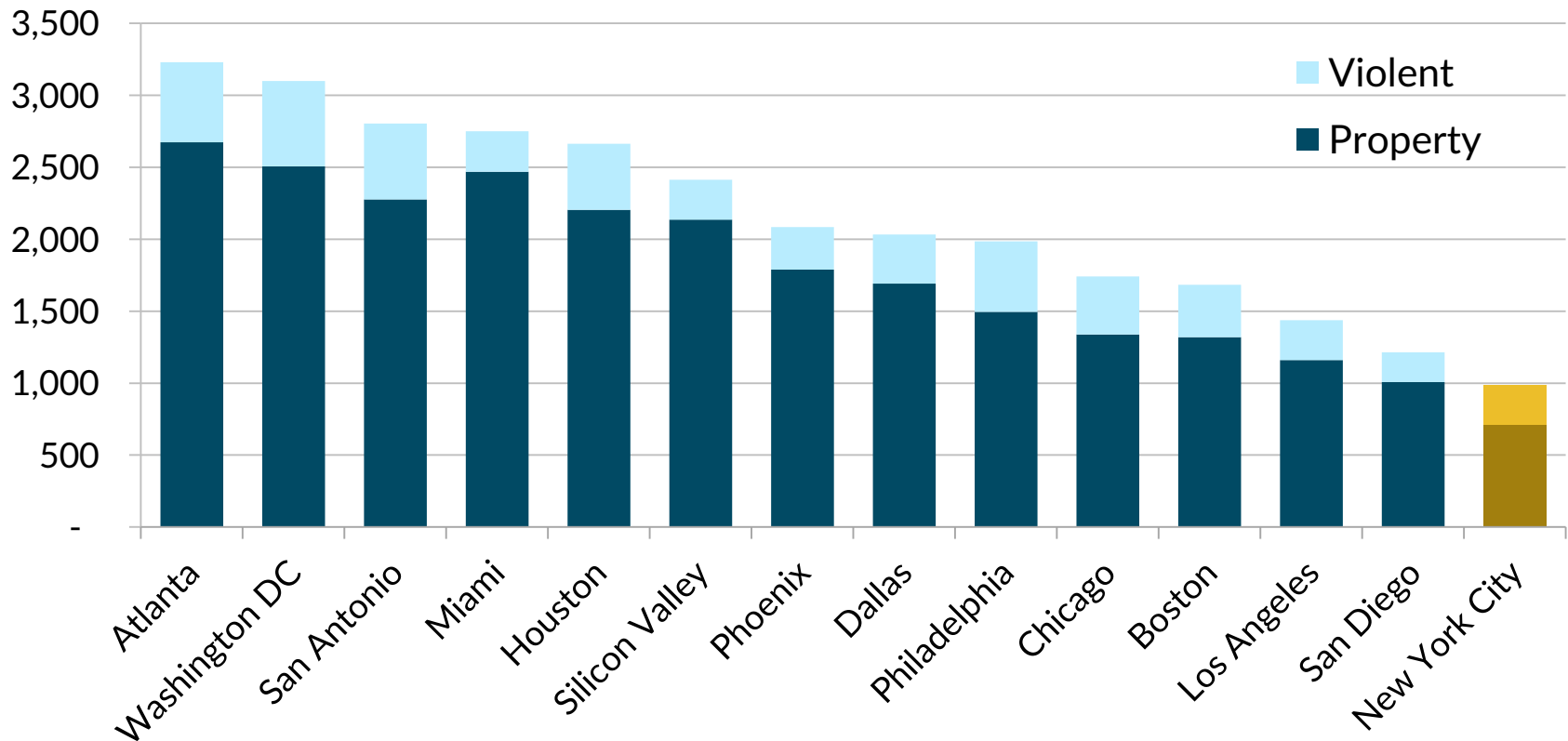
**Rent is Too Damn High, But the MetroCard is a Good Deal:** NYC among the metros with the highest rent affordability burden, but robust transportation network and low transportation costs make NYC metro among the most affordable locations overall

**Are We There Yet?** NYC metro ranks last on commute times

**Cultural Capital:** World-class cultural institutions, a vibrant arts scene, and abundance of bars, restaurants, and recreational opportunities

# NYC Is the Safest Big City

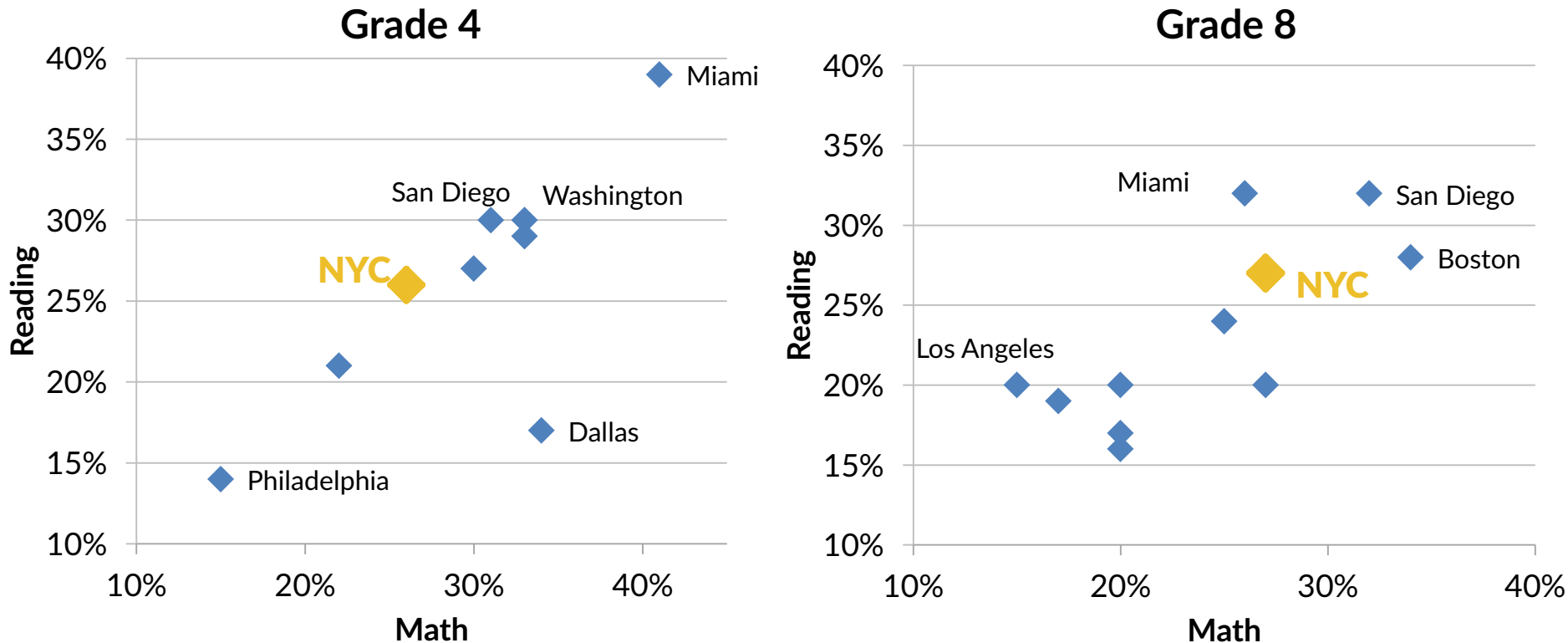
City Crime Rates Per 100,000 People,  
January - June 2015



Source: U.S. Federal Bureau of Investigation, Criminal Justice Information Services Division, *Preliminary Semiannual Uniform Crime Report, January–June, 2015*, “Table 4: Offenses Reported to Law Enforcement by State by City 100,000 and over in population.” Boston and Washington DC data for 2014.

# Mixed Performance of NYC Schools

## National Assessment of Educational Progress (NAEP) Percent of Students At or Above Proficient Level, 2015



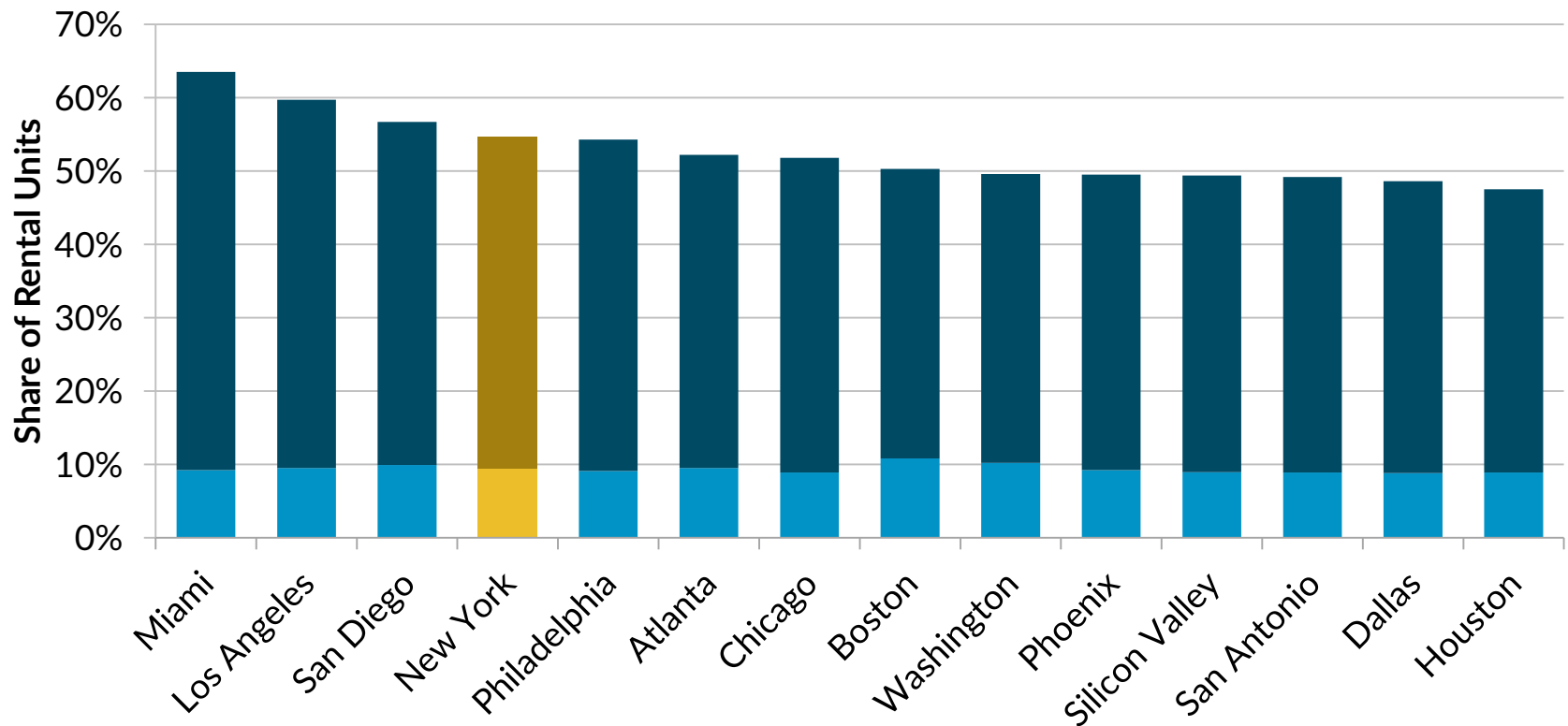
Note: San Francisco, San Jose, San Antonio and Phoenix do not participate.

Source: National Center for Education Statistics, National Assessment of Educational Progress, Results for Trial Urban District Assessments, 2015.

# In Most Other Metro Areas, Rent Constitutes a Smaller Share of Income

## Rent as a Share of Household Income

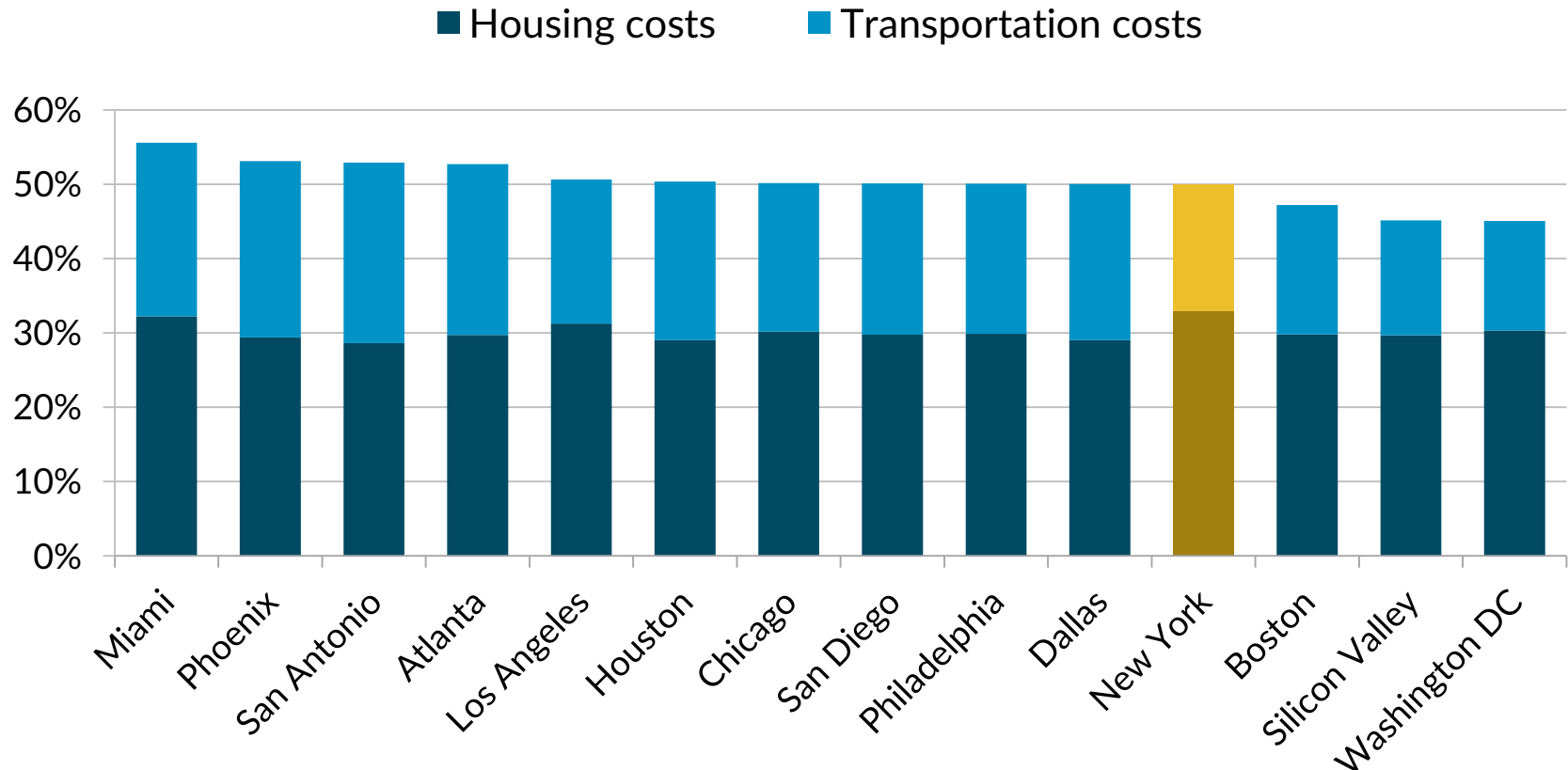
■ 30.0-34.9% ■ 35.0% or more





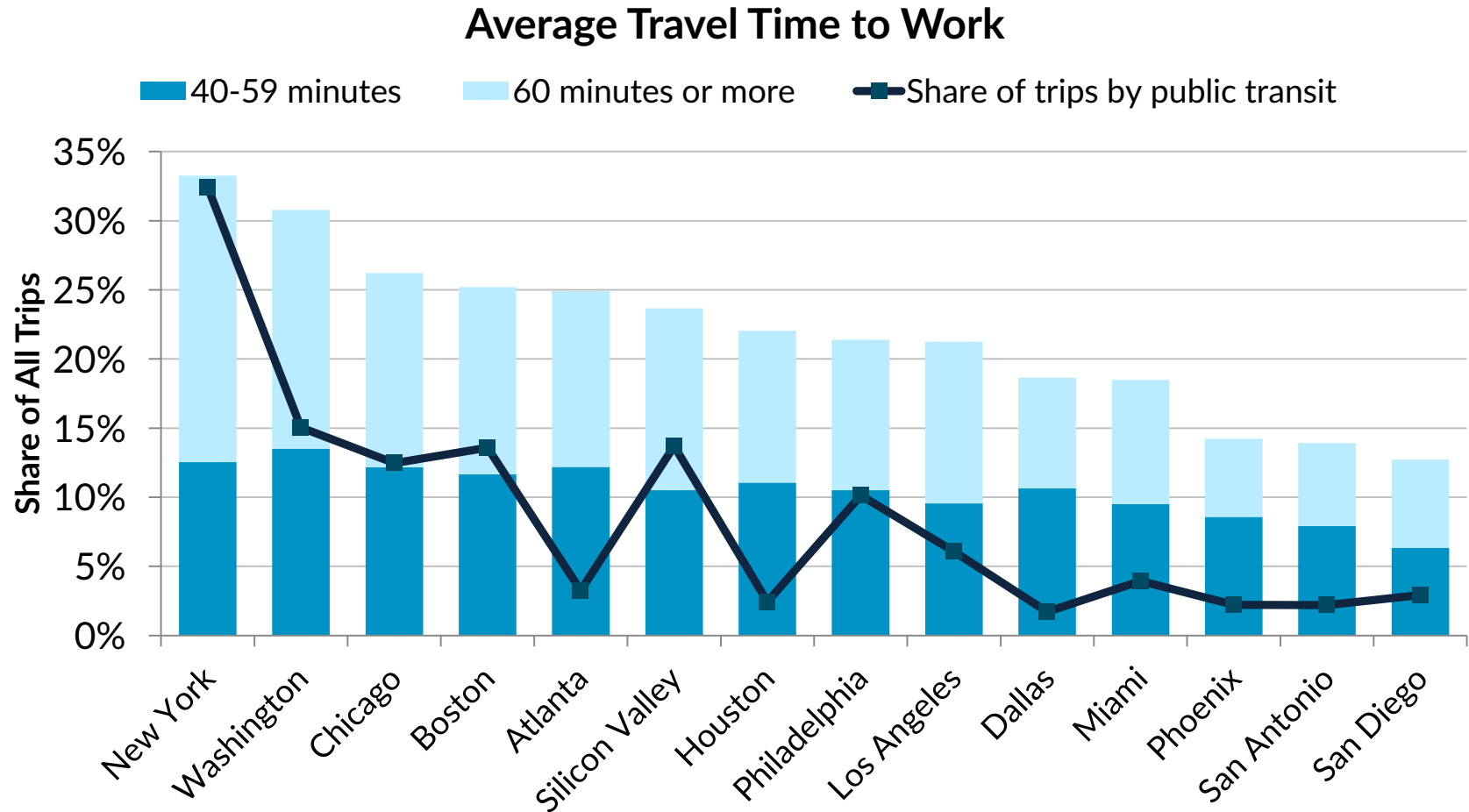
# Low Relative Transportation Costs Improve Location Affordability

## Housing and Transportation Costs as a Share of Typical Household Income



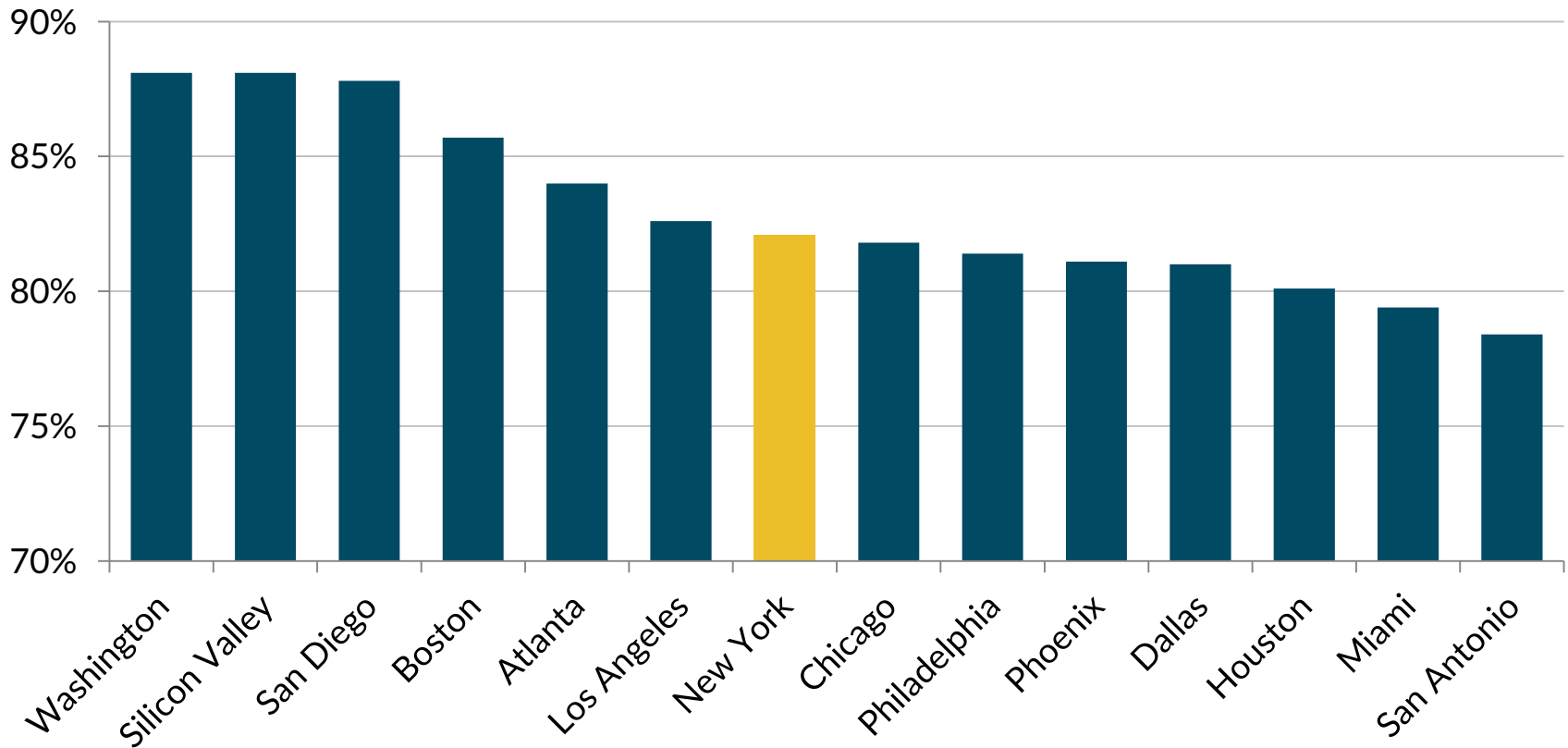
Source: U.S. Department of Housing and Urban Development, Location Affordability Portal - Version 2, accessed September 1, 2016.

# NYC Metro Has Lengthiest Commute Times, Highest Share of Commutes By Public Transit



# NYC Metro Trails Competitors in Broadband Access

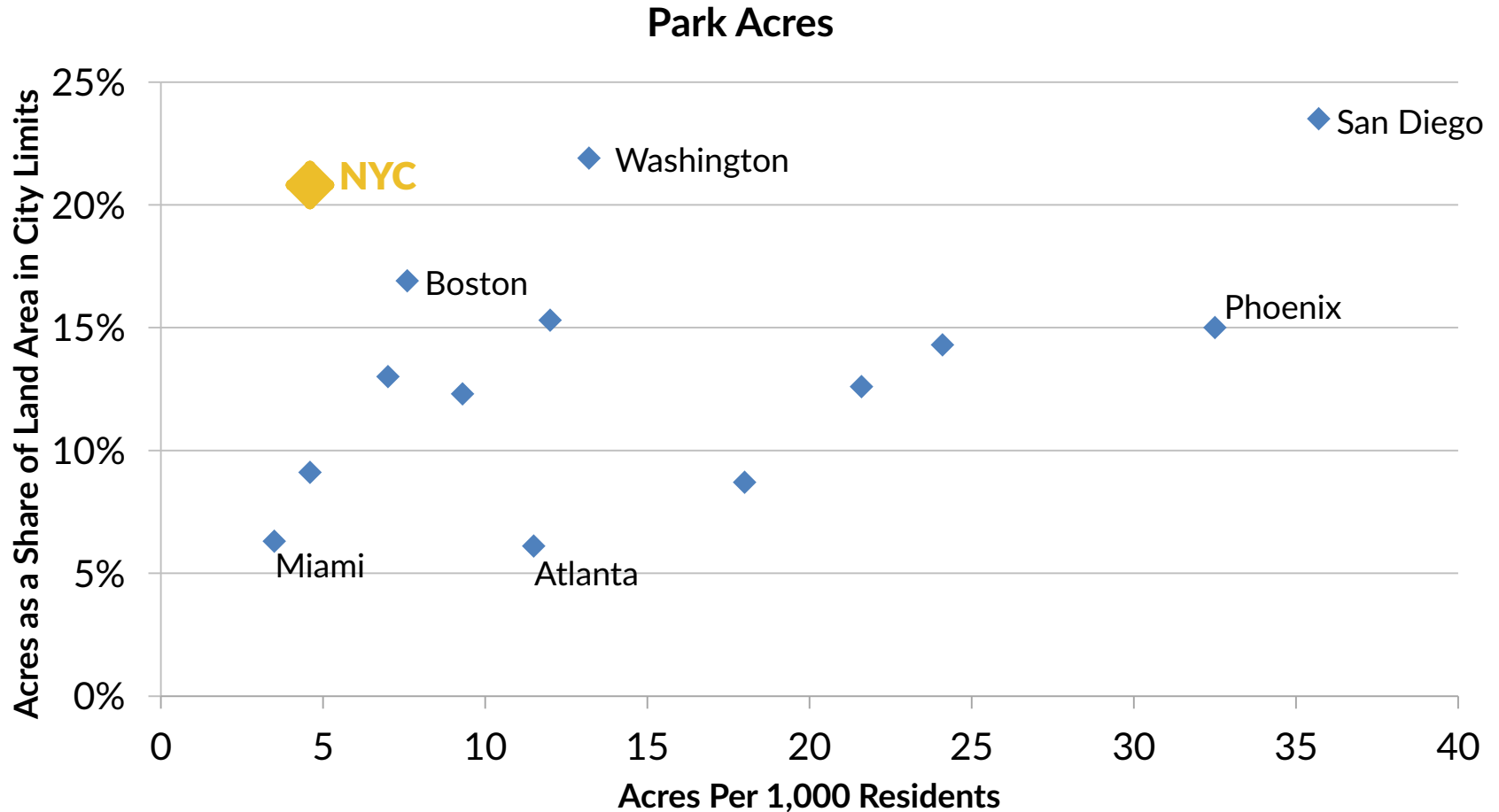
## Share of Households with Broadband Access



Note: Access includes household paid subscriptions and mobile phone data plans, as well as unpaid connections, available through public Wi-Fi, universities, and government subsidized programs. Excludes DSL connections.

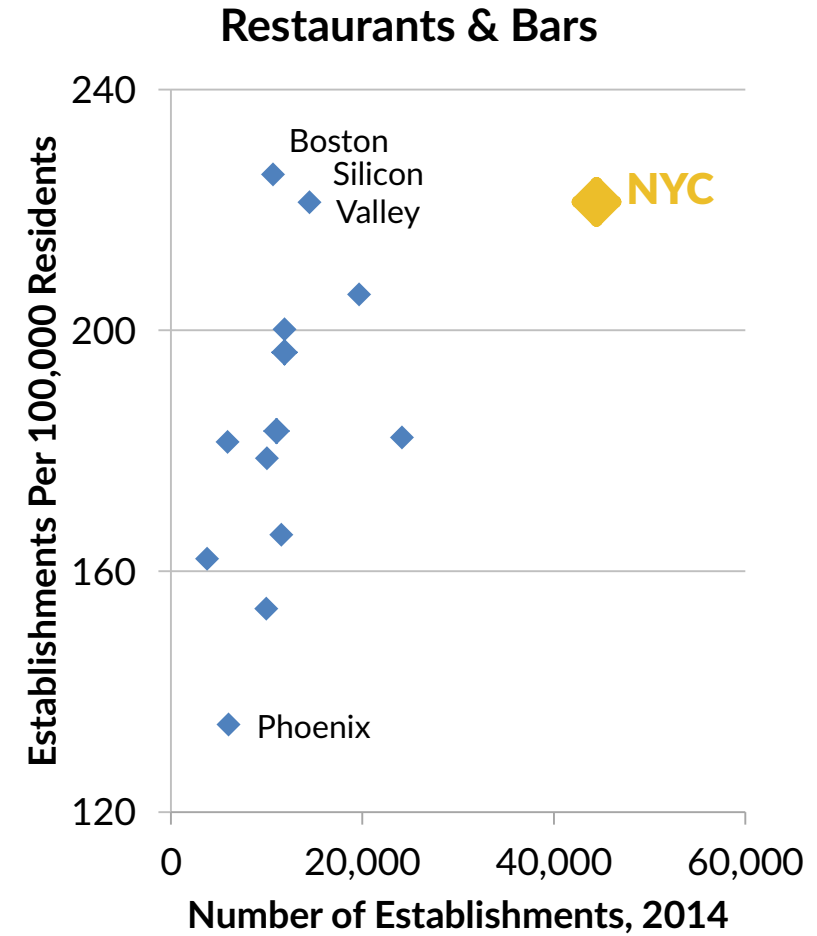
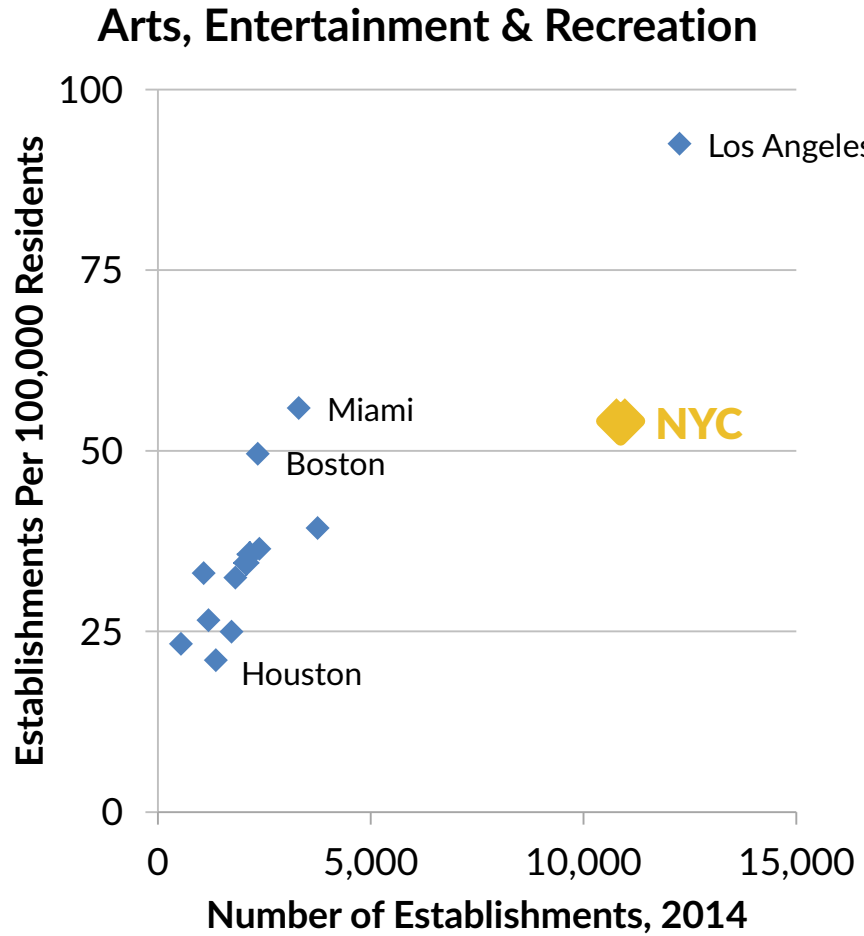
Source: U.S. Census Bureau, American Community Survey, 2014 One-Year Estimates, B28002.

# NYC Has Lots of Park Space, But Low Number of Acres Per Capita



Source: The Trust for Public Land, "2015 City Park Facts."

# NYC Metro Has Many Cultural and Recreational Establishments



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2014.



# NYC's Performance Summary



## Very Competitive

- Highly Educated People
- Net In-Migration of Young and Highly Educated
- Higher Education
- Employment & Pay
- Venture Capital
- Public Safety
- Public School Test Scores
- Arts, Entertainment & Recreation

## Less Competitive

- Net In-Migration of Highly Educated
- Business Creation
- Broadband Access

## Not Competitive

- Percent Change in Young and Highly Educated *and* Highly Educated
- Rent Affordability
- Commute Times

# How Has NYC's Performance Changed?

## TOP TIER, LOST RANK

Net In-Migration of Highly Educated  
(4<sup>th</sup> to 6<sup>th</sup>)

Grade 8 Reading Scores  
(3<sup>rd</sup> to 4<sup>th</sup>)

Share of Employment in Key Industries  
(3<sup>rd</sup> to 4<sup>th</sup>)

## TOP TIER, GAINED RANK

Venture Capital  
(3<sup>rd</sup> to 2<sup>nd</sup>)

Grade 8 Math Scores  
(4<sup>th</sup> to 3<sup>rd</sup>)

Rate of Business Creation  
(7<sup>th</sup> to 6<sup>th</sup>)

## BOTTOM TIER, LOST RANK

Percent Change in Young and Highly  
Educated (9<sup>th</sup> to 10<sup>th</sup>)

Percent Change in Highly Educated  
(12<sup>th</sup> to 13<sup>th</sup>)

Rent Affordability  
(9<sup>th</sup> to 11<sup>th</sup>)

## BOTTOM TIER, GAINED RANK

# Takeaways

**NYC metro continues to be an attractive location:** its size, employment opportunities, safety, public transit, educational institutions, and entertainment options are big advantages

**Silicon Valley and Washington DC** are toughest competitors, although several metros have higher rates of migration of highly educated

**Affordability and commute times** are challenges for the region and may be a constraint to growth



# Public Policy Implications

## Results suggest these approaches:

- Regional housing solutions based on transit-oriented development
- Investments in improving reliability (and speed) of mass transit network
- Development of outer borough business districts
- Continuing to foster affordable workspaces for tech-based startups and small businesses
- Supporting higher education in areas that provide training for emerging industries