



**Finance**  
Jacques Jiha, Ph.D.  
Commissioner

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# FY 2018

## RPIE 2015 Income and Expense Distributions

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Special Thanks to the Property Modeling and Research Group

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# RPIE 2015

## Citywide by Property Type

### Income, Expense, and Year-Year Change Distribution

3

	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
<b>INDUSTRIAL</b>	2,689	Income	\$8.83	\$12.00	\$15.69	\$14.17
		Income % change	-0.56%	2.50%	8.63%	2.43%
		Expense	\$1.45	\$2.55	\$4.35	\$3.61
		Expense % change	-18.37%	0.42%	20.08%	5.54%
<b>LOFTS</b>	281	Income	\$19.77	\$28.13	\$40.42	\$33.58
		Income % change	-0.18%	4.52%	10.94%	3.98%
		Expense	\$5.36	\$9.01	\$14.38	\$10.79
		Expense % change	-13.52%	0.55%	15.08%	0.01%
<b>OFFICE</b>	2,498	Income	\$19.60	\$32.01	\$51.33	\$50.26
		Income % change	-1.37%	2.66%	8.61%	2.26%
		Expense	\$4.49	\$8.68	\$16.03	\$14.95
		Expense % change	-13.73%	0.81%	13.92%	1.75%
<b>RENTAL APARTMENTS</b>	13,073	Income	\$13.20	\$17.50	\$30.77	\$25.84
		Income % change	0.53%	3.18%	6.29%	2.61%
		Expense	\$6.91	\$8.91	\$12.14	\$11.41
		Expense % change	-11.50%	-1.81%	6.43%	-2.75%
<b>RETAIL</b>	8,661	Income	\$19.46	\$30.52	\$49.57	\$49.61
		Income % change	-0.79%	2.63%	8.57%	2.45%
		Expense	\$3.62	\$6.73	\$12.03	\$11.12
		Expense % change	-15.68%	0.81%	17.87%	3.72%

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

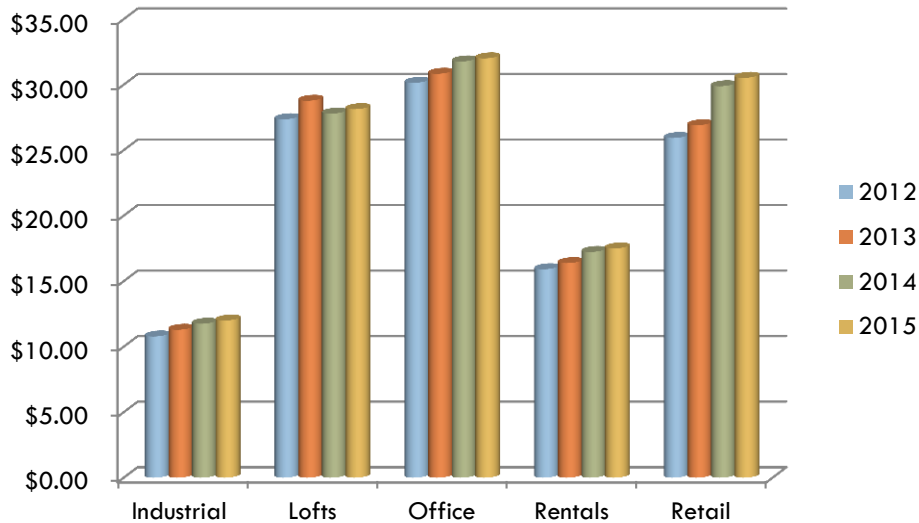
Rental Apartments with greater than 10 units

Does not include outlier filers and /or partial year filers

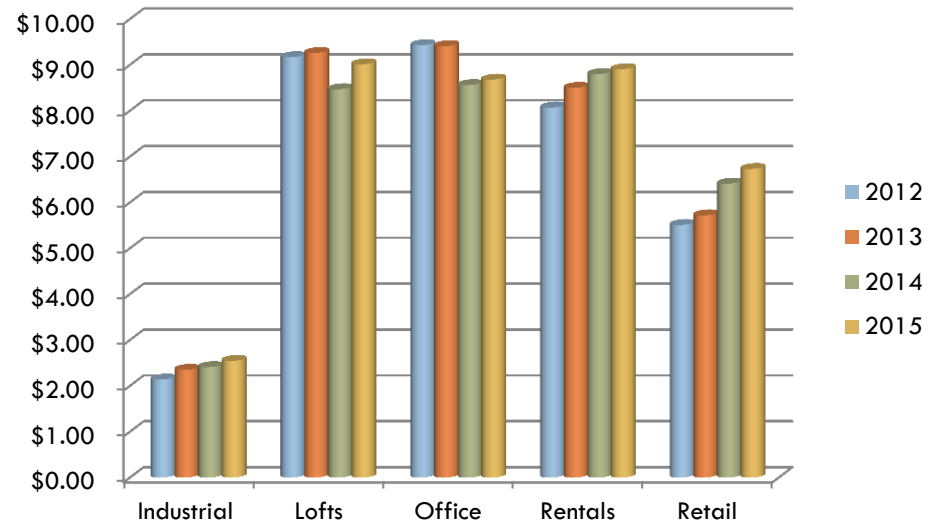
# RPIE 2012 - 2015

## Citywide by Property Type

### Median Income Per Square Foot



### Median Expense Per Square Foot



### Number of Filings

	2012	2013	2014	2015
Industrial	3,142	2,452	2,692	2,689
Lofts	597	437	288	281
Office	2,685	2,043	2,390	2,498
Rentals	16,778	12,591	12,966	13,073
Retail	8,689	6,519	8,188	8,661

Does not include outlier filers and /or partial year filers

# RPIE 2015

## Citywide by Borough

### Income, Expense, and Year-Year Change Distribution

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	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
<b>MANHATTAN</b>	8,621	<b>Income</b>	\$24.52	\$39.11	\$55.01	\$56.64
		<b>Income % change</b>	0.09%	3.65%	7.80%	3.01%
		<b>Expense</b>	\$8.91	\$12.41	\$17.33	\$16.54
		<b>Expense % change</b>	-12.22%	-0.52%	9.65%	-0.76%
<b>BRONX</b>	4,296	<b>Income</b>	\$11.24	\$13.87	\$19.52	\$19.07
		<b>Income % change</b>	-0.16%	2.42%	6.15%	2.06%
		<b>Expense</b>	\$5.35	\$7.24	\$9.16	\$7.93
		<b>Expense % change</b>	-13.36%	-2.15%	7.59%	-0.64%
<b>BROOKLYN</b>	7,345	<b>Income</b>	\$12.13	\$16.05	\$24.89	\$22.08
		<b>Income % change</b>	0.00%	2.81%	6.88%	2.39%
		<b>Expense</b>	\$3.68	\$6.15	\$8.61	\$7.21
		<b>Expense % change</b>	-12.93%	0.08%	12.32%	1.16%
<b>QUEENS</b>	6,069	<b>Income</b>	\$14.51	\$19.87	\$30.56	\$30.80
		<b>Income % change</b>	0.00%	2.82%	7.18%	2.61%
		<b>Expense</b>	\$3.37	\$6.28	\$9.37	\$9.90
		<b>Expense % change</b>	-13.84%	0.00%	13.32%	2.27%
<b>STATEN ISLAND</b>	871	<b>Income</b>	\$12.30	\$19.20	\$29.36	\$24.39
		<b>Income % change</b>	-2.95%	0.95%	6.25%	0.53%
		<b>Expense</b>	\$2.76	\$5.25	\$8.31	\$6.81
		<b>Expense % change</b>	-14.00%	0.20%	15.34%	2.89%

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

Rental Apartments with greater than 10 units

Does not include outlier filers and /or partial year filers

# RPIE 2015

## Industrial Properties by Borough

### Income, Expenses, and Year-Year Change Distribution

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Major Building Category	Borough	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
INDUSTRIAL	Manhattan	40	Income	\$16.88	\$24.71	\$41.08	\$32.69
			Income % Change	-3.03%	1.61%	5.76%	3.18%
			Expense	\$1.60	\$5.92	\$9.70	\$7.56
			Expense % change	-35.31%	-7.36%	17.58%	-5.78%
	Bronx	331	Income	\$7.20	\$10.27	\$13.70	\$13.25
			Income % Change	-1.72%	2.00%	8.06%	2.05%
			Expense	\$1.52	\$2.34	\$3.99	\$3.38
			Expense % change	-18.10%	0.64%	20.75%	4.87%
	Brooklyn	1,152	Income	\$8.70	\$11.79	\$15.44	\$13.21
			Income % Change	-0.05%	2.55%	8.41%	2.46%
			Expense	\$1.41	\$2.60	\$4.36	\$3.43
			Expense % change	-20.00%	0.92%	20.51%	5.17%
Queens	1,067	Income	\$9.81	\$12.94	\$16.44	\$15.11	
		Income % Change	-0.06%	3.00%	9.27%	3.11%	
		Expense	\$1.49	\$2.59	\$4.41	\$3.83	
		Expense % change	-18.14%	0.00%	18.85%	5.44%	
Staten Island	99	Income	\$6.34	\$9.47	\$12.39	\$10.90	
		Income % Change	-9.57%	0.00%	5.32%	-4.40%	
		Expense	\$1.02	\$1.94	\$3.31	\$2.50	
		Expense % change	-5.94%	2.54%	29.57%	17.87%	

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

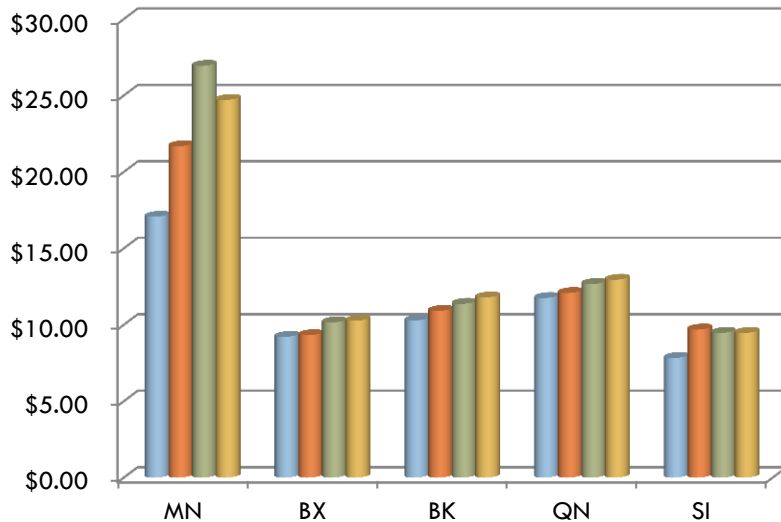
Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

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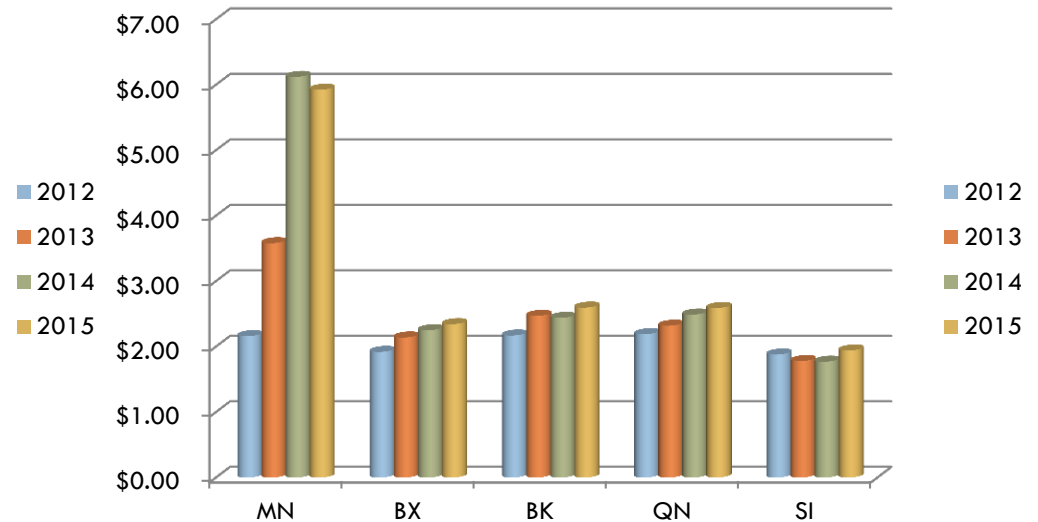
# RPIE 2012 - 2015

## Industrial Properties by Borough

Median Income Per Square Foot



Median Expense Per Square Foot



Number of Filings

	2012	2013	2014	2015
Manhattan (MN)	37	26	48	40
Bronx (BX)	363	302	308	331
Brooklyn (BK)	1,363	1,066	1,174	1,152
Queens (QN)	1,289	987	1,065	1,067
Staten Island (SI)	90	71	97	99

Does not include outlier filers and /or partial year filers

# RPIE 2015

## Loft Properties By Borough

### Income, Expense, and Year-Year Change Distribution

Major Building Category	Borough	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
LOFT	Manhattan	240	Income	\$23.42	\$30.90	\$42.14	\$36.43
			Income % Change	-0.24%	4.54%	11.01%	3.98%
			Expense	\$6.06	\$10.22	\$15.18	\$11.52
			Expense % change	-14.49%	-0.30%	14.44%	-0.63%
	Bronx	2	Income	\$8.12	\$8.37	\$8.62	\$8.37
			Income % Change	-3.07%	3.23%	9.53%	3.23%
			Expense	\$1.47	\$3.07	\$4.67	\$3.07
			Expense % change	-30.45%	-1.83%	26.80%	-1.83%
	Brooklyn	30	Income	\$10.78	\$15.26	\$19.97	\$18.61
			Income % Change	1.59%	4.30%	12.15%	5.29%
			Expense	\$3.20	\$5.72	\$8.48	\$7.33
			Expense % change	-4.14%	8.98%	22.41%	5.47%
Queens	9	Income	\$10.42	\$13.43	\$16.47	\$13.07	
		Income % Change	-0.54%	4.96%	8.02%	-0.13%	
		Expense	\$4.50	\$5.36	\$5.64	\$4.63	
		Expense % change	-6.38%	-4.84%	2.12%	-0.73%	

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

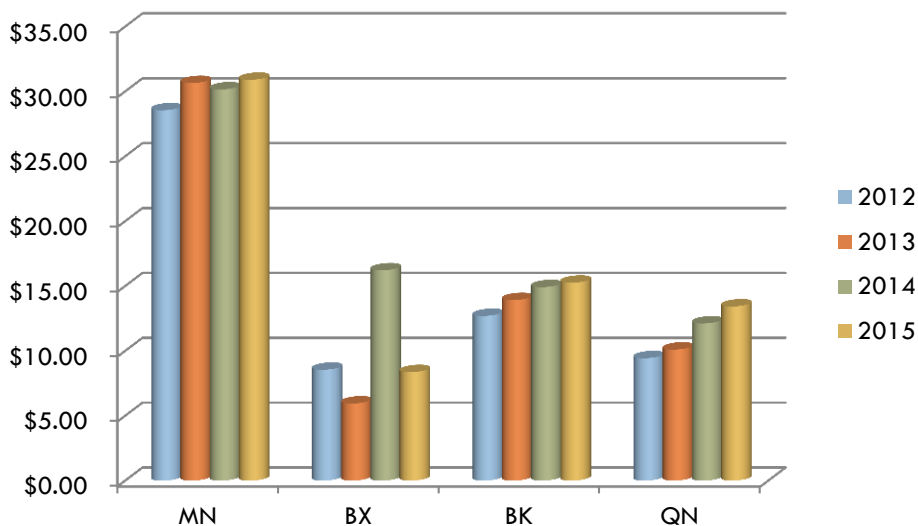
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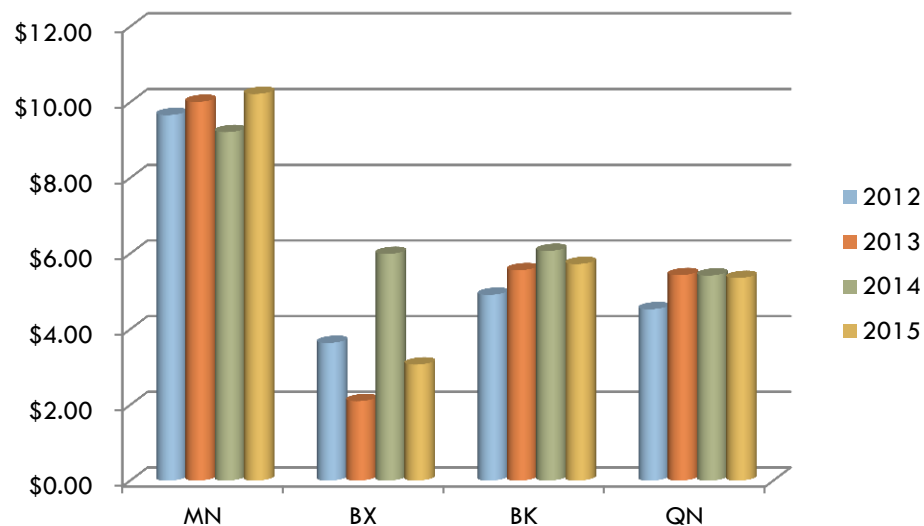
# RPIE 2012 - 2015

## Loft Properties by Borough

Median Income Per Square Foot



Median Expense Per Square Foot



Number of Filings

	2012	2013	2014	2015
Manhattan (MN)	548	393	248	240
Bronx (BX)	3	4	1	2
Brooklyn (BK)	40	35	33	30
Queens (QN)	6	5	6	9

Does not include outlier filers and /or partial year filers

# RPIE 2015

## Office Properties by Borough

### Income, Expenses, and Year-Year Change Distribution

Major Building Category	Borough	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
OFFICE	Manhattan	969	Income	\$37.07	\$50.96	\$72.13	\$80.03
			Income % Change	-0.61%	3.45%	9.25%	2.80%
			Expense	\$9.55	\$15.74	\$23.48	\$24.20
			Expense % change	-9.80%	1.22%	10.56%	1.47%
	Bronx	182	Income	\$16.95	\$23.01	\$32.18	\$27.82
			Income % Change	-2.73%	2.08%	6.81%	0.89%
			Expense	\$3.33	\$5.75	\$8.70	\$7.95
			Expense % change	-16.24%	-0.36%	23.73%	5.53%
	Brooklyn	571	Income	\$15.24	\$22.82	\$34.02	\$28.29
			Income % Change	-1.48%	2.38%	8.38%	1.88%
			Expense	\$3.08	\$5.66	\$9.21	\$8.30
			Expense % change	-16.98%	0.75%	17.17%	2.11%
Queens	581	Income	\$17.10	\$24.55	\$37.83	\$37.12	
		Income % Change	-1.62%	2.17%	9.14%	2.46%	
		Expense	\$3.80	\$6.80	\$11.78	\$10.65	
		Expense % change	-14.05%	1.17%	15.67%	2.34%	
Staten Island	195	Income	\$14.03	\$22.80	\$30.96	\$26.82	
		Income % Change	-5.35%	0.97%	5.67%	1.43%	
		Expense	\$3.30	\$6.23	\$9.42	\$7.83	
		Expense % change	-21.25%	0.00%	12.25%	-3.25%	

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

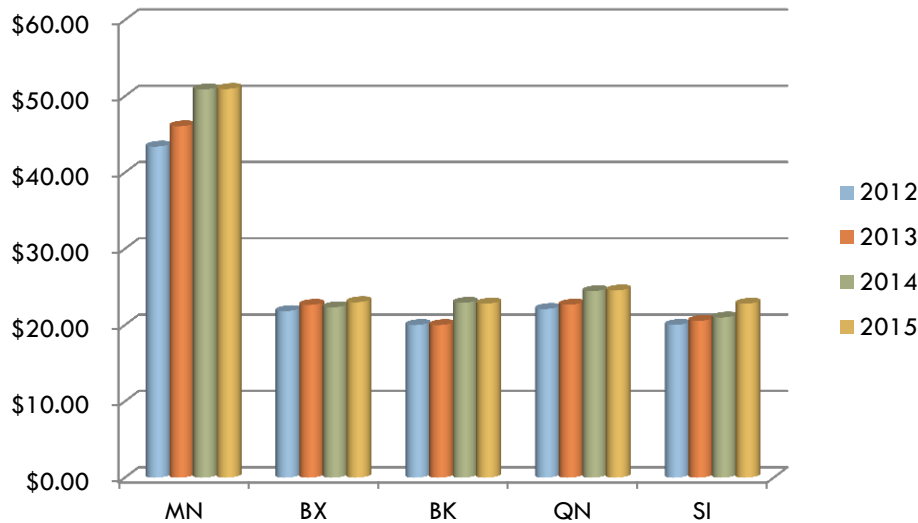
Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

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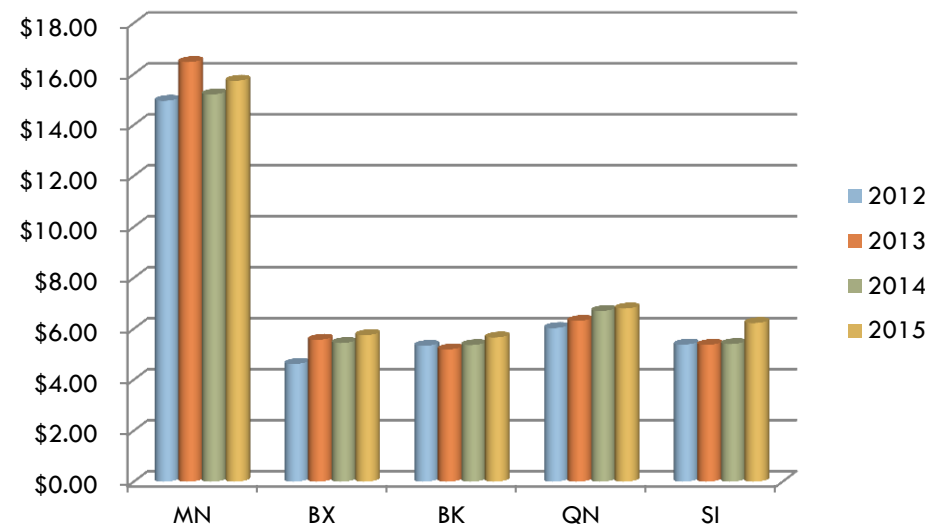
# RPIE 2012 - 2015

## Office Properties by Borough

Median Income Per Square Foot



Median Expense Per Square Foot



Number of Filings

	2012	2013	2014	2015
Manhattan (MN)	1,314	941	946	969
Bronx (BX)	200	151	171	182
Brooklyn (BK)	482	396	533	571
Queens (QN)	476	377	553	581
Staten Island (SI)	213	178	187	195

Does not include outlier filers and /or partial year filers

# RPIE 2015

## Rental Apartments By Borough

### Income, Expense, and Year-Year Change Distribution

Major Building Category	Borough	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
RENTAL APARTMENTS	Manhattan	5,367	Income	\$20.32	\$33.97	\$46.36	\$36.20
			Income % Change	0.54%	3.55%	6.93%	2.80%
			Expense	\$9.21	\$12.05	\$15.79	\$13.46
			Expense % change	-11.91%	-1.42%	7.70%	-2.48%
	Bronx	2,564	Income	\$10.92	\$12.77	\$14.80	\$13.64
			Income % Change	0.21%	2.56%	5.50%	2.03%
			Expense	\$6.56	\$7.76	\$9.26	\$8.39
			Expense % change	-12.47%	-3.77%	3.71%	-4.42%
	Brooklyn	3,267	Income	\$12.06	\$14.52	\$18.23	\$16.84
			Income % Change	0.65%	3.18%	6.21%	2.69%
			Expense	\$5.84	\$7.23	\$9.27	\$8.19
			Expense % change	-9.93%	-0.80%	7.39%	-1.89%
Queens	1,769	Income	\$15.14	\$17.89	\$21.00	\$29.34	
		Income % Change	0.90%	3.23%	5.77%	2.74%	
		Expense	\$6.39	\$7.93	\$9.92	\$15.79	
		Expense % change	-11.16%	-1.81%	5.78%	-3.01%	
Staten Island	106	Income	\$12.97	\$14.70	\$17.26	\$15.22	
		Income % Change	-0.81%	2.33%	5.83%	2.53%	
		Expense	\$5.59	\$6.91	\$8.42	\$7.41	
		Expense % change	-9.54%	0.90%	10.29%	1.99%	

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

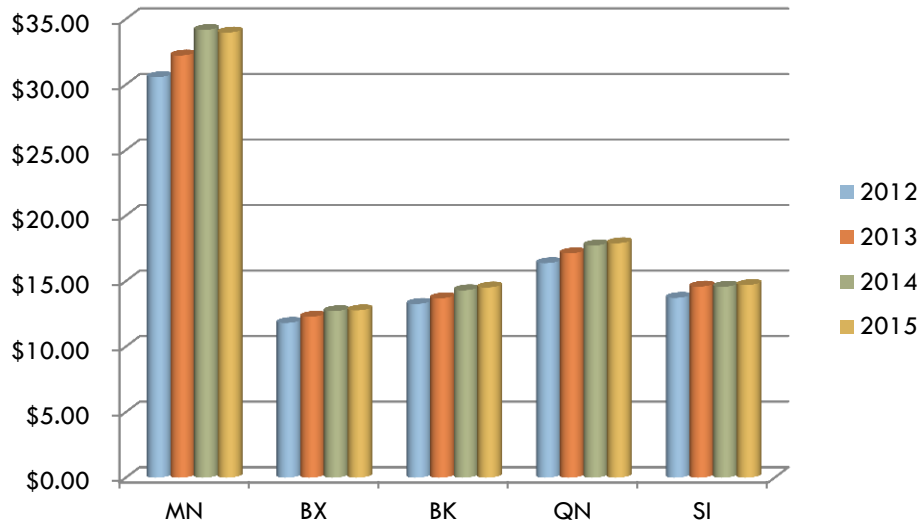
Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

Does not include outlier filers and or partial year filers

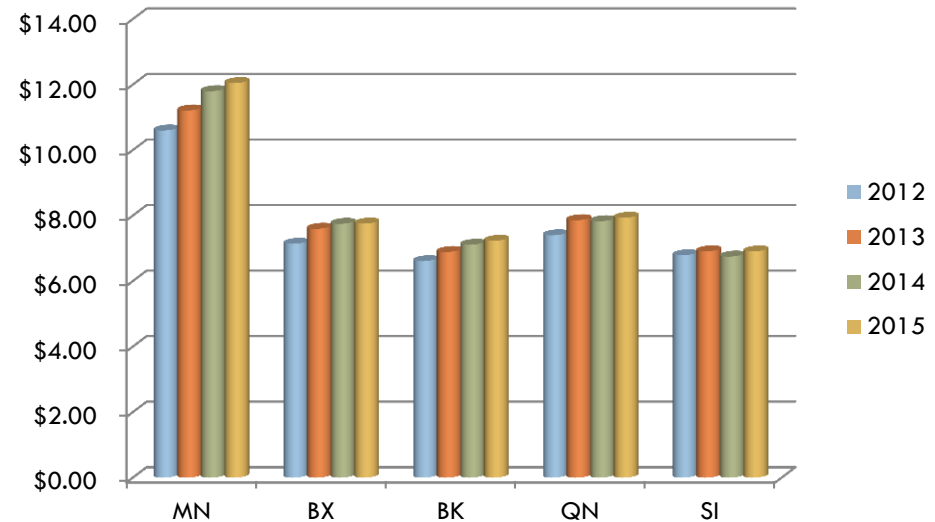
# RPIE 2012 - 2015

## Rental Properties by Borough

Median Income Per Square Foot



Median Expense Per Square Foot



Number of Filings

	2012	2013	2014	2015
Manhattan (MN)	6,963	5,128	5,342	5,367
Bronx (BX)	3,421	2,600	2,652	2,564
Brooklyn (BK)	4,144	3,175	3,222	3,267
Queens (QN)	2,118	1,585	1,643	1,769
Staten Island (SI)	132	103	107	106

Does not include outlier filers and /or partial year filers

# RPIE 2015

## Retail Properties By Borough

### Income, Expenses, and Year-Year Change Distribution

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Major Building Category	Borough	Count	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
RETAIL	Manhattan	2005	Income	\$37.00	\$56.35	\$100.49	\$102.95
			Income % Change	0.00%	4.20%	10.18%	3.57%
			Expense	\$7.80	\$13.06	\$21.19	\$21.88
			Expense % change	-13.84%	0.07%	15.43%	2.86%
	Bronx	1217	Income	\$16.91	\$25.29	\$36.22	\$30.82
			Income % Change	-2.19%	2.20%	8.56%	2.31%
			Expense	\$3.64	\$6.02	\$9.85	\$8.21
			Expense % change	-15.62%	0.91%	21.06%	4.91%
	Brooklyn	2325	Income	\$16.38	\$25.08	\$37.19	\$32.35
			Income % Change	-0.14%	2.17%	7.44%	2.01%
			Expense	\$2.91	\$5.19	\$8.69	\$7.43
			Expense % change	-17.43%	1.89%	18.98%	3.18%
	Queens	2643	Income	\$19.26	\$28.77	\$44.20	\$36.78
			Income % Change	-1.05%	2.22%	8.13%	2.36%
			Expense	\$3.25	\$5.87	\$10.03	\$8.26
			Expense % change	-15.81%	0.89%	18.43%	4.51%
	Staten Island	471	Income	\$15.19	\$23.40	\$33.33	\$28.29
			Income % Change	-2.80%	0.97%	6.92%	0.74%
			Expense	\$2.87	\$5.17	\$8.48	\$7.15
			Expense % change	-16.62%	0.00%	16.90%	2.48%

**Notes:**

Income = Gross Income per square foot

Expense = Total Expense per square foot

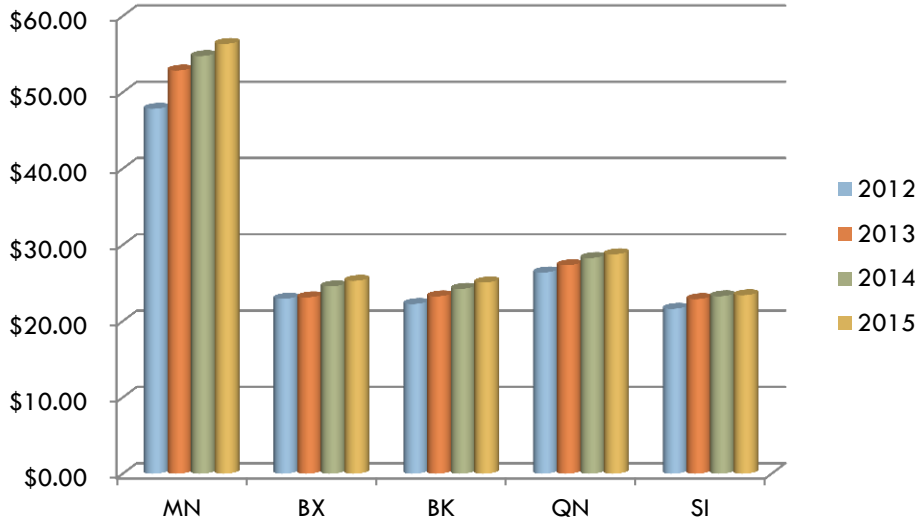
Income and Expense % changes based on information filed in RPIE 2015 and RPIE 2014

Does not include outlier filers and or partial year filers

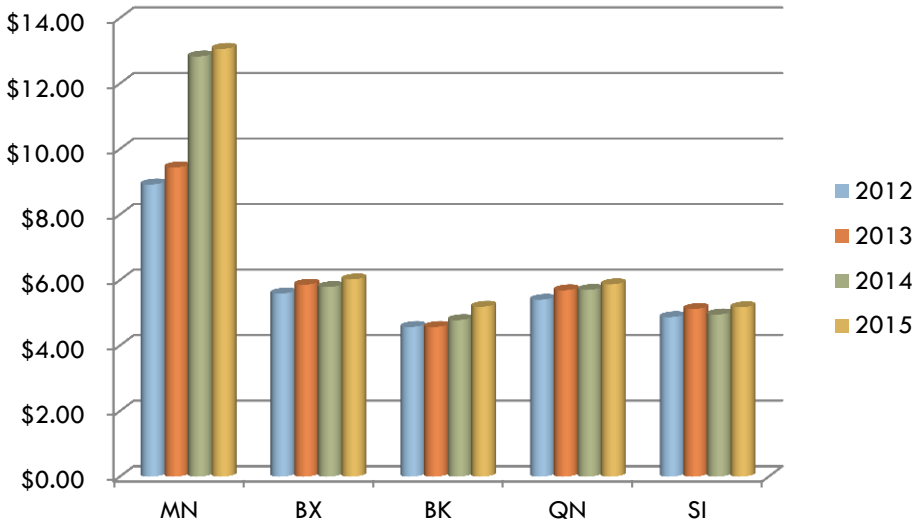
# RPIE 2012 - 2015

## Retail Properties by Borough

Median Income Per Square Foot



Median Expense Per Square Foot



Number of Filings

	2012	2013	2014	2015
Manhattan (MN)	1,366	1,017	1,968	2,005
Bronx (BX)	1,382	1,059	1,119	1,217
Brooklyn (BK)	2,489	1,828	2,141	2,325
Queens (QN)	2,909	2,198	2,511	2,643
Staten Island (SI)	543	417	449	471

Does not include outlier filers and /or partial year filers

# Guideline Income, Expense, and Cap Rate Distributions

Major Building Categories	Variable	25th Pctl	50th Pctl	75th Pctl	Mean
<b>INDUSTRIAL</b>	Income	\$12.54	\$15.57	\$17.53	\$16.18
	Expense	\$2.18	\$2.79	\$3.21	\$2.86
	Cap Rate	14.66%	14.61%	14.50%	14.58%
<b>LOFTS</b>	Income	\$18.84	\$28.64	\$40.56	\$29.76
	Expense	\$5.77	\$8.08	\$11.36	\$8.60
	Cap Rate	13.14%	12.74%	12.50%	13.17%
<b>OFFICES</b>	Income	\$28.12	\$34.18	\$47.67	\$39.97
	Expense	\$6.35	\$7.95	\$12.75	\$10.29
	Cap Rate	15.63%	15.50%	14.37%	14.96%
<b>RENTAL APARTMENTS</b>	Income	\$15.09	\$21.66	\$38.55	\$27.57
	Expense	\$9.23	\$12.08	\$17.00	\$13.18
	Cap Rate	14.04%	12.71%	12.50%	13.43%
<b>RETAIL</b>	Income	\$25.38	\$32.63	\$44.81	\$41.48
	Expense	\$5.43	\$6.74	\$8.73	\$8.03
	Cap Rate	15.54%	15.13%	14.90%	14.90%

**Notes:**

- Income = Gross Income per square foot
- Expense = Total Expense per square foot
- Cap Rate = Loaded Cap Rate

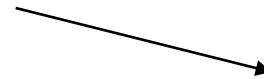
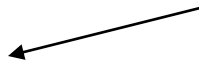


## FY18 Capitalization Rate Methodology Tax Class 2

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- Capitalization Rate based on Ellwood formula

$$R_o = Y_o - \Delta_n^{(an)}$$



Fallout Capitalization Rate = return *on* capital (dividend yield) - return *of* capital (capital gain/loss)



Capitalization Rate based on earnings

- the higher the growth rate, the lower the fallout Capitalization Rate, the more valuable the property

\*Guideline Cap rates will not reflect future property appreciation

## FY18 Capitalization Rate Methodology Tax Class 2

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- $R_0$  and  $\Delta_n^{(an)}$  are *not* estimated for each property but are guideline curves that reflect median relationships with income
- $R_0$  is estimated by a median regression of market Capitalization Rate on income per square foot
- $\Delta_n^{(an)}$  is estimated by a median regression of annual sales growth of Class 2 rentals that were purchased between 1985-2015 and sold from 2012-2016.

## FY18 Capitalization Rate Methodology Tax Class 2

- Guideline curves are applied on *rental filer* population and centered to reflect market rates

- For FY18: - the median Capitalization Rate  $R_o$  is centered on 4.32%\*

**Guidelines Rates**

Variable	25th Pctl	50th Pctl	75th Pctl	Mean
$R_o$	2.40%	4.32%	6.25%	4.61%
$\Delta$	1.99%	2.59%	3.55%	2.73%

- FY18 versus FY17 Capitalization Rate \*

**Citywide**

Variable	25th Pctl	50th Pctl	75th Pctl	Mean
Cap Rate FY18	6.70%	6.81%	8.24%	7.63%
Cap Rate FY17	6.70%	7.10%	8.14%	7.62%
Cap Rate FY18-FY17	0.00%	-0.29%	0.10%	0.01%

\*Does not include effective tax rate portion of Capitalization Rate

## FY18 Capitalization Rate Formulas and Example Tax Class 2

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- Capitalization Rate used reflects earnings-based return

$$Y_o = R_o + \Delta_n^{(an)}$$

$$R_o = \exp(-1.02139 \cdot \ln(\text{income psf}))$$

$$\Delta_n^{(an)} = -0.025278 + .016645 \cdot \ln(\text{income psf})$$

*Example:* income psf = **\$17.49\***

$$R_o = \exp(-1.02139 \cdot \ln(17.49)) \cdot 100 = 5.378\%$$

$$\Delta_n^{(an)} = (-0.025278 + .016645 \cdot \ln(17.49)) \cdot 100 = 2.235\%$$

$$Y_o = 5.378\% + 2.235\% = \mathbf{7.613\%}$$

\* FY18 Guidelines Post-1973 Rental Elevator Building Outer Borough

## FY18 Capitalization Rate Methodology Tax Class 4

Major Building Category	Flat Cap Rate Adjustment to FY17
INDUSTRIAL	-0.30%
LOFTS	-0.50%
OFFICES –Manhattan Trophy & Class A/B Downtown Brooklyn– Class A	-0.20%
OFFICES –Non Trophy nor Class A/B	-0.40%
OFFICES –Outer Boroughs	-0.30%
RETAIL – Manhattan/Downtown Brooklyn	-0.40%
RETAIL – Outer Boroughs	-0.00%

- Capitalization Rate are given a flat rate adjustment from FY17