



## **BOMA/Chicago Economic Impact Study 2012**

**Presented by the Building Owners and Managers Association of Chicago**

**Data reflecting BOMA/Chicago membership as of May 2012  
Released April 9, 2013**

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<sup>1</sup> As a departure from the 2006 Economic Impact Study, only unique locations were counted.

## 1. Overview: Economic Impact of BOMA/Chicago

The Building Owners and Managers Association of Chicago (BOMA/Chicago) is the premier trade association representing Chicago's office building industry. Founded in 1902, the mission of the organization is to enhance the value and impact of the commercial real estate industry and its professionals through thought leadership, advocacy, professional development, research and civic engagement.

As of May 2012, BOMA/Chicago membership included 252 commercial office, institutional and public buildings, constituting over 141 million square feet of rentable office space or 76.8% of all the commercial square footage available for rent in downtown Chicago, as well as 150 allied suppliers and professionals that provide goods and services to those buildings. BOMA/Chicago's membership includes 93.7% of the square footage in Chicago's Class A office buildings, 73.3% of the Class B space, and 30 governmental, educational and institutional facilities. Members include such iconic buildings as Willis Tower, John Hancock Center, Aon Building, Merchandise Mart and many more.

Since its establishment in 1902, BOMA/Chicago member buildings have played a pivotal role in the growth of Chicago as a world-class metropolis. Today, BOMA/Chicago buildings support 72,208 direct and indirect jobs in addition to tenant employees and house 10,186 companies, including 7,259 local businesses, 1,520 national companies and 1,265 international corporations.

As evidenced by this report, BOMA/Chicago's member buildings are a barometer of the city's economic health and a major contributor to the economic lifeblood of the entire region – from employment to tax generation to direct spending and beyond.

To further analyze and quantify BOMA/Chicago's economic impact on Chicago, this study measured variables in five key economic areas:

1. Economic and commercial real estate market share;
2. Building rents and operating expenses;
3. Employment and labor agreements;
4. Sustainability; and
5. Real estate property taxes.

Where possible, comparisons were drawn to findings of BOMA/Chicago's last economic impact study, which was released in 2006 (2006 EIS).

### **Key Findings**

Key findings of this study include the following.

#### **A. Economic and commercial real estate market share**

- Employees of the tenants in BOMA/Chicago buildings are responsible for nearly 80% of total consumer spending in the Loop.
- BOMA/Chicago building members represent over 141 million square feet of rentable office space or 76.8% of all the commercial square footage available for rent in downtown Chicago. That total represents an increase of 9.6% from the total square footage shown in the 2006 study.
- Membership includes 93.7% of all the square footage in Chicago's Class A office buildings and 73.3% of the Class B space.
- 10,186 businesses/tenants are housed in BOMA/Chicago buildings, a 30% increase from 2006.

- The vast majority (71.2%) of BOMA/Chicago building tenants are local companies, followed by 14.9% national, 12.4% international and 1.4% regional companies. The comparison of the 2006 EIS with the current data indicates a significant increase (91.4%) in the number of international companies/tenants.
- All six of the Fortune 500 companies with headquarters in the City of Chicago are located in BOMA/Chicago buildings.
- 74.2% of the largest publicly traded companies and 42.4% of the privately held companies with Chicago headquarters are located in BOMA/Chicago buildings.
- BOMA/Chicago buildings [and their tenants' employees] contribute \$3.5 billion to the Illinois economy and add \$1.04 billion in new taxable personal earnings annually.

## **B. Building rents and operating expenses**

The overall downtown Chicago office market trends including BOMA/Chicago member buildings suggest that:

- Average asking rents (\$30.90/sq.ft.) are below the national average (\$36.20/sq.ft.), ranking Chicago sixth out of the nine comparable cities studied.
- Average vacancy (15.7%) is also above the national average (14.1%).
- Average operating expenses (\$8.43/sq.ft.) were the median for the nine comparable cities studied.

## **C. Employment and labor agreements**

- Chicago's economy continues to face challenges with job growth at 0.6% through May of 2012, which was much lower than the national average of 1.4%, and an unemployment rate of 9.2% compared to a national average of 8.2% (May 2012).
- BOMA/Chicago member buildings support more than 72,000 direct and indirect jobs in addition to tenant employees housed in the buildings.
- Assuming zero vacancy, BOMA/Chicago buildings had the capacity to house 428,633 office workers. The actual numbers of tenant employees in BOMA/Chicago buildings in three key market areas is estimated at:
  - Loop: 289,709 employees with \$7.5 billion spending power or 79.5% of the total area spending power;
  - North of Chicago River (River North, North Michigan Avenue area): 54,583 employees with \$1.8 billion spending power or 45.1% of the total area spending power and;
  - O'Hare: 9,221 employees with \$150 million spending power or 68.4% of the total area spending power.
- The largest number of employees in BOMA/Chicago buildings work in financial/investment companies (14.9%), followed by business services companies (13.7%) and law firms (12.4%). This is a change from the 2006 study finding that far more of the office tenants were law firms.
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- 201 (79.7%) BOMA/Chicago buildings are signatories to at least one of the three labor agreements – janitorial, engineering and security – negotiated by BOMA/Chicago on behalf of its members.
  - 76.6% of the BOMA/Chicago properties benefit from the BOMA/Chicago negotiated janitorial agreement, 61.5% from the engineering agreement and 57.1% from the security agreement.
  - The total number of janitorial, engineering and security personnel covered by the BOMA/Chicago labor agreements was 6,335, which represented a decrease of 12.8% (or 934 individuals) compared to 2006.

## **D. Sustainability**

The city of Chicago ranks:

- First in square footage of LEED-EB (Existing Building) and NC (New Construction) office buildings and in the overall square footage of all relevant ratings for office buildings across all US cities.
- Second in the total number of LEED-EB and NC certified buildings and third in the overall number of buildings across all LEED ratings in all US cities.
- Second in square footage of office buildings with Energy Star ratings and fifth based on recertification times and average points received compared to all other US cities with more than 50 Energy Star properties.
- 91.1% of LEED certified buildings and 89.7% of Energy Star office buildings in Chicago are BOMA/Chicago member buildings based on their square footage.

## **E. Property tax trends**

- Real estate property taxes for downtown Chicago commercial office buildings averaged \$5.58/sq.ft. for 2011, which was the third highest in a comparison of nine comparable US cities.
- Commercial real estate property taxes in Chicago accounted for nearly 76% of a large building's total operating expenses for 2011, the highest percentage in the nine-city comparison group.
- For 2011, BOMA/Chicago building members paid nearly \$680 million in property taxes, which represented 46% of all the property taxes paid in the City of Chicago by commercial property exclusive of hotels.
- The submarkets with the highest average property taxes among BOMA/Chicago member buildings were: North Michigan Avenue (\$7.57/sq.ft.), West Loop (\$6.11/sq.ft.) and Central Loop (\$5.30/sq.ft.).

## 2. Introduction

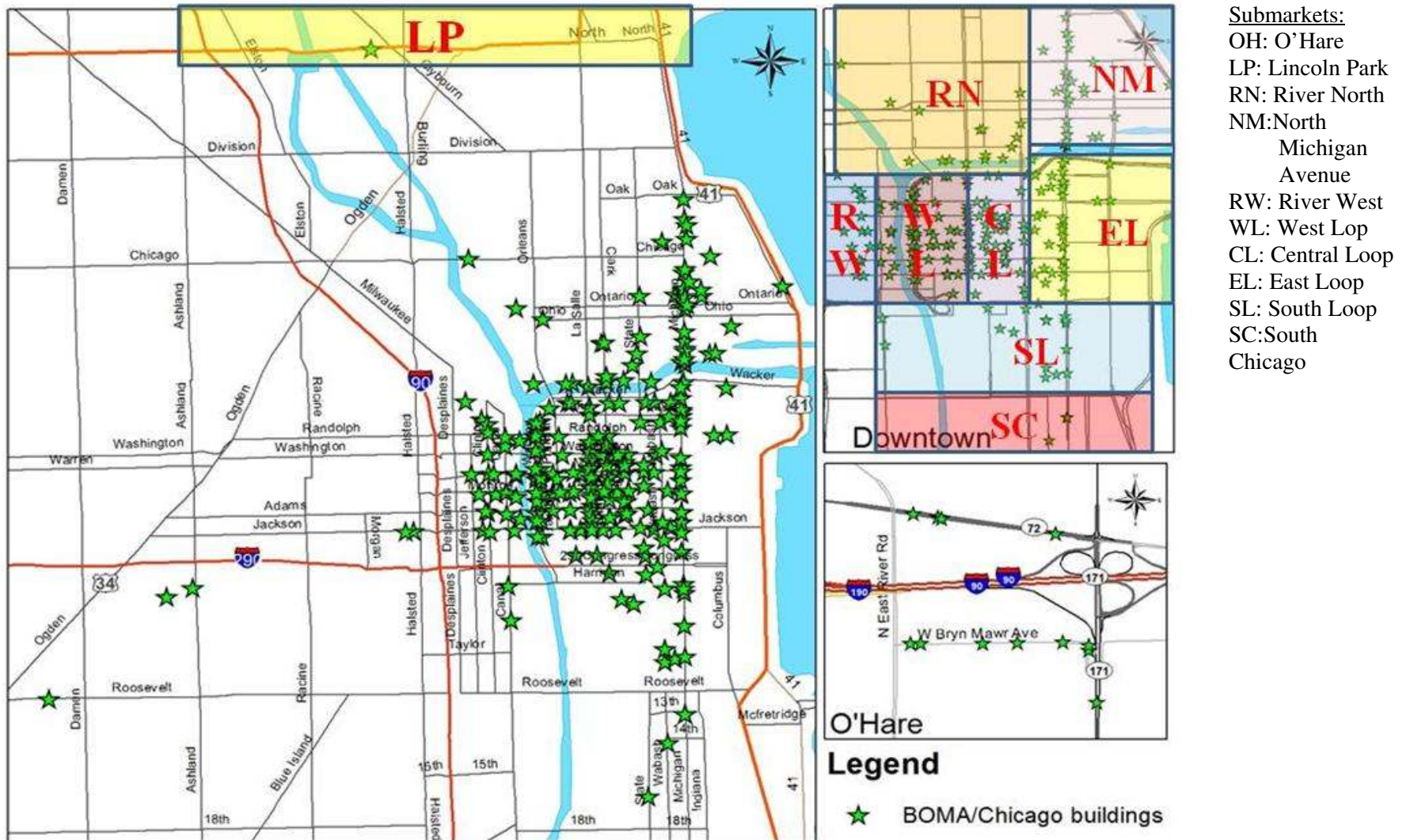
The objective of this research is to examine the market share, employment, operating expenses, sustainability, and taxes contributed by BOMA/Chicago member building in order to better gauge the impact of the office building industry on the city's economy. Underlying dynamics, stability and economic vitality of the City of Chicago are also examined. This study is the second Economic Impact Study (EIS) undertaken on behalf of BOMA/Chicago membership. The first study was completed in 2006. This research will address BOMA/Chicago's impact in light of current data, with an enhanced focus on sustainability, and it will make comparisons with the 2006 EIS results.

BOMA/Chicago represents 252 commercial office buildings totaling more than 141 million square feet within the city limits of Chicago and 150 affiliated companies that provide services to office buildings. Since 1902, BOMA/Chicago has represented the majority of downtown Chicago's office buildings on issues including legislation, regulation, safety and security, energy, emergency preparedness and more recently, sustainability. BOMA/Chicago is affiliated with the Building Owners and Managers Association International (BOMA International), an international federation of local associations and affiliated organizations founded in 1907 with more than 16,500 members. The mission of BOMA International and its affiliated organizations is to enhance the human, intellectual and physical assets of the commercial real estate industry through advocacy, education, research, standards and information.

This research required collection of information from multiple sources with the most notable being the: U.S. Census Bureau, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, National Bureau of Economic Research, Cook County Assessor, Cook County Clerk, Civic Federation, BOMA/Chicago, BOMA/International, CoStar Group (access was provided through the BOMA/Chicago account), Jones Lang LaSalle, United States Green Building Council (U.S.G.B.C), DOE - Energy Star, Crain's Chicago Business, CNN and World Business Chicago.

For standardization purposes, this study adopted CoStar's submarkets and general employment categories to allow for the identification of area-specific trends and ensure individual building anonymity (Figure 1). Expense categories and definitions were defined by the BOMA International Experience Exchange Reports (EER).

Figure 1: Submarkets and BOMA/Chicago member buildings.



### 3. Chicago area economy and office market

#### 3.1. Chicago economy

Chicago is a vibrant, economically diverse, 24/7 global city; like all major metropolitan areas, challenges exist. The Chicago Metropolitan Statistical Area (MSA) is ranked third<sup>2,3</sup> (based on a population of 2.69 million) behind New York (8.1 million) and Los Angeles (3.7 million) - 2010 U.S. Census; however, the city's population barely increased in the past decade (0.4%<sup>4</sup> vs. the U.S. average of 0.9%<sup>4</sup>). The population of 2.69 million within the city limits decreased in the 2010 U.S. Census by 6.9%<sup>4</sup> compared to 2000.

The Chicago metro area economy was showing signs of a slow down even before the recent financial meltdown of the Great Recession (12/07-6/09<sup>5</sup>), which further worsened the economic performance and competitiveness of the area. Evidence of the area challenges can be found in the almost continuous divergence of the area unemployment compared to the national average (Figure 2). A comparison of the Chicago MSA annual unemployment trends with cities studied throughout this report (2006 through 2012), shows that Chicago experienced the second highest unemployment rate in 2007 and maintained that ranking through the first quarter of 2012 (Figure 3). The Bureau of Labor Statistics report on Chicago employment growth performance among the 12 largest<sup>6</sup> MSAs ranked Chicago at 11th<sup>7</sup> place in job growth (0.6% when the national average was 1.4%) as of May 2012. Examining the select number of MSAs studied throughout this report presents similar results with Chicago's employment growth being ranked 8<sup>th</sup> out of the nine cities studied (Figure 3).

The comparison of the 2001 and 2010 Gross Domestic Product (GDP) for the Chicago metro area -- as well as a select number of others -- further emphasizes the less competitive Chicago market, ranked at sixth place based on GDP growth and eighth based on the 2010 GDP per capita (Figure 4).

The brief review of some key Chicago metro area economic trends during the last few years clearly suggests that Chicago's total taxes of 9.5% (state - 6.25% & local - 3.25%), which rank as second<sup>8</sup> highest across all U.S. cities, pose significant challenges for improving business dynamics. A recent report from World Business Chicago highlights in more depth Chicago's "lost momentum over the last decade"<sup>3</sup> and the challenges "of the new global economic realities"<sup>3</sup> while offering a strategic roadmap on engaging Chicago's "enormous competitive assets"<sup>3</sup>. The strategies/recommendations include improved support for entrepreneurs, rebuilding infrastructure, nurturing unique neighborhoods and improving the business climate. The strategy most relevant to BOMA/Chicago membership is "Strategy 10: Create an Environment in which Businesses Can Flourish"<sup>3</sup>.

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<sup>2</sup> U.S. Census - Table 20- <http://www.census.gov/compendia/statab/2012/tables/12s0020.pdf>.

<sup>3</sup> World Business Chicago, "A Plan for Economic Growth and Jobs", February 2012 - <http://www.worldbusinesschicago.com/files/downloads/Plan-for-Economic-Growth-and-Jobs.pdf>.

<sup>4</sup> U.S. Census-<http://quickfacts.census.gov/qfd/states/17/1714000.html>;  
<http://quickfacts.census.gov/qfd/states/00000.html>;  
[http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00\\_SF1/DP1/1600000US1714000](http://factfinder2.census.gov/bkmk/table/1.0/en/DEC/00_SF1/DP1/1600000US1714000).

<sup>5</sup> National Bureau of Economic Research - <http://www.nber.org/cycles.html>.

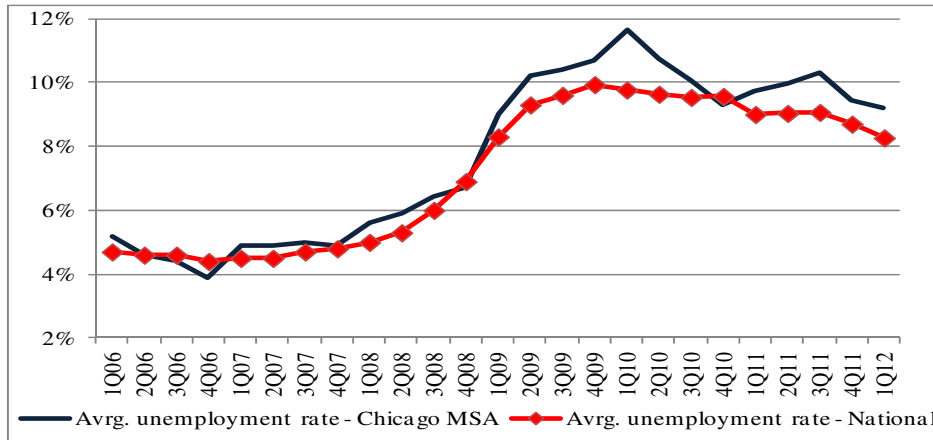
<sup>6</sup> The 12 largest MSA are: Atlanta, Boston, Chicago, Dallas, Detroit, Houston, Los Angeles, Miami, New York, Philadelphia, San Francisco, Washington D.C.- U.S. Bureau of Labor Statistics, <http://www.bls.gov/ro5/ceschi.pdf>

<sup>7</sup> U.S. Bureau of Labor Statistics, Chicago Area Employment - May 2012, News release, July 5<sup>th</sup>, 2012, <http://www.bls.gov/ro5/ceschi.pdf>.

<sup>8</sup> Drenkard, S., A. Raut and K. Duncan, "Sales Taxes in Major U.S. Cities", Tax Foundation - Fiscal Fact, issue 296, April 11<sup>th</sup>, 2012.



Figure 2: Unemployment rate comparison Chicago (MSA) and U.S.



Source: Bureau of Labor Statistics

Figure 3: Unemployment and employment growth trends among select number of U.S. cities.

MSA comparison	% change in non-farm employment 5/2011-5/2012	Unemployment rate trends						
		2006	2007	2008	2009	2010	2011	1Q2012
Houston	3.4% (1)	5.0%	4.3%	4.8%	7.5%	8.5%	8.1%	7.26%
Denver	2.2% (2)	4.4%	3.9%	4.9%	8.3%	9.0%	8.3%	8.26%
San Francisco	1.9% (3)	3.9%	4.0%	5.0%	8.5%	9.0%	8.2%	7.63%
Washington D.C.	1.6% (4)	3.1%	3.0%	3.8%	6.3%	6.4%	5.9%	5.73%
New York	1.3% (5)	4.8%	4.7%	5.4%	9.0%	9.3%	8.8%	9.13%
Atlanta	1.2% (6)	4.7%	4.6%	6.2%	9.8%	10.2%	9.6%	8.93%
Los Angeles	1.2% (7)	4.8%	5.1%	7.5%	11.6%	12.6%	12.3%	11.90%
<b>Chicago</b>	<b>0.6% (8)</b>	<b>4.5%</b>	<b>4.9%</b>	<b>6.2%</b>	<b>10.1%</b>	<b>10.4%</b>	<b>9.8%</b>	<b>9.2%</b>
Philadelphia	0.4% (9)	4.5%	4.4%	5.4%	7.8%	8.5%	8.3%	8.40%
National	1.40%	4.60%	4.60%	5.80%	9.30%	9.60%	8.90%	8.30%

Source: Bureau of Labor Statistics; (rank provided in parenthesis – (1) indicates highest value)

Figure 4: GDP performance of select number of U.S. cities.

MSA comparison	GDP growth change 2001 vs. 2010	MSA comparison	Real GDP/capita - 2010 (\$2005)
Washington D.C.	14.20% (1)	Washington D.C.	68,283 (1)
Los Angeles	12.93% (2)	San Francisco	68,008 (2)
Philadelphia	11.23% (3)	New York	60,672 (3)
New York	10.97% (4)	Houston	59,114 (4)
San Francisco	7.38% (5)	Denver	56,706 (5)
<b>Chicago</b>	<b>3.20% (6)</b>	Los Angeles	52,174 (6)
Denver	2.51% (7)	Philadelphia	52,096 (7)
Houston	-2.21% (8)	<b>Chicago</b>	<b>50,288 (8)</b>
Atlanta	-7.79% (9)	Atlanta	46,723 (9)
National	5.34%	National	41,280

Source: Bureau of Economic Analysis; (rank provided in parenthesis – (1) indicates highest value)

### 3.2. Chicago office market

#### 3.2.1. Chicago office market vacancy trends

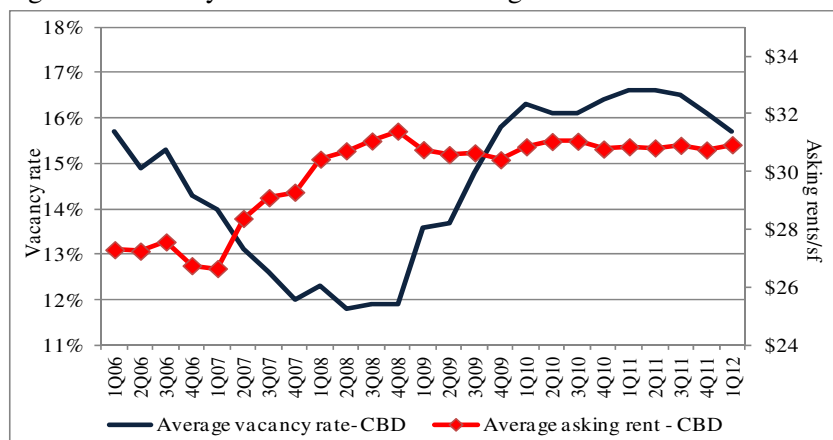
Figure 5 compares the current downtown or also referred to as Central Business District (CBD) office market rents and vacancy performance of Chicago with a select number of major cities across the U.S. Beyond the snapshot of first quarter 2012, Chicago’s long-term vacancy and asking rent performance is provided to identify possible market behavior patterns. This long-term performance from the first quarter of 2006 (1Q06) through the first quarter of 2012 (1Q12) clearly shows market cyclicality regarding vacancy. (The current vacancy rate is exactly the same as in first quarter 2006; supply increased by almost 4.2 million square feet) At the same time, asking rent levels have almost leveled off since 2008. The recent recession led to a steeper increase in vacancies from first quarter 2009, which started stabilizing in first quarter 2010 and decreased from first quarter 2012.

Figure 5: Real estate trends for their Central Business Districts.

MSA comparison	Vacancy rate- CBD - 1Q12	MSA comparison	Avg. asking rent (\$/sf)- CBD - 1Q12
Atlanta	22.5% (1)	Washington D.C.	\$50.53 (1)
Houston	17.2% (2)	San Francisco	\$47.49 (2)
Los Angeles	17.2% (3)	New York	\$40.42* (3)
<b>Chicago</b>	<b>15.7% (4)</b>	Los Angeles	\$35.78 (4)
Denver	13.1% (5)	Houston	\$33.00 (5)
Philadelphia	11.7% (6)	<b>Chicago</b>	<b>\$30.94 (6)</b>
San Francisco	11.5% (7)	Denver	\$26.95 (7)
Washington D.C.	10.9% (8)	Philadelphia	\$26.21 (8)
New York	9.6%* (9)	Atlanta	\$22.46 (9)
<b>National</b>	<b>14.10%</b>	<b>National</b>	<b>\$36.17</b>

Sources: Jones Lang LaSalle; New York vacancy and rents reflect only the downtown area - Midtown vacancy is at 11.5% and rents at \$62.93/sf; (rank provided in parenthesis – (1) indicates highest value)

Figure 6: Vacancy and rent trends in Chicago Central Business District (CBD) office buildings.



Source: Jones Lang LaSalle

#### 3.2.2. Chicago operating expenses, rents and national comparisons

Operating expense trends were gathered from two sources because the use of different methodologies provides a more comprehensive and broad overview. The information gathered allows for

better insight/benchmarking for BOMA/Chicago members when assessing market conditions. The sources were:

- BOMA International: a) *Kingsley Report*<sup>9</sup> - Benchmarking - Autumn 2011, assesses major market performance across the U.S. utilizing data from the BOMA International Experience Exchange Report (EER) and b) The EER itself, which includes results of office building performance surveys based on square footage without identifying the property classifications (Figure 8).
- Jones Lang LaSalle (JLL): JLL provided current average operating expense data for Chicago and CBDs of other major cities. (Figures 8 and 9).

The absence of detailed building operating expense databases containing various sorting features (e.g. class, year built, etc.) leads property managers to develop their own benchmarking standards while utilizing available operating reports; these reports group properties based on one rather than multiple characteristics. The EER<sup>10</sup> reports operating expenses by building size while Jones Lang LaSalle<sup>11</sup> the overall downtown areas (Figure 7). The data from both sources are fairly comparable, with Denver and Philadelphia being the only exceptions (Figure 7). Chicago operating expenses consistently ranked fourth for each of the BOMA International square footage categories, and fifth based on the JLL data (Figure 7). Chicago's expenses are expected to be lower than other prime markets like New York, San Francisco and Washington D.C., making the city competitive. The operating expense ratio (operating expenses over asking rents<sup>12</sup>) ranks Chicago third; this statistic indicates that properties are managed efficiently due to the low ratio, but an improvement in vacancy in combination with expense reduction will allow income to improve.

Figure 7: Average operating expense trends of select group of Central Business Districts (CBDs).

City	State	Total Oper. Exp. - BOMA (EER) - 2011 (\$/sf)		Total Oper. Expenses - JLL - 2011 values (\$/sf)
		300,000 - 599,999 sf	600,000+ sf	
New York	NY	\$14.21	\$13.31	\$13.00 (1)
San Francisco	CA	\$10.83	\$10.39	\$11.00 (2)
Washington	DC	\$11.17		\$10.00 (3)
Philadelphia	PA	\$3.23	\$1.96	\$8.66 (4)
<b>Chicago</b>	<b>IL</b>	<b>\$8.00</b>	<b>\$7.57</b>	<b>\$8.43 (5)</b>
Los Angeles	CA	\$7.06	\$8.51	\$8.09 (6)
Houston	TX	\$7.96	\$6.68	\$8.00 (7)
Denver	CO	\$2.84	\$3.67	\$6.16 (8)
Atlanta	GA	\$6.51	\$6.39	\$5.78 (9)

Source: BOMA International EER - 2011; Jones Lang LaSalle; New York: Only downtown not Midtown & Midtown south; (rank provided in parenthesis – (1) indicates highest value)

<sup>9</sup> BOMA International/Kingsley Report, Benchmarking- Autumn 2011, <http://www.boma.org/Resources/news/BOMAKingsleyReport/Pages/default.aspx>

<sup>10</sup> BOMA International's Experience Exchange Report, Operating expenses include: cleaning, repair/maintenance, utilities, security, and administrative expenses. Taxes are considered part of fixed expenses rather than operating expenses.

<sup>11</sup> Jones Lang LaSalle data on downtown operating expenses exclude taxes.

<sup>12</sup> Asking rent rather than effective gross income is used due to the data availability.

Figure 8: Operating expenses ratio among a select group of CBDs.

City	State	Total operating expenses as % of total office rentable area income - BOMA (EER)		Operating expenses as % of asking rent - Jones Lang LaSalle
		300,000 - 599,999 sf	600,000+ sf	
Philadelphia	PA	11.39%	9.56%	33.04% (1)
New York	NY	29.83%	27.43%	32.16% (2)
<b>Chicago</b>	<b>IL</b>	<b>29.03%</b>	<b>27.31%</b>	<b>27.25% (3)</b>
Atlanta	GA	27.86%	30.63%	25.73% (4)
Houston	TX		37.51%	24.24% (5)
San Francisco	CA	32.03%	21.43%	23.16% (6)
Denver	CO	17.04%	14.77%	22.86% (7)
Los Angeles	CA		34.61%	22.61% (8)
Washington	DC	23.49%		19.79% (9)

Source: Jones Lang LaSalle; (rank provided in parenthesis – (1) indicates highest value)

The Autumn 2011 *Kingsley Report* finds that the fixed<sup>13</sup> expenses of downtown Chicago office buildings are “43.5% above the national average compared to 23.8% below in the suburbs,” regardless of class. On a more positive note, with respect to fixed expenses in the largest markets, downtown Chicago buildings had the most substantial savings in 2009 at 18.4%. Additionally, the Chicago market utility expenses are 27.5% lower than the national average.

The EER comparison of cleaning, maintenance, utility, security and administrative expenses across a select number of cities indicates that (Figure 9):

- Chicago’s cleaning expenses are in the middle of the cost spectrum for the two higher square-foot brackets. Cleaning expenses are on average lower in Atlanta and Houston across all property groups; they are higher in Washington D.C. and San Francisco.
- Chicago utility costs are among the lowest across all the other markets and property groups.
- Security costs are on average higher in smaller and larger buildings in Chicago compared to other areas with the exception of San Francisco, which experiences higher costs for larger buildings.
- Chicago administrative costs are the highest for large office buildings (600,000 sq.ft. or more) compared to all other cities. The results are mixed for medium sized buildings.

Figure 9: Detailed building expenses from BOMA International - EER.

City	State	Cleaning (\$/sf)		Repair/Maintenance (\$/sf)		Utility (\$/sf)		Security (\$/sf)		Administrative (\$/sf)	
		300,000 - 599,999 sf	600,000+ sf	300,000 - 599,999 sf	600,000+ sf	300,000 - 599,999 sf	600,000+ sf	300,000 - 599,999 sf	600,000+ sf	300,000 - 599,999 sf	600,000+ sf
Atlanta	GA	\$0.92	\$0.99	\$1.31	\$1.48	\$2.24	\$2.02	\$0.64	\$0.74	\$1.43	\$1.14
<b>Chicago</b>	<b>IL</b>	<b>\$1.68</b>	<b>\$1.65</b>	<b>\$2.01</b>	<b>\$1.74</b>	<b>\$2.01</b>	<b>\$1.59</b>	<b>\$0.68</b>	<b>\$0.86</b>	<b>\$1.61</b>	<b>\$1.56</b>
Denver	CO	\$1.07	\$1.06	\$1.28	\$1.39	\$1.53	\$1.61	\$0.53	\$0.63	\$1.30	\$1.44
Houston	TX	\$1.14	\$1.09	\$2.12	\$1.91	\$2.14	\$1.95	\$0.91	\$0.71	\$1.25	\$0.99
Los Angeles	CA	\$1.17	\$1.71	\$1.63	\$2.28	\$2.08	\$2.05	\$0.85	\$1.19	\$1.71	\$1.15
New York	NY	\$2.98	\$2.50	\$2.98	\$3.00	\$4.45	\$4.59	\$0.70	\$1.05	\$1.76	\$1.50
Philadelphia	PA	\$2.15	\$1.90	\$1.70	\$1.91	\$3.31	\$2.84	\$0.46	\$0.73	\$1.31	\$1.14
San Francisco	CA	\$2.48	\$2.35	\$2.68	\$2.82	\$2.50	\$2.47	\$1.12	\$1.12	\$2.03	\$1.52
Washington	DC	\$2.04		\$2.33		\$3.41		\$0.98		\$2.29	

Source: BOMA International Experience Exchange Report 2011

<sup>13</sup> Fixed expenses are defined as: ‘expenditures for total land and building real estate taxes, building insurance such as fire, casualty, errors and omissions, personal property tax and other annual, periodic taxes such as excise tax, gross sales tax or leasing tax’ BOMA International Experience Exchange definition.

#### 4. Market share represented by BOMA/Chicago

BOMA/Chicago members represent 76.8%<sup>14</sup> of the Class A, B and C downtown<sup>15</sup> Chicago office market based on square footage. Breaking down the distribution between Class A and Class B buildings, BOMA/Chicago represents 93.7%<sup>14,15</sup> of the Class A office buildings and 73.3%<sup>14,15</sup> of the Class B office buildings in the Chicago downtown<sup>15</sup> office market. The actual square footage (sq.ft.) footprint of BOMA/Chicago is 141,538,602 sq.ft. (Figure 10), with 136,880,324 sq.ft. available in the CoStar Group database and directly comparable to the 124,890,555 sq.ft. in the first EIS (EIS 2006). The total square footage of BOMA/Chicago buildings has increased by 9.6%<sup>14</sup> compared to the EIS 2006. The total number of BOMA/Chicago member buildings currently stands at 252 (Figure 11), with 237 available for market comparison on CoStar Group. In 2006, BOMA/Chicago had a total of 271 buildings, with 236 available on CoStar Group.

A detailed analysis of Figure 10 indicates that BOMA/Chicago represents:

- 79.2%<sup>14</sup> of the overall market (Class A, B and C) among four key downtown submarkets (Central, East, West Loop and North Michigan Avenue.). A comparison with the same submarkets in the 2006 EIS indicates a decrease by 5.9% (84.2% in EIS 2006).
- 93.7%<sup>14</sup> of the Class A office space and 75.0%<sup>14</sup> of the Class B office space of four key downtown submarkets (Central, East and West Loop and North Michigan Avenue). BOMA/Chicago's penetration among the same submarkets as reported in the EIS 2006 was 89.6% for Class A and 81.9% for Class B.
- 84.9% of the West Loop, 81.8% of the Central Loop, 74.4% of the East Loop, 62.8% of the North Michigan Avenue and 58.5% of the River North (Class A, B and C) submarkets.
- 99.2% of the North Michigan Avenue, 98% of the West Loop, 91.8% of the Central Loop, 92.7% of the River North and 85% of the East Loop Class A submarkets.
- 83.7% of the East Loop, 82.1% of the Central Loop, 73.6% of the West Loop, 65.2% of the River North and 50.7% of the North Michigan Avenue Class B submarkets.

This report and the 2006 study also analyzed trends among BOMA/Chicago buildings totaling more than 100,000 sq.ft. versus the overall market. In this comparison, BOMA/Chicago represents 82.4%<sup>16</sup> of the Class A, B and C downtown<sup>17</sup> Chicago office market. Breaking down the distribution between Class A and B buildings, BOMA/Chicago represents 93.5%<sup>16,17</sup> of the Class A office buildings and 77.5%<sup>16,17</sup> of the Class B office buildings in the downtown<sup>17</sup> office market. The actual square footage (sq.ft.) footprint of BOMA/Chicago buildings with more than 100,000 sq.ft. is 140,206,959 sq.ft. (Figure 12) with 130,342,702 sq.ft. available in CoStar Group and directly comparable to the 123,329,280 sq.ft. in the 2006 EIS. The total square footage of BOMA/Chicago buildings has increased by 10.1%<sup>16</sup> compared to the previous study. The total number of BOMA/Chicago member buildings over 100,000 sq.ft.

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<sup>14</sup> Percentage refers to buildings available on the CoStar Group website.

<sup>15</sup> Downtown Chicago office market includes the following submarkets: Central, East and West Loop as well as North Michigan Avenue and River North. Submarkets with limited BOMA/Chicago presence in the 2006 EIS are not discussed beyond the figures (e.g. River North, O'Hare, South Loop etc.).

<sup>16</sup> Percentage refers to buildings available on the CoStar Group website.

<sup>17</sup> Downtown Chicago office market includes the following submarkets: Central, East and West Loop as well as North Michigan Avenue and River North.

currently stands at 226, with 216 available for market comparison on CoStar Group. In 2006, BOMA/Chicago had a total of 213 member buildings available on CoStar Group.

Figure 10: BOMA/Chicago membership compared to overall market.

Submarket Name	Class	Total RBA - all BOMA buildg.	Number of all BOMA buildings	Total RBA - all BOMA buildg.	Number of all BOMA buildings	Total RBA - all market	Number of all buildings	Total RBA - all market	Number of all buildings
Central Loop	A	20,336,889	22			22,151,277	26		
Central Loop	B	17,801,441	31			21,675,882	50		
Central Loop	C	1,859,131	6	39,997,461	59	5,075,362	39	48,902,521	115
East Loop	A	12,928,006	12			15,206,741	15		
East Loop	B	6,167,093	16			7,364,522	26		
East Loop	C	1,668,463	9	20,763,562	37	5,331,936	47	27,903,199	88
East Loop	-	972,452	2	972,452	2				
North Michigan Av.	A	6,251,790	12			6,302,869	13		
North Michigan Av.	B	4,121,602	13			8,128,042	53		
North Michigan Av.	C	337,500	1	10,710,892	26	2,627,392	33	17,058,303	99
North Michigan Av.	-	454,764	2	454,764	2				
O'Hare	A	3,068,703	11			8,382,951	39		
O'Hare	B	166,203	1	3,234,906	12	7,763,487	178	16,146,438	217
River North	A	3,975,421	5			4,287,729	7		
River North	B	7,050,491	6			10,816,113	102		
River North	C	192,200	1	11,218,112	12	4,084,127	127	19,187,969	236
River North	-	172,890	1	172,890	1				
West Loop	A	31,995,679	35			32,637,274	37		
West Loop	B	10,695,752	22			14,537,731	45		
West Loop	C	799,813	4	43,491,244	61	4,031,426	61	51,206,431	143
<b>Main submarket Total</b>		<b>131,016,283</b>	<b>212</b>	<b>131,016,283</b>	<b>212</b>	<b>180,404,861</b>	<b>898</b>	<b>180,404,861</b>	<b>898</b>
Lincoln Park	A	199,643	1	199,643	1				
River West	B	279,966	2	279,966	2				
South Loop	A	244,960	1						
South Loop	B	1,032,350	2						
South Loop	C	150,000	2	1,427,310	5				
South Loop	-	1,652,501	8	1,652,501	8				
South Chicago	A	429,728	1						
South Chicago	B	161,094	2						
South Chicago	C	30,663	1	621,485	4				
South Chicago*	-	1,683,136	5	1,683,136	5				
<b>Total office space based on</b>		<b>136,880,324</b>	<b>237</b>	<b>136,880,324</b>	<b>237</b>				
Retail space/Union station		1,152,952	3						
Education/government/other		3,505,326	12						
<b>Total BOMA/Chicago</b>		<b>141,538,602</b>	<b>252</b>						

Small BOMA/Chicago presence

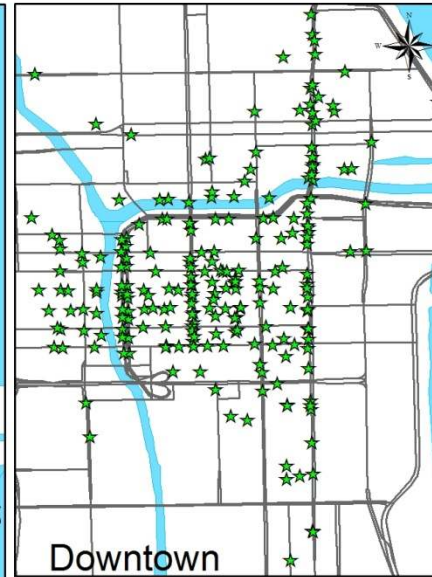
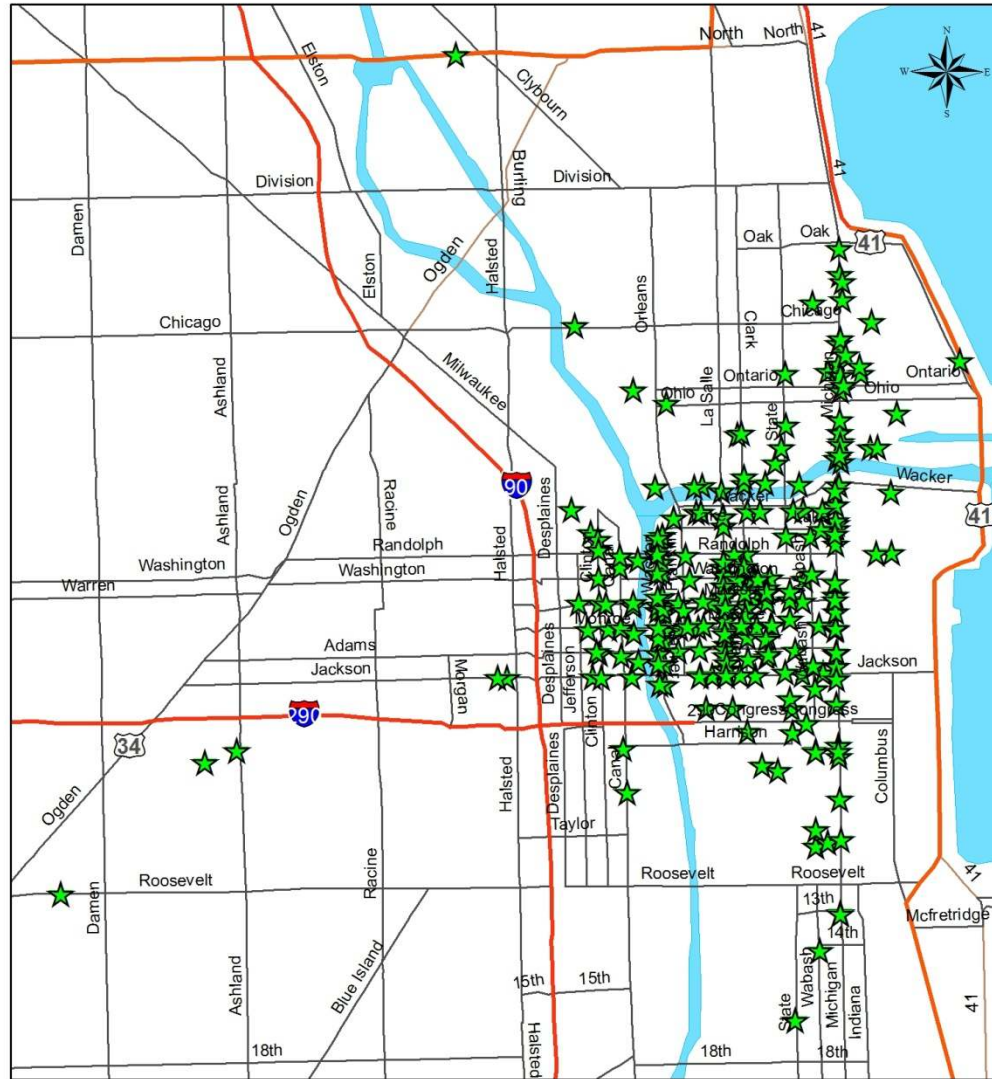
South Chicago\* includes: Museum of Science and Industry; BOMA/Chicago membership as of May 17th, 2012

An analysis of Figure 12 indicates that BOMA/Chicago represents:

- 82.5% of the overall market (Class A, B and C) among four key downtown submarkets (Central, East and West Loop and North Michigan Avenue). A comparison with the same submarkets in the 2006 EIS indicates a decrease of 7.0% (88.7% in EIS 2006).
- 93.5% of the Class A office space and 76.3% of the Class B office space of four key downtown submarkets (Central Loop, East Loop, West Loop and North Michigan Avenue). BOMA/Chicago's penetration among the same submarkets in EIS 2006 was 90.1% for Class A and 85.1% for Class B.
- 88% of the West Loop, 84.3% of the Central Loop, 81.3% of the River North, 77.8% of the East Loop, 67.4% of the North Michigan Avenue (Class A, B and C) submarkets.
- 98% of the West Loop, 95% of the North Michigan Avenue, 92.7% of the River North, 92.2% of the Central Loop, 85.1% of the East Loop Class A submarkets.
- 84.5% of the River North, 83.4% of the Central Loop, 74.1% of the West Loop, 80.2% of the East Loop, and 55.6% of the North Michigan Avenue Class B submarkets.



Figure 11: BOMA/Chicago member buildings.



Submarkets:

- OH: O'Hare
- LP: Lincoln Park
- RN: River North
- NM: North Michigan Avenue
- RW: River West
- WL: West Loop
- CL: Central Loop
- EL: East Loop
- SL: South Loop
- SC: South Chicago

Figure 12: BOMA/Chicago membership compared to overall market (only for buildings 100K or more sq.ft.)

Submarket Name	Class	Total RBA - all BOMA buildg. (100K or more)	Number of all BOMA buildings (100K or more)	Total RBA - all BOMA buildg. (100K or more)	Number of all BOMA buildings (100K or more)	Total RBA - all market (100K or more)	Number of all buildings (100K or more)	Total RBA - all market (100K or more)	Number of all buildings (100K or more)
Central Loop	A	20,336,889	22			22,050,428	25		
Central Loop	B	17,660,178	29			21,163,846	38		
Central Loop	C	1,788,786	4	39,785,853	55	3,953,418	16	47,167,692	79
East Loop	A	12,928,006	12			15,189,809	14		
East Loop	B	6,167,093	16			7,685,303	19		
East Loop	C	1,584,463	8	20,679,562	36	3,706,207	19	26,581,319	52
East Loop	-	972,452	2	972,452	2				
North Michigan Av	A	6,251,790	12			6,584,257	12		
North Michigan Av	B	4,028,801	12			7,240,653	22		
North Michigan Av	C	337,500	1	10,618,091	25	1,924,453	7	15,749,363	41
North Michigan Av	-	454,764	2	454,764	2				
O'Hare	A	3,068,703	11			8,055,384	34		
O'Hare	B	166,203	1	3,234,906	12	3,983,128	27	12,038,512	61
River North	A	3,975,421	5			4,287,729	7		
River North	B	6,944,331	4			8,218,555	11		
River North	C	192,200	1	11,111,952	10	1,168,965	7	13,675,249	25
River North	-	172,890	1	172,890	1				
West Loop	A	31,995,679	35			32,637,274	37		
West Loop	B	10,516,740	19			14,195,698	30		
West Loop	C	799,813	4	43,312,232	58	2,358,433	14	49,191,405	81
<b>Main submarket Total</b>		<b>130,342,702</b>	<b>201</b>	<b>130,342,702</b>	<b>201</b>	<b>164,403,540</b>	<b>339</b>	<b>164,403,540</b>	<b>339</b>
Lincoln Park	A	199,643	1	199,643	1				
River West	B	279,966	2	279,966	2				
South Loop	A	244,960	1						
South Loop	B	1,032,350	2						
South Loop	C	110,000	1	1,387,310	4				
South Loop	-	1,459,234	4	1,459,234	4				
South Chicago	A	429,728	1						
South Chicago	B	97,887	1	527,615	2				
South Chicago*	-	1,592,373	2	1,592,373	2				
<b>Total office space based</b>		<b>135,788,843</b>	<b>216</b>	<b>135,788,843</b>	<b>216</b>				
Retail space		1,089,290	2						
Education/government/other		3,328,826	8						
<b>Total BOMA/Chicago</b>		<b>140,206,959</b>	<b>226</b>						

Small BOMA/Chicago presence

South Chicago\* includes: Museum of Science and Industry; BOMA/Chicago membership as of May 17th, 2012

### 5. Employment and consumer spending in BOMA/Chicago buildings

Due to the absence of exact employment data on a building specific basis, the number of workers in BOMA/Chicago buildings was estimated through two methods. A third estimate is offered using the economic rather than tenant data from the CoStar Group database, which does not allow us to differentiate between submarket and class.

**First Method:** A detailed extraction of the number of employees on a building basis was taken from the CoStar Group tenant database. The data includes the number of employees in building tenant businesses where building management elected to report those numbers. This method accounted for 187,191 employees (Figure 13) as a minimum. Complete employee records were not always available for each building. Even so, we could calculate general percentages regarding the location and types of tenants in BOMA/Chicago buildings. Comparing the employees “accounted for” (see definition in Figure 13) in the current study with those in EIS 2006, we found a significant decrease of 24.6%. This trend can be explained in part by fewer buildings providing employee counts to CoStar currently compared to 2006.

**Second Method:** The second method employed estimated the number of employees (428,633 -- Figure 13) using the total square footage of BOMA/Chicago buildings (assuming zero vacancy) and the



average square footage-per-employee as determined by the Experience Exchange Report (EER). Using this computation, we also can make suppositions about vacancy and its correlation to employment. We learned that a 1% vacancy increase represented a 4,286 office employee decrease. It should be noted that the list of specific tenants is volatile; however, the total square footage of BOMA/Chicago buildings and the average square footage per person changes less dramatically, making it more reliable in estimating employees. Next we compared the estimated number of employees in the current study with those in the 2006 EIS, where a similar zero vacancy approach was used. The comparison indicated a significant increase (34.7%) caused by more than 10% additional square footage in the current study and the adjustment of the square feet per employee.

There is a significant difference (241,442) between the number of office employees “accounted for” in the CoStar Group data - First Method - and in the estimates based on square footage per employee – Second Method. This difference can be caused by: a) Vacancy that was not taken into account in the estimated number to allow for a maximum worker estimate the buildings could accommodate with zero vacancy. Vacancies during the study period were as low as 6.1% in certain submarkets/classifications and as high as 24.6%; and b) Some tenants did not have their total employee numbers listed on the CoStar Group database.

**Third Method:** The inclusion of economic data in the CoStar Group database allows for the observation of total number of employees, along with businesses and consumer spending among certain areas where BOMA/Chicago has significant presence (Figures 14 and 15). Figure 14 provides an insight on the economic impact of all commercial properties in the designated areas. Figure 15 focuses only on BOMA/Chicago buildings, while utilizing consumer spending power from Figure 14. The main contributors of office occupancy are Finance, Insurance, Real Estate and Service (or so-called F.I.R.E.S.) companies, which led to the extraction of the number of businesses and employees for those industries in addition to the overall numbers in Figure 14. The Loop area has 2 times the number of businesses, 3.8 times more human capital, and 2.4 times more total spending compared to the area north of the Chicago River, although the consumer spending per capita is less (Fig. 14).

Shifting the focus to BOMA/Chicago member buildings, the number of workers and consumer spending was estimated for the same three zones as the overall market. The number of workers was estimated by applying the downtown Chicago square-foot-per-worker level from the EER to the rentable building areas within BOMA/Chicago buildings plus occupancy levels (Figure 15). For example, comparing the 289,709 office workers in the Loop (Figure. 15) with the 263,602 Finance, Insurance, Real Estate and Services (FIRES) employees in the area (Figure 14) indicates that employees from other industries beyond FIRES are present in BOMA/Chicago member buildings. Consumer spending was estimated by applying the annual consumer spending per capita (Figure 14) to the number of workers in BOMA/Chicago buildings (Figure 15). Figure 15 also shows that office workers in BOMA/Chicago member buildings in the Loop contribute \$7.5 billion in annual consumer spending power or 79.5% of the Loop’s spending. Office workers housed in BOMA/Chicago member buildings in the O’Hare area contribute 68.3% of the area’s spending power.

Figure 13: Accounted vs. estimated number of employees.

Submarket Name	Class	Number of all BOMA buildings	Accounted number of employees	Estimated number of employees*	Accounted number of employees	Estimated number of employees*
Central Loop	A	22	26,034	63,654		
Central Loop	B	31	23,075	55,718		
Central Loop	C	6	1,583	5,819	50,692	125,192
East Loop	A	12	25,076	40,465		
East Loop	B	16	8,208	19,303		
East Loop	C	9	4,737	5,222		
East Loop	-	2	2	3,044	38,023	68,033
North Michigan Av.	A	12	12,210	19,568		
North Michigan Av.	B	13	6,344	12,901		
North Michigan Av.	C	1	23	1,056		
North Michigan Av.	-	2	94	1,423	18,671	34,948
O'Hare	A	11	6,378	9,605		
O'Hare	B	1	121	520	6,499	10,125
River North	A	5	4,357	12,443		
River North	B	6	6,794	22,068		
River North	C	1	93	602		
River North	-	1	-	541	11,244	35,654
West Loop	A	35	42,536	100,146		
West Loop	B	22	17,401	33,478		
West Loop	C	4	1,182	2,503	61,119	136,127
<b>Sub-Total</b>		<b>212</b>	<b>186,248</b>	<b>410,079</b>	<b>186,248</b>	<b>410,079</b>
Lincoln Park	A	1	5	625	5	625
River West	B	2	375	876	375	876
South Loop	A	1	21	767		
South Loop	B	2	25	3,231		
South Loop	C	2	1	469		
South Loop	-	8	14	5,172	61	9,640
South Chicago	A	1	-	1,345		
South Chicago	B	2	234	504		
South Chicago	C	1	-	96		
South Chicago	-	5	268	5,268	502	7,213
<b>Overall - Total</b>		<b>237</b>	<b>187,191</b>	<b>428,633</b>	<b>187,191</b>	<b>428,633</b>

Accounted number of employees are based on the available number of employees from CoStar Group

Estimated number of employees\* is calculated based on total Rentable Building Area (RBA) and the average sf per office worker reported at the 2011 BOMA experience exchange report assuming no vacancy

Figure 14: Employment and spending trends - all office buildings.

	Zone 1 - Loop	Zone 2 - North of Chicago River	Zone 3 - O'Hare
Total number of Finance Insurance, Real Estate (FIRE) & Services businesses	10,866	5,096	574
Total Finance Insurance, Real Estate (FIRE) & Services (FIRES) employment	263,602	68,352	7,202
Total Businesses	14,544	7,586	883
Total Employment	364,325	121,011	13,487
Per Capita Income - 2011 (downtown approximation)	\$52,333	\$63,074	\$30,872
Total Annual consumer spending per capita - 2011 (downtown approximation)	<b>\$26,018</b>	<b>\$33,109</b>	<b>\$16,342</b>
Total Annual consumer spending of all employees - 2010 (downtown approximation)	<b>\$9,479,007,850</b>	<b>\$4,006,553,199</b>	<b>\$220,404,554</b>

Data source: CoStar Group

Figure 15: Economic footprint of workers in BOMA/Chicago member buildings.

Estimated consumer spending	Zone 1 - Loop	Zone 2 - North of Chicago River	Zone 3 - O'Hare
BOMA- RBA - 1Q2012	107,128,677	20,884,729	3,659,591
Occupancy % - 1Q2012	86.40%	83.50%	80.50%
Occupied sf - BOMA buildings	92,559,177	17,438,749	2,945,971
Estimated number of workers in BOMA buildings based on avg. sf/worker from <i>EER</i> - 319.5 sf/employees	<b>289,709</b>	<b>54,583</b>	<b>9,221</b>
Estimated consumer spending based on workers in BOMA buildings - 2011 values	<b>\$7,537,652,713</b>	<b>\$1,807,191,246</b>	<b>\$150,687,202</b>
Estimated % spending of workers in BOMA buildings compared to overall consumer spending	<b>79.52%</b>	<b>45.11%</b>	<b>68.37%</b>

Data sources: CoStar Group, BOMA International *EER*

An Economic Impact Study<sup>18</sup> commissioned by BOMA International in 2012 focused on market share, employment and consumer spending. It revealed that BOMA International members represent 9 billion sq.ft. across 94 markets. This square footage can support 44.3 million office jobs, 1.56 million supported jobs<sup>19</sup> and a \$205 billion GDP contribution. The application of area specific multipliers allowed the identification of each BOMA's impact in their respective economies. The study found that BOMA/Chicago's share within BOMA International was 2.15% (about 213 million sq.ft.) and estimates the job effect to be 72,208 total jobs [47,952 – direct<sup>18</sup> jobs (associated with the operation of a building) and 24,256 – indirect<sup>18</sup> jobs (“generated by the direct outlays or expenditures”)] beyond the tenant employees, with a contribution of \$3.5<sup>18</sup> billion to the state economy and \$1.04<sup>18</sup> billion in new taxable personal earnings.

## 6. Estimated number of employees by industry type in BOMA/Chicago buildings

The identification of the type of industries and their size (number of employees) represented in BOMA/Chicago member buildings is significant as it lets BOMA/Chicago benchmark building employment trends based on area industry changes. The 187,191 “accounted” employees in BOMA/Chicago member buildings (Figure 13) represented 17 industries (Figures 16 and 17).

The largest number of employees in BOMA/Chicago buildings work in financial/investment (14.9%) and business services (13.7%), followed by law firms (12.4%) (Figures 16 and 17). Other findings from the two aforementioned figures include:

- When accounting for all three office class types, West Loop (32.8%) followed by Central Loop (27.2%) have the highest concentration of employees.
- Financial services employees are highly concentrated (based on number of employees) in the West Loop (22.2%) and law firms are equally concentrated in the Central Loop (22.4%).

<sup>18</sup> Fuller S., “Where America goes to work: The Contribution of Office Building Operations to the Economy, 2012”, Prepared for the Buildings Owners and Managers Association (BOMA) International, 2012. [http://www.boma.org/SiteCollectionDocuments/Org/Docs/Advocacy/2011\\_BOMA\\_Econ\\_Impct\\_PDF-Proof.pdf](http://www.boma.org/SiteCollectionDocuments/Org/Docs/Advocacy/2011_BOMA_Econ_Impct_PDF-Proof.pdf); <http://www.boma.org/SiteCollectionDocuments/Org/Docs/Advocacy/Fuller%20Study/IL%20-%20Commercial%20Real%20Estate's%20Contribution%20to%20the%20Economy.pdf>

<sup>19</sup> Supported jobs: “excludes jobs that directly support, manage or maintain office buildings” (Fuller, 2012).

- Business services have the highest concentration of employees in North Michigan Avenue (18.6%) while financial services in the Central Loop are at 17.3% when compared to all other industries within these submarkets.
- As it relates to Class A buildings, West Loop have the highest concentration of employees (22.8%) followed by Central (13.9%) and East Loop (13.4%) Class A. Central Loop Class B is close behind with a concentration of 12.3%.
- The comparison among Class A buildings indicates that largest numbers of employees are from financial/investment (16.9%), law firms (14.1%) and insurance industries (11.8%). In contrast, business services (13.4%), financial/investment (12.6%) and law firms (10.5%) are more frequent among Class B buildings.

To enable comparisons between the current study and the 2006 EIS, classification categories used in the first EIS were combined where possible to represent some of the same categories for the current study. This report classifies employees based on the categories used by CoStar. Figure 18 compares the current study with the 2006 EIS trends across similar industries. The comparison suggests a decrease in employment across all industry categories with the only exception being the personal<sup>20</sup> services industry.

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<sup>20</sup> “Personal Services” industry includes foundations, associations and companies offering services to individuals rather than to other companies

Figure 16: BOMA/Chicago aggregate number of employees by submarket.

Submarket Name	Accounting	Agriculture/ Mining/Utilities	Business Services	Print and Electronic Communications	Computers/ Software/ Programming/ Data Processing	Engineers/ Architects/ Construction	Financial/ Investment	Government/Schools/ Public Service	Insurance	Law Firms/ Law Services	Manufacturing	Medical	Not Identified	Personal Services	Real Estate	Retailers/W holesale	Travel/ Transportation	Total
Central Loop	662	778	7,937	819	895	1,436	8,780	6,603	2,598	11,401	1,077	320	2	3,812	1,936	1,441	195	50,692
East Loop	1,934	217	4,184	2,827	1,823	2,977	899	3,239	7,399	1,923	251	2,902	2	4,475	1,839	1,027	105	38,023
North Michigan Av.	222	274	3,474	1,881	824	467	2,061	619	86	507	941	2,201	0	1,964	1,402	1,702	46	18,671
O'Hare	70	14	595	1,168	291	600	537	24	161	3	1,594	304	0	423	194	483	38	6,499
River North	21	41	1,575	2,251	717	68	2,063	78	38	1,334	371	18	0	1,157	562	910	40	11,244
West Loop	3,308	238	7,851	3,129	2,935	1,653	13,621	695	5,990	8,115	2,678	998	0	4,119	2,071	1,487	2,231	61,119
<b>Sub-Total</b>	<b>6,217</b>	<b>1,562</b>	<b>25,616</b>	<b>12,075</b>	<b>7,485</b>	<b>7,201</b>	<b>27,961</b>	<b>11,258</b>	<b>16,272</b>	<b>23,283</b>	<b>6,912</b>	<b>6,743</b>	<b>4</b>	<b>15,950</b>	<b>8,004</b>	<b>7,050</b>	<b>2,655</b>	<b>186,248</b>
Lincoln Park	-	-	2	-	-	-	2	-	-	-	-	1	-	-	-	-	-	5
River West	3	-	45	108	41	20	2	-	25	14	-	96	-	18	3	-	-	375
South Loop	-	-	-	26	-	-	4	-	-	-	-	1	-	25	1	4	-	61
South Chicago	-	3	82	18	49	98	0	0	-	-	18	146	-	59	14	15	-	502
<b>Overall - Total</b>	<b>6,220</b>	<b>1,565</b>	<b>25,745</b>	<b>12,227</b>	<b>7,575</b>	<b>7,319</b>	<b>27,969</b>	<b>11,258</b>	<b>16,297</b>	<b>23,297</b>	<b>6,930</b>	<b>6,987</b>	<b>4</b>	<b>16,052</b>	<b>8,022</b>	<b>7,069</b>	<b>2,655</b>	<b>187,191</b>

Figure 17: BOMA/Chicago detailed number of employees by submarket and class.

Submarket Name	Class	Accounting	Agriculture/ Mining/Utilities	Business Services	Print and Electronic Communications	Computers/ Software/ Programming/ Data Processing	Engineers/ Architects/ Construction	Financial/ Investment	Government/Schools/ Public Service	Insurance	Law Firms/ Law Services	Manufacturing	Medical	Not Identified	Personal Services	Real Estate	Retailers/W holesale	Travel/ Transportation	Total
Central Loop	A	564	665	5,220	113	475	678	4,959	545	2,045	6,748	620	33	2	1,486	1,220	549	112	26,034
Central Loop	B	79	93	2,558	233	418	716	3,813	6,003	538	4,358	454	287	0	1,910	689	855	71	23,075
Central Loop	C	19	20	159	473	2	42	8	55	15	295	3	0	0	416	27	37	12	1,583
East Loop	A	1,877	101	3,001	2,509	943	1,958	602	1,994	6,596	1,199	52	726	0	1,478	1,543	434	63	25,076
East Loop	B	22	82	974	205	805	683	40	930	803	571	87	459	0	2,036	233	258	20	8,208
East Loop	C	35	34	209	113	75	336	257	315	0	153	112	1,717	2	959	63	335	22	4,737
East Loop	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
North Michigan Av.	A	29	238	2,397	1,192	349	335	1,846	129	63	492	98	1,265	0	1,231	1,182	1,331	33	12,210
North Michigan Av.	B	193	36	1,076	689	475	132	215	490	23	15	843	936	0	726	200	282	13	6,344
North Michigan Av.	C	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	20	-	23
North Michigan Av.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	20	69	-	94
O'Hare	A	70	14	595	1,168	291	500	537	24	149	0	1,594	302	0	423	190	483	38	6,378
O'Hare	B	-	-	-	-	-	100	-	-	12	3	-	2	-	-	4	-	-	121
River North	A	-	32	681	73	113	5	1,139	0	33	1,334	20	2	-	854	34	37	-	4,357
River North	B	21	9	870	2,174	604	42	924	75	5	-	351	9	-	271	526	873	40	6,794
River North	C	-	-	24	4	-	21	-	3	-	-	-	7	-	32	2	-	-	93
River North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
West Loop	A	2,173	178	4,842	635	2,023	370	10,727	458	4,878	6,707	2,104	903	0	2,629	906	832	2,171	42,536
West Loop	B	524	56	2,881	2,475	821	1,137	2,888	225	1,112	1,391	574	86	0	1,415	1,143	641	32	17,401
West Loop	C	611	4	128	19	91	146	6	12	0	17	0	9	0	75	22	14	28	1,182
<b>Sub-Total</b>		<b>6,217</b>	<b>1,562</b>	<b>25,616</b>	<b>12,075</b>	<b>7,485</b>	<b>7,201</b>	<b>27,961</b>	<b>11,258</b>	<b>16,272</b>	<b>23,283</b>	<b>6,912</b>	<b>6,743</b>	<b>4</b>	<b>15,950</b>	<b>8,004</b>	<b>7,050</b>	<b>2,655</b>	<b>186,248</b>
Lincoln Park	A	-	-	2	-	-	-	2	-	-	-	-	1	-	-	-	-	-	5
River West	B	3	-	45	108	41	20	2	-	25	14	-	96	-	18	3	-	-	375
South Loop	A	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	2	-	21
South Loop	B	-	-	-	21	-	-	4	-	-	-	-	-	-	-	-	-	-	25
South Loop	C	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
South Loop	-	-	-	-	4	-	-	-	-	-	-	-	1	-	6	1	2	-	14
South Chicago	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Chicago	B	-	-	15	-	-	-	-	-	-	-	18	137	-	53	11	-	-	234
South Chicago	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Chicago	-	-	3	67	18	49	98	-	-	-	-	-	9	-	6	3	15	-	268
<b>Overall - Total</b>		<b>6,220</b>	<b>1,565</b>	<b>25,745</b>	<b>12,227</b>	<b>7,575</b>	<b>7,319</b>	<b>27,969</b>	<b>11,258</b>	<b>16,297</b>	<b>23,297</b>	<b>6,930</b>	<b>6,987</b>	<b>4</b>	<b>16,052</b>	<b>8,022</b>	<b>7,069</b>	<b>2,655</b>	<b>187,191</b>

Figure 18: Comparison table of the number of employees in the 2006 EIS with the current trends.

Type	Employees -2006 EIS	Employees - 2012 EIS	% change
Financial/ Investment	52,197	27,969	-46.42%
Business Services	28,200	25,745	-8.71%
Law Firms/ Law Services	37,619	23,297	-38.07%
Insurance	23,056	16,052	-30.38%
Personal Services	11,465	16,297	42.15%
Print and Electronic Communications	14,574	12,227	-16.10%
Government/Schools/ Public Service	14,844	11,258	-24.16%

Financial/Investment - sums from EIS2006: Banks/Financial Institutions & investments

Business Service - sums from EIS2006: Business consultants & business services & advertising

Personal Services - sums from EIS2006: organizations, personal services

Print and Electronic Communications - sums from EIS2006: printers/publishers, telecommunications & cable

## 7. Businesses in BOMA/Chicago buildings

This research revealed the existence of 10,186 businesses in BOMA/Chicago buildings, an increase of 30% from the 7,807 figure reported in the 2006 study. This significant percentage increase is a positive step in the strengthening of area economy. To make comparisons to the 2006 EIS, the categories used in that study were combined where possible. Using this strategy, financial/investment and personal service firms maintain their dominance in the West and East Loop submarkets, respectively. A review of data compiled from the CoStar Group database regarding the businesses in BOMA/Chicago buildings shows (Figures 19 and 20):

- Personal services<sup>21</sup> tenants (17.8%) followed by the business services (14.3%) and financial services (13.6%) tenants are most predominant in BOMA/Chicago buildings.
- Central Loop has a higher concentration of businesses (28.3%) compared to West Loop (26.6%). East Loop follows with 21.4% of overall downtown tenants.
- Central Loop is dominated by personal services (20.1%) and financial services (17.4%). Similarly, East Loop is dominated by personal services (19.8%) and business services (13.4%). This statistic is reversed for North Michigan Avenue, where business services constitutes the highest category followed by personal services (18.4% vs. 17.3%). West Loop is home to many financial/investment services (20.7%) followed closely by personal services (15.8%) and business services (15.7%) tenants.
- West Loop Class A and Central Loop Class B share the highest concentration of overall number of tenants with 15.6% and 15.4%, respectively. Central Loop Class A and West Loop Class B follow with 11.3% and 10.3%, respectively.
- In an analysis of Class A buildings, the largest numbers of businesses are financial/investment (18.3%), personal services (16.7%) and business services (15.7%). In contrast, within Class B buildings personal services (19.5%), business services (12.9%) and law (10.5%) constitute the greatest number of businesses, followed by the Finance/Investment industry (10.4%).

<sup>21</sup> "Personal Services" industry type includes: foundations, associations and companies offering services to individuals rather than to other companies.

Figure 19: BOMA/Chicago aggregate industry types by submarket.

Submarket Name	Accounting	Agriculture/ Mining/Utilities	Business Services	Print and Electronic Communications	Computers/ Software/ Programming/ Data Processing	Engineers/ Architects/ Construction	Financial/ Investment	Government/Schools/ Public Service	Insurance	Law Firms/ Law Services	Manufacturing	Medical	Not Identified	Personal Services	Real Estate	Retailers/W holesale	Travel/ Transportation	Total
Central Loop	36	27	315	45	68	55	494	90	70	518	35	50	16	572	167	261	24	2,843
East Loop	28	31	288	82	53	60	108	68	42	108	40	438	14	425	111	228	25	2,149
North Michigan Av.	15	28	271	109	37	20	150	33	11	16	36	128	4	254	155	191	11	1,469
O'Hare	2	5	56	15	24	13	31	6	6	2	27	19	-	40	20	16	4	286
River North	3	9	88	21	13	12	47	6	5	16	42	10	-	75	30	225	5	607
West Loop	47	30	419	66	153	86	554	33	147	180	58	48	8	423	165	228	28	2,673
<b>Sub-Total</b>	<b>131</b>	<b>130</b>	<b>1437</b>	<b>338</b>	<b>348</b>	<b>246</b>	<b>1384</b>	<b>236</b>	<b>281</b>	<b>840</b>	<b>238</b>	<b>693</b>	<b>42</b>	<b>1789</b>	<b>648</b>	<b>1149</b>	<b>97</b>	<b>10,027</b>
Lincoln Park	0	0	1	0	1	0	1	0	0	0	0	4	0	2	1	6	0	16
River West	1	-	6	3	2	2	1	2	2	2	2	7	-	5	3	2	1	41
South Loop	-	-	2	5	-	-	4	8	-	-	-	1	-	6	3	10	-	39
South Chicago	-	1	7	2	5	4	0	3	-	-	2	22	-	9	1	6	1	63
<b>Overall - Total</b>	<b>132</b>	<b>131</b>	<b>1453</b>	<b>348</b>	<b>356</b>	<b>252</b>	<b>1390</b>	<b>249</b>	<b>283</b>	<b>842</b>	<b>242</b>	<b>727</b>	<b>42</b>	<b>1811</b>	<b>656</b>	<b>1173</b>	<b>99</b>	<b>10,186</b>

Figure 20: BOMA/Chicago detailed industry types by submarket and class

Submarket Name	Class	Accounting	Agriculture/ Mining/Utilities	Business Services	Print and Electronic Communications	Computers/ Software/ Programming/ Data Processing	Engineers/ Architects/ Construction	Financial/ Investment	Government/Schools/ Public Service	Insurance	Law Firms/ Law Services	Manufacturing	Medical	Not Identified	Personal Services	Real Estate	Retailers/ Wholesale	Travel/ Transportation	Total
Central Loop	A	15	11	144	19	33	20	232	24	31	176	20	15	7	203	74	103	13	1,140
Central Loop	B	16	15	145	20	32	30	256	58	38	291	15	34	9	340	87	147	9	1,542
Central Loop	C	5	1	26	6	3	5	6	8	1	51	0	1	0	29	6	11	2	161
East Loop	A	12	17	141	52	32	27	68	29	29	41	13	24	2	131	58	82	11	769
East Loop	B	5	7	80	19	13	27	18	25	13	43	9	68	4	148	30	60	8	577
East Loop	C	11	7	67	11	8	6	22	13	0	24	18	346	8	143	23	86	6	799
East Loop	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	4
North Michigan Av.	A	5	19	146	50	23	6	109	15	6	12	14	36	4	152	119	89	8	813
North Michigan Av.	B	10	9	120	59	14	14	41	18	5	4	22	92	-	97	34	58	3	600
North Michigan Av.	C	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	5	-	8
North Michigan Av.	-	-	-	4	-	-	-	-	-	-	-	-	-	-	3	2	39	-	48
O'Hare	A	2	4	56	15	24	11	31	5	5	1	27	18	-	40	18	16	4	277
O'Hare	B	-	1	-	-	-	2	-	1	1	-	-	1	-	-	2	-	-	9
River North	A	1	3	15	3	3	2	23	2	3	14	1	1	-	25	11	7	-	114
River North	B	2	6	67	16	10	7	23	3	2	2	41	7	-	45	18	213	5	467
River North	C	-	-	6	2	-	3	-	1	-	-	-	2	-	5	1	-	-	20
River North	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	5	-	6
West Loop	A	21	16	233	31	89	31	398	20	95	111	33	19	4	233	86	127	17	1,564
West Loop	B	23	12	177	32	55	42	153	11	51	65	25	22	4	182	76	95	8	1,033
West Loop	C	3	2	9	3	9	13	3	2	1	4	0	7	0	8	3	6	3	76
<b>Sub-Total</b>		<b>131</b>	<b>130</b>	<b>1437</b>	<b>338</b>	<b>348</b>	<b>246</b>	<b>1384</b>	<b>236</b>	<b>281</b>	<b>840</b>	<b>238</b>	<b>693</b>	<b>42</b>	<b>1789</b>	<b>648</b>	<b>1149</b>	<b>97</b>	<b>10,027</b>
Lincoln Park	A	-	-	1	-	1	-	1	-	-	-	-	4	-	2	1	6	-	16
River West	B	1	-	6	3	2	2	1	2	2	2	2	7	-	5	3	2	1	41
South Loop	A	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	4
South Loop	B	-	-	-	1	-	-	3	1	-	-	-	-	-	-	-	-	-	5
South Loop	C	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	2
South Loop	-	-	-	-	3	-	-	1	6	-	-	-	1	-	6	3	8	-	28
South Chicago	A	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
South Chicago	B	-	-	4	-	-	-	-	-	-	-	2	18	-	5	-	3	-	32
South Chicago	C	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
South Chicago	-	-	1	3	2	5	4	-	1	-	-	-	4	-	4	1	3	1	29
<b>Overall - Total</b>		<b>132</b>	<b>131</b>	<b>1453</b>	<b>348</b>	<b>356</b>	<b>252</b>	<b>1390</b>	<b>249</b>	<b>283</b>	<b>842</b>	<b>242</b>	<b>727</b>	<b>42</b>	<b>1811</b>	<b>656</b>	<b>1173</b>	<b>99</b>	<b>10,186</b>

The comparison of the number of businesses in the current study with those in the 2006 EIS, required certain aggregations of the 2006 EIS business categories which are shown in Figure 21. This figure compares the trends between the two studies, although a direct comparison is very difficult beyond the identical categories (law firms, medical and real estate). The results suggest a significant increase in all of the categories below with the only exception being the law firms.

Figure 21: Comparison table of the number of businesses in the 2006 EIS with the current trends.

Type	Employees -2006 EIS	Employees -2012 EIS	% change
Personal Services	506	1,811	257.91%
Business Services	772	1,453	88.21%
Financial/ Investment	769	1,390	80.75%
Retailers/Wholesale	525	1,173	123.43%
Law Firms/ Law Services	1,681	842	-49.91%
Medical	572	727	27.10%
Real Estate	382	656	71.73%

Personal Services - sums from EIS 2006: organizations, personal services

Business Services - sums from EIS 2006: Business consultants & business services & advertising

Financial/Investment - sums from EIS 2006: Banks/Financial Institutions & investments

## 8. Geographic distribution of companies in BOMA/Chicago buildings (local, national, international)

Local companies dominate BOMA/Chicago member buildings. The current study identifies regional companies as those with offices in Chicago and at least one of the following states: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin. Below are the observations that can be made regarding the geographic distribution of businesses with at least one office in Chicago are (Figure 22):

- BOMA/Chicago buildings house companies/tenants with coverage among four geographic levels [local (71.2%), national (14.9%) international (12.4%) and regional (1.4%)].
- Central Loop has the highest concentration of local (31.6%) and regional companies (30.4%) when compared to all other downtown submarkets. In both cases, West Loop follows with 25.1% and 29.7%, respectively.
- West and Central Loop have the highest concentration of international and national tenants (33.4% and 32.6% for the first submarket, 24.4% and 21.3% for the second submarket).
- The highest submarket concentration of local companies is in Central Loop Class B properties (17.2%) followed by West Loop Class A properties (13%).
- The highest submarket concentration of national companies is in West Loop Class A properties (20.1%) followed by West Loop Class B properties (11.5%) and Central Loop Class A properties (10.2%).
- The highest submarket concentration of international companies is in the West Loop Class A properties (23.1%) followed by the Central Loop Class A properties (15.1%).



The most significant finding from the comparison of tenant geographic distribution between the current and 2006 EIS is the 91.4% increase in the number of international tenant businesses (Figure 23). Although local companies continue their dominance and increased their presence by 27%, the increase among international companies is substantial. National tenants increased their presence by 7.6%. All submarkets experienced an increase in their number of tenants except of Central Loop, where they decreased by 6% (Fig. 23).

Figure 22: Geographic distribution of tenants in BOMA/Chicago buildings

Submarket Name	Class	Local	Regional	National	International	Total
Central Loop	A	773	20	156	191	1,140
Central Loop	B	1,249	23	154	116	1,542
Central Loop	C	144	1	14	2	161
East Loop	A	456	12	154	147	769
East Loop	B	431	13	80	53	577
East Loop	C	713	8	51	27	799
East Loop	-	4	0	0	0	4
North Michigan Av.	A	615	5	104	89	813
North Michigan Av.	B	441	9	92	58	600
North Michigan Av.	C	7	0	1	0	8
North Michigan Av.	-	40	0	4	4	48
O'Hare	A	164	2	59	52	277
O'Hare	B	5	0	2	2	9
River North	A	70	0	22	22	114
River North	B	289	11	108	59	467
River North	C	18	0	2	0	20
River North	-	5	0	1	0	6
West Loop	A	947	18	306	293	1,564
West Loop	B	723	18	175	117	1,033
West Loop	C	48	1	15	12	76
<b>Sub-Total</b>		<b>7,142</b>	<b>141</b>	<b>1,500</b>	<b>1,244</b>	<b>10,027</b>
Lincoln Park	A	4	1	6	5	16
River West	B	33	0	5	3	41
South Loop	A	4	0	0	0	4
South Loop	B	2	0	0	3	5
South Loop	C	2	0	0	0	2
South Loop	-	23	0	5	0	28
South Chicago	A	1	0	0	0	1
South Chicago	B	30	1	1	0	32
South Chicago	C	1	0	0	0	1
South Chicago	-	17	0	2	10	29
<b>Overall - Total</b>		<b>7,259</b>	<b>143</b>	<b>1,520</b>	<b>1,265</b>	<b>10,187</b>

Figure 23: Comparative geographic distribution of tenants in BOMA/Chicago buildings currently vs. 2006 EIS

Submarket	Local 12	Local 06	Regional 12	National 12	National 06	International 12	International 06	Total 12	Total 06	% change
Central Loop	2,166	2,411	44	324	452	309	163	2,843	3,026	-6.05%
East Loop	1,604	1,385	33	285	258	227	115	2,149	1,758	22.24%
North Michigan Av.	1,103	859	14	201	216	151	118	1,469	1,193	23.13%
O'Hare	169	83	2	61	66	54	28	286	177	61.58%
River North*	382	79	11	133	35	81	13	607	127	377.95%
West Loop**	1,718	869	37	496	373	422	223	2,673	1,465	82.46%
<b>Sub-Total</b>	<b>7,142</b>	<b>5,686</b>	<b>141</b>	<b>1,500</b>	<b>1,400</b>	<b>1,244</b>	<b>660</b>	<b>10,027</b>	<b>7,746</b>	<b>29.45%</b>
Lincoln Park	4		1	6		5		16	0	
River West	33	29	0	5	10	3	1	41	40	2.50%
South Loop	31		0	5		3		39	0	
South Chicago	49	0	1	3	1	10	0	63	1	
<b>Overall - Total</b>	<b>7,259</b>	<b>5,715</b>	<b>143</b>	<b>1,519</b>	<b>1,411</b>	<b>1,265</b>	<b>661</b>	<b>10,186</b>	<b>7,787</b>	<b>30.81%</b>

River North\*: BOMA expanded coverage in this submarket; West Loop\*\*: New construction took place after EIS 2006

BOMA/Chicago does not have currently any buildings at the North Chicago Industrial and Northwest City submarket therefore revising the total number of companies in the EIS 2006 to 7,787 from 7,807

## 9. Number of company headquarters

A total of 54.6% of the largest Chicago based privately and publicly-held companies (based on revenue) are located in BOMA/Chicago member buildings, according to Crain's Chicago Business and CNN's list of publicly held companies. Specifically, BOMA/Chicago buildings capture 74.2% of the publicly-traded companies and 42.4% of the privately held companies with headquarters in Chicago. Some findings from the largest companies with corporate headquarters in BOMA/Chicago buildings by submarket/class are:

- The largest concentration of corporate headquarters are in the West Loop submarket (41%) followed by 18% in the Central Loop.
- Major corporations are more likely to locate in Class A buildings in West, Central and East Loop. Next in line are West and Central Loop Class B buildings, North Michigan Class A and River North Class B.

Figure 24: Number of major company headquarters in BOMA/Chicago buildings.

Submarket Name	Class	Major Company Headquarters in BOMA/Chicago buildings*
Central Loop	A	11
Central Loop	B	7
Central Loop	C	0
East Loop	A	10
East Loop	B	4
East Loop	C	0
North Michigan Av.	A	7
North Michigan Av.	B	2
North Michigan Av.	C	0
O'Hare	A	2
O'Hare	B	0
River North	A	2
River North	B	7
River North	C	0
West Loop	A	29
West Loop	B	11
West Loop	C	1
<b>Sub-Total</b>		<b>93</b>
South Loop	A	0
South Loop	B	0
South Loop	C	1
<b>Overall - Total</b>		<b>94</b>

\* Includes largest privately held companies in the Chicago area, based on revenue (based on Crain's list) and all Public companies (based on CNN)

## 10. Fortune 500 companies' headquarters

Out of the thirty Fortune 500 headquarters in the greater Chicago area six<sup>22</sup> are headquartered within Chicago city limits; all of which are located in BOMA/Chicago buildings. The greater Chicago area had the same number of Fortune 500 headquarters in 2006 with seven of them inside the city limits. The Central Loop captures three, the West Loop has two and East Loop has one (Figure 25).

<sup>22</sup> Fortune 500 companies in BOMA/Chicago buildings include: United, Exelon, Telephone & Data Systems, Aon, Boeing and R.R. Donnelley

Figure 25: Unique headquarters of Chicago based Fortune 500 companies

Submarket Name	Class	Number of F500 companies with HQ in BOMA buildings
Central Loop	A	2
Central Loop	B	1
East Loop	A	1
West Loop	A	2
<b>Sub-Total</b>		<b>6</b>

## 11. Number of public companies (NYSE and NASDAQ)<sup>23</sup>

There are 66 publicly traded companies with headquarters within the Chicago city limits, of which 49 (74.2%) are located in BOMA/Chicago buildings. Close to half or 42.8% of these companies maintain headquarters in the West Loop, while 18.4% are in the East Loop and 16.3% in the Central Loop (Figure 26).

Figure 26: Unique headquarters of Chicago based publicly traded companies.

Submarket Name	Class	Number of Publicly Traded Companies with HQ in BOMA buildings
Central Loop	A	5
Central Loop	B	3
Central Loop	C	0
East Loop	A	6
East Loop	B	3
East Loop	C	0
North Michigan Av.	A	4
North Michigan Av.	B	1
North Michigan Av.	C	0
O'Hare	A	1
O'Hare	B	0
River North	A	1
River North	B	4
River North	C	0
West Loop	A	16
West Loop	B	5
West Loop	C	0
<b>Total</b>		<b>49</b>

## 12. Impact of BOMA/Chicago labor contracts (engineering, janitorial and security)

Since its founding in 1902, BOMA/Chicago has represented its building members in the negotiation of labor agreements and has acted as their collective bargaining agent with unions representing the buildings' engineers and their security and janitorial employees. Currently, a total of 201 (79.7%) BOMA/Chicago buildings are signatories to at least one labor agreement, compared to 216 (91.5%) buildings at the time of the 2006 EIS. (Figure 27). Labor contract negotiations remain a highly

<sup>23</sup> As a departure from the 2006 EIS only unique locations were counted.

valued service to members, and BOMA/Chicago has cultivated a positive and productive relationship with two of the metropolitan area's major organized labor groups: Service Employees International Union Local 1, representing security and janitorial staff; and the International Union of Operating Engineers Local 399, representing building engineers.

Of the total building membership, 76.6% benefit from the negotiated janitorial contract, 61.5% from the engineering contract and 57.1% from the security contract. The total number of employees currently covered by labor agreements in BOMA/Chicago buildings is 6,335, which includes 1,231 direct employees and 5,104 contracted employees. Statistics from the 2006 EIS reveal 7,269 employees under contracts (1,721 direct employees and 5,548 contract employees), which represents a 12.8% decrease in the number of covered employees. Figure 27 shows that:

- Participation among all three types of contracts is the highest for West Loop Class A buildings (37.1% janitorial contracts, 32.6% engineering contracts and 30.3% security contracts) and Central Loop Class B (23 janitorial, 18 engineering and 17 security).
- In certain submarkets (East Loop and River North – Class A, River North – Class C) 100% of the BOMA/Chicago member buildings are signatories to the engineering agreement.

Figure 27: Labor contract participation among BOMA/Chicago buildings.

Submarket Name	Class	Number of all BOMA buildings	Engineer	Janitors	Security
Central Loop	A	22	14	20	17
Central Loop	B	31	18	23	17
Central Loop	C	6	3	3	1
East Loop	A	12	12	10	5
East Loop	B	16	12	12	9
East Loop	C	9	6	6	3
East Loop	-	2	1	2	0
North Michigan Av.	A	12	7	11	9
North Michigan Av.	B	13	7	10	7
North Michigan Av.	C	1	0	0	0
North Michigan Av.	-	2	0	0	1
O'Hare	A	11	2	5	3
O'Hare	B	1	0	1	0
River North	A	5	5	4	2
River North	B	6	3	4	2
River North	C	1	1	1	0
River North	-	1	1	1	0
West Loop	A	35	29	33	27
West Loop	B	22	12	17	10
West Loop	C	4	2	3	2
<b>Sub-Total</b>		<b>212</b>	<b>135</b>	<b>166</b>	<b>115</b>
Lincoln Park	A	1	0	0	0
River West	B	2	1	1	0
South Loop	A	1	0	0	0
South Loop	B	2	1	2	1
South Loop	C	2	1	1	1
South Loop	-	8	7	7	7
South Chicago	A	1	0	0	0
South Chicago	B	2	0	0	0
South Chicago	C	1	1	1	1
South Chicago	-	5	2	2	2
<b>Overall - Total</b>		<b>237</b>	<b>148</b>	<b>180</b>	<b>127</b>
Educational & specialized		15	7	13	17
<b>Total BOMA/Chicago</b>		<b>252</b>	<b>155</b>	<b>193</b>	<b>144</b>

### 13. Sustainability (LEED and Energy Star)

According to the latest U.S. Environmental Protection Agency report on greenhouse emissions, the commercial sector accounted for 19%<sup>24</sup> of the carbon dioxide emissions from fossil fuel in 2010. An earlier report of the impact of buildings on the environment<sup>25</sup> highlighted that commercial buildings accounted for 35%<sup>25</sup> of the total U.S. electricity consumption in 2006, with a projection to almost 37%<sup>25</sup> by 2025. According to BOMA International's Energy Efficiency Program (BEEP), "The commercial real estate industry spends \$24 billion<sup>26</sup> annually on energy costs and a 30% reduction or \$7.2 billion can be achieved by improving building operating standards."<sup>27</sup>

#### 13.1. LEED

Leadership in Energy and Environmental Design (LEED) evaluates the environmental sustainability of a building, neighborhood or tenant space. It was launched in 2002 by the U.S. Green Building Council (USGBC).

A number of academic and professional studies have focused on the rent and sale performance of comparable LEED certified and non-LEED certified properties, suggesting the existence of premiums for LEED certified properties. A recent study by the University San Diego/CBRE/McGraw Hill Construction<sup>28</sup> analyzed the trends of a nationwide sample of buildings. Beyond current trends the study also focused on the 2009-11 period, with the results suggesting that Energy Star scores are improving and an increasing number of buildings are pursuing LEED certification. Occupancy among LEED buildings was found to be 3.1% higher than the market, and rental rates for LEED buildings were 4.1% higher than non-LEED buildings in 2011.

##### 13.1.1. Chicago national LEED rankings

Using the USGBC database (as of May 2012) all LEED-certified office buildings were extracted by city for those with more than 50 certified projects in total (across all office building relevant LEED ratings). The office building relevant LEED-ratings include LEED: New Construction (NC), Existing Buildings: Operations & Maintenance (EB), Commercial Interiors (CI) and Core & Shell (CS). Chicago ranks second across all other U.S. cities based on the number of certified LEED-EB and NC buildings and third across all relevant LEED ratings (Figure 28). When ranking the cities based on the total square footage of their certified buildings, Chicago ranked first, surpassing other cities by more than 6.8 million

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<sup>24</sup> U.S. Environmental Protection Agency (EPA), "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010", April 15, 2012 <http://www.epa.gov/climatechange/emissions/downloads12/US-GHG-Inventory-2012-Main-Text.pdf>.

<sup>25</sup> U.S. Environmental Protection Agency (EPA), "Buildings and their Impact on the Environment: A Statistical Summary", Revised April 22, 2009 <http://www.epa.gov/greenbuilding/pubs/gbstats.pdf>

<sup>26</sup> BOMA Energy Efficiency Program Quick Facts: <http://www.boma.org/TrainingAndEducation/BEEP/Pages/default.aspx>

<sup>27</sup> <http://www.boma.org/TrainingAndEducation/BEEP/Pages/objectives.aspx>

<sup>28</sup> U. San Diego - CBRE - McGraw Hill Construction, "Do Green Buildings Make Dollars & Sense", Green Building study ver. 3.0

square feet (Figure 29). Chicago ranks fourth based on the average points of all LEED-EB and NC buildings but tenth on the LEED-CS points (Figure 30).

Figure 28: Ranking of private LEED office buildings based on total number of properties.

City	State	Number of LEED certifications					Overall Total
		Total LEED-EB & NC	LEED-CI	LEED-CS	LEED-EB	LEED-NC	
Houston	TX	75 (1)	21 (9)	23 (2)	55 (3)	20 (2)	119 (5)
Washington	DC	72 (2)	77 (2)	24 (1)	62 (1)	10 (6)	173 (1)
<b>Chicago</b>	<b>IL</b>	<b>72 (2)</b>	<b>61 (4)</b>	<b>6 (8)</b>	<b>53 (4)</b>	<b>19 (3)</b>	<b>139 (3)</b>
San Francisco	CA	64 (3)	69 (3)	5 (9)	58 (2)	6 (9)	138 (4)
Atlanta	GA	49 (4)	32 (6)	7 (7)	29 (9)	20 (2)	88 (7)
New York	NY	48 (5)	88 (1)	7 (7)	42 (5)	6 (9)	143 (2)
Los Angeles	CA	43 (6)	17 (11)	2 (11)	39 (6)	4 (10)	62 (11)
Denver	CO	42 (7)	19 (10)	7 (7)	33 (7)	9 (7)	68 (9)
Seattle	WA	41 (8)	32 (6)	18 (3)	30 (8)	11 (5)	91 (6)
Portland	OR	37 (9)	27 (7)	13 (4)	12 (11)	25 (1)	77 (8)
Boston	MA	36 (10)	24 (8)	3(10)	21 (10)	15 (4)	63 (10)
San Diego	CA	25 (11)	16 (12)	12 (5)	10 (12)	15 (4)	53 (13)
Charlotte	NC	15 (12)	38 (5)	8 (6)	8 (13)	7 (8)	61 (12)

Source: USGBC - certified as of May 17, 2012 - Cities with more than 50 overall LEED certifications; (ranking by each variable is available in parenthesis with the highest value receiving the ranking of 1)

Figure 29: Ranking of private LEED office buildings based on property square feet.

City	state	LEED certified square feet					Overall Total
		Total LEED-EB & NC	LEED-CI	LEED-CS	LEED-EB	LEED-NC	
<b>Chicago</b>	<b>IL</b>	<b>54,303,092 (1)</b>	<b>3,829,509 (1)</b>	<b>5,626,990 (4)</b>	<b>52,526,858 (1)</b>	<b>1,776,234 (4)</b>	<b>63,759,591 (1)</b>
Houston	TX	47,500,814 (2)	1,456,897 (6)	6,376,373 (2)	46,129,978 (2)	1,370,836 (6)	55,334,084 (2)
New York	NY	43,922,866 (3)	3,625,674 (2)	5,950,245 (3)	41,531,680 (3)	2,391,186 (3)	53,498,786 (3)
San Francisco	CA	29,415,874 (4)	2,483,238 (3)	838,134 (12)	28,313,429 (4)	1,102,445 (9)	32,737,246 (5)
Washington	D.C.	27,867,788 (5)	2,422,041 (4)	8,035,274 (1)	26,876,788 (5)	991,000 (11)	38,325,103 (4)
Los Angeles	CA	26,342,101 (6)	542,745 (13)	632,289 (13)	26,237,502 (6)	104,599 (13)	27,517,135 (6)
Boston	MA	21,821,364 (7)	623,887 (11)	2,194,543 (8)	19,263,697 (7)	2,557,667 (2)	24,639,794 (7)
Seattle	WA	17,616,175 (8)	693,232 (9)	5,189,716 (5)	16,632,538 (8)	983,637 (12)	23,499,123 (8)
Denver	CO	16,766,805 (9)	631,034 (10)	1,465,948 (11)	15,730,603 (9)	1,036,202 (10)	18,863,787 (10)
Atlanta	GA	16,479,076 (10)	1,077,446 (7)	3,204,445 (6)	15,160,228 (10)	1,318,848 (7)	20,760,967 (9)
Portland	OR	8,386,452 (11)	813,306 (8)	1,793,677 (10)	4,854,912 (11)	3,531,540 (1)	10,993,435 (11)
San Diego	CA	5,720,990 (12)	582,160 (12)	2,103,488 (9)	4,325,338 (12)	1,395,652 (5)	8,406,638 (13)
Charlotte	NC	5,280,445 (13)	1,913,062 (5)	3,192,008 (7)	3,991,645 (13)	1,288,800 (8)	10,385,515 (12)

Source: USGBC - certified as of May 17, 2012 - Cities with more than 50 overall LEED certifications; (ranking by each variable is available in parenthesis with the highest value receiving the ranking of 1)

Figure 30: Ranking of LEED-CS, EB and NC average points.

City	State	Average LEED points		
		LEED-EB	LEED-NC	LEED-CS
San Francisco	CA	60.64 (1)	47.33 (3)	31.60 (12)
Washington	DC	57.34 (2)	46.20 (5)	38.25 (3)
Portland	OR	57.25 (3)	42.40 (7)	40.54 (1)
<b>Chicago</b>	<b>IL</b>	<b>54.72 (4)</b>	<b>46.32 (4)</b>	<b>33.50 (10)</b>
Seattle	WA	53.63 (5)	34.18 (13)	35.00 (7)
Boston	MA	53.48 (6)	39.13 (11)	36.00 (5)
Houston	TX	52.76 (7)	39.35 (10)	35.52 (6)
Charlotte	NC	50.87 (8)	44.71 (6)	34.75 (8)
Los Angeles	CA	50.72 (9)	39.75 (9)	38.00 (4)
Atlanta	GA	49.59 (10)	48.00 (2)	31.43 (13)
Denver	CO	49.39 (11)	49.33 (1)	33.00 (11)
San Diego	CA	49.20 (12)	41.93 (8)	34.25 (9)
New York	NY	47.64 (13)	38.50 (12)	38.71 (2)

Source: USGBC - certified as of May 17, 2012. Cities with more than 50 overall LEED certifications; (ranking by each variable is available in parenthesis with the highest value receiving the ranking of 1).

A publication of Crain's Chicago Business<sup>29</sup> devoted to green businesses provides some insight into the costs and benefits of sustainable retrofits (Lime Energy Co.) (Figure 31). The Crain's survey<sup>30</sup> of downtown Chicago office buildings that obtained LEED-EB certification indicated an average retrofit cost of \$0.20 per square foot and an average payback period of 1.8 years. Operating expenses also decreased by an average of 8% after LEED-EB certification.

Figure 31: Average cost assumption trends based on *Crain's Chicago Business*<sup>21</sup>

	Avg. Cost (\$/sf)	Avg. Annual Savings (\$/sf)
Window film	\$0.40	\$0.08
Boiler upgrade	\$0.85	\$0.05
Office lighting	\$1.25	\$0.33
Recomission HVAC controls	\$0.05	\$0.05
Overall average cost	\$0.64	\$0.13
<b>Simple payback</b>	<b>5.1</b>	

### 13.1.2. BOMA/Chicago LEED footprint

Corporate responsibility, operating efficiency and fiscal responsibility have all been major drivers of the tremendous progress toward sustainability in office building operations. BOMA/Chicago works extensively with the USGBC Illinois Chapter to provide education and information resources. BOMA/Chicago's LEED footprint is significant in the following ways (Figures 32 and 33):

<sup>29</sup> Crain's List Chicago's Carbon Footprint, <http://www.chicagobusiness.com/section/lists>

<sup>30</sup> Dermisi S., "Performance of LEED-Existing Buildings before and after their certification" white paper funded by Real Estate Research Institute, 2012.

- Ninety-seven (97) BOMA/Chicago member buildings received LEED certification either as a building or for a tenant space and 47 are pursuing one of the relevant LEED certifications. These 97 buildings/spaces represent 69.8% of the total number of LEED certified buildings in Chicago and 91.1% of the total LEED square footage in the city.
- The certified buildings represent only 19.4% of BOMA/Chicago building membership. (LEED-CI is excluded because buildings are counted rather than just tenant space.) Analyzing the BOMA/Chicago total rentable building area (RBA), the coverage rises to 38.7% based on square footage. An additional 14.6% of the total BOMA/Chicago RBA is LEED registered and in the process of becoming certified. Certification of that space will increase the LEED certified RBA of BOMA/Chicago buildings to 53%.
- Compared to the Chicago LEED market, BOMA/Chicago buildings achieve slightly higher average points under LEED-EB rating (56.4 vs. 54.7) in contrast to the NC rating, where a slight decrease is experienced (36 vs. 46.3).
- 44% of all BOMA/Chicago certifications are Gold and 37.1% Silver.

Figure 32: LEED certification trends of BOMA/Chicago member buildings.

	LEED certified	LEED registered	Avg. points achieved	Number of LEED by certification level					Total square feet of LEED by certification level				
				Certified	Silver	Gold	Platinum	Total	Certified	Silver	Gold	Platinum	Total
EB	43	21	56.44	3	14	22	4	43	2,365,056	20,153,456	23,465,398	2,955,371	48,939,281
NC	1	0	36.00		1			1		600,000			600,000
CI	48	24	37.92	7	20	18	3	48	577,548	1,117,637	1,507,563	74,461	3,277,209
CS	5	2	33.50	1	1	3		5	97,887	1,000,000	4,192,636		5,290,523
<b>Totals</b>	<b>97</b>	<b>47</b>		<b>11</b>	<b>36</b>	<b>43</b>	<b>7</b>	<b>97</b>	<b>3,040,491</b>	<b>22,871,093</b>	<b>29,165,597</b>	<b>3,029,832</b>	<b>58,107,013</b>

Source: USGBC - certified & registered as of May 17th, 2012; BOMA/Chicago membership as of May 9th, 2012

Properties are counted only once (e.g. if a property was LEED-NC and then became LEED-EB it is counted only as LEED-EB. If a building was recertified it counts only once)

Figure 33: LEED certification trends of BOMA/Chicago member buildings.

	Total Chicago LEED*	Total BOMA/Chicago RBA**
% BOMA/Chicago LEED certified buildings	69.78%	19.44%
% BOMA/Chicago LEED certified sf	91.13%	38.74%
%LEED registered sf		14.58%

\*: uses all LEED ratings (EB, NC, CI and CS)

\*\* : uses LEED - EB, NC and CS, excludes CI to avoid redundancy of multiple tenants in the same building

### 13.2. Energy Star

Energy Star<sup>31</sup> is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. It is a “type of external benchmark that helps energy managers assess how

<sup>31</sup> [http://www.energystar.gov/index.cfm?c=about.ab\\_index](http://www.energystar.gov/index.cfm?c=about.ab_index)



efficiently their buildings use energy, relative to similar buildings nationwide” (Energy Star website)<sup>32</sup>. A score of 75<sup>33</sup> or greater is required to qualify for Energy Star.

### 13.2.1. Chicago national Energy Star rankings

Comparing Chicago’s performance with cities of more than 50 Energy Star properties, Chicago ranks:

- 7<sup>th</sup> based on number of Energy Star properties.
- 2<sup>nd</sup> based on the square footage of Energy Star properties.
- 5<sup>th</sup> based on the Energy Star recertification times and the average points received.

Figure 34: Chicago ranking based on number of Energy Star private office properties.

City	State	Total square feet	City	Number of properties	City	Number of recertifications	City	Average recertification times	City	Average certification score
New York	NY	116,182,912 (1)	Washington	230 (1)	Houston	803 (1)	Los Angeles	4.07 (1)	Los Angeles	87.48 (1)
<b>Chicago</b>	<b>IL</b>	<b>95,304,336 (2)</b>	Houston	217 (2)	San Francisco	584 (2)	Houston	3.70 (2)	San Diego	87.26 (2)
Houston	TX	89,017,135 (3)	San Francisco	175 (3)	Washington	583 (3)	San Francisco	3.33 (3)	San Francisco	86.95 (3)
Washington	DC	78,840,780 (4)	New York	160 (4)	Los Angeles	501 (4)	Denver	3.15 (4)	Denver	84.12 (4)
San Francisco	CA	63,205,423 (5)	San Diego	128 (5)	<b>Chicago</b>	<b>314 (5)</b>	<b>Chicago</b>	<b>2.88 (5)</b>	<b>Chicago</b>	<b>82.91 (5)</b>
Los Angeles	CA	56,619,823 (6)	Los Angeles	123 (6)	Denver	297 (6)	Washington	2.53 (6)	Charlotte	82.81 (6)
Dallas	<b>TX</b>	41,953,129 (7)	<b>Chicago</b>	<b>109 (7)</b>	San Diego	290 (7)	Dallas	2.51 (7)	Washington	81.76 (7)
Denver	CO	33,361,017 (8)	Dallas	104 (8)	New York	273 (8)	San Diego	2.26 (8)	Houston	81.68 (8)
Charlotte	NC	19,471,447 (9)	Denver	94 (9)	Dallas	261 (9)	Charlotte	2.15 (9)	Dallas	81.67 (9)
San Diego	CA	18,588,544 (10)	Charlotte	77 (10)	Charlotte	166 (10)	New York	1.70 (10)	New York	81.19 (10)

Source: Energy Star Database as of May 17th 2012; (rank provided in parenthesis – (1) indicates highest value)

### 13.2.2. BOMA/Chicago Energy Star footprint

Ninety one (91) BOMA/Chicago member buildings received their Energy Star rating for at least one year. Key observations include the following (Figures 35 and 36):

- BOMA/Chicago member buildings represent 83.4% of all the Energy Star office buildings in Chicago; based on square footage, the figure rises to 89.76%.
- BOMA/Chicago buildings recertified slightly less frequently (3.01 vs. 2.8 times) than the overall Chicago office market.
- The average score obtained by BOMA/Chicago buildings is about the same as the scores in the overall office market.
- The period from 2007 through 2010 showed a significant increase in certification, although only 35 properties recertified in 2011.

<sup>32</sup> [http://www.energystar.gov/index.cfm?c=evaluate\\_performance.pt\\_neprs\\_learn](http://www.energystar.gov/index.cfm?c=evaluate_performance.pt_neprs_learn)

<sup>33</sup> [http://www.energystar.gov/index.cfm?c=green\\_buildings.green\\_buildings\\_index](http://www.energystar.gov/index.cfm?c=green_buildings.green_buildings_index)

Figure 35: Overall BOMA/Chicago member buildings Energy Star trends.

Number of BOMA/Chicago Energy Star buildings	91
Number of re-certifications of BOMA/Chicago buildings	274
Average recertification rate (1999-2012*)	3.01
Average score (1999-2012)*	82.87

\*: includes data until May 17, 2012

Figure 36: BOMA/Chicago member buildings Energy Star trends annually.

Year	Number of unique certified properties/year
2012 (until 5/17/12)	11
2011	66
2010	69
2009	48
2008	47
2007	19
2006	5
2005	4
2004	2
2003	0
2002	1
2001	0
2000	1
1999	1
Total non-unique certification of BOMA properties	274

## 14. Taxes

### 14.1. Chicago tax comparison with other cities

Local taxing districts derive a significant portion of their operating budgets from real estate property taxes. Chicago is certainly no exception; but what is exceptional is the burden those taxes represent to commercial office buildings compared to those in other large U.S. cities. With only marginal exceptions - New York City and Washington, D.C. - Chicago taxes are on average the highest of any major Central Business District (CBD) in the United States based on two data sources (BOMA International's EER and Jones Lang LaSalle - Figure 37).

More importantly, despite the fact that Chicago is a market in which high commercial office rental rates are not the norm, it is a market in which real estate taxes consume a disproportionate share of operating expenses<sup>34</sup>. Among two leading sources of tax trends across U.S. markets, Chicago has either the highest or second highest ratio of property taxes to operating expenses (Figure 38).

<sup>34</sup> Operating expenses exclude taxes. Taxes are part of fixed expenses.

Despite relatively slow growth for most operating expenses -- and the ability to negotiate labor rates, reduce energy expenses through energy efficiency and proactively control other costs -- commercial office building managers have no ability to control real estate property tax expenses. These expenses are either borne by the landlord or, more typically, passed on to tenants via escalation provisions in their leases. Most market escalations operate from a base year and do not provide full recovery of expense. Consequently, the exponential growth of the property tax component as a percentage of operating expenses has resulted in virtually flat net rental revenue for landlords.

In a 1993 study, BOMA/Chicago found that over a 25-year period from 1976 to 1991, property taxes as a share of operating expenses rose from approximately 30% of operating expenses to 40%, overshadowing all other expenses<sup>35</sup>. In the years since 1991, property taxes as a percentage of operating expenses rose from 40% to over 60% and in the last five years, the percentage has hovered around 70%.

Figure 37: Average tax comparison of CBDs based on two distinct data sources.

City	State	Taxes (\$/sf) - BOMA (EER)		Taxes (\$/sf) - JLL -
		300,000 - 599,999 sf	600,000+ sf	2011 values
New York	NY	\$8.95	\$9.13	\$12.00 (1)
Washington	DC	\$9.50		\$10.00 (2)
<b>Chicago</b>	<b>IL</b>	<b>\$5.80</b>	<b>\$5.75</b>	<b>\$5.58 (3)</b>
Los Angeles	CA	\$3.09	\$2.48	\$4.40 (4)
San Francisco	CA	\$3.61	\$4.07	\$4.00 (5)
Philadelphia	PA	\$3.23	\$1.96	\$3.09 (6)
Denver	CO	\$2.84	\$3.67	\$2.57 (7)
Atlanta	GA	\$3.41	\$3.36	\$1.84 (8)
Houston	TX	\$2.58	\$3.33	\$1.25 (9)

Source: BOMA International EER - 2011; Jones Lang LaSalle - data on New York include only the downtown area; (rank provided in parenthesis – (1) indicates highest value)

<sup>35</sup> BOMA/Chicago; “The 1993 White Paper on Property Tax Assessments and Equalization of Real Property In Cook County”

Figure 38: Average taxes as a percentage of downtown operating expenses.

City	State	Ratios - BOMA International		Ratios - Overall downtown- JLL
		300,000 - 599,999 sf	600,000+ sf	
<b>Chicago</b>	<b>IL</b>	<b>72.50%</b>	<b>75.96%</b>	<b>66.19% (1)</b>
Los Angeles	CA	43.77%	29.14%	54.38% (2)
Denver	CO			41.72% (3)
San Francisco	CA	33.33%	39.17%	36.36% (4)
Philadelphia	PA			35.68% (5)
Atlanta	GA	52.38%	52.58%	31.83% (6)
Houston	TX	32.41%	49.85%	15.62% (7)
New York	NY	62.98%	68.60%	
Washington	DC	85.05%		

Sources: BOMA International and Jones Lang Lasalle; ratios use operating expenses rather than fixed expenses; (rank provided in parenthesis – (1) indicates highest value)

#### 14.2. Real estate property taxes

To determine the relative property tax burden on its member buildings, BOMA/Chicago has tracked and analyzed tax and assessment trends over the last five years (2007-2011) using a population of approximately 190 BOMA/Chicago member buildings located in the Central Business District. Figure 39 provides simple statistical illustration of the tax burden borne by the BOMA/Chicago members that comprise that composite index. The figures represent the average annual real estate property taxes paid by buildings in the index. The buildings included in the composite index were chosen for their taxable status, availability and relative consistency in assessed property identification numbers (PINs), the completeness of their assessments and minimal changes in use. Using the buildings' PINs, assessed value information was obtained from the Cook County Assessor and the Board of Review websites, and from informational reports issued by the Assessor. Tax information, including rates and equalization factors, was obtained from the Cook County Clerk's website.

Figure 39: Relative Tax Burden of BOMA/Chicago Members

BOMA/CHICAGO BUILDING PROPERTY TAX BURDEN					
<i>Real Estate Taxes Paid by Individual Buildings</i>					
<i>As Measured by the BOMA/Chicago Building Composite Tax and Assessment Index</i>					
	2007	2008	2009	2010	2011
Average	\$3,899,884	\$3,977,977	\$3,633,940	\$3,631,549	\$3,578,890
Median	\$2,528,033	\$2,619,258	\$2,414,561	\$2,397,528	\$2,388,717
Range	\$17,097- \$25,702,212	\$17,269- \$26,009,977	\$18,115- \$23,390,179	\$18,904- \$24,408,450	\$18,825- \$24,306,934

Composite index of 190 BOMA/Chicago member buildings

Figure 40 compares the assessment levels of a group of specific BOMA/Chicago member buildings from 2007 through 2011 and illustrates how their assessments compare to the assessments of three other groups: all property in the City of Chicago, all commercial property in Chicago and all commercial property in Chicago excluding hotels.

Figure 40: BOMA/Chicago Composite Index of Total Assessed Valuation in the City of Chicago

<b>TOTAL ASSESSED VALUATIONS: (CITY OF CHICAGO)</b>					
	2007	2008	2009	2010	2011
All Property	33,623,465,352	33,995,117,837	31,437,439,570	30,565,662,711	30,093,621,252
Commercial Property	11,061,252,089	11,218,537,632	9,777,575,150	9,501,956,947	9,519,477,256
Commercial Property Exclusive of Hotels	10,586,024,163	10,669,915,105	9,368,273,955	9,106,737,046	9,131,926,995
<b>BOMA/Chicago Buildings</b>	<b>5,131,377,479</b>	<b>5,209,702,326</b>	<b>4,427,811,076</b>	<b>4,236,525,273</b>	<b>4,192,590,905</b>
<b>PERCENTAGE OF BOMA/CHICAGO MEMBER BUILDINGS ASSESSED VALUE (CITY OF CHICAGO)</b>					
	2007	2008	2009	2010	2011
As a % of All Property	15.3	15.3	14.1	13.9	13.9
As a % of All Commercial Property	46.4	46.4	45.3	44.6	44
As a % of Commercial Property Exclusive of Hotels	48.5	48.8	47.3	46.5	45.9

While the overall assessments of all commercial property decreased by 13.93% between 2007 and 2011 period, taxes paid (Figure 41) by all commercial properties decreased only 1.80% during the same five year period.

Figure 41: BOMA/Chicago Composite Index of Total Taxes Paid in the City of Chicago

<b>TOTAL TAXES PAID: (CITY OF CHICAGO)</b>					
	2007	2008	2009	2010	2011
All Property	4,227,456,012	4,390,367,349	4,446,243,256	4,551,562,298	4,565,493,112
Commercial Property	1,570,967,315	1,609,292,223	1,524,661,556	1,546,186,940	1,542,595,401
Commercial Property Exclusive of Hotels	1,503,473,370	1,530,592,664	1,460,837,368	1,481,875,572	1,479,794,342
<b>BOMA/Chicago Buildings</b>	<b>729,278,284</b>	<b>747,859,679</b>	<b>690,448,626</b>	<b>689,994,404</b>	<b>679,989,034</b>
<b>PERCENTAGE OF BOMA/CHICAGO MEMBER BUILDINGS TAXES PAID (CITY OF CHICAGO)</b>					
	2007	2008	2009	2010	2011
% of All Property	17.3	17	15.5	15.2	14.9
% of All Commercial Property	46.4	46.5	45.3	44.6	44.1
% of Commercial Property Exclusive of Hotels	48.5	48.9	47.3	46.6	46

The BOMA/Chicago composite index study reveals something unexpected over the last five years. Notably, the 2009 triennial reassessment resulted in a significant overall drop in the assessment of commercial property, including commercial office buildings. Revaluations generally account for

increasing assessed values, but the 2009 revaluation resulted in lower assessed values among commercial properties.

A more detailed analysis of the current taxes paid by the majority of BOMA/Chicago members indicates that the average taxes are \$5.50 per square foot. The highest average taxes of \$7.40 per square foot are in the North Michigan Avenue submarket, followed by \$6.11 per square foot in the West Loop. (Figure 42)

Figure 42. BOMA/Chicago building members tax trends by submarket

Tax trends of all current available BOMA members			
Submarket	count	RBA	average taxes/sf
North Michigan Av.	29	12,272,685	\$7.57 (1)
West Loop	58	42,208,660	\$6.11 (2)
Central Loop	53	34,503,772	\$5.30 (3)
O'Hare	10	2,813,806	\$5.03 (4)
East Loop	35	20,771,244	\$4.55 (5)
River North	11	9,989,755	\$4.12 (6)
<b>Sub-Total</b>	<b>196</b>	<b>122,559,922</b>	<b>\$5.58</b>
Lincoln Park	1*	199,643	\$8.14
South Chicago	3*	557,675	\$3.79
South Loop	3*	1,567,796	\$1.95
River West	2*	279,966	\$1.08
<b>Sub-Total</b>	<b>205</b>	<b>125,165,002</b>	<b>\$5.52</b>

\* Outliers due to limited number of observations

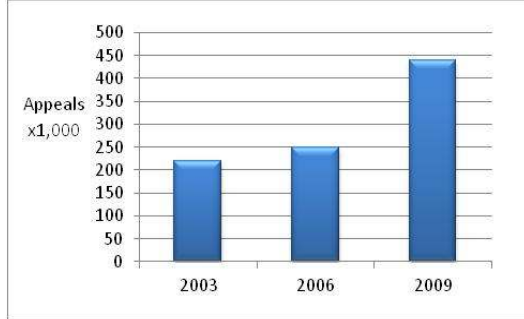
### 14.3. 2009 Revaluation and Change in Assessment Levels

In 2008, the Cook County Board of Commissioners amended the county ordinance prescribing the levels of assessment for various classifications of property. The so-called 25-10 amendment reduced the level of assessment for single-family residential property in Cook County from 16% of market value to 10% and for commercial property from 38% (36% for industrial property) to 25%. At the time of that amendment, it was argued that the de facto levels of assessment were 10% for single-family residential property and 25% for commercial property and that the amendment would formalize that change. It was further argued that the ordinance would not change average assessed values and would have no impact on the state equalization factor, but would merely align the ordinance with prevailing practice in the County and the actual assessments which were well below 38% for commercial property.

As the assessment ordinance was being considered, BOMA/Chicago and other commercial stakeholder groups argued that the change to 25% would in fact mask an increase. Complicating matters was the fact that the new assessment levels took effect in 2009, a year in which the recession was a major factor on real estate values. Furthermore, 2009 was also a triennial reassessment year. Reassessments typically increase assessed values. With these other variables affecting values, it became impossible to determine the effect that adjusting assessment levels had on establishing taxable values. Subsequent research showed that many commercial office building assessments went down after the change, not due to the 25-10 amendment but rather due to extraordinary Board of Review assessment reductions.

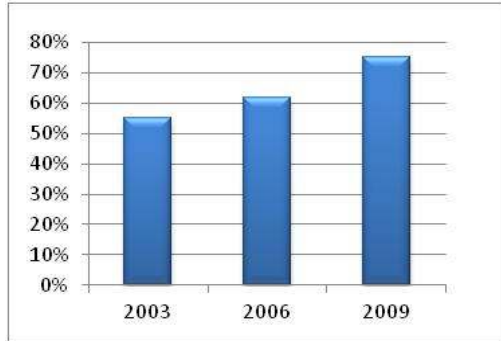
Additionally, while there were almost 200,000 additional assessment appeals in 2009 versus 2006 (Figure 43), the percentage of appeals that received reductions grew significantly. A staggering 75% of the 450,000 appeals filed with the Board of Review received reductions (Figure 44).

Figure 43: Cook County Board of Review Appeals in Reassessment Years



Source: Cook County Board of Review

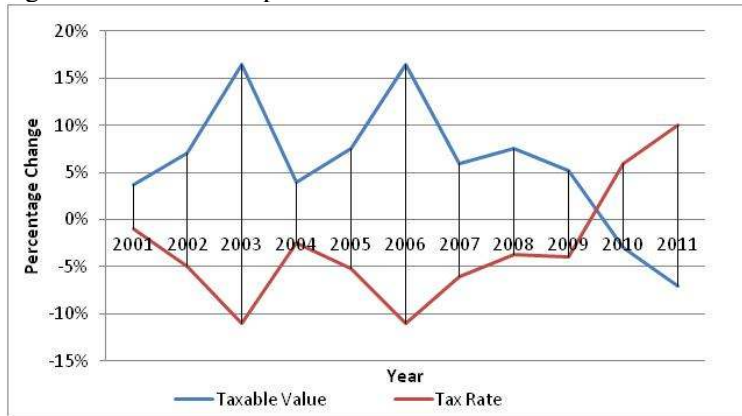
Figure 44: Cook County Board of Review Reductions in Reassessment Years



Source: Cook County Board of Review

The effect of the assessment dynamics at work in 2009 is easily and dramatically observable in the relationship between tax rates and taxable value. Figure 45 shows the interplay between the two from 2001 to 2011

Figure 45: Relationship between Tax Rates and Taxable Values



Source: Cook County Clerk and True Partners Consulting

The 2003 and 2006 reassessments produced noticeable spikes in taxable value with each reassessment creating a 15% increase in taxable value from the previous year. Intervening years between the two reassessments also produced increases in taxable value. As would be expected during these years, the change in tax rate was inversely proportional with the increases. Generally, large percentage increases in taxable value produced large percentage decreases in the tax rate. Small percentage increases in the taxable value produced small percentage decreases in the tax rate. Following the 2009 reassessment, the trend lines of the two were on steep and opposing trajectories and crossed paths. Taxable value decreased over the previous year while the tax rate increased.

#### ***14.4 Setting the Stage for the 2013 taxes***

The 2012 reassessment of the central portion of Cook County, including Chicago's Central Business District, is currently underway and local taxing districts are in the process of determining budgets amid a state and local pension crises, a sluggish economic recovery and decreasing revenues. Some commercial real estate sales activity is being reported, but it is still far below the pace needed to draw reliable conclusions about the market value of the sector in general. The lack of job growth continues to negatively impact the demand for space, with many new and existing tenants even reducing the amount of space they rent. Furthermore, market indicators such as capitalization rates resulting from sporadic transactions may be more illustrative of the market's need to invest cash rather than an increase in market fundamentals or property value.

Early indications are that residential assessments, which comprise about two thirds of the taxable value in Chicago, will decline. This continues the trend that began on the south side of Cook County in the 2011 revaluation and is expected to continue with the north side revaluation in 2013. Initial commercial assessments, on the other hand, are increasing significantly and often inconsistently in the CBD. Those values are subject to the appeals process that will continue well into 2013.

With residential assessments and budget pressures keeping upward pressure on the tax rate, the net result is that commercial office buildings are bracing for a double hit - an increasing tax rate combined with increasing assessments. It may be that the political and other pressures to reduce the assessments and tax burden on residential property owners, combined with other factors, may cause the pendulum to swing back toward an even greater increase in the tax burden shouldered by commercial property owners in Chicago and Cook County.

## **15. Conclusions and considerations**

BOMA/Chicago buildings comprise more than the skyline of the great City of Chicago. They house the heart of the city's economic engine. The Chicago economy and real estate industry were retracting before the Great Recession of 2008. That economic turmoil resulted in greater challenges for the city and its commercial real estate industry.

**Impact based on market share represented by BOMA/Chicago:** BOMA/Chicago member buildings represent 76.8% of all the commercial square footage of the Class A, B and C office buildings in the



downtown area, including 93.7% of the Class A space and 73.3% of the Class B space. The employees who work in these buildings generate an estimated minimum of \$7.5 billion consumer spending annually.

**Impact of jobs housed in BOMA/Chicago buildings:** An estimated 289,709 people are working in BOMA/Chicago buildings when considering first quarter of 2012 (1Q2012) vacancy. From a smaller number of “accounted” workers in each building based on in the CoStar Group database, the largest number of employees in BOMA/Chicago buildings work in financial/investment companies (14.9%) and business services (13.7%), followed by law firms (12.4%).

**Impact of businesses housed in BOMA/Chicago buildings:** There are 10,186 businesses housed in BOMA/Chicago buildings. The vast majority or 71.2% of tenants in BOMA/Chicago buildings are local companies, 14.9% are national and 12.4% are international. A total of 54.6% of the largest Chicago based privately and publicly held companies are located in BOMA/Chicago member buildings. Of all the publicly traded companies with headquarters in Chicago, 74.2% are located in BOMA/Chicago buildings. There are six Fortune 500 companies with headquarters within the Chicago city limits and all are in BOMA/Chicago buildings.

**Impact of labor contracts:** Of the total BOMA/Chicago building membership, 76.6% benefit from the BOMA/Chicago negotiated janitorial contracts, 61.5% from the engineering contracts and 57.1% from the security contracts. The total number of employees under labor contracts in BOMA/Chicago buildings is 6,335.

**Impact of sustainability on the environment and economy:** With 139 LEED certified buildings, Chicago ranks third in the U.S. based on the number of certifications across all LEED ratings and first in the amount of LEED certified square footage. Chicago also ranks second in the U.S. based on the number of LEED-EB and LEED-NC certified buildings. Of the office buildings attaining these standards, 91.1% of all LEED rated office buildings in Chicago are BOMA/Chicago members. Also, 38.7% of the total rentable building area in BOMA/Chicago buildings is already LEED certified, and 14.6% is registered (excluding LEED-CI).

Chicago ranks second based on the total Energy Star square footage, and fifth based on recertification time and average points. A total of 83.4% of the number of Energy Star properties are BOMA/Chicago members. The average recertification time among BOMA/Chicago properties is 3.01 times and the average score achieved is 82.9.

**Impact of taxation of the buildings:** Property taxes continue to be an oppressive burden for commercial real estate in the City of Chicago. With property taxes accounting for as much as 75% of a building’s operating expenses; they are consuming as much as 25% of a building’s gross revenue. Consequently, effective rents remain flat while taxes drive up gross rents. In the eyes of investors, developers and employers looking to locate a business, property taxes put Chicago at a competitive disadvantage compared to other major metropolitan cities, as well as to surrounding suburbs. The looming budget and pension crisis facing the City of Chicago and the State of Illinois combined with the current assessment complications threaten to put even further strain on commercial real estate by compounding the property tax burden to be paid over the next several years.

**General assessment of BOMA/Chicago member buildings:** Chicago has gradually slipped in various economic measures based on the 2006 EIS. BOMA/Chicago has also experienced slight decreases in the number of buildings in membership, in labor contract participation, and in the number of employees accounted for in member buildings. There are ample areas for growth and impressive strengths to boost the outlook for the future. The tremendous effort of BOMA/Chicago buildings toward energy conservation and sustainability has pushed Chicago to among the top of metro areas in attainment of LEED certifications. Chicago has the business, transportation, education and talent resources to reverse trends and redefine its future.

Increasing the impact of BOMA/Chicago will significantly depend on the continued attraction of regional, national and international businesses to the city. This need is evident throughout this research as well as the review of numerous reports from the Bureau of Labor Statistics regarding business and employment. The 2006 EIS made strong recommendations for the need to increase the number of national and international companies in Chicago; that recommendation still stands. The city should be responsive when economic decision-making has a negative impact on the stability and growth of the commercial real estate industry. Based on the research presented here, it's clear that a growing and vibrant downtown office building market is critical to retaining and attracting jobs and new business development in Chicago.

## **16. Legal Notice**

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## **17. About Dermisi Consulting Group**

Dr. Sofia Dermisi is the principal author of this study. She is also the principal and founder of Dermisi Consulting Group based in Chicago, Illinois. In addition to her company's research projects she is Professor of Real Estate and the Pasquinelli Family Distinguished Chair at Roosevelt University's Walter E. Heller College of Business.

Dr. Dermisi joined the Roosevelt faculty after earning her Doctorate at the Harvard Graduate School of Design. She holds a five-year undergraduate degree in Planning & Regional Development Engineering (1998) from University of Thessaly, in Greece, and Master's and Doctoral degrees (1999 and 2002) from Harvard Design School, focusing on Real Estate Finance & Urban Development as well as Real Estate Office Markets & Technology, respectively. She also completed her LEED Green Associate certification in 2011.

Dr. Dermisi's research has focused on office markets trends, building operations, terrorism-life-safety issues and more recently sustainability. Her research has earned her multiple best manuscript awards. In 2011 she received the prestigious William Kinnard Young Scholar Award from the American Real Estate Society. She was the recipient of external grants from the National Science Foundation, Real Estate Research Institute, and Illinois Department of Transportation. Dr. Dermisi was also the lead researcher on the BOMA/Chicago Economic Impact Study completed in 2006.

She is a frequent speaker in the U.S. and abroad. She is a Board member of the American Real Estate Society and Lambda Alpha International. She is the editor of the Data, Methods, and Technology section of the Journal of Real Estate Literature. She serves as a reviewer of nine peer reviewed journals and the National Science Foundation. She currently teaches four graduate level real estate courses, and in 2009 received Roosevelt University's Excellence in Teaching Award spanning all disciplines.

Dr. Dermisi was assisted on the project by Joyce Travis, also of the Dermisi Consulting Group. Ms. Travis formerly served as director of education and communications of the Building Owners and Managers Association of Chicago and as vice president of education and communications of the Institute of Real Estate Management.

## **18. Acknowledgments**

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