**Luxury Condos: An Analysis of Sales Price and Hotel Amenities in Manhattan**

by

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Submitted to the Program in Real Estate Development in Conjunction with the Center for Real Estate in Partial Fulfillment of the Requirements for the Degree of

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## ABSTRACT

The purpose of this research project is to examine the market pricing behavior of condos with hotel amenities in the Manhattan condo market. To do this, data was compiled from multiple sources to track variations in price paid per square foot controlling for whether the unit was part of a building with hotel amenities, among other things. Prices were tracked from 2004 through 2011 to capture the peak and fall of the most recent real estate cycle, during which luxury branded condos with hotel amenities saw a surge in popularity. The resulting analysis reveals a number of buyer preferences for building attributes as well as unit attributes.

To determine the value of each attribute, the regression controls for variables such as neighborhood, floor on which each unit is located, maintenance fees per square foot and bedrooms and baths. The results of this analysis reveal that buyers are willing to pay a premium for units in buildings which have been branded. It also reveals that, controlling for all other variables, buyers do not value hotel amenities as part of the branded package.

The timeliness of this research given the current surplus of unsold luxury condos should help developers responsible for the disposition of these assets by providing quantitative data to support the market and financial analysis tools already at their disposal. While this data focuses on the Manhattan condo market, the analysis and process can easily be translated to other major markets making this paper applicable to a wide range of readers.

Thesis Supervisor: William Wheaton
Title: Professor of Economics

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## Acknowledgements

I would like to thank my thesis advisor and economics professor William Wheaton whose guidance through the research process made this thesis possible. Special thanks are owed to Joie de Vivre for the inspiration for this research and insight and feedback throughout the process.

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# 1.0 Chapter 1: Introduction

## 1.1 Research motivation

The purpose of the thesis is to examine the market demand for residential real estate with hotel amenities in Manhattan. During the real estate boom of the past decade, buyers' appetite for luxury combined with relaxed lending practices led to the development of new luxury residential products. One of these trends was the emergence of high-rise condos over hotels, with many being serviced by the hotel operator under a luxury flag. The widely-held belief in the development community is that these amenities command a premium in the housing market. With the prolonged economic downturn now in its fourth year, is there still demand for such a product? If so, what is the premium buyers are willing to pay for this luxury?

The housing market experienced massive growth in many geographic locations and sectors during the boom period of the past decade. While many of these areas such as second homes, investment properties and subprime mortgages have received high levels of coverage, one product that has remained relatively un-researched is the luxury condo with hotel amenities. The place that has seen more of these condos built than anywhere else is Manhattan. The depth of the residential market, the wealth of the buyers and the lifestyle adopted by New York residents make Manhattan a perfect testing ground for this thesis as it provides the sample size and transactions needed to draw statistically significant conclusions.

Condos with hotel amenities typically come with all the bells and whistles of a luxury condo, but the maintenance fee only includes the option to purchase additional services from the hotel management. This level of residential luxury, while in existence for decades, did not see a rise in popularity until recently. This rise was due to several factors including growing wealth, lifestyle changes and easy access to financing that allowed buyers not to feel the true cost of these services.

The downturn has had a profound effect on the new construction luxury market even relative to the rest of the market. The freeze of funding for both the developer and buyer has stalled the condo market. Buildings are being converted to rental where possible and amenities are being scaled back to make these project more affordable.

The methodology of this paper is to analyze sales data for new construction condos in the Manhattan market to establish where these hotel amenity and non-hotel amenity projects align and diverge in the prices that were paid during the boom and through the downturn. This paper will then examine the underlying value of both the product and the amenity to provide evidence of trends going forward.

## 1.2 Industry Background

Luxury condos, defined as the top ten percent of sales by price in a given year, have always been a part of the Manhattan market. Condos have long been the primary mode of home ownership for residential real estate in the Manhattan real estate market. In terms of market share, condos made up 50.2% of all apartment closings in Manhattan, while co-ops made up 49.8%, from January 2006 through August 2010. Residential transactions have averaged 9,700 annually in Manhattan over the last decade. Given Manhattan's size and status as the center of the finance, fashion and theatrical world, it comes as no surprise that the income of such a city can support a large number of residential transactions.

Elevator buildings with hotel concierge services have long been a staple of the market. Two such early examples are New York's Waldorff Astoria, since demolished and rebuilt, and the landmarked Plaza Hotel. The latter has been recently shut down and gut renovated to its former glory and houses a combination of hotel rooms and condo-hotel units.

Condo-hotels are not part of this research but they should be defined as part of a broader understanding of the market. Condo hotels operate as a time share type product in which owners purchase the right to occupy their unit for a fixed number of days of the year. During the days which they are not occupying the unit, the condo goes into the hotel pool and both the owner and the hotel reap the benefits of the additional revenue from the room. Maintenance fees for these products can be very high because the owner is paying the monthly common charges for the hotel itself.

Co-ops also are not part of this analysis due to the unique nature of the buildings. While not common in other cities, they make up a significant portion of units in New York City. The legal structure for these units makes the individual unit attributes and financial obligations difficult to ascertain. Fees and taxes for these buildings are also structured differently making the total cost of ownership ambiguous. Finally, the approval process for ownership of co-ops and the unique nature of the boards that govern entry into these buildings makes them unsuitable for inclusion in this research.

The precedent for the most recent boom in luxury condos with hotel amenities came with the completion of the Time Warner Center in 2004. This development came complete with two towers topped by residential condos, once of which was branded in combination with the Mandarin Oriental Hotel. The success of this project spurred on a number of similar projects in both the Manhattan market and other urban centers.  Brands such as the Four Seasons, St. Regis and W followed suit in New York and around the country.

Over time the target demographic for this product has shifted along with the economy. In the mid

2000's wealthy empty nesters and financiers were the primary buyers of these all-inclusive lifestyles. With the economic downturn, developers have turned to international buyers brought here by the devaluation of the US Dollar in recent years.

While the oversupply of new condo developments has contributed to the collapse in sales prices that spans the range of residential product from entry level to luxury, the drop in demand is also widespread (Douglass Elliman, 2011). Demand for luxury rentals with hotel style amenities has forecast intense growth, especially in locations where income and demographics support such development. As the condos brought to market during the downturn are absorbed and inventory diminishes over the next eighteen to thirty-six months, prices in the Manhattan market will rebound and eventually spur new development as prices once again exceed replacement cost. With the return of demand as credit loosens, financing will once again become available.

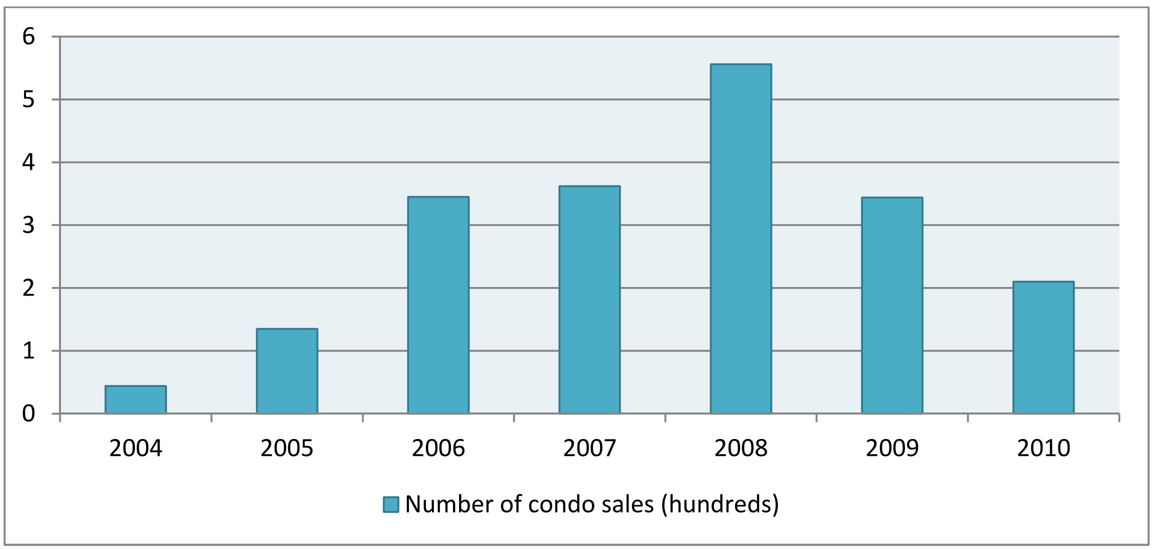


**Figure 1: Sales Volume - Dataset**

## 1.3 Research methodology

There were several key sources of information from which to derive information for the research. The research is pursued first through data collection, second through industry articles and papers and finally through anecdotal information gleaned through industry interviews.

The research asks what the premium is on a square foot basis that buyers are willing to pay for condos with hotel amenities versus those without. Wrapped into this question, however, are a number of other questions and variables which must be identified and controlled for in order to answer this primary question.

As part of this data collection, the paper must define hotel amenities and differentiate between properties which have them and those which do not. This analysis may be further broken down by the branding of a property, which is an important component of development and has been proven to drive sales regardless of the presence of hotel amenities. All condos associated with a hotel are considered branded. There is an additional category of luxury condo, however, which has hotel style amenities and branding, but without an attached hotel. In this case, the property was identified as a condo with hotel amenities despite the lack of associated hotel.

Additionally, the structure for maintenance fees for condos with hotel amenities had to be identified and differentiated from those without the hotel amenity. Amenities identified as "hotel associated" were universally not included in the base fee, but rather, were included as an option to purchase a la carte at an additional cost. In effect, condos with hotel amenities have maintenance fee structures similar to condos without these amenities and simply offer the option to purchase. The additional cost to purchase these amenities varies across properties depending on the management company and range of amenities offered.

To answer these questions the research is divided in two parts: industry trends (Chapter 3) and data analysis (Chapter 4). Evidence of the former is provided through interviews as well as industry articles and research papers. Evidence of the latter is provided by linear log regression modeling of the variables as it is derived from the sales data. The combination of these two sections provides the context for the market summary in Chapter 5. Refer to Chapter 2 for a full description of the methodology and data.

## 1.4 Summary Conclusions

The conclusions of this paper are based on the compilation of quantitative data, industry articles and interviews. The paper defines the industry, discusses the drivers for its growth over the past decade, summarizes the current state of the industry and speculates on changes in the future.

Manhattan, like much of the rest of the country, has seen a run up in residential prices in the past decade driven by easy financing and a seemingly limitless appetite for luxury. The market crash of 2008 caused massive Wall Street layoffs, the biggest buyers of luxury real estate in Manhattan. Manhattan residential sales appear to be stabilizing in the first two quarters of 2011 with both volume and price leveling off. However, financing remains challenging for most buyers and high inventories mean new development is unlikely to happen anytime in the foreseeable future. While the country as a whole has moved towards more austere spending habits, markets with disposable income continue to exhibit a preference for luxury housing, especially given the recent growth seen in the multi-family residential market. While demand for luxury amenities in residential product has remained stable in some markets, a lack of appetite for home ownership and ability to obtain financing has hindered prices. As household creation rises again, finding solutions to fulfill future residential demand and creating alternative uses for luxury condo projects that are already entitled or built will require careful analysis of market trends and sales data.

## 1.5 Thesis Structure

This paper is organized as follows: Chapter 2 explains the methodology and data used for this thesis. Chapter 3 investigates trends in the market for condos with hotel amenities over the past decade and summarizes industry research and opinions. Chapter 4 describes the results of the regression analysis of condo sales data in the Manhattan market from 2004 through 2011. Chapter 5 relies on the information gathered through industry papers and interviews as well as regression analysis to draw conclusions on the effects to the market and the future of luxury condos with hotel amenities. Chapter 6 contains summaries of such conclusions.

# 2.0 Chapter 2: Methodology and Data

## 2.1 Introduction

This thesis hypothesizes that the increase in development of condos with hotel amenities was primarily a result of the financing that was available during the housing boom of the past decade, and that the inclusion of this service failed to create any real value to the buyer or the developer. To test this hypothesis, this paper examines the Manhattan luxury condo market trends since 2004, examines sales data during the same period and draws conclusions about the current state of the market.

The criteria for data selection were limited in several ways. First, sales were limited to individual condo units and co-ops were excluded from the data set. This is for two reasons. First, condos are real property, are tangible and their values are easily measured. In contrast, co-ops are jointly owned among all the shareholders in the building and therefore, the values of individual units are difficult to separate from the value of the entire corporation. Additionally, the data currently available is much more reliable for condos than it is for co-ops. It was not until 2006 when the NYC Department of Finance required that co-op sales disclose the full purchase price. Even now, obtaining data for co-op units has proven unreliable and difficult. Furthermore, condos and co-ops have different maintenance fee structures. Condo owners pay a maintenance fee to the building for their common area charges and a separate payment to the city for property taxes. Co-ops, on the other hand, pay one maintenance fee to the building which includes maintenance, taxes as well as a share of the underlying mortgage for the building. As such, the two building types should not be included within the same dataset.

The second limitation to the data was the age of the building. Because the analysis reflects current trends in luxury condo buildings, it was important to select newly-developed buildings which reflect current developments in the industry. These trends include amenities, average square feet per unit, similar interior finishes and number of bedrooms and bathrooms.

Finally, the elimination of repeat sales limits the dataset to the sales price per square foot the developers received and does not reflect a building's fluctuations in value over its extended life. Again, all of these limitations were implemented to reflect what the developer's experience likely was in the past and to forecast it going forward.

Within the limited dataset, condos with hotel amenities were identified first. Once these properties were identified, comparable properties in each of the neighborhood market areas were included in the data set in order to control for differences in location.

It should be noted that certain neighborhoods have seen more luxury condo development, and only a subset of those have seen the growth of luxury condos with hotels amenities. This can be due to several factors. First, some neighborhoods attract more hotel, business and tourist business than other neighborhoods. Second, certain neighborhoods have higher as-of -right development height and density guidelines. Typically, condos that are part of a hotel are structured with the condos atop the hotel and thus have taller heights. Neighborhoods such as Chelsea have seen their share of luxury condo development, however, due to lower height limits than other parts of the city it has also seen fewer condos with branded hotels attached. The neighborhood with the most growth in luxury condo development has been the financial district (StreetEasy, 2011). This neighborhood, not coincidentally, has seen some of the highest rates of development of luxury condos with hotel amenities.

| Distribution of Condominium Sales (2004-2011) | | | | |
|---|---|---|---|---|
| | **Market** | | **Dataset** | |
| **Neighborhood** | **#** | **% of total** | **#** | **% of total** |
| Financial District | 476 | 8.5% | 174 | 8.9% |
| Tribeca | 364 | 6.5% | 273 | 14.0% |
| Gramercy | 924 | 16.5% | 184 | 9.4% |
| Chelsea | 476 | 8.5% | 170 | 8.7% |
| Midtown | 632.8 | 11.3% | 466 | 23.9% |
| Upper West Side | 1209.6 | 21.6% | 682 | 35.0% |

**Figure 2: Condo Sales Distribution**

The timeliness of this research is important not just to inform future development but also for the workouts of existing and often troubled luxury condos that were built during the past few years. The analysis of the data can be extrapolated to predict the effects market changes will have on both future development and the repositioning of entitled and existing assets brought to market during the downturn. Specific information of the methodology and data collection is covered in the remainder of this chapter.

| Building Name / Brand | Address | Hotel Amenity | Information |
|---|---|---|---|
| JEAN NOUVEL | 100 11TH AVENUE | No | Mid-rise fronting on the Hudson River |
| AVERY | 100 RIVERSIDE BLVD | No | Part of UWS luxury residential development |
| - | 101 WARREN STREET | No | Ultra luxury condo development in financial district |
| SKYHOUSE | 11 EAST 29TH STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| RUSHMORE | 80 RIVERSIDE BLVD | No | Part of UWS luxury residential development |
| - | 200 CHAMBERS STREET | No | Small mid-rise condo development |
| ONE MADISON PARK | 23 EAST 22ND STREET | No | Starchitect designed tower with 2 units per floor max |
| TRUMP HERITAGE | 240 RIVERSIDE BOULEVARD | No | Park of UWS luxury residential development |
| PLATINUM | 247 WEST 46TH STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| TIME WARNER | 25 COLUMBUS CIRCLE | No | Opposite tower to 80 Columbus circle. Similar units without the option to purchase hotel amenities |
| THE LINK | 310 WEST 52ND STREET | No | UWS luxury tower located near Lincoln Center and other cultural amenities |
| SOHO MEWS | 311 WEST BROADWAY | No | Mid-rise with a variety of layouts including penthouses and townhouses |
| - | 325 5TH AVENUE | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| ORION | 350 WEST 42ND STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| Twenty9th Park Madison | 39 EAST 29TH STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| CHELSEA MODERN | 447 WEST 18TH STREET | No | Mid-rise project with extensive common outdoor space |
| CALEDONIA | 450 WEST 17TH STREET | No | Building amenity includes private HighLine access |
| - | 456 WEST 19 TH STREET | No | Small Building with all units loft duplex design |
| - | 50 FRANKLIN STREET | No | Mid-rise luxury condo with limited number of units |
| - | 555 WEST 59TH STREET | No | UWS luxury tower located near Lincoln Center and other cultural amenities |
| W RESIDENCES | 123 WASHINGTON STREET | Yes | Condo residences above W hotel downtown. Hotel operators sevices hotel and condo units |
| WILLIAM BEAVER HOUSE | 15 WILLIAM STREET | Yes | Hotel branded condo and concierge. Recently partially converted to multi-family due to market |
| GRAMERCY BY STARK | 340 EAST 23RD STREET | Yes | Condos located in a building adjacent to the Gramercy Park hotel which services the condos. Separate physical building structure allows the condo building to capture the 421a tax abatement |
| SETAI FIFTH AVE | 400 FIFTH AVENUE | Yes | Luxury condos located above hotel of same flag. Condos are serviced by same operator |
| CASSA | 70 WEST 45TH STREET | Yes | 54 residences located atop luxury hotel of the same name. Units are designed to be easily combined |
| ANDAZ | 75 WALL STREET | Yes | Conversion of historic FiDi building. Hotel is located in adjacent structure |
| MANDARIN | 80 COLUMBUS CIRCLE | Yes | Once of the first condo with hotel amenity properties of this decade's boom. Highly sucessful project |
| SETAI BROAD | 40 BROAD | Yes | Conversion of office building. Struggled with legal financial and construction problems |
| TRUMP | 120 RIVERSIDE BLVD | Yes | Part of UWS luxury residential development |
| ADAGIO | 243 WEST 60TH STREET | Yes | UWS luxury tower with limited units per floor and river views |

**Figure 3: Condo Properties Dataset**

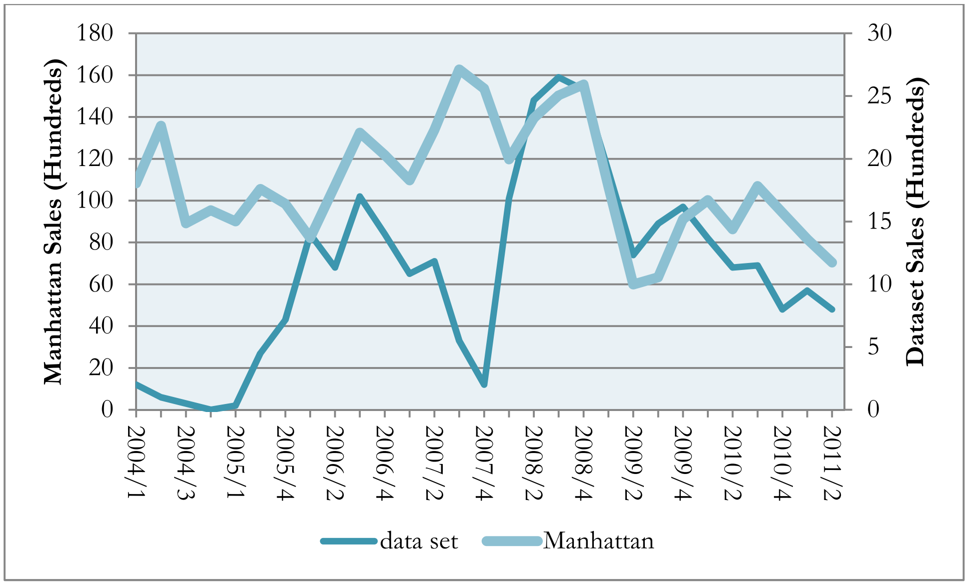


**Figure 4: Manhattan Condo Sales Volume**

## 2.2 Research Process

## 2.3 Published Information

Housing preferences and lifestyle trends have shifted over time. For the purpose of this thesis, it is important to understand what changes drove the increased popularity in the luxury condo market and what long term market changes are likely to impact demand going forward. Data was gathered with this in mind on the following topics:

- Sales data on condos with hotel amenities and comparable luxury condos without hotel amenities in the Manhattan market
- Case studies on luxury condo projects in Manhattan
- Tax abatement programs in New York City
- Maintenance fees, amenity packages and associated costs
- Branding of condo projects

Sources are cited throughout the paper. Sales data was obtained from StreetEasy.com as well as the NYC Department of Finance. Building attributes were found on newconstructionmanhattan.com and propertyshark.com. Additional data sources include interviews, industry articles and academic research papers.

## 2.4 Industry Interviews

A number of interviews with industry professionals were conducted as part of this research. The information collected and digested as part of this process provides a background for the data analysis and conclusions drawn. The purpose of the interviews was to collect real-time information about market conditions and buyer preferences as well as to gain additional insight into the market analysis that drove these developments. Interviewees were contacted because of their expertise in the market and their decision-making role within their respective companies. Interviews were conducted over the phone and were recorded via notes taking during the call. No audio recordings were made. Interviewees were not requested to sign informed waivers of consent and therefore no interviewees are quoted directly in this paper.

## 2.4 Sales Data

### 2.4.1 Description of Data and Sources

Manhattan is an attractive location for a comparative study of condo values because of the large number of properties developed and sold. Due to the nature of the real estate market and lag between the offer, the closing and the recording of the sale, the published data suffers from some lag. The data used for this research is recorded by New York City's Department of Finance. Typically in Manhattan, it takes two to three months from the time a contract is signed to the close of the transaction. The time between closing and the date that the sale is recorded can be up to eight weeks, despite the fact that the city requires sales to be recorded within fifteen days. This means that price data could be upwards of five months old by the time it is recorded publicly.

Secondary data sources obtain the base information from the New York City's Finance Department and supplement it with additional information on unit characteristics from broker databases. This data is available by subscription and was collected, synthesized and then parsed out into sales indexes that track gross sales price, sales price per square foot and sales volume by neighborhood with additional traits being identified as property level or unit level characteristics.

Data was obtained from several sources:

1. New York City Department of Finance
2. Street Easy
3. New Construction Manhattan
4. Property Shark

The information on maintenance fees and taxes is collected at the time of the transaction, so this information is accurate at the time of the recorded sale regardless of whether or not the fees have changed in the period since the sale. By comparison, building characteristics represent a static characteristic that is carried throughout the life of the building unchanged.

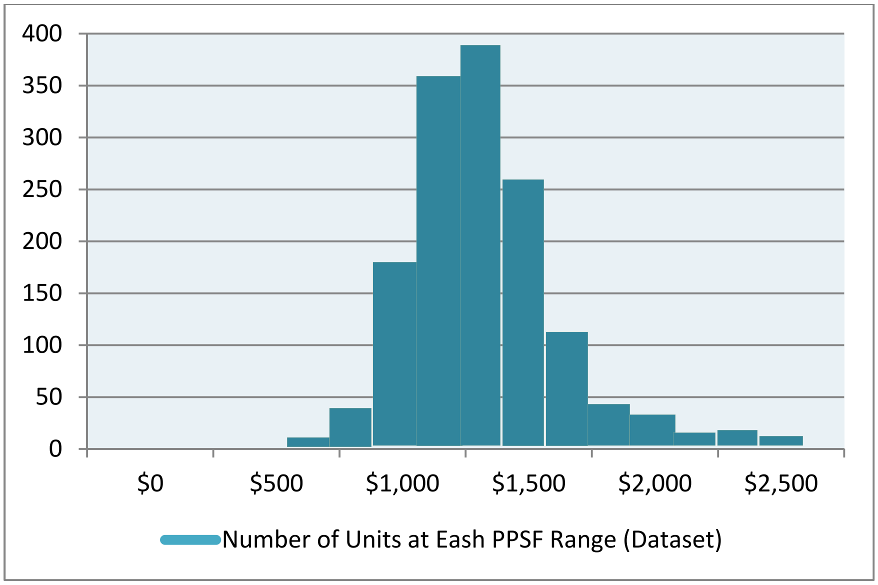


**Figure 5: Condo Sales Price per Square Foot Distribution**

Data was supplemented through papers and interviews with industry professionals. Current articles provided evidence of regarding the broader Manhattan market, and interviews with industry professionals provided a more in-depth look at the nuances of specific buildings.

### 2.4.3 Analysis of Data

Several factors must be acknowledged in reviewing the selected data set. The nineteen condo buildings without hotel amenities were selected because of their comparable characteristics to the condos in the data set which do have hotel amenities. Characteristics such as neighborhood, number of floors in the building, and interior finishes were all characteristics that were examined to identify comparable properties for the data set. A limited number of properties were ultimately removed from the data set because of outlier sales prices that created noise and caused incorrect correlations to be drawn.

First, the mix of properties sold in one time period may not necessarily be comparable to the mix of properties sold in a subsequent period; they may be entirely different in terms of age, size, quality, etc. Second, because buildings are completed all at once, there is a tendency for the data to appear "lumpy" in terms of having sharp rises and falls over multiple periods.

In the raw data, some buildings were missing data for specific variables. The number of observations with missing attributes was quite high in some cases, since developers are not required to report first time sales data (Marchant, 2004). In cases where the missing variables could be found in separate sources, the observation was included in the set. In cases where the variables could not be definitively identified, the observation was deleted from the data set.

In addition to deleting observations with missing variables, units with sale prices below $100,000 as well as properties with outlier sale price per square foot above $6,000 and below $400 were not included in the regression. These properties represented only 14 of the 1949 observations, but were outliers in the dataset biased the regression results. The final data sample set includes 1935 observations across six neighborhoods and 30 condo properties built since 2004. This represents approximately 37% of all new luxury condo construction in the city during this time period (Calin, 2011).

Results from the StreetEasy pricing index show that the New York metro area market peaked in early 2006. However the index also shows that Manhattan saw the greatest volume of sales in 2007 and 2008. New development condo transactions made up more than one-third of all Manhattan residential closings during that two-year period which caused prices to increase more dramatically with the Manhattan market peaking in March 2008.

## 2.5 Summary of Data Compilation

Chapter 5 will review the results of Chapters 3 and 4. Trends discussed in Chapter 3 will be examined in the data from Chapter 4 to determine if a relationship exists. This will provide a viewpoint of the cause, effect and possible strategies for the market going forward. The data results in Chapter 4 will provide insight into the sales trends of Manhattan luxury condos and have implications for the development of future condos with hotel amenities.

Chapter 4 examines this data for a relationship between sales price per square foot and the amenity package offered by a given building, be it hotel amenities or otherwise. This analysis is based on a linear regression using the log of the dependent variable as a basis for examining the results. There are a total of 31 independent variables, some of which are parsed out to create dummy variables for groups of data. The variables used in the regression equation are described in Figure 12. Summary statistics are discussed in Chapter 4 to provide context and scale of the variability in the results.

Using the results of this data analysis, the paper will theorize how the real estate market will be affected by buyer preferences and the economic downturn in the long term and how developers may look to develop or re-envision this product in the future.

# 3.0 Chapter 3: Condo Market - Industry Trends and Projects

## 3.1 Market Overview

The Manhattan market is a unique one in the United States in that it is comprised almost exclusively of condos and other multi-family product. In terms of market share, condos made up 50.2% of all apartment closings in Manhattan, while co-ops made up 49.8%, from January 2006 through August 2010. A second key area where Manhattan differs from the national economy is homeownership rates. In 2010, homeownership was 32% in Manhattan compared to 66% percent in the rest of the country. While still above the fifty year average, it represents a relatively small part of the housing stock in the city. Given the high cost of living, relatively high percentage of multifamily as a percentage of the total and a high mobility rate for the city, it is unlikely that homeownership rates will change significantly.

Recently, new construction development has suffered disproportionately relative to the rest of the market with prices for new units falling 14.7% year over year relative to the 6.1% drop suffered by condo properties as a whole in Manhattan (Miller Samuel, 2011).

National lifestyle trends (a corresponding effect of which is the growth of grocer's prepared foods revenue) have translated into a desire to be closer to restaurants and other amenities which have the potential to simplify living. Fewer people are cooking, which translates into less need for large kitchens as well as spaces to entertain guests in, a trend especially useful in Manhattan where space has long been a luxury. One design result of this trend is the development of so called "Murphy kitchens". Similar in concept to the Murphy bed, these kitchens are compact versions of a full size kitchen and take up about the same amount of space as a large closet. These kitchens are typically located within the main living space of a condo but concealed behind paneling or integrated doors and are only visible during such occasions that the owner opts to make use of the facilities.

Given the downturn of the past several years, most development for the foreseeable future will be multi-family rental housing and will likely provide fewer amenities to the tenants than in the past. Existing assets which failed to sell after the peak will be sold and repositioned as rental products while owners wait for the condo market to return. Existing assets which have been competitively marketed will survive, but with a slower sales pace, owners will need to be prepared to carry the costs associated with a longer hold period.

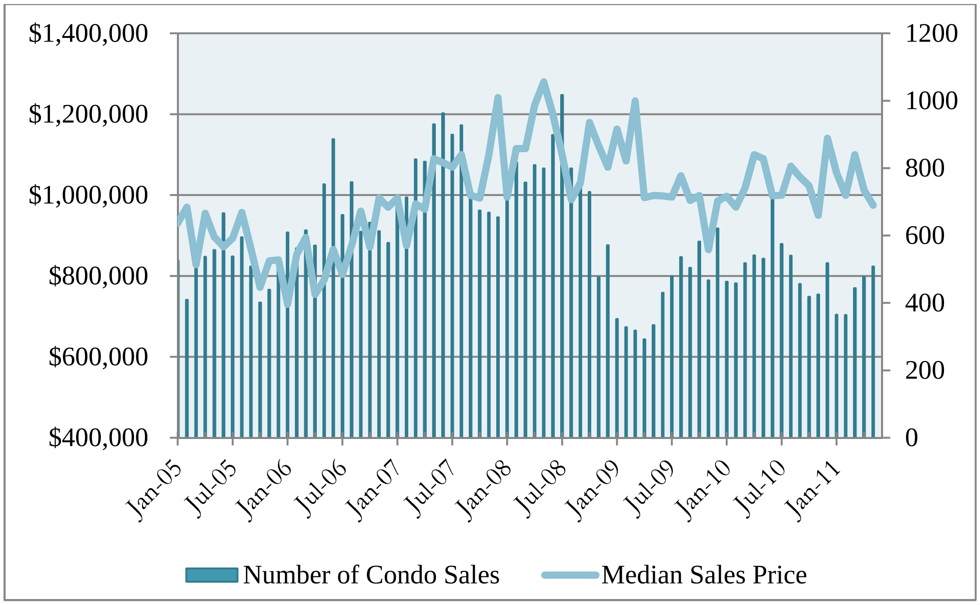


**Figure 6: Manhattan Condo Sales by Volume & Price**

### 3.1.1 Manhattan Luxury Residential Condo Market

The Manhattan luxury residential market is generally defined as the top 10% of the market in terms of sale price. The market is segmented by building type, and condo buildings may be categorized as high rise or low rise; luxury or basic amenities. Condos with hotel amenities fall into a subset of the luxury amenity building type. These buildings come with unique and personalized services in addition to the amenities that are standard for a luxury building.

Buyers of these condos tend to be wealthy individuals who may purchase these units as second homes. Residents that occupy these units as primary homes tend to be busy professionals or retirees in search of an easier lifestyle. More recently, buyers have come from overseas where the economy may not be suffering as badly to take advantage of their increased spending power in the United States (Sharp & Marchant, 2009).

Luxury condos with hotel amenities have been at the forefront of unique design trends as developers work to reflect evolving lifestyles in their designs. Luxury condos have a base level of finishes associated with a certain level of quality. Whether a building is marketing to a younger, "hipper" demographic or an older, more sophisticated one, rich materials such as slab stone and stained woods will run throughout the lobbies and other public spaces. Developers will include amenities such as common terraces for gathering, fitness centers complete with locker rooms and building-specific amenities like dog runs or children play rooms. Typical unit amenities will include high end kitchen appliances, in-unit washer and dryer, premium finishes such as stone counters and hardwood floors, in addition to sufficient dimensions and light in each room.

| Type | 3Q 06 | 4Q 06 | 1Q 07 | 2Q 07 | 3Q 07 | 4Q 07 | 1Q 08 | 2Q 08 | 3Q 08 | 4Q 08 | 1Q 09 | 2Q 09 | 3Q 09 | 4Q 09 | 1Q 10 | 2Q 10 | 3Q 10 | 3-Year Trend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Studio | 543 | 538 | 492 | 472 | 482 | 503 | 544 | 501 | 463 | 504 | 526 | 529 | 559 | 475 | 513 | 526 | 445 | |
| 1-Bedroom | 741 | 788 | 739 | 748 | 741 | 759 | 756 | 734 | 758 | 752 | 735 | 753 | 767 | 761 | 780 | 773 | 705 | |
| 2-Bedroom | 1,424 | 1,411 | 1,327 | 1,395 | 1,328 | 1,412 | 1,453 | 1,393 | 1,375 | 1,423 | 1,578 | 1,260 | 1,262 | 1,302 | 1,322 | 1,261 | 1,253 | |
| 3-Bedroom | 2,469 | 2,629 | 2,512 | 2,794 | 2,788 | 2,762 | 2,681 | 2,535 | 2,505 | 2,647 | 2,795 | 1,948 | 1,998 | 2,081 | 2,138 | 2,158 | 2,143 | |
| 4+Bedroom | 3,759 | 3,901 | 3,943 | 3,760 | 3,538 | 3,458 | 4,395 | 3,977 | 4,633 | 3,927 | 3,895 | 3,007 | 3,328 | 3,462 | 3,443 | 2,948 | 4,000 | |

**Figure 7: Manhattan Condo Construction Average Square Feet by Number of Bedrooms**

Condos with hotel amenities are structured in much the same way as luxury condos. The fundamental difference between the two lies in the maintenance fees, what is included in those fees and what additional services are available. Owners of condos with hotel amenities are simply offered the option to purchase, at an additional cost, the services typically associated with a hotel stay.

## 3.2 Attributes in the Manhattan Condo Market

### 3.2.1 Hotel Amenities

Hotel amenities are typically defined as something of a premium nature provided when renting a room at a hotel in addition to the room and its basics. These amenities are typically unit or service based and often include restaurants with available room service, pools and fitness centers as well as front desk or concierge assistance.

In Manhattan, luxury condos will typically include the following hotel style amenities:

- Dedicated entrances separate from other uses in the building
- Fitness Center
- Pool
- Resident Lounge which may include city views and  wet bar
- Children's Play Area
- Exterior Resident Terrace which may include Jacuzzi and barbeque area
- Meeting or Conference Rooms
- Available parking spots with valet parking
- Storage
- Wine Vault
- Screening Room
- Library / Drawing Room
- 24-hour doorman and bellman

In addition to typical luxury amenities, condos with hotel amenities may include the following service based personalized amenities:

- Residential concierge services
- Private fitness instructors available at the fitness center
- Spa with available in-room treatments
- Five star restaurant with priority reservations and room service
- In-home catering services for hosted parties and events
- Dry cleaning and laundry
- Linen and turndown service
- Housekeeping
- Personal shopping
- Business services
- Priority reservations and discounts for guest rooms in the hotel
- Town car service
- Child care
- On call physician, pharmacist and dentist

These condos carry the maintenance fees associated with the building amenities as well as any additional costs required to provide the base concierge and lifestyle services associated with the hotel level amenities. The hotel amenities are not included in the monthly maintenance fees for a condo unit. Instead owners are provided with the option to purchase the individual amenities on an a la carte basis. Some hotels provide discounts from the market pricing while others do not.

Industry interviews indicate that only around twenty percent of buyers of these condos make use of the additional amenities offered by hotel serviced condos. Buyers who use the units as part-time residences tend to make more use of the services than do full time residents. Use of the services also diminishes over time as the owner resides in the unit for longer and the novelty of having hotel services available wears off. This knowledge can drive both developers and buyers to make better choices about how they develop, what amenities they include and how to value these services.

The management of condos with hotel amenities is structured in much the same way as a typical condo development, with the primary difference being additional concierge management associated with the hotel amenities for the units. The most popular model for development of condos and hotels of this type is for a developer to partner with a hotel operator for the development of a project. The inclusion of condos in the design provides the developer with a financing mechanism and the ability to sell a significant portion of the debt at completion of construction and sales. Furthermore, the association with a nationally recognized luxury brand can help to drive the sales price per square foot and overall success of the project.

The hotel operator with whom the brand is associated will manage both the hotel as well as the condo amenities once the project is completed. Typically, personalized luxury services available to condo owners align with the services provided to guests of the hotel. In this sense, the marginal cost of providing the option to purchase these services to the condo owners, in addition to the hotel guests, is small.

Physically, condos with hotel amenities are structured with condos located on the upper floors and hotel keys located on lower floors. To maintain the exclusive feel of the condos, certain lower-cost amenities will be kept separate from the hotel, while amenities which have a higher cost per square foot will be shared by residents and guests. In the case of many Manhattan projects, the condos will be provided with their own building entrance and lobby which is separate from the hotel. Common areas, such as resident lounges, business centers, screening rooms and children's play areas will be located on the levels in between the condo units and the hotel. This is not unlike luxury condos which do not have the hotel component.

The amenities which have a higher marginal cost to provide will often be combined with the hotel amenities. Shared amenities often include fitness centers, associated locker rooms, pools and Jacuzzis. Because many residential common area amenities go unused by owners, developers do not have an incentive to duplicate every amenity. To maintain a sense of privacy and exclusivity, an elevator from the residential core will usually provide stops with resident key card access to levels with shared amenities. This allows residents to access them as though they were located in the same part of the project.

Other shared amenities that are more closely associated with the hotel include restaurants, bars, ballrooms and spas. These are amenities which would be provided and serviced by the hotel even in the absence of the condos. As a benefit to ownership, condo residents are often given priority access to these services and in some cases are given discounts of up to 20% off of list price. Almost no additional space is required to be allocated to these programs despite the presence of the condos. Space dedicated to the concierge, catering and housekeeping services is incorporated in the area needed for the hotel itself. This is especially true given the fact that less than 20% of condo owners make use of the hotel services on average.

Luxury hotel operators derive a significant portion of their revenue from the additional services provided to hotel guests. Because the amenity space can be sold or leased to the hotel operator as part of their daily guest operations, the developer's exposure to this one portion of the risk is mitigated. While the developer's incentive to build condos as a part of a project is the revenue from the sale of the units, the hotel operator's incentive comes in the form of monthly operating revenue from residents and guests utilizing the spa, restaurant or personalized concierge services onsite.

To align with this incentive, the amount of space devoted to hotel amenities and services is driven by the hotel operator and scaled based on guest demand and revenue projections. Higher end brands are willing to provide more square feet and higher quality finishes with the knowledge that that capital investment will help to drive revenue. In many cases, the hotel operator will contract the brand and operations of these amenities to a third party. An example of this may be a five star restaurant headed by a famous chef or a destination spa. The inclusion of additional branding opportunities can generate revenue from local area residents as well.

Ultimately, the relationship between the developer and the hotel operator must balance the value of the brand as it relates not only to guests and users of the amenities, but also the residents of the building who will be buying into a vision for the lifestyle they will be afforded. The financial structure must account for all of these factors and provide sufficient incentives for all parties to profit from the development.

### 3.2.2 Maintenance Fees

Maintenance fees and what is included in the monthly charges can vary depending on the type of building, age of building and amenities provided. For the purposes of this paper the distinctions will be explained below.

Buildings in New York fall into the category of either condo or co-op, with the percentage being approximately fifty percent for each. All buildings in the data set are condo buildings, thus eliminating the need to account for differences in the ownership and maintenance fee structure of the buildings as part of the analysis. Co-op building maintenance fees include all costs associated with the overall uptake and maintenance of the building, the costs associated with the underlying mortgage for the building and real estate taxes. Condos, on the other hand, include fees associated only with the overall uptake and maintenance of the building and its services. Real estate taxes are broken out separately and paid by the unit owner directly to the city's tax assessor. One final differentiation between condo and co-op maintenance fees is that condo fees are not tax deductible.

Maintenance fees cover the common areas of the condo building or complex. Common areas are areas that everyone shares such as: lobbies, hallways, elevators, gym, exterior grounds and / or roof terraces. The fee also includes the staff that manages and maintains the property, including doormen, concierge and maintenance personnel. As would be expected, buildings with more amenities and common space will typically have higher maintenance fees. Maintenance fees for condos do not include utilities for individual units.

Older buildings often will have capital expenditures, such as roof work or facade repair, which can temporarily raise the fee with a one-time assessment. However, because all of the buildings in the data set are new, it is assumed that this is not a factor and that the reserve funds are healthy. A factor that is unique to new buildings is the tendency of developers to underestimate monthly expenses. New buildings are prone to seeing fee creep in the first few years of occupancy as the true cost of operating the building is discovered. Similar to co-ops, condo maintenance fees are subject to fluctuations in expenses such as insurance, energy and staff wages. This has been an increasing issue over that past five years with condo owners seeing a 30% rise in fees relative to a 7% rise for the previous five-year period (Rogers, 2008).

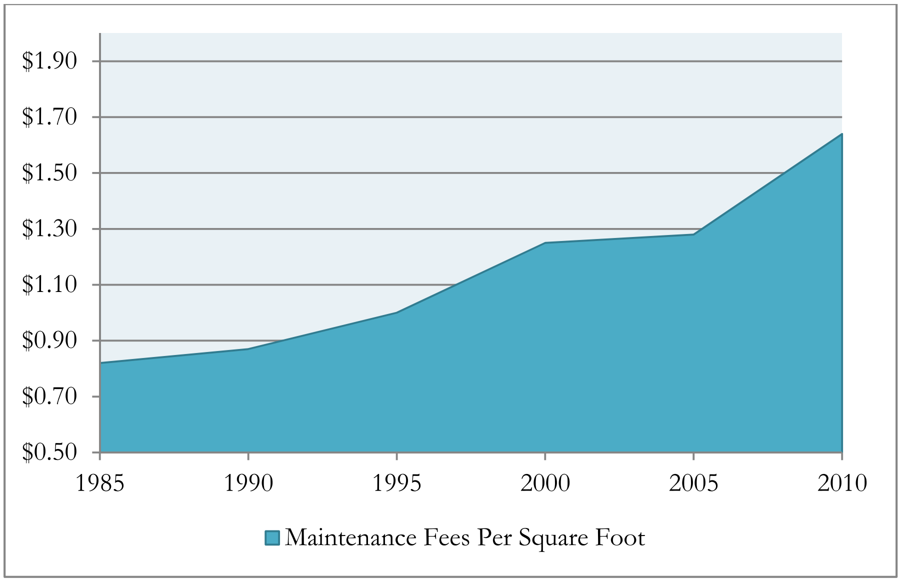


**Figure 8: Rising Manhattan Condo Maintenance Fees**

Maintenance fees for condos with hotel amenities are not inclusive of the services associated with the hotel. Condos that are part of a hotel serviced building will have the option to purchase the additional amenities either at market or for a discount to the listed cost. Optional services may include housekeeping service, room service, massage and spa services, catering services, supervised childcare and babysitting services, pet walking services, fresh flower service and reserved guestrooms in the hotel. The option to purchase these amenities is unique to condos with hotel amenities. In typical luxury condos, these services are not available through the building's management or concierge.

### 3.2.3 Tax Abatement

New York City's 421a tax abatement program was created in 1971 with the intent of stimulating new residential construction in the five boroughs. The abatement period varies throughout the boroughs, but for the purposes of this paper, the as-of-right abatement period for all properties in Manhattan below 110$^{th}$ Street is 10 years.

Developers receive a partial tax exemption for construction of residential units. The incentive for developers is to profit from the difference between the full cost of the unit's tax rate and the discounted tax rate on a monthly basis. While the law was intended to help keep the cost of housing low by providing temporary relief from property taxes, the assumption of developers is that buyers would be willing to pay more per square foot for a unit by the amount of their initial tax savings.

Tax abatement benefits granted under the program provide for up to three years for a construction exemption period with an additional 10-year post-construction abatement period. The post-construction period consists of an initial two-year period with a full abatement followed by an eight-year phase out period. The tax relief is the greatest at the moment the building is ready for occupancy, and then increases every two years (20% every 2 years) thereafter until the ten years is complete, and at which time the property taxes hit their maturity.

| Asessed Value | $ 1,000,000 |
|---|---|
| Monthly tax assesment assuming constant value | |
| Year 1-2 | $ 1 |
| Year 3-4 | $ 59 |
| Year 5-6 | $118 |
| Year 7-8 | $176 |
| Year 9-10 | $235 |
| Year 11 forward | $294 |

**Figure 9: Example of tax abatement**

The law states that the tax benefits will be reduced by the extent to which the project's floor area of non-residential space (commercial, community facility, and accessory) exceeds twelve percent of the Aggregate Floor Area. The Aggregate Floor Area calculation is the sum of "Residential A.F.A.," "Non-Residential A.F.A.," and "Ineligible Residential A.F.A.," not the total floor area of the building (421a Legislation, 2011).

In 2008, the laws were changed to exclude more geographic areas from the exemption and to require an affordable housing component be provided as part of the benefit. This affordable housing component provides for a minimum of 20% affordable housing onsite or purchased certificates for comparable offsite housing. These changes were implemented after several observations by the industry. The law was failing to incentivize affordable housing with only 7% of new housing being affordable. Typically, residential units with significant affordable housing fall under other abatement programs already and do not have a need for 421a. Finally, the law failed to incentivize new development with only 36% of new development taking advantage of the abatement (Pratt, n.d.).

A catalyst for this abatement program lies in the fact that condos are assessed as a Class 2 property in Manhattan. This class is assessed at a higher percentage of value than Class 1 properties, which include single-family through three-family properties. By providing temporary abatement from these taxes, the city hoped to spur condo development in areas with historically high density and cost of living.

Tax rates have fluctuated in New York City over the past 20 years. In 2002, the tax rate was increased by 20%, making housing significantly less affordable for many. In 2007, that rate was mitigated with a temporary one year reduction of 7%. A benefit for homeowners when it comes to assessed values is that they continue to trail market value (Pratt, n.d.). To help shield owners from unaffordable tax increases, the law requires that co-op and condo buildings be assessed as if they were rental buildings, resulting in far lower tax bills.

The issue of how to account for buyer preference and decision to sell at a given time in order to benefit from this exemption cannot be easily ascertained by any data. Owners may seek to sell the unit after owning it for five years with the sole intention of benefitting from the still existing abatement for the unit. The data is unable to account for this buyer behavior outside of observing that the average holding period in Manhattan is only three years, well short of the national average of seven years.

#### 3.2.4 Branding

Branding can take several forms. First, a condo may be branded with the same name as the hotel it is associated with. Second, a condo may be branded with a building name if it is accompanied by a broad marketing campaign to create an identity for the building and associated lifestyle. Third, the building may be branded with the name of the signature concierge service. In this particular hotel amenity style building without the hotel attached, a name brand concierge with a reputation for a high level of service may be used as a marketing tool. Finally, the recent rise of star architects or "starchitects" has created an entirely new marketing tool for developers. Architecturally unique buildings are now being branded with the architect's name in a bid to attract a new segment of buyers.

Branding of condo developments is strongly associated with higher sales price per square foot. In many cases, a developer may pay a premium for the use of such a name, such as Trump. In other cases, design fees of well-known architects may drive development costs higher in an attempt to capture some of the cache of living in a recognizable building.

Buyers' perceptions are often that buildings branded with the name of a quality hotel will come with a similar quality of material, finish and experience as staying one of the company's hotels. However, many buildings that carry the brand of a hotel or company name are developed and built by a separate entity and the name is simply licensed to the building for a fee. The association between unit attributes and those of the hotel it is branded with remain strong and allow these units to command a premium. This is particularly true when the brand is nationally recognized and of a very high quality. Condos branded with lower tier hotels do not command the same premium.

### 3.2.5 New Construction versus Conversion

New luxury condo developments in Manhattan are spread between new construction buildings and conversions of existing buildings. In a market where the barrier to entry is high and almost every developable site already has a use on it, it may not always make financial sense to raze a building and start from scratch. These buildings are typically converted from apartment buildings, hotels and office buildings. Conversions of these buildings become most common when the price of housing is rising and development of new product cannot keep pace with demand. Conversion of apartment stock and hotels has become especially controversial because it takes valuable and needed housing out of the multi-family pool.

In these cases, where the existing building has some residual value, a developer may choose to gut and rehabilitate the building. This process can reduce both the schedule and cost of construction as well as alleviate some of the execution risk to the project.

While these projects remain in the minority of new development in Manhattan, they do continue to persist and their presence must be accounted for and acknowledged in the dataset. In the case of this variable, it is the reduced development cost which allows these building to sell for less than their new construction counterparts. No measurable effect can be found on buyer preference for a new building over a converted one.

### 3.2.6 The impact of view and floor height on sale price per square foot

Manhattan is unique in its density, building height and wealth of city, park and water views. Developers have long known that condos with views command a premium over condos without views. This is true to the extent that similar units on the same floor may command different prices depending on the orientation and specific features of the view.

This paper looks at unit floor height in two different ways. First, it considers the impact of a unit's floor relative to the total number of floors in a building. In this case, the question is whether a buyer places a premium on being on a higher floor regardless of whether that floor is associated with a view. Research suggests a trend towards developers naming the top several floors with the PH prefix as opposed to only the units on the top floor. This trend indicates a preference associated with the branding and exclusive association of an individual unit.

The second consideration of the research is the floor an individual unit is located on and the likelihood of a higher floor yielding city, park or river views. In this case, the goal was to determine a relationship between condos located above a hotel and condos in non-hotel buildings which were simply located on a higher floor. Typically, in a building which houses both a hotel and condos, the hotel is located on the lower levels with the condos being located above on the higher levels of the building. Because of this physical construct, condos in these buildings are more likely to have views given that all of the units are located on high floors. While the condos with hotel amenities in the data set are not exclusively of this format, those that are were included in a separate analysis to look at this variable.

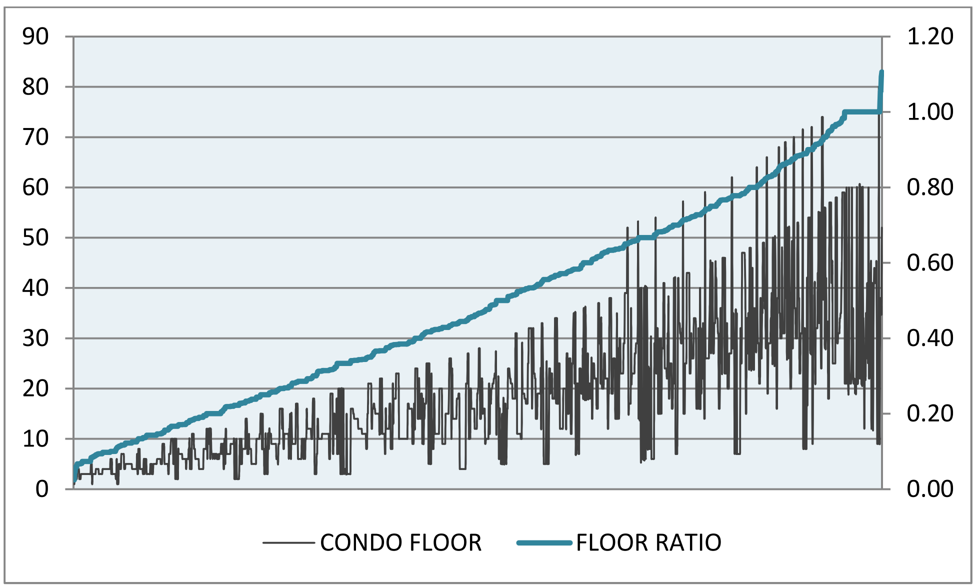


**Figure 10: Price PSF condo floor & Price PSF Condo Floor Ratio**

## 3.3 Case Studies of Buildings in Dataset

### 3.3.1 Successful Project Example – Mandarin Oriental

This project is perhaps the most successful of all luxury hotel branded condos ever developed in Manhattan. The success of this project, however, cannot be attributed to just one factor. Market, location, branding and timing were all critical to the success of this development. These combined factors drove demand for these residences with some of the higher sale prices per square foot ever seen in the city and made it the highest grossing residential development project in the city (Calin, 2011).

Related Companies, the developer of this mixed use project incorporated an extensive list of resident, guest and public amenities including many typically outside the scope of a typical condo or hotel development. The building includes office and retail with fine dining and a Whole Foods grocery store in the basement as well as concert halls for Lincoln Center Jazz. The project is located on Columbus Circle with expansive views of Central Park and sits directly atop three subway lines.

The Mandarin Hotel is one of the most luxurious and well recognized brands allowing the developer to capture buyer's association between the Mandarin brand and the luxury quality of residences and lifestyle the developer was selling. Ultimately, the project came to market at a time when the economy and demand for luxury residential was growing. As one of the first projects of the decade to combine luxury amenities in a new construction building, the developer captured an unmet demand for this product.

### 3.3.2 Distressed Example - Setai Downtown

The Setai Downtown, located at 40 Broad Street, is a conversion of an existing office building in downtown Manhattan. The property was redeveloped by a partnership between family-owned real estate company Zamir Equities and the Setai Group along with Ian Schrager, a hotel magnate, known for the luxury hotel co-op Gramercy Park North and numerous other luxury residences and hotels in Manhattan. The project features a private club, restaurant, rooftop cabanas and a spa.

From the start, several problems plagued this project. There were allegations from the Setai, which licensed its name to the development, that the interior finishes of the units did not meet the 5-star standards required of the brand. The building was plagued by construction delays and later in the project purchaser lawsuits were brought against the developers by those wanting to rescind their contracts.

The final straw in the building's troubled history came when the developer defaulted on their $147 million construction loan for a second time. The developer had previously defaulted on the loan and it had subsequently been restructured. Anglo Irish Bank, the troubled holder of the loan put it up for sale along with a number of other distressed notes. Ultimately, the note was purchased for $80 million in the spring of 2011 and sales resumed, with price cuts of 16% or more.

### 3.3.3 Built and Repositioned Example - William Beaver House

The William Beaver House is 100% condos with no hotel component; however, with a branded restaurant and spa on site, the building is owned and managed by Andre Balazs of The Standard hotel.

The William Beaver House came to market in 2008 and struggled with sales due to market timing, pricing and some unique design features that not all buyers were interested in paying for, such as open bedroom bathroom layouts that did not allow for privacy. In December 2010, with only 78 of its 319 residences sold, the CIM Group, a real estate investment company based in Los Angeles, stepped in to bail out Tamir Sapir, who developed the building. The new owner took possession of the building's unsold units and immediately began the conversion process to rentals. In early 2011 the unsold units went on the rental market and have been relatively successful with over 85% of the units leased as of July 2011. It is expected that the units will eventually be sold as the market strengthens in the coming years.

#### 3.3.4 Unbuilt Example - Four Seasons Downtown Hotel and Residences

The four Seasons project was announced in early 2007 as a partnership between the Four Seasons and Silverstein Partners, a development firm known best for their involvement in the nearby World Trade Center site. The eighty story tower, designed by architect Robert AM Stern, was to have 142 condos atop a 175 key hotel and be a landmark building in the downtown area.

By mid-2008, the project had completed construction documents, the existing building on the site had been demolished and foundation work had begun. However, in late 2008 the credit markets had frozen prior to Silverstein securing funding and the market for hotels and condos had evaporated. As of early 2011, the project remained a hole in the ground, though the developer maintains that the market for their product still exists and construction is said to be starting sometime in 2012. The developer maintains the building will be built in its current design and configuration when the market returns. Whether this materializes, or is just the optimistic talk of the developer remains to be seen.

## 3.4 Chapter Summary

Brand and luxury amenities have been used as marketing tools to drive sales over the past several years in Manhattan. However, with the economic downtown and failure of many high profile projects, developers are being forced to rethink the viability of this development strategy. This chapter presented a background of luxury condos in Manhattan, as well as evidence of the decline in the market for fully serviced luxury condos and the amenity options that come with them.

Research indicates that although the downturn has affected some developments more than others, an obvious pattern has emerged. Reasons cited for the decline in the market were inability for buyers to find financing, lenders' unwillingness to finance units in specific troubled buildings, resistance to condos with uncertainty about affordable housing components and potentially rising maintenance fees.

Due to this shift in demand, developers are abandoning plans to build luxury condos and are seeking to reposition these assets as rental apartments, in some cases with a lower tier of amenities if allowable. This leads to the question of how developers will go about identifying the new highest and best use for these assets in this evolving market and what buyers, or in some cases renters, will be willing to pay.

# 4.0 Chapter 4: Data Analysis

## 4.1 Introduction

The primary purpose of this analysis is to identify behavior of residential buyer preference for, and willingness to pay for, hotel amenities, and to gain insights as what variables drive sales of luxury condos. The analysis will present a relationship between sales price per square foot, and building as well as unit characteristics such as maintenance fees per square foot, branding and property taxes. The results presented here were the result of a linear regression analysis to solve for the dependent variable of sales price per square foot using 18 dummy variables and 11 independent variables. This data set dates from 2004 through the second quarter in 2011 and consists of sales data from a select set of condo developments in Manhattan. The variables are listed and described in Figure 12. The summary statistics of datasets for each of the variables are shown below in Figure 13 to provide context of scale and variability for the results presented in the remainder of the chapter.

There are several factors in the data which create errors, biases and skewed pricing trends. Several steps were taken to minimize these errors including the exclusion of price outliers – extremely high or low prices, as large price per square foot differences indicate that there may have been data entry errors and that the outliers may affect the outcome of the analysis – and co-ops and hotel condos were omitted as they are considered to be part of a different market.

The following equation was used to solve the linear regression:

PPSF = HA + BR +Maint + TA0 + TA 6 + TA8 + TA10 + AGE + NC + FLR + FL + Beds0 +Beds1 + Beds2 + Beds 3+ + Fullbath1 + Fullbath2 + Fullbath3+ + Halfbath + LC1 _LC2 +LC3 +LC4 +LC5 +LC6

**Figure 11: Regression Equation**

| Regression Variables | |
|---|---|
| **Variable** | **Definition** |
| **PPSF** | Dependent variable indicated as sale price per square foot. |
| **HA** | Accounts for available hotel amenities as a building characteristic with a 1. No hotel amenities are indicated with a 0. |
| **GSF** | Gross Square feet of a given condo unit per public sales records. Does not indude exterior square feet of balconies or separate storage spaces. |
| **Beds** | Number of bedrooms per sales recrods. Dummy variable is provided to sort bedrooms with 3+ bedrooms being allocated to the same group. |
| **Fullbath** | Number of bathrooms per sales recrods. Dummy variable is provided to sort bathrooms by number of full baths. 3+ bedrooms are allocated to the same group. |
| **Halfbath** | Half bathrooms are separated from full bathrooms and the presence of a halfbath in a unit is indicated with a 1 versus a 0 when it does not exist. |
| **Maint** | Indicates the maintenance fee as a dollar per square foot of gross square feet of unit. |
| **LC** | Accounts for locational differences in sales price per square foot. Dataset is broken out into six different negihborhoods. A unit's location in a given neighborhoos is indicated with a 1, while it is given a 0 for all neighborhoods it is not located in. |
| **AGE** | Indicated as the number of years difference between the year the building was built and the date the unit was sold. |
| **BR** | Accounts for presence of branding as a building characteristic with either a 1. No Brand is indicated with a 0. |
| **NC** | Accounts for whther a building in new construciton or a conversion. This building characteristic with a 1 for conversions and a 0 for new construction. |
| **FLR** | Indicated as a ratio the floor of condo relative to the total number of floors in the building. |
| **FL** | The floor a condo is located on in a building. |
| **TA** | Indicates number of years of remaining tax abatement at time of unit sale. Years are broken out into dummy variables based on the years when tax rates will rise. Buildings without any tax abatement are indicated with a 0. |

**Figure 12: Regression Variables**

## 4.2 Summary Statistics

Figure 13 shows summary statistics for the sample set used in the analysis. The first column shows the characteristics of condos with hotel amenities; the second column shows the characteristics of condos without hotel amenities; and the third column shows the characteristics the entire data set. Condos with hotel amenities tend to be larger, have more bedroom and bathrooms, have fewer total units in the building and be located on higher floors. Not surprisingly, condos with hotel amenities are more likely to be branded than their non-hotel amenity counterparts. A preference for larger units is related to the greater wealth associated with buyers of higher-end luxury condos rather than a direct correlation to the presence of hotel amenities.

Looking at the percentage of condos with hotel amenities in the sample dataset, 11 of the 32 buildings have hotel amenities associated with them, but only 542 of the 1935 observations have hotel amenities. This summary statistic aligns with the observation that condos with hotel amenities have 104 fewer units per building on average. The results of the analysis show that the dependent variable, sale price per square foot in a given condo unit, indicates that the average value of a condo with hotel amenities over one without is statistically insignificant at only 1.2% more.

The neighborhood distributions of condo sales in the data set are shown in Appendix A. The neighborhoods are broken down into six primary districts. Neighborhoods without sales of condos with hotel amenities were excluded from the data set. Neighborhoods with sales of condos with hotel amenities include an average of two condos without hotel amenities for every one with hotel amenities. Buildings in similar neighborhoods have similar building attributes.

**Summary Staistics for DataSet**

| Log Price PSF | Condos with HA | Condos without HA | Combined |
|---|---|---|---|
| Independent Variables | | | |
| average gross square feet | 1218 | 1083 | 1151 |
| number of bedrooms | | | |
| studio | 76 | 47 | 123 |
| 1 bedroom | 256 | 565 | 821 |
| 2 bedrooms | 179 | 532 | 711 |
| 3+ bedrooms | 51 | 229 | 280 |
| number of bathrooms | | | |
| 1 bath | 324 | 590 | 914 |
| 2 baths | 194 | 531 | 725 |
| 3+ baths | 44 | 252 | 296 |
| half baths | 136 | 290 | 426 |
| avg age of building at time of sale (years) | 0.72 | 0.71 | 0.72 |
| hotel amenity buildings | 562 | 0 | 562 |
| branded condos | 562 | 848 | 1410 |
| avg condo floor ratio | 0.53 | 0.45 | 0.49 |
| avg floorof condo | 17.7 | 14.9 | 16.3 |
| average maintenance per square foot | $ 1.06 | $0.89 | 0.975 |
| condos with tax abatement | | | |
| no abatement | 112 | 43 | 155 |
| 6 years remaining | 1 | 12 | 13 |
| 8 years remaining | 31 | 142 | 173 |
| 10 years remaining | 419 | 1175 | 1594 |
| conversion | 92 | 0 | 92 |
| tribeca | 86 | 187 | 273 |
| chelsea | 0 | 170 | 170 |
| financial | 174 | 0 | 174 |
| gramercy | 72 | 112 | 184 |
| midtown | 5 | 456 | 461 |
| upper west side | 225 | 448 | 673 |
| year of sale | | | |
| 2004-2006 | 180 | 259 | 439 |
| 2007 | 81 | 103 | 184 |
| 2008 | 89 | 485 | 574 |
| 2009 | 131 | 243 | 374 |
| 2010 | 47 | 223 | 270 |
| 2011 | 34 | 60 | 94 |
| Dependent Variable | | | |
| avg sale price per square foot | $1,246.00 | $ 1,418 | $ 1,332 |
| Number of observations | 562 | 1373 | 1935 |

**Figure 13: Summary Statistics**

## 4.3 Results

This section is broken out by the independent variables contributing to the results. The variables include both building attributes, such as presence of tax abatement and hotel amenities, as well as unit attributes, such as the monthly tax bill and maintenance fee. The parsing out of the variables in this manner presents a clearer picture of what effect these individual attributes have on the price per square foot of a unit.

The log transformation of the data produces coefficients that represent relative change as a percent in the dependent variable (sale price per square foot) given a change in each individual independent variable. Dummy variables for which the control variable has been given a relative value are studios, one bath, zero years of tax abatement remaining, Gramercy neighborhood and date of sale years one through 3. The results of this analysis have a number of statistically significant observations with a 95% confidence, the conventional confidence interval used in statistics. These values are highlighted in the results table.

Parking does not play a direct role in the sale price per square foot of a unit. Manhattan is a unique market in that parking is rarely deeded with a unit though most luxury condo buildings in Manhattan do have parking facilities attached. Those that do typically operate the parking as a separate condo entity and either lease or sell the parking on a per space basis (Schill, Voicu & Miller, 2006). Buyers in buildings with parking attached do benefit from the option to purchase or lease a space; however, since this data is not tracked with unit sales, it was not possible to draw a correlation of the option of parking as a building attribute which could affect the sale price per square foot.

Age of the building at its first closing relative to the closing date of the unit was not a factor in the regression model. Under normal repeat sale conditions, days on market would be correlated to the discount given on the closing price. The commonly held belief is that units that do not sell quickly have sellers who are incentivized to provide discounts in order to sell their unit. In the case of new buildings, however, developers will release only a select number of units for sale at a given time. This means that units sold at a later date were more likely to have been released for sale towards the end of the marketing cycle rather than the sale date being a broader indicator of the building's or market performance.

**Model of Sale Price per Square Foot**

| Log Price PSF | Coefficient | Std. Error | Percentage Effect | P>t | 95% Confidence | Interval |
|---|---|---|---|---|---|---|
| log gross square feet | 0.0356099 | 0.0238109 | 1.5 | 0.135 | -0.0110882 | 0.0823079 |
| number of bedrooms | | | | | | |
| beds1 dummy | -0.0299383 | 0.017688 | -1.69 | 0.091 | -0.0646282 | 0.0047516 |
| beds2 dummy | 0.0587968 | 0.0334355 | 1.76 | 0.079 | -0.0067773 | 0.1243708 |
| beds3plus dummy | 0.0523932 | 0.0403841 | 1.3 | 0.195 | -0.0268084 | 0.1315949 |
| number of bathrooms | | | | | | |
| fullbath2 dummy | -0.0607014 | 0.0282639 | -2.15 | 0.032 | -0.1161327 | -0.00527 |
| fullbath3plus dummy | 0.0555297 | 0.0379245 | 1.46 | 0.143 | -0.0188482 | 0.1299076 |
| halfbath dummy | 0.0052709 | 0.0108903 | 0.48 | 0.628 | -0.0160872 | 0.0266291 |
| age of building at time of sale | -0.0102269 | 0.0085183 | -1.2 | 0.23 | -0.026933 | 0.0064793 |
| hotel ammenity | -0.0204448 | 0.0171564 | -1.19 | 0.234 | -0.0540921 | 0.0132025 |
| brand | 0.1622675 | 0.016808 | 9.65 | 0 | 0.1293035 | 0.1952315 |
| condo floor ratio | 0.3028889 | 0.0149924 | 20.2 | 0 | 0.2734857 | 0.3322921 |
| floors in building | 0.0037462 | 0.0004804 | 7.8 | 0 | 0.0028041 | 0.0046883 |
| maintenance PSF | 0.1342571 | 0.0242446 | 5.54 | 0 | 0.0867084 | 0.1818059 |
| tax abate remaining 6yrs dummy | -0.1015821 | 0.0619392 | -1.64 | 0.101 | -0.2230578 | 0.0198935 |
| tax abate remaining 8yrs dummy | -0.2244682 | 0.032985 | -6.81 | 0 | -0.2891586 | -0.1597778 |
| tax abate remaining 10yrs dummy | -0.2445099 | 0.0254968 | -9.59 | 0 | -0.2945144 | -0.1945055 |
| conversion v new construction | -0.3907963 | 0.0349409 | -11.18 | 0 | -0.4593227 | -0.3222699 |
| tribeca | 0.2250141 | 0.0257068 | 8.75 | 0 | 0.1745978 | 0.2754305 |
| chelsea | 0.1201298 | 0.0213824 | 5.62 | 0 | 0.0781944 | 0.1620652 |
| financial | 0.013154 | 0.0261633 | 0.5 | 0.615 | -0.0381577 | 0.0644656 |
| midtown | 0.0616777 | 0.0264194 | 2.33 | 0.02 | 0.0098638 | 0.1134915 |
| upper west side | 0.0195089 | 0.0151567 | 1.29 | 0.198 | -0.0102165 | 0.0492344 |
| | | | | | | |
| Year of Sale Indicators | | | | | | |
| year_dum4 | 0.1359621 | 0.0170103 | 7.99 | 0 | 0.1026013 | 0.1693228 |
| year_dum5 | 0.2242887 | 0.0172804 | 12.98 | 0 | 0.1903981 | 0.2581792 |
| year_dum6 | 0.2078077 | 0.0187968 | 11.06 | 0 | 0.1709432 | 0.2446721 |
| year_dum7 | 0.17102 | 0.0212033 | 8.07 | 0 | 0.1294359 | 0.212604 |
| year_dum8 | 0.1843625 | 0.0277151 | 6.65 | 0 | 0.1300074 | 0.2387177 |
| R-squared | | | 0.5756 | | | |
| Number of observations | | | 1935 | | | |

**Figure 14: Regression Results**

## 4.4 Variables in Data

### 4.4.1 Effect of Hotel Amenities on Price per Square Foot

Hotel amenities have no significant effect on sale price per square foot. Developments with hotel amenities, whether the presence of a hotel exists or not, do not sell for a premium per square foot over buildings without when controlling for all other independent variables.

The results of this analysis indicate that there is no financial benefit to the developers by choosing to provide this amenity. In fact, developers who devote development design, licensing and other fees to this type of development are hurting the financial performance of the project when strictly considering the benefits of one type of amenity package over another. The dataset in this case does not account for a difference in luxury level within the branded hotel buildings. Given the fact that more luxurious buildings do command a premium, this indicates that condos branded with less luxurious or well-known brands would be hindered more than previously thought.

### 4.4.2 Effect of Maintenance Fees on Price per Square Foot

Condos sold for 5.5% more per square foot when maintenance fees were higher, a statistically significant amount. However, this premium is a result of the building characteristics rather than the presence of hotel amenities. Buildings with a higher percentage of common area relative to the total gross square feet of all condos have higher maintenance per square foot due to each residential square foot carrying a higher percentage of the total common square feet.

A second building attribute that causes higher maintenance relative to sale price per square foot is that buildings with higher amenity packages, nicer finishes and more personal services inherently sell for a premium per square foot over buildings with fewer amenities and quality of common area finishes.

Ultimately, the maintenance per square foot, while a unit attribute, is a factor of the building quality and amount shared building amenities and not the presence of hotel amenities. The statistical significance of this independent variable is not attributable to the presence of hotel amenities.

### 4.4.3 Effect of Tax Abatement Programs on Price per Square Foot

Tax abatement has a negative effect on the price per square foot that buyers are willing to pay. The longer a unit has left for its tax abatement period, the less a buyer is willing pay. Units with 10 years of abatement remaining sell for 10% less than units without an abatement program attached to the building.

While these results run counter to the concept that buyers are willing to pay more for units with lower initial tax rates, using the savings to increase monthly mortgage payments, the opposite is true. Anxiety over the association with affordable housing is one such reason that buyers will pay less for this abatement.

A second reason a unit with abatement will sell for less is the concern for the increasing tax bill as property prices appreciate and the negative impact that bill will have on the future value of the property. As the property tax bill increases in future years along with the appraisal, buyers can expect the actual tax bill to rise by more than 20% annually. This provides an additional level of concern for the future value of the asset at the time of resale.

### 4.4.4 Effect of Branding on Price per Square Foot

Condos with branding, whether hotel name or building identification, sell for 9.7% more per square foot than buildings without a brand associated with them. Condos branded with higher end and more well-recognized brands sell for a higher premium than condos branded with a lower tier flag or boutique operator.

Branding of luxury condo projects is nothing new. However the trend has increased in the past decade. The branding of these buildings may take several forms. First, the condo may be branded with the same name as the hotel or concierge it is associated with. Second, a building may have a name designed to market to the building and associate with a certain image and lifestyle. Third, in the most recent trend, a building will have the name of its architect or designer, when that person is well known, as a component of its name. All of these branding strategies are designed to increase the perceived value of a building to potential buyers, and in turn increase sales price per square foot. This belief is substantiated by the data.

### 4.4.5 Effect of New Construction versus Conversion Buildings on Price per Square Foot

Buildings in the data sample were differentiated based on whether they were new ground-up construction or whether the buildings had been converted from existing buildings into condos (the original uses varied from apartments to office buildings). Buyers paid 12% less per square foot for buildings which had been converted from previous uses than for new construction buildings. The data sample included 198 observations for conversion buildings out of a total 1935 observations in the dataset.

The primary reason for this is due to the developer's ability to price these units more competitively. A large percentage of a development's hard costs come from the excavation, foundation and structure of the building. The absence of these costs helps to bring down the total development cost of the project.

Secondary reasons for this lower sale price per square foot of conversion buildings include the fact the conversion buildings often have layouts and floor plans less desirable given current market preferences for open floor plans.

#### 4.4.6 Effect of Floor Number Ratio on Price per Square Foot

Condos on a higher floor number relative to the total number of floors in a building sell for 20% more per square foot than condos on lower floors in the same building. This is a statistically significant premium with a standard error of 1%. Higher floors are generally associated with better views; however, this ratio accounts only for the floor the unit is located on relative to the total number of floors in a building. This accounts for the premium paid for high floor units even in buildings with a relatively small number of floors.

The premium buyers are willing to pay to be located on the top floor of a building can also be seen in the trend towards developers building a higher number of units with the prefix PH for Penthouse (Miller, 2008), even when the unit may be located three or more floors from the top. Unit characteristics for these penthouse units include a higher level of privacy with fewer units per floor, outdoor terrace space, unique layouts relative to other units in the same building and unit amenities in addition to those enjoyed by other building owners. While some developers have attempted to sell units without premium attributes for a premium sales price, there is no evidence that the market supports this.

#### 4.4.7 Effect of Square Feet of Unit per Number of Beds and Baths

Condos with hotel amenities tend to have more square feet per bedroom as well as more bedrooms and bathrooms than condos without hotel amenities. This fact helps to account for the higher sale prices of condos with hotel amenities even when controlling for number of bedrooms and bathrooms, assuming a statistically insignificant difference in the price per square foot paid based on the presence of hotel amenities. This is associated with buyers of higher luxury buildings having a preference for more space.

#### 4.4.8 Effect of Neighborhood on Price per Square Foot

Condos in the Gramercy neighborhood had the lowest sale price per square foot of the six neighborhoods, while Tribeca had the highest over the 6 year period. While Tribeca's price paid per square foot was 8.8% higher than Gramercy's, Gramercy showed the strongest price appreciation over the past year while the Financial District suffered the largest price decline (Douglass Elliman, 2011).

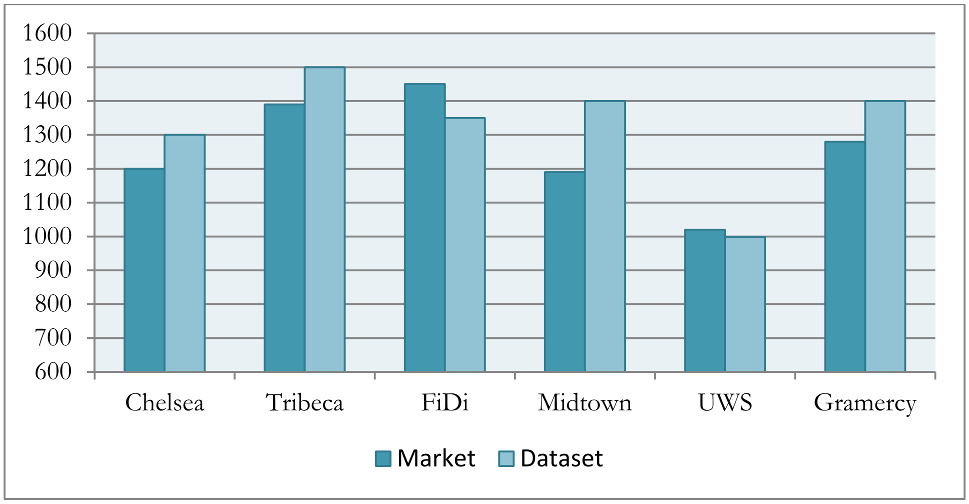


**Figure 15: Sales Price PSF by Neighborhood (2005-2010)**

## 4.5 Chapter Summary

The analysis in this study substantiates developer sentiment; condos of similar quality will not command higher per square foot sales figures when paired with hotel amenities. When coupled with the additional cost of branding condos with hotel amenities, developers of these properties could see even less if their development agreement provides a fee to the owner of the brand.

The secondary result of this analysis shows that buyers of luxury condos are willing to pay significantly less for condos with tax abatement. While this would seem to contradict common sentiment, uncertainty over affordable housing affecting the overall value or association with their unit continues to drive the market in this respect. This figure diminishes over time along with uncertainty associated with the abatement.

Buyers are willing to spend 5.5% more per square foot for units with higher maintenance fees. This willingness to pay more for units in more luxurious buildings is related to the branding of the building and not the hotel amenity itself. Given that the cost to provide these optional services that come as an addition to the traditional luxury services buyers have come to expect, and is a small additional cost to the developer, these buildings can expect to be successful in the future provided the market supports this amenity level by income and lifestyle.

This data analysis confirms developer sentiment and can help to drive future development decisions within companies regarding development proposals and associated amenity packages. Where the variable outcomes do not align with industry reasoning, it provides a backdrop for developers to rethink their market knowledge and pursue further research.

# 5.0 Chapter 5: Consequences to Real Estate

## 5.1 Effects on the Residential Condo Market in Manhattan

Markets such as Manhattan will always maintain a certain level of demand for luxury residential given its place in the country's economy. The run up in popularity of this highly personalized luxury product was due as much to the easy credit of the past decade as it was to evolving buyer preferences. Eventually, the economic downturn exerted its dominance, and exceptional developments failed under market pressure.

Ultimately, the success of a luxury condo project with hotel amenities is driven not by the hotel amenity component, but by other building-level attributes. Well-located buildings will always perform better than poorly located ones. Branded projects, especially those branded with ultra-luxurious nationally recognized labels will command the premium that developers seek, while lower tier brands and boutique properties will struggle to have similar effect. Finally, more than any other factor (as seen in the most recent downturn), the market plays the largest role in the success of a project. A large market with a depth of sophisticated buyers will outperform smaller markets unaccustomed to such high end products. Expanding markets with positive jobs and economic growth data will support the development while declining and struggling markets will not see the same growth.

The downturn will have far reaching long term effects on the Manhattan residential market. Condo projects remain challenging to finance in today's market. Existing inventory remains high and replacement cost remains lower than current sale prices. As long as these trends continue it is unlikely any measurable new development will occur. Many un-built as well as built and distressed properties will remain in financial and legally precarious situations.

## 5.2 Solutions for Distressed Properties

The question of what to do with the properties is something that many developers are struggling with today. Tightening credit requirements combined with buyers' reluctance to commit to a purchase with unstable and falling prices caused a number of buildings to slash prices or fall into foreclosure (Bernstein, 2011). As it stands right now, condos cannot be financed, built or sold and much of the product that is out there is distressed. Chapter 3 presented several cases of buildings which had met varying levels of success in the market and the routes their owners had pursued in order to achieve financial stability.

Projects which have yet to be built provide the most flexibility in repositioning the project to meet today's market needs. The un-built Four Seasons project in the Financial District is one such example of a project that may be revived with the return of market demand. Other entitled and un-built properties may be taken through minor zoning changes to turn them into multi-family. Alternatively, projects without the branded hotel attached physically may be built as condos with a lower level of unit finish and amenity package when the demand from buyers returns. All of these projects can benefit from design changes which reduce the amount of square feet devoted to amenities and services which no longer yield the same revenue stream they once did.

Properties under construction and those which have been completed may pursue relief through a legal restructuring and ownership change that allows them a variety of remedies. The William Beaver House, which came to market in 2008 with weak sales, has opted to rent its unsold units creating a hybrid condo ownership and rental condition throughout the building, due to the fact that this decision was made after approximately one quarter of the units had been sold on various floors. Alternatively, the Setai at 40 Broad Street implemented a sales freeze after defaulting on its construction loan and recently brought its unsold units back to market with price cuts upwards of 30% under a new owner. It remains to be seen whether the market will support the sale of the remaining units even at this steeply discounted price.

Both of these buildings have struggled partly because of the business structure of the developments. Without the presence of a hotel component, the building management has struggled to attract well-known restaurant and spa operators their buildings. Without a hotel operator to wrap the service and amenity space under their management umbrella, the condo's management companies, and ultimately the condo owners, have had to pay the additional costs associated with this less efficient structure. With these buildings already completed, solutions to this problem are limited. Future development may rethink their development strategy to reduce developer's and manager's risk that a portion of the built space in a project may never find a tenant or buyer without an actual hotel as part of the project.

## 5.3 The Future of the Luxury Condo Industry

Luxury condos will have a future in the Manhattan residential market. Large and sophisticated markets will continue to support premium residential products, while smaller markets will continue to struggle with this product.

The presence of hotel amenities has less correlation with sales price per square foot than does the association of the building with a brand name. Furthermore, it is the nationally recognized brands with the highest level of luxury that succeed in commanding the premium over condos with standard luxury amenities.

In the bigger picture, desire for luxury residential remains strong and sales will return as the market strengthens. Hotel developers will continue to build condos as a component of their projects as a financing strategy as well as well as a way to increase their branding power. Buyers value the brand name associated with a national luxury hotel chain and believe it provides security form sharp market declines even in a volatile real estate market.

With the devaluing of the dollar and prolonged economic downturn, an increasing number of sales are coming from overseas buyers. Developers have been quick to recognize this trend and change marketing strategies. In the future, the market can expect to see not only marketing changes but also changes to the building designs, unit sizes and layouts and amenity packages as international buyers assert their preferences on the Manhattan condo market.

## 6.0 Chapter 6: Conclusion

While desire for a luxury product remains strong, willingness to pay for it has yet to rebound. This can be seen in the growth of luxury multi-family properties in Manhattan and across the country in many urban markets. As the inventory of luxury condos shrinks over the next two years, developers can expect to see prices rise above replacement cost and thus spur new development once again. Luxury condos with hotel amenities are likely to be a part of this new growth as hotel developers use it as a financing mechanism.

Ultimately, while the hotel amenity may be a component of a success project, the true driver of sale price per square foot is the branding of a nationally recognized luxury hotel. Rather than focus exclusively on the services provided to owners, developers must consider partnering with the brand that will drive the highest price sales at the lowest development cost, assuming that those amenities are equal to the buyer.

## 7.0 Chapter 7: Topics for Further Study

This paper provided the opportunity to analyze a specific set of data targeting the luxury branded hotel amenities of the Manhattan condo market. Given additional time, the research would benefit from an expanded scope.

One area of study that could be pursued is to apply a similar methodology to other urban markets in the country. Cities such as San Francisco, Boston and Chicago have all seen development of luxury hotel amenity condos, though to a lesser extent than New York. Analyzing the impact of buyer preferences on these markets as well as identifying the nuances that drive sales across the country would help to create a clearer understanding of the demand for luxury residential as a whole.

Better information on financial structure of the companies developing these properties as well as the entities which manage the services would help to identify inefficiencies in their structure and propose possible improvements. As it is now, little published data on this exists and many industry professionals interviewed were reluctant to disclose this information.

Developers could stand to benefit from research that develops a targeted methodology to amenities based on demographics of the targeted buyer. This analysis could yield results that identify buyers who would be willing to pay a premium for condos with hotel amenities and what other inclusions would help to target that group. In determining this, developers would be able to narrow the specific amenities they offer to those which produce the highest return on investment.

Finally, the model could be adjusted to provide more timely data. Perhaps in addition to using recorded sales data from the New York City Department of Finance, sales listings data could be used to analyze time on market and price changes made to listings before they go into contract. This data would have the potential to yield information on the relationship between days and market and discount in the list price relative to closing price.

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## Appendix A: Map of Dataset Properties

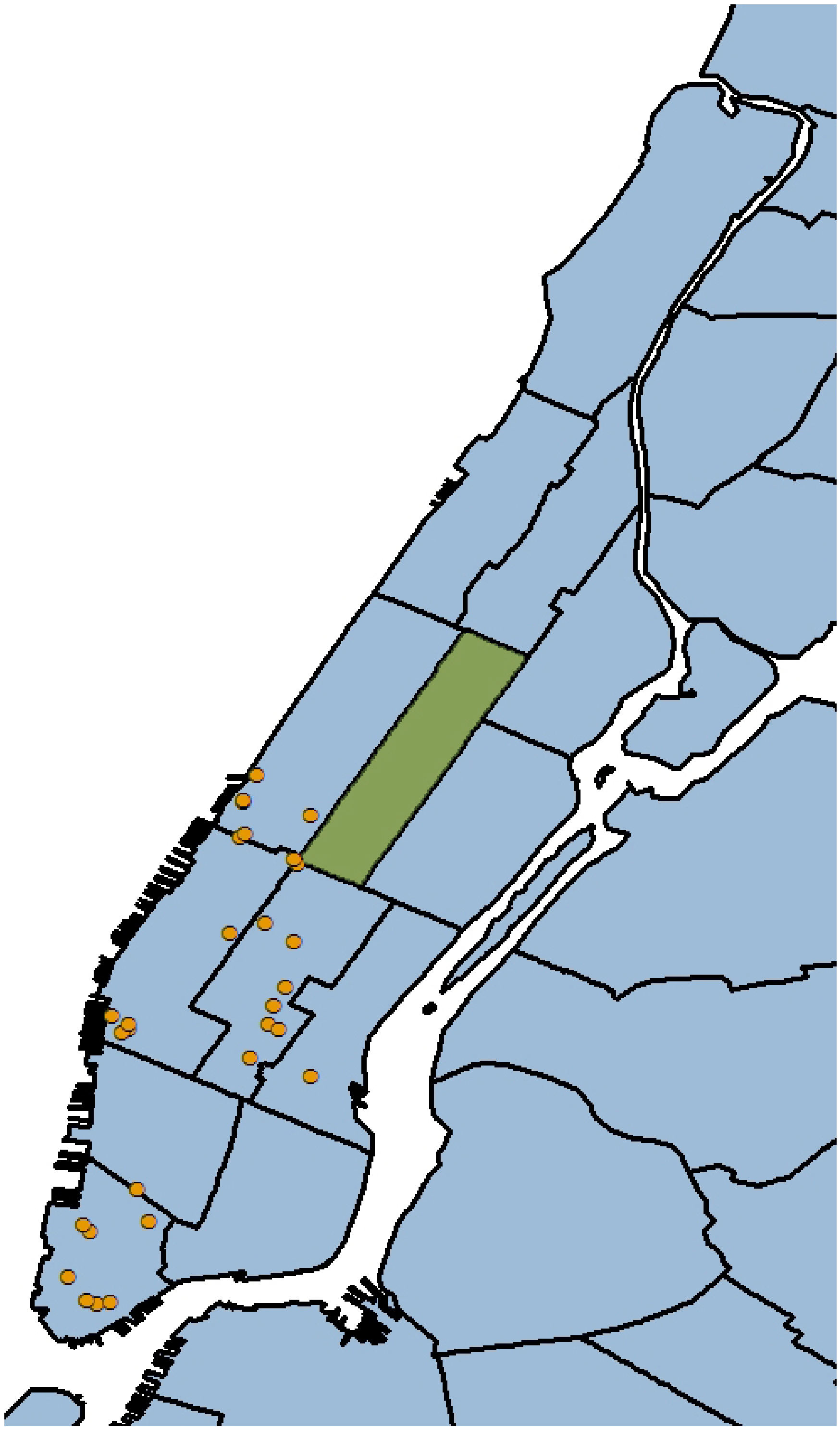

**Figure 16: Map of Properties in Dataset**

# Appendix B: Condo with Hotel Amenity Dataset

| Building Name / Brand | Address | Hotel Amenity | Information |
|---|---|---|---|
| JEAN NOUVEL | 100 11TH AVENUE | No | Mid-rise fronting on the Hudson River |
| AVERY | 100 RIVERSIDE BLVD | No | Part of UWS luxury residential development |
| - | 101 WARREN STREET | No | Ultra luxury condo development in financial district |
| SKYHOUSE | 11 EAST 29TH STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| RUSHMORE | 80 RIVERSIDE BLVD | No | Part of UWS luxury residential development |
| - | 200 CHAMBERS STREET | No | Small mid-rise condo development |
| ONE MADISON PARK | 23 EAST 22ND STREET | No | Starchitect designed tower with 2 units per floor max |
| TRUMP HERITAGE | 240 RIVERSIDE BOULEVARD | No | Park of UWS luxury residential development |
| PLATINUM | 247 WEST 46TH STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| TIME WARNER | 25 COLUMBUS CIRCLE | No | Opposite tower to 80 Columbus circle. Similar units without the option to purchase hotel amenities |
| THE LINK | 310 WEST 52ND STREET | No | UWS luxury tower located near Lincoln Center and other cultural amenities |
| SOHO MEWS | 311 WEST BROADWAY | No | Mid-rise with a variety of layouts including penthouses and townhouses |
| - | 325 5TH AVENUE | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| ORION | 350 WEST 42ND STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| Twenty9th Park Madison | 39 EAST 29TH STREET | No | Mid-town high-rise modern glass tower with typical luxury building amenities |
| CHELSEA MODERN | 447 WEST 18TH STREET | No | Mid-rise project with extensive common outdoor space |
| CALEDONIA | 450 WEST 17TH STREET | No | Building amenity includes private HighLine access |
| - | 456 WEST 19 TH STREET | No | Small Building with all units loft duplex design |
| - | 50 FRANKLIN STREET | No | Mid-rise luxury condo with limited number of units |
| - | 555 WEST 59TH STREET | No | UWS luxury tower located near Lincoln Center and other cultural amenities |
| W RESIDENCES | 123 WASHINGTON STREET | Yes | Condo residences above W hotel downtown. Hotel operators sevices hotel and condo units |
| WILLIAM BEAVER HOUSE | 15 WILLIAM STREET | Yes | Hotel branded condo and concierge. Recently partially converted to multi-family due to market |
| GRAMERCY BY STARK | 340 EAST 23RD STREET | Yes | Condos located in a building adjacent to the Gramercy Park hotel which services the condos. Separate physical building structure allows the condo building to capture the 421a tax abatement |
| SETAI FIFTH AVE | 400 FIFTH AVENUE | Yes | Luxury condos located above hotel of same flag. Condos are serviced by same operator |
| CASSA | 70 WEST 45TH STREET | Yes | 54 residences located atop luxury hotel of the same name. Units are designed to be easily combined |
| ANDAZ | 75 WALL STREET | Yes | Conversion of historic FiDi building. Hotel is located in adjacent structure |
| MANDARIN | 80 COLUMBUS CIRCLE | Yes | Once of the first condo with hotel amenity properties of this decade's boom. Highly sucessful project |
| SETAI BROAD | 40 BROAD | Yes | Conversion of office building. Struggled with legal financial and construction problems |
| TRUMP | 120 RIVERSIDE BLVD | Yes | Part of UWS luxury residential development |
| ADAGIO | 243 WEST 60TH STREET | Yes | UWS luxury tower with limited units per floor and river views |

**Figure 17: Comparable Properties Dataset**