THE MYTH OF INTRINSIC VALUE

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This work offers for analysis the discrepancy between the perceived and actual performance of multifamily real estate submarkets of major metropolises. The research encompasses a case study of nine submarkets in New York City, NY: Bronx County, Kings County (Brooklyn), Midtown West, Morningside Heights/Washington Heights, Queens County, Stuyvesant/Turtle Bay, the Upper East Side, the Upper West Side, and the West Village/Downtown. Two of these submarkets are scrutinized in particular: the Bronx and the Upper East Side. An examination of each market’s capitalization rates (between 2002 and 2016) serve to illustrate investor perceptions of these markets’ risk and growth metrics whereas rental and vacancy rates (between 1995 and 2016) are offered to elucidate the actual performance of markets judged by these same metrics. A review of each market’s returns between 2002 and 2016 is also given. The inconsistencies between CAP rates (perceptions) and rents/vacancies (reality) in these neighborhoods evoke the biases and misconceptions commonly purveyed in the real estate investment community and, to a degree, the potential pitfalls and flaws in traditional valuation methodologies applied to investment securities more generally.
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INTRODUCTION

In 1997 real estate investor Fred Leeds picked up his phone. “Fred, I have something for you,” said a broker. “Corner of Wilshire and Union. Meet me there this afternoon.”

Fred, always hungry to expand his portfolio, hopped into his car and drove into the direction of 1990’s Los Angeles No-Man’s-Land: East. Pulling up to the property, he laid his eyes on 9 acres of proverbial, rotting LA blight: 4 vacant warehouses (if they could still be called that), sprinkled across a booming bazaar of drug dealing, homelessness, and prostitution. “It’s a development play,” said the broker, a forced attempt at gilding the neighborhood fungus. “The zoning allows up to 2 million square feet of mixed-use real estate here.” Fred rolled his eyes, thanked the broker for his time, got into his car, and drove back towards the Pacific.

But he always tried to keep an open mind, and he soon enough he found himself rethinking his initial indifference. At the time, the area had no prospects for growth, but did that matter? It was on Wilshire Boulevard, Los Angeles’ premier arterial thoroughfare named after the eponymous land developer. “If you graduate dead last in medical school, what do they call you? A doctor. The least attractive slice of a beach community is still a beach community, and the worst part of Wilshire Boulevard is still Wilshire Boulevard,” gleams Fred.

Our protagonist did a quick back-of-the-envelope analysis. Nestled just west of Downtown LA, the cross street was in the top quintile for traffic count in all of LA County\(^1\), making it one of the densest corridors in the city. The parcel was being offered for $14 million. Even with moderate

\(^{1}\) [http://ladot.lacity.org/node/581](http://ladot.lacity.org/node/581)
construction costs, any landlord would be able to offer rents at a substantial discount to market for a *brand new* building, thus ensuring a high occupancy, and still garner a substantial return. When the broker got back to his office, he saw a fax coming in from Fred. “Draft offer at asking. 30 day escrow. No contingencies.”

Shortly thereafter, Fred was a proud owner of “the tract of homeless encampments,” his coveted name for the asset. “Guess how many premium coffee houses there were nearby? None. We got turned down by Home Depot 4 times for a store. We have at our site a Home Depot; it's their third or fourth most profitable store in their chain. Our McDonald's is in the top 5% for the company’s retail store sales. The dirt alone is worth approximately $150 million today.”

Fred has no shortage of these stories, having made a career out of successfully investing in Los Angeles’ most beleaguered submarkets. His office itself embodies his “turning chicken shit into chicken salad” investment philosophy: a pristine newly-finished space juxtaposed on the unsavory Crenshaw Boulevard and freckled with artwork from the now-defunct gaming giant, Atari (“I bought these pieces for cents on the dollar from one of their corporate offices when the company went out of business”).

It’d be easy to write Fred’s success off to luck; a maverick, or perhaps even unwitting, cowboy who chanced upon urban decay prior to the burgeoning grace of modern gentrification. He took high risk and was awarded his high return, one could say. However, questionable is the belief that an investment strategy like this can be depended on to generate consistently high and *risk-adjusted* returns: there are old pilots, and there are bold pilots; but there are no old, bold pilots.
A more fun a theory would be to praise Fred as some genius, a [Michael] Burry-ian eccentric with a knack for finding value in the singularly unexpected edges of a city. Music to a value investor’s ears and appeasement to a contrarian’s intellectualism: deals like these are diamonds in the rough, awarded to those with the stamina to network and endlessly sift through lead to find those golden nuggets. There’s some merit here: neglect from competitors does bring asset prices down across the board and creates occasional buying opportunities for those with the patience to look through all to find some.

But what if Fred’s success in these static, derelict city corners was due to something other than fluke, asset aberration, or prescient foresight?

Fred Leeds’s stories do more than just pique curiosity. They shed light on what opportunities, biases, risks, and unknowns lie in these ‘unattractive’ submarkets of major cities generally neglected by the institutional investment community. More than that, they goad on the unsettling reality that these very submarkets are not nearly as risky, on a fundamental basis, as investors believe them to be, especially compared against the more glamorous, luxury localities traditionally favored by investors.

RESEARCH METHODOLOGY

To explore these markets and their merit for investment further, this work offers a case study centered on what is perhaps considered to be one of the most efficient real estate markets in the United States and thus, by extension, the world: New York, NY. Analyzed in particular are
multifamily rental and vacancy rates, going back to the mid-1990s, and capitalization rates, going back to the early 2000s. All data contained herein has been provided by research company, REIS®, Inc. Multifamily was selected as the asset class for this analysis for several reasons, among them:

• The data required for exploration is extant and the most encompassing of any of the major real estate ‘food groups’.

• In comparison to that of commercial real estate (such as office or retail), the creditworthiness of the underlying tenants in apartment buildings is relatively uniform across a submarket, and so location can be isolated as the primary independent variable for the analysis. For example, a single-tenant building NNN leased for 30 years to a McDonald’s in Queens will be entrusted with a similar discount rate as would a building with the same tenant and lease terms in the West Village, which means that the tenant is obscuring the locational differences in the asset’s risk characteristics. This is much less so the case with multifamily assets.

• With the typical apartment lease extending 12 months, multifamily rents tend to be marked-to-market yearly (with the exception here being rent-controlled units), which means in-place rents consistently reflect what the market demand/supply balance deems them to be.

 Analyzed are New York City’s 9 main high-density residential submarkets: Bronx County, Kings County (Brooklyn), Midtown West, Morningside Heights/Washington Heights, Queens County, Stuyvesant/Turtle Bay, Upper East Side, Upper West Side, West Village/Downtown. The focus of this work, however, will be on two of these markets in particular: the Upper East Side and the Bronx. It’s my intention to prove why the aforementioned realities and perceptions of those realities

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2 Included are all unit types and sizes and building classes (i.e. A, B, and C) for buildings with 5 or more units.
are, at times, out of sync in these two neighborhoods of NYC. We start off here with how all of these markets are perceived by the investment community.

The valuation or price of any piece of real estate, and for that matter any investable security, is determined by two variables: income and multiple, that is, the income the building is currently generating or is projected to produce and the multiple applied to that incumbent or future income. In other words:

\[
\text{Purchase Price} = \frac{\text{Net Operating Income}}{\text{CAP Rate}}
\]

Income, in the form of rental and vacancy rates, is a product of a market’s fundamentals: population and aggregate job changes, proximity to employment and transportation, etc. (demand) and total housing stock, new development, zoning restrictions, etc. (supply). The underlying consumer, apartment tenants, and their relationship with available inventory are the foundation for this figure.

Capitalization rates (real estate’s esoteric analogue for earnings multiple) are also determined by supply and demand, but in a different marketplace: that of buyers and sellers of real estate assets. Investors apply CAP rates based on their perceptions of risk and growth for a given asset. Discount rates, interest rates, the ebbs and flows of capital markets, fear, greed, and all other beliefs are the driving forces for this number.

CAP rates are a manifestation of opinions of investors (relatively subjective) while rents and vacancies are that of the interaction of fundamental market characteristics (relatively objective). In a perfectly efficient market, NOI and cap rates would be highly correlated; as rents in a market are or are expected to increase and as vacancies are or are projected to decrease, CAP rates should in turn
decrease, with the inverse holding true as well. A scenario in which CAP rates move independently of rent and vacancy changes is indicative of buyers and sellers inaccurately perceiving a market’s fundamentals. An inefficiency. Risk and return are out of sync, with an overly compressed CAP rate signaling exuberance and an expanded one, unwarranted despondency. It is on these latter discords which this work focuses.
CAP RATES

The Gordon Growth Model, as applied to real estate, asserts that capitalization rates are determined by the difference between an asset’s appropriate discount rate, $r$, a measure of risk, and its projected growth (or contraction) rate, $g$ ($r - g$). A higher CAP rate demonstrates a belief in a relatively high $r$ and a low $g$, and a lower CAP rate, a lower $r$ and/or a higher $g$. While practitioners usually don’t explicitly break down CAP rates when underwriting potential acquisitions, the principles of this formula are nonetheless implicit in every valuation, with investors gifting lower CAP rates to markets or buildings that have room for growth in rents, ‘upside’, or a more stable stream of cash flows, for example.

Below are the multifamily historical CAP rates for the New York submarkets mentioned above between the years 2002 and 2016.
**Annual CAP Rates**

The Upper West Side is perhaps the most cherished market in New York City among investors today. At 3.5%, its CAP rate currently stands as the lowest among those of the 9 markets surveyed. The Upper East Side and Stuyvesant Town trail slightly behind at 3.6% and 3.9%, respectively, and the West Village/Downtown slightly behind still at 4.2%. Brooklyn at 4.4% and Queens at 4.7% are in the middle range, while Morningside Heights, the Bronx, and Midtown West all sell at or above five-and-a-half CAPs. The Bronx also had the highest ever recorded CAP rate during the period, reaching a peak of 9.2% in 2010.
Average CAP Rates

To give a better idea of performance over the entire term, though, below is a simple average of those same values between 2002 and 2016.

The pecking order for the average CAPs is very similar to that of the current CAPs, with the only substantive difference being Midtown West: compared to its peer markets, it has a very high current CAP rate versus a relatively robust average CAP rate.

As mentioned above, CAP rates are a barometer of investor sentiment, and so, by extension, we can use the hierarchy to extrapolate how investors perceive each market’s potential risk and growth. While it would be impossible to bifurcate each CAP rate into two distinct figures for \( r \) and \( g \), educated guesses of this breakdown could be made based on how the fundamentals of that market perform (attempted below). For now, however, it is sufficient to use the above chart to demonstrate how investors have been and are thinking. It should come as no surprise, for example, that investors are and have been more enthusiastic about investment prospects in the Upper West Side, Stuyvesant Town, and the Upper East Side than they have been about those in Morningside Heights and the Bronx.
Not only is the Bronx one of the most punished markets on an average and current basis, ranking at a 7.1% average CAP rate, a full 60 basis points higher than the nearest submarket in the list, Morningside Heights, but it is also maltreated in its changes from one year to the next. It’s CAP rate has one of the highest volatility scores, second only to that of the Upper West Side. CAP rates swing widely from one year to the next, as investors capriciously embrace and shun the neighborhood. This contrasts with the Upper East Side’s relatively low volatility in CAP rates throughout the period.

With a general feel for the perceptions, particularly for the Bronx and the Upper East Side, let’s now examine the reality.
RENTAL RATES

The first fundamental metric analyzed are that of rental rates and changes. Below is a graph showing the annual rents for the above-mentioned submarkets over the years 1995-2016.

**Annual Rents**

At first glance, the data seems to affirm the CAP rate hierarchy. All submarkets in Manhattan, New York City’s most populous and prominent borough, both started off and ended off at higher nominal rental rates. Rents in the Upper West Side outstripped those of the Upper East Side in the year 2000 to become the highest-priced market in New York and maintained the top spot through...
present day, ending at an average of $4,882 per unit. The Upper East Side, along with Stuyvesant/Turtle Bay, Midtown West, and the West Village/Downtown all started with and ended with rankings among the most expensive neighborhoods with rents above $4,000 by 2015. The markets outside of Manhattan: Brooklyn, Queens, and the Bronx, had the lowest rents, in the sub-$2,500 range by 2016. Morningside Heights was the only exception to Manhattan’s price-gouging rents, topping out at $2,462 by 2016, but it still beat out its non-Manhattanite counterparts.

At second glance, still nothing provokes much questioning: those same high-flying markets have steeper rent curves, hinting at an expected faster growth rate.

It is only at a third, more scrupulous ‘glance’ that the data betrays intrigue to the CAP rate data above: while the steeper rent curves seemingly point to a faster increase in those high-rent Manhattan markets than those in the Bronx, Queens, Morningside Heights, and Brooklyn, it’s important to note that the graph is linear. A more substantial total dollar gain, an example being the West Village’s $2,363 rise compared to Queens’ $1,240 over the twenty-one-year period, does not necessarily make for a greater percentage increase. The starting point matters.
Rent Growth

The above chart controls for the inconsistency by setting all submarket rents to 100 in the year 1995, allowing for the ups and downs in YOY rent changes to be measured against a uniform starting point. To take it a step further, below lies a chart ranking the submarkets according to their compounded annual growth rates, that is, their average, geometric year-over-year rate of growth over the twenty-one-year period. Although this bite-sized figure is somewhat crude in that it smooths out the peaks and troughs captured above, it is now more digestible for the targeted analysis.
**Rental Compounded Annual Growth Rates**

The data becomes far more interesting when comparing these compounded annual growth figures, with some conclusions being intuitive and others, frustratingly incomprehensible.

The top 6 neighborhoods, Stuyvesant Town/Turtle Bay, Brooklyn, Midtown West, Queens, the Upper West Side, and Morningside Heights, can all be categorized as growth markets to varying degrees. In an analogy to equities, these markets could be considered the high-flying biotechnology startups that experience massive growth in short periods of time. They are parts of Manhattan that have seen a change of character, *gentrification*, and were accompanied by the staggering rent growth associated with such transformations. In the mid-1990’s all of these neighborhoods looked and felt substantially different than they do today, going from neglected or moderately undesirable to hipster-cool or moderately desirable today. These are also the markets with CAP rates on the lower end and, while not in perfect succession, the rent growth figures in these neighborhoods more or less justify their correspondingly low CAPs. A high g dovetails with a low CAP.

While change is always exciting, this work focuses on the Bronx and the Upper East Side, markets that have changed little from their initial state when compared to the above-mentioned gentrifying neighborhoods. In the 90’s, renters deemed and priced the Upper East Side as a luxury district of...
the city, while ascribing the Bronx with the diametrically opposed views of cheap and unsightly.

What’s important, though, is that both realities persist today. Bourgeois and unappealing, respectively, both then and now. By isolating these two submarkets that remain static in character and removing the confounding variable of gentrification on rent growth, we are able to more effectively hold hostage the above-broached notion that, all else held equal, luxury markets see more appreciable expansion in rents than do inexpensive ones.

Investors would be pleased to learn that the market with both the highest average CAP of 7.1% and the highest current CAP of 5.6%, the Bronx, is also the one with the most sluggish CAGR of 3.11%. Perceptions indeed are agreeing with reality. However, while comforting, it’s important to note the other submarket in the bottom rung: the Upper East Side. This market, deified by investors with an average CAP of 5.4% and a current CAP of 3.6% has only a marginally higher CAGR of 3.37%. It is incumbent on us to ask: is a twenty-six basis point higher CAGR worth a two-hundred-basis point lower CAP? The story is only beginning to unfold with doubt being cast on whether markets really are judged fairly.
Rent Volatility

CAP rates are not only a product of growth figures, though; \( r \), or risk, must be taken into account. Volatility in short-term rent changes serves as a useful supplementary metric, as CAGR conveniently glosses over the fickleness of rental markets with an illusion of consistency. The below graph charts the markets’ annual rent changes.
To synthesize this data further, though, here are graphs on rent change ranges (maximums and minimums) as well as standard deviations.

Unsurprisingly, the growth markets generally had the most volatility\(^3\), which is in line with the theory that higher growth, and therefore return, goes hand-in-hand with greater risk. But what is again shocking are those two same submarkets, the Upper East Side and the Bronx. The former had the greater range of rent changes and the larger standard deviation of the two. In fact, the Bronx’s metrics turn out to be the most timid out of any market with the dead-last lowest rankings in standard deviation, at 3.5%, and YOY rent decrease, at 1.7%. While indeed the upside is capped in the Bronx as well, the market having had the smallest rent increase in any given year, at 9.2%, it is by any measure fair to call the Bronx the safest market of the nine studied when it comes to YOY rent movements.

\(^3\) Note that these are ranges and standard deviations of rent changes, not of the rents themselves, which rules out the possibility of a high standard deviation being merely a reflection of a consistently high growth rate. The only type of activity that could potentially confound this inference would be if these markets had a consistently positive and geometric (i.e. exponential) rate of growth, which is shown not to be the case by their wide range and erratic fluctuations.
VACANCY RATES

The second fundamental metric analyzed in this work is that of vacancy rates. Vacancy rates can serve as a measure reciprocal to rent changes of an overall market’s strength or weakness, as they give a holistic view of the current balance between supply and demand. While the two metrics are undeniably correlated, vacancy rates perhaps isolate the variable of risk a bit more, whereas rent changes can incorporate market growth characteristics as well.

Annual Vacancy Rates

Below is each market’s annual vacancy rate between 1995 and 2016:
Submarket vacancies vary widely and have moved erratically throughout the period, making it difficult to discern any meaningful pattern from the raw data. Rather, the below averages provide some more color to how each market’s vacancies have performed:

**Average Vacancy Rates**

It’s striking to see how tight a rental market New York City is, with average vacancies over a twenty-one-year period just barely crossing the 3% threshold across all nine submarkets. In any case, just as with the rental data, the vacancy figures do not fail to shock. Understandably, the growth markets of Brooklyn, Midtown West, Morningside Heights, Queens, Stuyvesant Town, and the Upper West side all exhibited average rates above 2%. Higher return came with higher risk. But the Upper East Side, at 1.8%, exhibited a higher average vacancy rate than did the Bronx, at 1.5%, during this period. More curious still, the Bronx actually has had the lowest average vacancy rate out of any of the nine surveyed in New York City. Additionally, the Bronx and the Upper East Side are essentially neck-and-neck with their current vacancy rates at 1.6% and 1.4%, respectively.
**Vacancy Rate Volatility**

Similar to the CAGR metric, averages can mask unsightly anomalies in data sets, so it isn’t enough to extrapolate from such metrics alone. But the ranges and standard deviations only further reinforce the Bronx’s stability:

The Bronx has had the third-lowest minimum vacancy rate at .4% (second only to Stuyvesant Town and the Upper West Side, both tied at .3%) as well as the lowest maximum vacancy rate at 2.6%, the latter of which is a full 210 basis points beneath the second lowest figure of 4.7% on the Upper East Side. It comes as no surprise, then, that the Bronx also has the lowest standard deviation among all the markets.
RETURNS ANALYSIS

In summary thus far, it’s evident that buyers and sellers have not and do not accurately price real estate markets in New York City, particularly the Bronx and the Upper East Side. The Bronx is harshly prescribed significantly higher CAP rates despite safer vacancy rate characteristics, more stable rent movements, and only a marginally slower rent growth rate. While this analysis might be intellectually stimulating, a burning question remains: is this purely an academic pursuit, or is there a real investment opportunity hidden in the numbers? To find out, let’s model it out.

**Bronx & Upper East Side Internal Rates of Return**

The main metric used to compare the returns across these three markets is the internal rate of return (IRR). While other measures, such as equity multiple and cash-on-cash, are commonly used as well to value properties, the IRR, hold period held constant, is an all-encompassing representation of capital appreciation over time, and, as importantly, factors in the time value of money.  

Below is a graphical representation of the the internal rates of return for the Bronx and the Upper East Side for all possible hold periods between 2002 and 2016.  

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4 Used to arrive at the IRR are: historical rent and vacancy rates combined with a uniform 40% expense ratio to constitute a working Net Operating Income. Historical CAP rates are then applied to those numbers to determine acquisition and disposition prices. Taxes are not factored in, as different investors are exposed to different taxation rates, with even some experiencing no tax burden (i.e. state pension funds).

5 Each line is a representation of a market's performance over several different hold lengths but based on only one acquisition year. Each data point is the IRR that would have been achieved by an asset sold in that year and held since the year at which the line begins. For example, for the Bronx, the longest line represents an asset bought in the market in 2002. The first year that asset could have been sold, 2003, would have resulted in a 23% IRR, the next year, 2004, a 31% IRR, and so on. The next-longest line represents an asset bought in 2003 and sold in 2004 at a 40% IRR, in 2005 at a 29% IRR, and so on. There are 104 total combinations throughout this period.
IRR Comparison: The Bronx

Hold Length & Year of Disposition

IRR Comparison: The Upper East Side

Hold Length & Year of Disposition
**Internal Rates of Return by Hold Length**

To many an investor’s relief, the Upper East Side outperformed the Bronx swimmingly throughout the fourteen years studied. Here is the same data, averaged out and synthesized by hold length:\(^6\):

Across the 104 combinations, the Upper East Side averaged a 14.2% IRR whereas the Bronx, a 12.2%, with the former beating the latter in 12 out of the 14 hold length possibilities.

**Internal Rate of Return Bifurcation**

In light of the fundamentals of each submarket (rents and vacancies) challenging investor convictions (CAP rates) in these submarkets, why is it that the Upper East Side is such a better investment than the Bronx? The first conclusion to leap for would be ascribing the bound to the higher rental CAGR showcased above: 3.11% vs. 3.37%. However, a twenty-six-basis-point stronger rent growth on the UES could hardly justify such a great spread in IRR. We also know that it can’t be due to vacancy rates, since the Bronx had both lower average and (most of the time) annual figures in this regard. This thus rules out the income (NOI) variable as the primary cause for the difference in the formula, Price = NOI/CAP rate, leaving us with CAP rates as the remaining variable.

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\(^6\) The ‘sample size’ for each hold period is inversely proportional to the number of years in that period. For example, there are fourteen 1-year-hold data points, thirteen 2-year-hold data points, and so on. The average is for all data points, with each hold period given equal weight.
variable. The below graph of the IRRs in each market bifurcated by cash flow and gain (that is, how much of the IRR is due to cash flow and how much, to capital gains), helps to clarify.

The Bronx gets the lion’s share of its return from cash flow (74%), whereas the Upper East Side, the inverse (24%), indicating that the Upper East Side’s greater IRR is due to an increase in asset price. And, since the rents and vacancies in the markets have not been too dissimilar, it must be that the buoyant asset values on the Upper East Side are due to \textit{CAP rate} change and not NOI change.
CAP RATES REVISITED

Shown here are the CAP rate ranges and standard deviations of the nine NYC submarkets between 2002 and 2016.

As can be seen, during economic upswings, CAP rates among markets with different fundamentals and risk characteristics become less and less distinct from one another, whereas that difference becomes significantly more pronounced during economic downturns. During the height of Wall Street exuberance, 2006, the range of CAP rates squeezed down to 120 basis points with the standard deviation also reaching its lowest point. When the financial crisis occurred in 2008, the spread widened considerably, reaching a peak of 470 basis points in 2010. This is not only the case in New York City, but across many cities and real estate markets: when prices in ‘core’ locations rise and CAP rates fall during times of economic strength, buyers become more confident (or arrogant) in taking risk in ‘tertiary’ markets in an attempt to get the more favorable returns that once existed in ‘trophy’ markets. When the economy turns, greed abruptly turns into fear, and investors flap away from these frontiers and flock back to their comfort zone, reversing price and CAP rate movements: the proverbial ‘flight to safety’. Whereas CAP rates in tertiary markets are more pliable...
across financial and economic cycles, core market CAP rates maintain stability more-or-less indefinitely.

This dichotomy is particularly marked between the Upper East Side and the Bronx. Below are the annual CAP rates for the two markets (reshown from above and singled out here for clarity).

The spread between the two markets’ CAP rates was only 50 basis points in 2006, skyrocketed to 340 basis points in 2010, and then shrunk back down to 200 basis points in 2016.
CONCLUSIONS: WHY IT ALL MATTERS

To echo what’s been established already, real estate values are determined by two variables: income and multiple. The income component of the Bronx, in the form of rents and vacancies, is shown to have very little appreciable difference in growth and, better yet, superior risk (volatility) characteristics to those of the Upper East Side. However, the investment returns for the Upper East Side beat out those for the Bronx relatively consistently, and that is due to the Upper East Side’s CAP rate reliability. If this is the case, the primary driver of return in the Upper East Side, a core market, has little to do with the actual fundamentals of that market, the supply and demand characteristics of housing and the underlying tenants it serves, but more to do with the supply and demand attributes of capital markets and asset buyers and sellers.

While this case study is limited to New York and the few submarkets within it, broader conclusions can be drawn upon real estate investing as well as on investing theories more generally.

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*Intrinsic Value*

“That painting cost $60,000 10 years ago. I could sell it today for $600,000. The illusion has become real. And the more real it becomes, the more desperately they want it. Capitalism at its finest.”

-Gordon Gekko, *Wall Street*

Many long-term investors today employ some form of ‘fundamental analysis’ in valuing assets, which is a methodology for making investment decisions based on the asset’s underlying characteristics as a cash-flow-generating company/stock/bond/piece of real estate/etc. More
specifically, fundamental analysis advocates estimating and discounting an asset’s future net cash flows back to the present using an appropriate discount rate, thus incorporating both the time value of money as well as risk into the valuation of any security. Examples of these include the Capital Asset Pricing Model, the Discount Dividend/Gordon Growth Model, and the Arbitrage Pricing Theory, among others. All fundamental analyses have as a cornerstone the concept of ‘intrinsic value’, perhaps most plainly cemented by John Burr Williams in his 1938 text, *The Theory of Investment Value*, which is the value or price of the security derived from this method. For example, a dividend-less stock projected to be worth $40 in 3 years would have an intrinsic value of approximately $30 today at a discount rate of 10%.

In this form of analysis, the discount rate is crucial in determining intrinsic value, and it is entailed that this number should be matched perfectly with the risk of the asset in question: a higher projected volatility/risk of loss should be accompanied by a higher discount rate, thereby reducing the estimated value of the asset today.

Champions of the Efficient Market Hypothesis, a theoretical framework for how the market functions developed by Eugene Fama, posit that market prices at all times accurately reflect the underlying security’s intrinsic value. That is, market participants are rational and incorporate information nigh-instantaneously and accurately into buying and selling decisions, thrusting prices to equilibrium risk-return ratios. No investor will find a moment when price diverges from intrinsic value.

Students of the school of Value Investing, an investment paradigm or ‘style’, on the other hand, counter this hypothesis with the criticism that market participants, while perhaps prompt in reacting
to new information, are neither rational nor accurate when incorporating that information into security prices; at least not all of the time. Perhaps prices reflect intrinsic value most of the time, but in rare instances, they don’t. And it is in these rare instances when price diverges from value that the value investor has an opportunity to profit from an inefficiency by buying when the price dips below value, and selling when the market realizes its error and adjusts the price accordingly (assuming a long position). The value investor is thus a heretic to the efficient market gods and instead proselytizes a mostly efficient market: intrinsic value may diverge from market value in the short term on some securities, but it will return to it eventually or in the long term.

**intrinsic** | inˈtrinzik, -sik | adjective
belonging naturally; inherent, innate, inborn, congenital, connate, natural

**value** | ˈvalyō | noun
the regard that something is held to deserve; the importance, worth, or usefulness of something

While value investors and efficient market theorists disagree on whether and when market prices coincide with value, they both agree that the concept of intrinsic value does in fact have merit and that it exists as the one ‘true’ value of a security: it is inherent to the asset; a ‘correct’ or ‘real’ value, determined by a discount rate that places a perfect premium over the risk free rate; not attributed externally but rather determined by the fundamental risk of the asset and the ‘natural laws’ of finance. Benjamin Graham, the godfather of value investing, alludes to this reverence for the supremacy of intrinsic value: “You are neither right nor wrong because the crowd disagrees with you. You are right because your data and reasoning are right.”

Phil Fisher, more associated with the school of Growth Investing, also writes in his investment classic, *Common Stocks and Uncommon Profits*:

“A change in net income, a change in a company’s management, appearance of a new invention or a new discovery, a change in interest rates or tax laws… All these influences have one thing in common. They are real occurrences in the world about us. They are actions which have happened or are about to happen. Now we come to a very different type
of price influence. This is a change which is purely psychological. Nothing has changed in the outside or economic world at all. The great majority of the financial community merely look upon the same circumstances from a different viewpoint than before. As a result of this changed way of appraising the same set of basic facts, they make a changed appraisal of the price or the price-earnings ratio they will pay for the same shares. These are fads and styles in the stock market just as there are in women’s clothes.”

Our study on NYC multifamily markets calls this presumption of intrinsic value’s “correctness” into question, however. Recall that, compared against the Upper East Side, the Bronx has better vacancy and similar rent metrics, but higher CAP rates throughout the period studied. CAP rates in the Bronx haven’t just been higher on an average, but also almost consistently on an annual basis between 2002 and 2014 (the exceptions being in 2004 and 2005, when the Bronx had CAP rates just 20 basis points and 40 basis points lower than the UES, respectively). In other words, despite their similar risk and growth characteristics, they are priced differently by investors. There are only two possible explanations for this hypocrisy: assets in the Bronx have intrinsic values that prices simply never meet or the method used to arrive at intrinsic value for assets in the Bronx is different from that which is used for those in the Upper East Side. If the latter explanation be the apt one, how can two cash-flowing assets be valued by different standards? Investment science has no place for Janus-faced valuation methodologies. And in the former case, one might ask, what’s the point of a metric that never coincides with price? Would it not just be some hollow academic calculation, unavailing to any practitioner who values investment results over vague philosophies of value itself? William Strong of Equinox Partners describes the importance of mostly efficient markets in an interview he gave to the Heilbrunn Center for Graham and Dodd Investing at Columbia University:

**Graham & Doddsville:** Given the fact that the [company you had invested in] had been growing but that [its] stock was flat until approximately a year ago, was it frustrating as an investor?

**Strong:** It’s a two-sided coin. If you have a perfectly efficient market, where business values are always reflective of business fundamentals, then we are out of business. If you have a perfectly imperfect market, where the stock market never reflects fundamentals, then we

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7 (Fisher, 155-156)
are out of business. Markets generally value fundamentals properly. Our job is to find exceptions to this and take advantage of it. This is what value investing is all about.\(^8\)

I opt for this latter explanation of the Bronx, outlined by Strong. It is a perfectly imperfect market, inefficient and underpriced (or the Upper East Side, inefficient and overpriced), and it stays that way indefinitely. The intrinsic value is indeed there, however the value investor’s cherished ‘reversion to the mean’ never happens. There is nothing novel about markets that perform as such. Benjamin Graham, in his magnum opus, *The Intelligent Investor*, admitted that his strategy of “determine intrinsic value, buy below it, wait for the market to agree” doesn’t apply universally:

Secondary issues, for the most part, do fluctuate about a central level which is well below their fair value [and]… if most secondary issues tend to be undervalued, what reason has the investor to believe that he can profit from such a situation? For if it persists indefinitely, will he not always be in the same market position as when he bought the issue?\(^9\)

While small companies may… be undervalued for similar reasons, and in many cases may later increase their earnings and share price, they entail a risk of… protracted neglect by the market in spite of better earnings.\(^10\)

Graham’s ‘secondary issues’ are analogous to submarkets of major MSAs like the Bronx which suffer from ‘protracted neglect by the market in spite of better earnings’.

**Investing vs. Speculating**

Value investors pride themselves on basing their underwriting on fundamental analysis as opposed to on ‘speculation’. Seth Klarman in his Wall Street cult classic, *Margin of Safety*, distinguishes between the two:

Assets and securities can often be characterized as either investments or speculations. The distinction is not clear to most people. Both investments and speculations can be bought and

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\(^9\) (Graham, 172-177)

\(^10\) (Graham, 163)
sold. Both typically fluctuate in price and can thus appear to generate investment returns. But there is one critical difference: investments throw off cash flow for the benefit of the owners; speculations do not. The return to the owners of speculations depends exclusively on the vagaries of the resale market… Stocks and bonds go up and down in price, as do Monets and Mickey Mantle rookie cards, but there should be no confusion as to which are the true investments. Collectibles, such as art, antiques, rare coins, and baseball cards, are not investments, but rank speculations… Investments, even very long-term investments like newly planted timber properties, will eventually throw off cash flow. A machine makes widgets that are marketed, a building is occupied by tenants who pay rent, and trees on a timber property are eventually harvested and sold. By contrast, collectibles throw off no cash flow; the only cash they can generate is from their eventual sale… The apparent value of collectibles is based on circular reasoning: people buy because others have recently bought. This has the effect of bidding up prices, which attracts publicity and creates the illusion of attractive returns. Such logic can fail at any time.\(^\text{11}\)

Klarman’s overarching opinion is that the difference between investments and speculations is found in the asset’s main driver of value: true investment worth is rooted in the consumer marketplace whereas that of speculations, in the capital marketplace. The former is depicted as being grounded in reality, echoing the abstraction of ‘intrinsic value’ as being the ‘real’ or ‘true’ value, whereas the latter, in a more capricious and flimsy ‘sardine can’\(^\text{12}\) market. But, as shown above, the Upper East Side gains the majority of its return from that same ‘resale’ market and, more importantly, does so safely across financial cycles, defying the notion that this source of profit is a shaky one.

Howard Marks, of Oaktree Capital Management, calls attention to a subtle nuance in one of his quarterly investment memos (emphasis added):

In short, there are two primary elements in superior investing:

- seeing some quality that others don’t see or appreciate (and that isn’t reflected in the price), and
- having it turn out to be true (or at least accepted by the market).\(^\text{13}\)

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\(^{11}\) (Klarman, 7-8)

\(^{12}\) “There is the old story about the market craze in sardine trading when the sardines disappeared from their traditional waters in Monterey, California. The commodity traders bid them up and the price of a can of sardines soared. One day a buyer decided to treat himself to an expensive meal and actually opened a can and started eating. He immediately became ill and told the seller the sardines were no good. The seller said, “You don’t understand. These are not eating sardines, they are trading sardines.” (Klarman, 5)

\(^{13}\) (Marks, 2007)
Or at least accepted by the market. Understandably, the two outcomes of ‘truth’ or ‘acceptance by market’ are used somewhat interchangeably, since, for all intents and purposes, that’s all that matters to an investor. A harmony in target price and market price is all that is needed for financial profit, regardless of whether it’s rooted in truth or mere mob mentality. However, the line between objectivity (true value) and subjectivity (ascribed value) is blurred; intrinsic value and market price are much more interrelated than is purported by traditional value investing lore. Certain markets tend to behave more in line with George Soros’s paradigm of price behavior (as influenced by his mentor, philosopher Karl Popper), reflexivity:

In situations that have thinking participants, there is a two-way interaction between the participants’ thinking and the situation in which they participate. On the one hand, participants seek to understand reality; on the other, they seek to bring about a desired outcome. I call the interference between the two functions “reflexivity”… a feedback loop between the participants’ understanding and the situation in which they participate… Financial markets… operate with a prevailing bias, but the bias can actually validate itself by influencing not only market prices but also the so-called fundamentals that market prices are supposed to reflect… This is how reflexivity gives rise to initially self-fulfilling… prophesies.14

Seth Klarman also readily accepts Soros’s model as applicable in some circumstances:

Reflexivity is a minor factor in the valuation of most securities most of the time, but occasionally it becomes important. This phenomenon is a wild card, a valuation factor not determined by business fundamentals but rather by the financial markets themselves.15

A self-fulfilling prophecy is a befitting description for the phenomenon in the Bronx: the market is deemed risky for a reason that has nothing to do with the fundamentals (i.e. fear of illiquidity, biases and stigmas, fear of getting mugged on a property tour, or ‘noise’, as statisticians might call it). This perception leads to higher CAP rates and less asset liquidity. Since these characteristics are indeed real risks, buyers are hesitant to invest in the assets, which in turn keep CAP rates high and liquidity

14 (Soros, 2-6)
15 (Klarman, 137)
low. Therefore, perceived risk leads to real risk, and unwarrantedly high CAP rates leads to deservedly high CAP rates. And thus, market price movements are an important component of intrinsic value and not merely a reflection of it. Economic science is not physical science. “Predictions of the return of Halley’s comet do not influence its orbit,” writes sociologist Robert Merton in Social Theory and Social Structure. But by inducing a bank run, “the rumoured insolvency of [fictional] Millingville’s bank did affect the actual outcome. The prophecy of collapse led to its own fulfilment.”

*The Existential Investor*

Klarman further footnotes his definition of investments as those which throw off a stream of cash flow with another exception:

The only possible exceptions to [the] cash flow test are precious metals, such as gold, which is a widely recognized store of value; throughout history, for instance, the value of an ounce of gold has been roughly equivalent to the cost of a fine men’s suit. Other precious metals and gems have a less-established value than gold but might be considered by some to be a similar type of holding. Klarman admits that while gold is indeed a store of value, it provides no cash flow and has no underlying consumer or fundamental demand. Its value stems from the same source that provides value for speculative investments: the ‘resale’ marketplace for buyers and sellers of the asset itself. There was a time when gold had utility as a currency due to many of its unique characteristics as a metal: it is pure, noncorrosive, distinct in color, easy to meld, impossible to produce (at the time), difficult to counterfeit, and extremely rare. But with modern day’s utilization of fiat currencies, gold

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10 (Merton, 477)
17 (Klarman, 31)
as a form of legal tender is obsolete. Inexplicably, though, it is still a valuable commodity. Warren Buffet commented on the oddity in a speech given at Harvard in 1998:

> Gold gets dug out of the ground in Africa, or some place. Then we melt it down, dig another hole, bury it again and pay people to stand around guarding it. It has no utility. Anyone watching from Mars would be scratching their head.  

My contention is not that real estate and other financial securities have no utility. It is obvious that apartments do indeed have a use, as they have an underlying consumer. But, as is shown when comparing the Upper East Side to the Bronx, the line between stocks, real estate, gold, and art is much more nebulous than both efficient market theorists and value investors would like to believe. The returns derived from investments in them are based, in some cases, on the same notion that gives utility-less gold or art their value: a desire for them to be valuable. It’s worth what we want it to be worth. “Owning a trophy hotel is like owning art,” one real estate investor told me. While some investors deplore buyers and sellers who rely on the herd mentality to make their investment decisions, they too depend on that same herd to see their investments to a successful conclusion. Isolationist contrarianism must capitulate to the reality that, in the end, their fellow market participants have as significant an impact on their investments as do the underlying fundamentals of the investments themselves.

The Bronx has been shown to have similar growth characteristics and superior risk characteristics to those of the Upper East Side, yet CAP rates have consistently not reflected this. While an analysis of Manhattan multifamily assets can by no means extend universally to all financial securities, the

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18 (Mortished, 2003)
inefficiency among some of the different markets can exhibit the spirit of some of the myths and misconceptions propounded by the investment community. Although Graham and other value investors maintain the preeminence of fundamental analysis in spite of the above-outlined shortcomings, I argue that this methodology of valuation is called into question because of these imperfections. If intrinsic value never coincides with market price, it’s debatable whether it’s useful as an investment metric for those in search of an above-market risk-adjusted return, or if it even exists beyond an idealist’s theory. Terms like “relative”, “subjective”, or even “extrinsic” are more apt than the word ‘intrinsic’, since ‘intrinsic value’, as has been shown here, is an oxymoron.

An economics professor and his student are strolling down the street. They come upon a $100 bill lying on the ground, and as the student reaches down to pick it up, the economist says, “Don’t bother – if it were a genuine $100 bill, someone would have already picked it up.”

If there were $100 lying on a Bronx street corner, perhaps it’d be best to leave it there. Nobody would accept a $100 bill that no one would accept.
BIBLIOGRAPHY


