

Housing Financialization and Rent Control

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Abstract

This working paper attempts to consolidate a number of insights about commercial real estate finance over the last 25 years in New York City to suggest a general framework for thinking about gentrification, housing financialization, and rent control. In particular, it argues for the need to account for the supply of capital seeking out returns in NYC, with an emphasis on the market for older-stock, rent-stabilized multifamily buildings. It also sketches out some potential dynamics following the passage of the Housing Stability and Tenant Protection Act in June 2019, which significantly strengthened the NYC rent stabilization regime and had an important effect in the acquisition market for rent stabilized properties. Finally, it analyzes an example of a portfolio of Bronx buildings owned by Emerald Equity Group and financed by Freddie Mac, to explore some of these dynamics. Many of the parts of this paper are in draft-form, and areas to expand upon and develop are noted throughout the paper.

¹While this working paper was conceived with much help, it does not reflect the analysis of anyone but myself, as a graduate student in Economics at John Jay College. Please do not cite without contacting the author at Judell12@gmail.com.

Introduction

NYC private landlords and their investors have been able to profit handsomely over the last 25 years by acquiring large portfolios of existing rent-stabilized, older-stock properties.² In that period, prevailing prices for rent stabilized buildings have increased almost unabated, with the few years around the 2008 Financial Crisis being the only exception. In this market, landlords of this older stock of housing often take on more and more debt to capture these price increases - called “pulling equity out” - without any expectation that this debt be used to reinvest in the building to improve conditions. As long as a building isn’t crumbling and the net operating income is enough to pay off mortgage payments, landlords can use that added debt to increase their real estate holdings (and continue to bid up prices) or make other investments. In this system, landlords are entitled to any increase in the values of buildings, but not responsible for maintaining the assets they own in line with those increased values.³

The passage of the Housing Stability and Tenant Protection Act (HSTPA) in June 2019, which drastically strengthened rent stabilization and closed a number of loopholes, threw a significant wrench into this system. Though real estate market participants had been prepping for some time for a downturn, the rent law package made it significantly more difficult to raise rents and had an immediate chilling effect on the market (more below). Investment volume in NYC rent-stabilized housing has more or less dried up, and those buildings that are being traded are being sold at prices per unit 25% - 40% lower than prices in the previous year. Banks are suddenly unwilling to refinance or provide new debt at rising principal amounts, and in some cases are selling the notes of those mortgages at discounts to third-party distressed debt buyers. Landlords have predicted that these changes will return the housing stock to its state in the 1970s, though what they really seem to be protesting is that quick monopoly profits are no longer viable in this market.

This working paper is divided into two parts, both of which seek to provide context to those last 25 years and think through what comes next. The first part looks generally at dynamics in the market for rent stabilized real estate, and asks a number of questions surrounding the huge increases in asset prices for rent stabilized buildings from the 1990s until today.⁴ The sections of Part I emphasize dynamics in commercial real estate financing as well as the supply of capital – i.e., capital flowing into this type of real estate seeking out returns – to ask questions about this era

² Rent Stabilization refers to the vast majority of rent controlled rental housing in New York City. The two major functions of rent stabilization are: 1) to limit rent increases in rent stabilized units to the amount set annually by the Rent Guidelines Board, and 2) to guarantee tenants of rent stabilized units the right to a renewal lease when their current lease expires. Rent-stabilized units are considered “under market” and are often identified by investors as opportunities to greatly increase returns, assuming they are able to turn over a unit from regulated rents to unregulated rents. This relies upon the exploitation of various loopholes within the rent stabilization regime, many of which were closed in a June 2019 law that greatly expanded tenant protections. For more on rent stabilization prior to June 2019, see Mironova (2019): <https://www.cssny.org/publications/entry/rent-regulation-in-new-york-city>. And for an overview to the various changes post June 2019, see this NYT article: <https://www.nytimes.com/2019/06/12/nyregion/rent-regulation-laws-new-york.html>

³ New York City is complicit in this system through the systematic lack of enforcement of the Housing Maintenance Code. If landlords were compelled to maintain their buildings at a level consistent with safety and habitability, there would be a mechanism to force the increased capital flowing into NYC real estate into improving conditions. Prior to the passage of the 2019 rent law package, New York State was also complicit through the Major Capital Improvement (MCI) and Individual Apartment Improvement (IAI) programs, whereby any improvement in building conditions was predicated on a trade-off with affordability.

⁴ Changes in investment volume – i.e. the number of buildings being traded – are not focused on in this version of the paper, but will be included in future versions.

and its interaction with rent control regimes, particularly given the recent strengthening of rent stabilization. The second part looks at a specific ‘supply of capital’ example – Freddie Mac refinancing of the debt on a portfolio of rent stabilized buildings – to ground some of those questions in an actual analysis.

PART I – Financing dynamics in rent-stabilized real estate

Context

Below are some framing thoughts on the mechanics of the market for rent-stabilized rental housing in New York City, especially as they relate to rent control type policy in an era of financialization in rental housing.⁵ Among my preliminary conclusions is that what is needed is a deeper discussion of the connection between gentrification and housing financialization, a story that really takes off in the mid-90s. There are a few connected dynamics that I explore in the below sections:

- No matter how comprehensive the rent stabilization regime in NYC, there are structural forces that create the economic incentive for landlords and investors to find new ways to keep the market for rent-stabilized housing hot – either by new loopholes in rent regulation, resorting to grey-area or outright illegal activity, or pressuring state agencies to keep enforcement lax and under-funded.
- Conventionally, the major structural force which creates that incentive is the movement of higher-income, mostly white households to previously dis-invested urban areas (i.e. gentrification), which brings with it increased rents and increased property values, as well as the displacement of lower-income households of color.
- But there are other structural forces which both benefit from and help to drive gentrification, all of which are related to increases in the supply of capital seeking out returns in real estate. These forces include: global capital concentration, the arrangement of commercial real estate bank financing, the resurgence of a secondary market for rental housing, the tax code and depreciation schedules etc.
- If we want to account for the era of financialized housing, we need to understand, a) how the above forces connect to gentrification and create a system whereby housing is such an attractive investment, and b) how that system works to bid up prices in housing, and how investors in that system have reaped increasing profits as a result.

As Mason explains, rent control does work to dampen economic rents, as it did this past June.⁶ However, if a political program only works towards rent control without thinking comprehensively about how to lessen speculation / financialization / monopoly profit involved in rental real estate, odds are that those structural forces described above will also dampen the effectiveness of rent control. This implies that a) the capacity for a given rent control regime to curb economic rents should be considered one of its policy goals, in addition to the primary goal of affordability / stable tenancy and b) other policy tools to combat those forces are necessary.

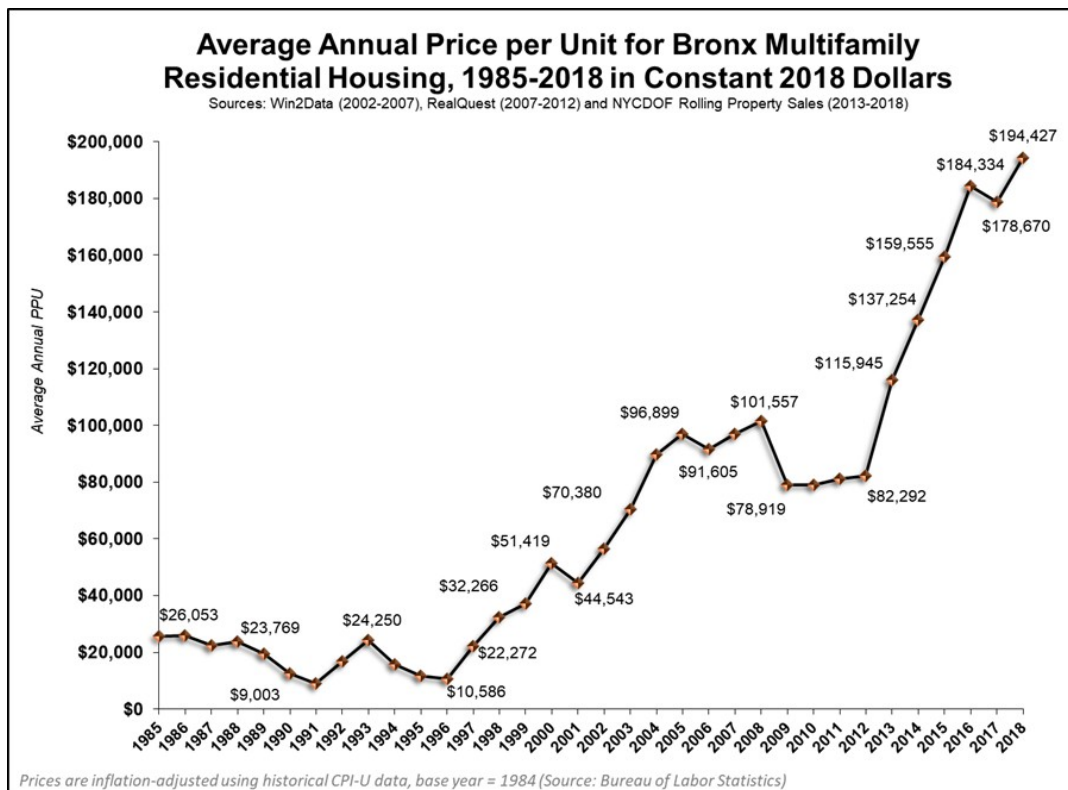
⁵ By housing financialization, I mean the increasing use of certain local real estate markets as an investment commodity for global capital. <https://www.ohchr.org/EN/Issues/Housing/Pages/FinancializationHousing.aspx>

⁶ Mason, “Considerations on Rent Control.” By economic rents, Mason means the “a payment that someone receives from some economic activity because of an exclusive right over it, as opposed to contributing some productive resource.” <https://jwmason.org/slackwire/considerations-on-rent-control/>

Dynamics in the Market for Rent Stabilized Housing

First, a bit on economic rents in rental housing, and especially rent-regulated housing. In short, there are two ways that economic rents – i.e. profits that are not the result of some investment of productive resources – can be captured by existing rental housing: 1) increases from net income, or rents after expenses and 2) asset value increases. These are obviously connected, but I think (2) is overlooked and it is important to describe how it takes on a logic of its own. I'll try to explain, starting with a chart of Bronx per unit prices that the organization I work for, University Neighborhood Housing Program (UNHP), has kept for a long time.

UNHP started in the early 80s to help tenants get financing to rehabilitate abandoned / distressed rental housing in the NW Bronx, and in many cases, they became the de facto non-profit owner. UNHP continued to look for 'preservation opportunities' (i.e. buying housing from private landlords and using government subsidy to maintain affordability) through the 80s and 90s. In the late 90s, however, UNHP began noticing that they could no longer compete in the rental real estate market, because while the organization's underwriting and purchase price offers were based on existing tenants, new buyers were coming in and offering to purchase based on speculative terms. From that experience, UNHP started tracking prices for Bronx multifamily rental, almost all of which was rent-stabilized. As the below chart of that data shows, since the late 90s increases in the acquisition of these buildings have continued basically uninterrupted, excepting the years around the 2008 Financial Crisis.⁷



What's particularly interesting, though, is that we know that there isn't necessarily a one-to-one correlation between price rise and net income from rents. In real estate, this is conventionally

⁷ Worth noticing, as well, is how clearly cyclical the price movements are.

measured by something called the capitalization (cap) rate, or annual net income divided by sales price. The cap rate in the Bronx has gone down from 8%-10% a decade ago to about 4% - 5% over the past years.⁸ This means that building prices have moved around twice as fast as things like the actual deregulation of units and the exploitation of rent control loopholes used to raise rents, at least in the borough.⁹

One aspect of this, obviously, is speculative investment driven by future rental income expectations for the Bronx. In other words, even if high-income / highly-educated / white people won't want to pay rents that justify the sales price now, investors were expecting that to happen at some point in the future. This is predicated upon the ability to turn over existing tenants when that future happens and bring in more desirable ones: to displace and then to gentrify. This builds off of Mason's argument about rent control loopholes: that to the extent that rent laws have easy loopholes, the rentier incentive to take advantage of those things as 'market distortions' or 'arbitrage opportunities' can undo the gains that rent control provides. That has definitely happened in NYC generally and to a certain extent in the Bronx.

But taking the longer view, it is clear from the price-per-unit chart that the type of rents that 'justify' sales prices are relative – prices from 1997 to 2018 in the Bronx rose over 1700%, and it is highly unlikely that either current rental income or future expectations on that income have kept pace. This is why I contend that there is a bigger story here than just speculating on future rents, and might have more to do with speculating that asset prices will continue increasing: that there will always be some buyer down the road to which a current landlord can sell their building for a profit (“the theory of the greater fool”). If we were to construct a regression model on price changes in the Bronx, it is this final independent variable – speculation on future asset prices increases – that is the hardest to adequately explain. This is where I think we need to return to those structural forces connected to the supply of capital seeking returns in order to explain the full picture.

Commercial Real Estate Financing




Lots of those forces are difficult to get at, but in this section, I wanted to focus particularly on one of them: the mechanics of commercial real estate (CRE) finance. I'll touch on some of the other forces, and to rising asset prices and rent control, at the end.

CRE mortgages to acquire an existing building are structured as ~ 5-year loans (often with an extend option for another 5 years), but are amortized on a 30-year schedule. What this amortization schedule means is that while mortgages to landlords are large, monthly debt payments back to the bank are relatively small. At the end of the five years, the landlord must either roll over the loan by refinancing or pay back a large lump-sum of the remaining principal, known as the 'balloon payment'. The difference between the monthly payments of a mortgage of the same amount, period, and rate can be huge, depending on the amortization schedule. See below for a quick graphic of three ways to pay debt service on a loan with the same amount, rate, and period:

⁸ See, for instance, year over year sales reports from brokers such as Ariel Property Advisors. <http://arielpa.nyc/investor-relations/research-reports>.

⁹ Additional pricing data will be included in future versions of this working paper.

For a \$750,000 loan at 5% interest for 5 years (60 months), the different mortgage structures are:

Fully Amortizing Mortgage 	Balloon Payment Mortgage 	Interest-Only Mortgage 
If the loan is amortized over 5 years:	If the loan is amortized over 30 years:	If the loan only requires monthly payments of interests:
Monthly Payment is \$14,100	Monthly Payment is \$4,000	Monthly Payment is \$3,100
Annual Payment is \$169,200	Annual Payment is \$48,000	Annual Payment is \$37,200
Payment 1 – \$3,100 interest , \$11,000 principal Payment 60 – \$100 interest, \$14,000 principal	Payment 1 – \$3,100 interest , \$900 principal Payment 60 – \$2,850 interest, \$1,150 principal	Payment 1 – \$3,100 interest , \$0 principal Payment 60 – \$3,100 interest, \$0 principal
Balloon Payment (end of loan) is \$0	Balloon Payment (end of loan) is \$689,000	Balloon Payment (end of loan) is \$750,000

Why is this important? Firstly, because landlords need to pay their debt service out of their income, and without a loan amortized in this way they would not be able to. Annual debt service must be paid out of net operating income (NOI), and at least for rent regulated housing in New York City, NOI would generally not be high enough to pay off a fully amortized loan. We know this because of bank underwriting standards. One of the major ways that bank underwriting measures risk is by something called Debt Service Coverage Ratio (DSCR), defined as annual debt service over net operating income. Generally, a DSCR of around 1.25 is considered safe underwriting. But that ratio assumes annual debt payments that are significantly less than they would be if the loan was fully amortized – given the differences in monthly payments in the above graphic, we can be pretty sure that no landlord would be able to pay debt service out of income if they had fully amortizing loans. This loan structure is also important because it almost always necessitates refinance. Landlords generally do not have enough cash on hand to pay the balloon payment at the end of the term, meaning that they either need to sell the building or need the bank to refinance the mortgage by extending it, or deferring the payment.

It is at the moment of refinance that the rising asset prices described above come to bear. In addition to DSCR, the other tool banks use to underwrite their CRE loans is loan-to-value (LTV). Generally, a 75% LTV is considered stable, as it assumes that the 25% equity acts as a cushion. In other words, even if the rental building goes down in value by 25%, the bank would still make all of its money back.

But, in a market like NYC where asset prices are rising, the moment of refinance / roll-over is also generally an opportunity to take on significantly more debt at the same terms or better. At that moment, banks and appraisers make decisions about 'value' based mostly upon comparables - i.e. how much similar buildings in similar areas have recently been sold for - so if you're a landlord functioning in a market with price increases like the Bronx (or NYC as a whole), the average price changes over a period of ~ 5 years is a chance to take on much more debt.

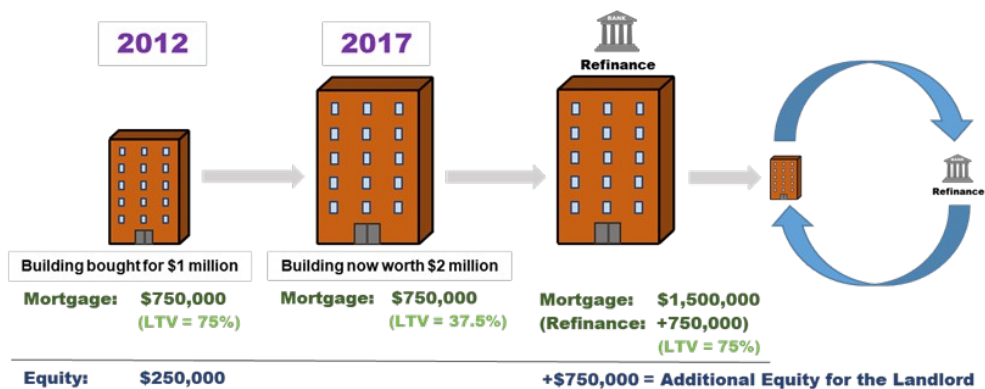
The below example describes that process, assuming an interest-only loan for simplicity's sake. Imagine that, to acquire a \$1 million building, a landlord took a \$750,000 loan that was interest-

only at 5% interest – in that case, the annual payment would be \$37,200 (see above), which would be paid out of NOI. Over the 5-year term, imagine also that the building has doubled in value to \$2 million – even though no principal was paid off during those five years, the LTV of the loan has been cut in half to 37.5% just because of the price increase.

The landlord thus actually has three options for what to do with the balloon payment – they can pay it off, they can roll it over, or they can take on more debt: in this case, double what they originally borrowed, to bring the LTV back up to 75%. But there's no expectation that the additional debt provided to the landlord goes back into a given building. In fact, the assumption is the opposite -- that they get financing (at extremely cheap terms because the 30-year amortization schedule is renewed) which everyone knows serves as their equity to do what they want with. This usually means buying additional rental buildings or buying property for their personal use. The mechanics just described bear themselves out for the vast majority of the rental housing finance records we look at in the NYC City Register, called ACRIIS.¹⁰ Whether or not buildings are traded often or held onto, the debt principal on rent stabilized properties continues to rise basically continually since the early 2000s (when the records were made uniform) at around 5-year intervals.

Unlike household debt, in which the point is to pay it off, in commercial real estate the point is to take on more and more debt to capture the increase in the value of the asset. In real estate parlance, this is called "pulling equity out" or "cashing out" of a building and is the major way that landlords that got their starts at the beginning of this price rise have built up huge portfolios. It's also likely the major way that an environment of rapidly rising prices gets translated into economic rents, at least for landlords of low-income, rent stabilized buildings.

How do landlords benefit from rising building prices?



To recap: landlords rely on a specific type of mortgage structure (let's call it cheap financing, because of the very small debt service payments they make during the life of the loan) to be able to take on bank debt to continue purchasing buildings at ever increasing purchase prices – purchase prices that would have seemed ridiculous fifteen, ten, or even five year prior. Cheap financing only works if landlords have the ability to refinance their loans. In fact, this is not only key to being able to receive a mortgage, it is also key to landlord profit, because taking on debt at the moment of refinance allows for the capture of economic rent, in the form of higher land prices and their monopoly claim over rental housing on that land. Banks, for their part, are more willing

¹⁰ <https://a836-acris.nyc.gov/DS/DocumentSearch/Index>

to provide cheap financing and refinance with ever more debt in a market where building prices are rising – in moments where there is doubt that prices will continue to rise, as in post-2008 and potentially post June 2019, bank CRE lending freezes up and regulators pressure underwriters to adjust the LTV on their existing loans.

Taken together, this is what Michael Hudson means when he says that, “a house [or in this case, rental building] is worth whatever the bank will lend to it.”¹¹ Or, as Josh Ryan-Collins puts it, also in the context of home mortgages:

Since the majority of mortgage loans finance the purchase of *existing* rather than new property, the inevitable result is house price inflation. With the support of bank credit, households bid up the price of land as they compete for property in more desirable locations. This creates even more demand for mortgage debt, which then flows into existing property and so on. In other words, the supply of bank mortgage credit can be seen to create its own *increased* demand – via rising property prices – for ever more mortgage credit.¹²

Hyman Minsky’s distinctions between *hedge*, *speculative*, and *ponzi finance*, used to help describe the different stages of a financial bubble, are helpful here.¹³ On the face of it, CRE financing for rental housing looks like *hedge finance* – on the whole, it looks like landlords can continuously meet their payment commitments out of NOI. But landlords cannot pay the balloon payment, and instead must roll over principal, which makes CRE debt look like *speculative finance*. It’s not necessarily *ponzi finance* as long as prices continue to rise, because buildings do generate enough cash flow to cover their relatively small debt service payments and banks continue to meet expectations about higher prices without rising mortgage amounts. However, CRE financing is undoubtedly exposed to the very real liquidity risk that banks will shut their doors if and when they see that prices might be dropping; of that were to happen somewhere like NYC, we might start seeing already over-leveraged landlords turn to *ponzi finance*.

Supply of Capital in Rent Stabilized Housing

Returning to rent stabilization and those larger structural forces: again, asset price for rental buildings in NYC have continued to shoot up since the mid-90s, with the aid of bank finance as described above. The conventional story to explain this is that rising prices are driven by gentrification or the expectation of future gentrification. Those expectations, in turn, drive the exploitation of loopholes in the rent stabilization laws, the frequency with which landlords ignore laws and regulations more generally, and the intensity of displacement and its associated effects. The problem with that story is that even when gentrification has not happened, asset prices for rental buildings haven’t adjusted to reflect a different expectation for going on 25 years, and investors across the globe continue to pour money into NYC rent-stabilized buildings.

Given that this near-continual price rise began in the mid-90s, perhaps it makes sense to look at what else was going on around that time. In NYC, it is the moment when the rent regulation regime began to erode – see the '93 rent stabilization loopholes¹⁴ or Pataki’s famous midnight deal

¹¹ Hudson (2014), *The Bubble and Beyond*, and Hudson (2019), ‘Asset Price Inflation and Rent Seeking: a total-returns profile of economic polarization in America’ [work in progress].

¹² Ryan-Collins, “Breaking the Housing-Finance cycle: Macroeconomic policy reforms for more affordably homes,” EPA: Economy and Space 0.0 (2019), p. 2.

¹³ Minsky (1992). <http://www.levyinstitute.org/pubs/wp74.pdf>

¹⁴ <https://www.propublica.org/article/the-vote-that-made-new-york-city-rents-so-high>

on rent regulations in '97¹⁵ – and also when the current iteration of gentrification took off citywide. But it is also generally considered to be the moment when the supply of capital flowing into real estate really takes off.¹⁶ The supply of capital story is oftentimes described in general strokes – the concentration of wealth domestically and globally that leads to capital ‘sloshing’ around looking for easy returns, and finding it largely in real estate assets. But, at least when it comes to real estate, the story isn’t particularly well spelled out yet. It would, of course, take significant historical work to understand what coalesced to make real estate so attractive at that moment of the mid-90s and moving forward, but it’s also important that it is not easy to find a detailed account of it.

Even without that detailed account, however, if we think about gentrification in NYC in the context the supply of capital flowing into real estate at the same, it becomes harder to think of gentrification as only as only a cause of financialization as opposed to an effect of it. In other words, in NYC and areas like it, it’s harder than we think to parse out whether gentrification / displacement is driving housing financialization, or the other way around.

In terms of the filling out the supply of capital story, the best I can do in this draft paper is list out some events and trends that I think are worth looking into:

- The prevailing low interest-rate environment starting in the 80s. The risk-return analysis of real estate is connected to relative returns in safer investments, and when the returns on, say, U.S. treasuries go down, one would imagine that the incentive to invest in real estate goes up.
- Depreciation, which is crucial to the after-tax returns on CRE. This is especially true in a market where rental real estate trades hands often, because depreciation schedules are started anew every time an existing building is bought. The tax reforms in 1981 and 1986 led to a stop and start market in real estate largely because of depreciation.
- The Savings and Loans Crisis of the mid-80s to mid-90s. The S&L Crisis led to the creation of the Resolution Trust Corporation (RTC) to make the real estate assets of insolvent S&Ls – previously major players in CRE in urban centers – available at highly discounted price.
- Growth of Real Estate Investment Trusts (REITs). The REIT market likely grew as a result of the S&L Crisis – even though REITs were instituted in 1960, before 1990s they had only \$10 billion market capitalization (compared to \$400 billion now).
- The Development of the Commercial Mortgage Backed Securities (CMBS). CMBSs also grew as vehicles began to package and sell loans from RTC. CMBSs likely induced cheap financing of CRE acquisitions because it served as a secondary market for originations, parallel to the development of a secondary market for mortgages on owner-occupied real estate. The CMBS market grew to over \$800 billion in the US, with \$230 billion of volume in 2007. Post 2008 Financial Crisis until today, the market has slowed considerably.
- The role of Government Sponsored Enterprises (GSEs). After the 2008 Financial Crisis, Freddie Mac and Fannie Mae were placed in federal conservatorship. One of the principals of conservatorship was the creation of total lending caps for Fannie Mae and Freddie Mac. However, ‘workforce rental housing’ was exempted from these caps, meaning that

¹⁵ <http://www.antibiaslaw.com/sites/default/files/all/Cake.pdf>

¹⁶See, for instance, Ambrose & Linneman, “The Maturing of REITs” (1999); Hilton March, “The Making of an Asset Class” (2012); FDIC, “Commercial Real Estate and the Banking Crises of the 1980s and Early 1990s”

affordable multifamily rental lending has been a growing part of the business of GSEs and have taken a much larger share of the secondary market for rental housing mortgages. It's possible that GSEs have taken the place of what was previously a private CMBS market for multifamily. Freddie Mac, for instance, packaged \$78 billion of multifamily rental financing in 2018, compared to \$21.6 billion in 2007.

- The Rise of Real Estate Private Equity. The growth of private equity invested in real estate is certainly an important factor, especially pre- and post- the 2008 Financial Crisis (see: the history of “Predatory Equity” organizing in NYC).¹⁷ Real estate private equity in particular takes advantage of pension and retirement fund capital because of quirks in the Employee Retirement Income Security Act of 1974 (ERISA) as well as in the tax code. ERISA regulates any employee benefit plans, and is especially stringent in regulating equity (ownership) investments made by these sorts of funds. However, private equity groups that invest at least half of its funds in real estate are exempt from key ERISA restrictions. Additionally, because these plans are non-profit, they are taxed only when they profit from “unrelated business taxable income,” (UBTI) which limits the range of investment vehicles such funds can invest in. However, passive income, which includes rental income from real estate, is generally not considered UBTI, and income received by employee benefit plans from rental income is therefore generally not taxed.
- Cross-Border Capital, US Real Estate as a Tax Shelter, & Limited Liability Companies (LLCs). This is hard to get at, but infusion of international capital in US real estate is connected to trends in the creation of domestic and offshore tax shelters. Despite their prevalence, these trends are not as long-standing as it might seem – LLCs for instance, were only formally considered partnerships by the IRS in 1988.

Without having clear answers, I am suggesting that there is a much longer story of why investment in real estate in the US has become so attractive, and that this needs to be dealt with. And, again, as much as rent control can and does limit economic rents, there's a sense to which the prevailing structure of economic rents in housing also limits rent control. If we don't address the ways the economy, the financial system, or the tax code make investment in non-owner-occupied housing so attractive, we're always going to be dealing with rent laws that are eroding, with all of the associated the negative social effects.

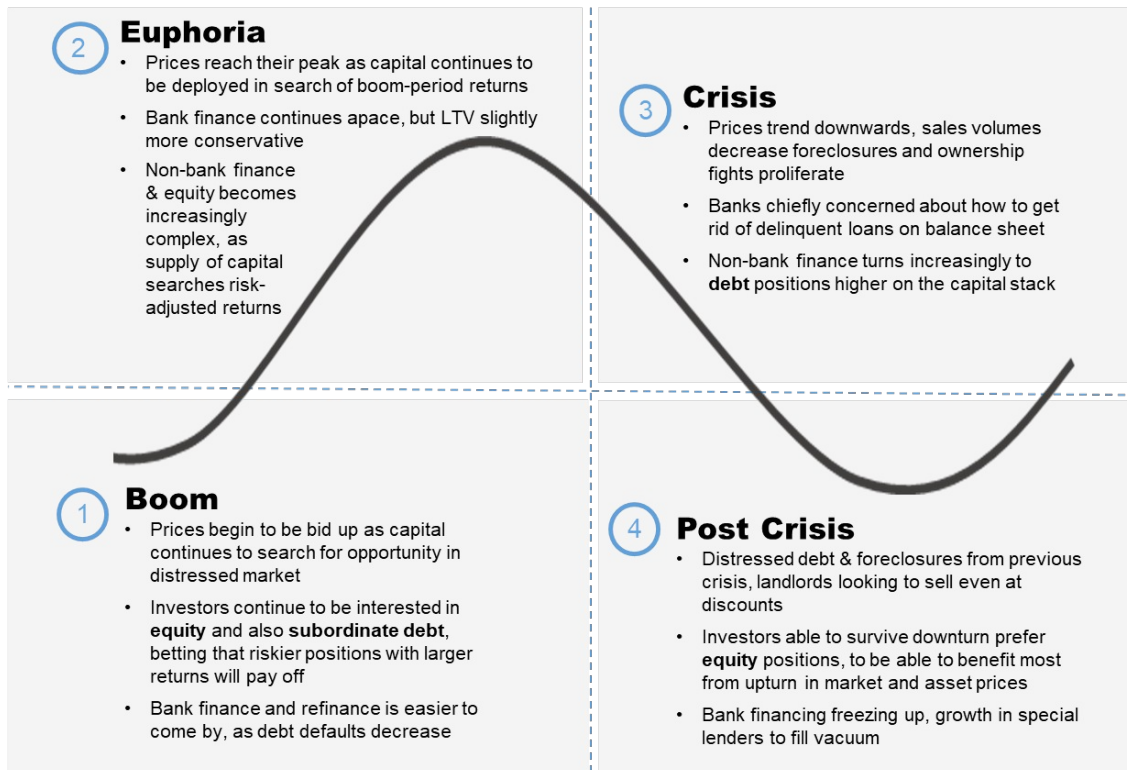
Rent Stabilized Housing in NYC Post Rent-Laws

NYC right now is an interesting test case for the effects of rent laws on economic rents in housing. The huge improvements in the rent laws this past June have stopped the NYC rent-stabilized building market in its tracks (though there is evidence that the peak of the real estate cycle in NYC had passed anyway). But all of a sudden, the frenzy of buying and selling rent-stabilized buildings has disappeared, and everyone is waiting on what the new prices will be set at. Late in 2019, a set-up sheet (marketing packet for a building on sale) for a Bronx building came across my desk with a price per unit of \$125,000, which would represent almost a 60% drop in average prices from last year. This is probably an extreme example, but even price drops half that amount would be very bad news for landlords whose leverage is predicated on not having their loans called due, as well as for banks -- who will then have regulators breathing down their necks as they adjust the LTVs on these mortgages such that all of a sudden the debt looks to be underwater.

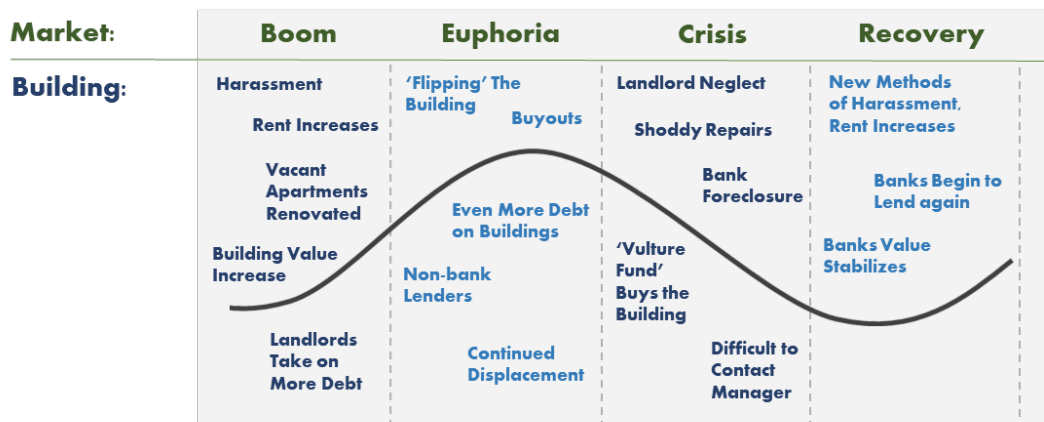
¹⁷ https://cdp.urbanjustice.org/sites/default/files/CDP.WEB.doc_Report_SNYCPredatoryEquity_20171214_0.pdf

But the jury is still out on whether the market will recover – perhaps landlords will find new ways to restore confidence in investors that ‘upside potential’ still remains (i.e. that they can still displace low rent-payers), or maybe banks will pull back and be replaced by non-bank financing or vulture fund type groups hoping to buy buildings (or the debt on those buildings) at discounts. Importantly, those groups are much harder to regulate and historically more prone to aggressive displacement & harassment tactics. There's also always the potential that investment capital will turn away from NYC and re-imagine the 'arbitrage opportunity' in different areas where rent regulation is weaker, which is a strong argument for national rent control. If that's the case, maybe all that is happening is a shifting around of who bears the burden of the effects of financialized housing.

One learns in real estate 101 that the housing market is a cycle, and smart investors in real estate know how to make money at all parts of that cycle. This is a game of where a given investment sits on the ‘capital stack’, or the specific risk-reward mix an investor decides to take on given their reading of the market. If we imagine that, like most asset markets, there are four phases – boom, euphoria, crisis, and post-crisis – the diagrams below describe how real estate investors think about making money at each of those parts of the cycle, and how that might translate into certain negative outcomes for rent-controlled buildings and tenants.



— = Average Building Price
 (Price Per Unit, Price Per Square Foot, Cap Rate etc.)



Those diagrams are just a way to say that real estate investors know how to make money in a wide range of situations, and in fact lots of money can be made out of distress or financial crisis, as long as the capital is patient enough to wait around for the next upswing. For rent control and associated housing policies to break these fundamental movements in housing financialization, we need to be thinking more broadly about the types of things that need to change market- and economy-wide.

This is what I mean, above when I said that just as rent control can work to dampen economic rents, the prospective of economic rents locked in by structural 'supply of capital' forces can also work to dampen the effectiveness of rent control. It's possible that there is too much money locked into finding current and future returns in NYC rent-stabilized real estate for the passage of the HSTPA in June to take speculation out of this market. More it's very possible that landlords will resort to other types of business plans if we descend into the crisis phase of the real estate cycle. These strategies – deferred maintenance, distressed debt buying, eventual foreclosures – all have potentially very negative effects for tenants. As the market for rent-stabilized buildings continues to shake out, I will include much more on these questions in the next version of this working paper.

PART II – EXAMPLE ANALYSIS

Context

The below sections examine a Freddie Mac refinance at what look to be over-inflated values to a well-known bad acting landlord who owns a large rent-stabilized portfolio in the Bronx. The analysis builds off of Part I for a few reasons. First, GSEs are a piece of the 'supply of capital' puzzle, as they create liquidity in the primary market for origination of CRE multifamily mortgages. And the program through which the Freddie Mac Loans were issued – called the Small Balance Loan Program – raises a number of questions about Freddie Mac's role in allowing landlords capture economic rents during price boom of the last five or so years. Second, the appraised values of the portfolio rose dramatically in a short time span, meaning that the landlord was able to pull equity of the building at a particularly dramatic pace. Next, while not much is known about the landlord's Bronx portfolio, it is highly unlikely that the buildings appraised values are reflected in improved conditions or higher rents to justify those values.¹⁸ Finally, the

¹⁸ The following draft of this working paper will include detail about the building conditions and organizing efforts in the portfolio.

prospect of significantly decreased prices for this portfolio allows us to get a quantitative sense of just how troubled these mortgages might be.

Emerald Equity Group

Emerald Equity Group is an NYC landlord with significant rent-stabilized real estate holdings in the Bronx and Uptown Manhattan. They appeared on the scene in 2016, when they acquired their current holdings in the Bronx and East Harlem in the span of a year for a total of almost \$500 million. Emerald, and its principal Isaac Kassirer, didn't do it alone, however – the acquisitions were buttressed by debt and equity investments from a wide-range of large players in NYC rent-stabilized real estate, including New York Community Bank, Brookfield, Loancore Capital, Mack Real Estate, and others.

In late 2019 and early 2020, Emerald Equity's East Harlem portfolio was in the news multiple times for being in deep financial trouble.¹⁹ The heavily-leveraged portfolio of 47 buildings (1,181 units) is known as the Dawnay Day portfolio, named after the infamous British private equity group that acquired the buildings and quickly let them fall into disrepair and foreclosure following the 2008 Financial Crisis.²⁰

Like Dawnay Day a decade ago, Emerald Equity bought the portfolio with the goal of capitalizing on gentrification in East Harlem. Their plan was to move out existing low-income tenants, renovate units, and then charge newcomers significantly higher rents. In the process, Emerald Equity became well-known for displacement and harassment tactics among the most extreme in New York City. Previous reporting details unbearable living conditions for low-income tenants, including rat infestations, lack of gas and hot water due to illegal renovations on vacant apartments, aggressive buyout offers accompanied by threats to report undocumented households, and more. Importantly, that reporting also found that low-income tenants were also being pressured to relocate to one of Emerald Equity's Bronx buildings.²¹

The recent *Real Deal* piece notes that Emerald Equity is considering applying for an Article XI tax exemption in order to keep the Dawnay Day portfolio afloat. Article XI is a New York State subsidy intended for non-for-profit housing, in which a tax exemption is granted in exchange for maintaining income and affordability limits on units. In recent years, private landlords have attempted to apply for the exemption as well, likely with the goal of locking in affordable housing to regulatory agreements. But the fact that the City is considering granting an Article XI to a landlord like Emerald Equity clearly raises questions about this trend. Why, after a well-documented history of harassment and neglect on Emerald Equity's part, would the City agree to subsidize their continued ownership of these buildings? Is it the City's job to bail out a landlord whose displacement-driven business plan has gone awry? And should the City and State be subsidizing private landlords through a program originally meant for not-for-profit housing?

¹⁹ <https://therealdeal.com/2020/01/16/emerald-equity-weighing-all-options-to-save-massive-multifamily-portfolio/>

²⁰ <https://www.nytimes.com/2009/12/22/nyregion/22dawnay.html>

²¹ <https://indypendent.org/2018/07/vulture-equity-circles-east-harlem/>

Those questions aside, it's important to note that, if Emerald Equity does receive Article XI status, this wouldn't be the first time that they have gotten funding from public sources. In 2017 and again in 2019, Emerald Equity refinanced their massive Bronx and East Harlem portfolios to the tune of \$318 million of loans from Freddie Mac, also known as the Federal Home Loan Mortgage Corporation.

Freddie Mac is an entity created and – since 2008 – more or less owned by the federal government, and one that has increasingly emphasized lending to affordable rental housing over the previous decade-plus. Because of its semi-public status, Freddie Mac also discloses much more data about its housing investments than is generally available. Below, I'll explore the data on Emerald Equity's lesser-known Bronx portfolio, and what it reveals about the ways in which mortgage financing can allow landlords to realize immense profits from neglected, rent stabilized buildings in places like New York City, and how federal money is complicit in that process. But before we get to that, we need to understand how it came to be that Freddie Mac started to lend to landlords like Kassirer in the first place.

Freddie Mac

Freddie Mac is one of a few government-sponsored enterprises (GSEs) created and capitalized by the US government in the 60s and 70s in order to increase the amount of lending in both owner-occupied as well as rental housing. Freddie Mac buys existing mortgages from banks or other mortgage originators, which provides new money (known as liquidity) for these lenders to go out and offer additional mortgages. Freddie Mac then groups the loans that they buy and creates investment products that are made up of the debt payments of the multiple mortgages, which are then bought by additional investors. The market for these investment products is known as the secondary mortgage market, as the primary mortgage market is made up of borrowers (landlords or homeowners) and lenders (mortgage originators).

Freddie Mac came into public consciousness in 2008, when its activity, along with that of other GSEs and private actors who created similar investment products, was identified as a major cause of the 2008 Financial Crisis. These institutions were specifically blamed in providing a market for risky loans – called subprime mortgages – for owner-occupied homes. When a mortgage originator could sell off loans to institutions like Freddie Mac, there was little incentive to ensure that the loans were financially sound, because the risk could be offloaded to Freddie Mac and the investors in the secondary mortgage market.

The fallout from the '08 Crisis led to an over \$150 billion government bailout of Freddie Mac and Fannie Mae, a GSE with a near-identical function. In response, the US government placed the two GSEs under federal conservatorship. Conservatorship meant that the federal government essentially took control of these institutions; whereas before the Crisis, Freddie Mac and Fannie Mae acted as private corporations, afterwards the US government became the major stockholder and the sole recipient of their profits.

Another of the principals of conservatorship was the creation of total lending caps, which significantly limited the number of mortgages Freddie Mac and Fannie Mae could purchase.

However, ‘workforce rental housing’ was exempted from these caps, which meant that mortgages for low-income multifamily rental housing has been a growing part of the business of GSEs.²² Between 2008 and 2018, for instance, Freddie Mac more than tripled the amount of low-income rental mortgages that it packaged into investment products (from \$24 billion to \$78 billion).²³ In 2017, almost half of all new multifamily mortgages in the country were purchased by Freddie Mac and Fannie Mae.²⁴ In other words, due to strict lending caps on certain types of housing investment, Freddie Mac and Fannie Mae shifted the emphasis of its new business from owner-occupied homes to multifamily rental buildings.

Freddie Mac, the GSE which holds the more than \$300 billion of debt provided to Emerald Equity, has two programs for lending to affordable rental housing using this exemption from conservatorship. The first is known as K-deals, in which Freddie Mac buys debt from properties that have a targeted affordability component. The second is known as Small Balance Loan Program, or SB-deals, in which Freddie Mac buys debt from smaller properties that are ‘naturally-occurring affordable’ – a euphemism for low-quality housing that is relatively affordable given a certain area’s rental market. SB-deals are focused on loans up to \$7.5 million for smaller rental properties (generally, though not always, less than 50 units) that, according to Freddie Mac’s own research, help fill a capital need for underserved markets.²⁵

K-deals are the more significant program in terms of volume, and can be justified on the basis of making federal or state affordability subsidies more attractive to developers and investors. However, there have been questions raised about using government guaranteed capital to provide financing to properties that oftentimes have a few affordable units mixed in with mostly luxury housing.²⁶ SB-deals, while smaller in scale, are simply about providing capital to landlords and contain no guarantee that the financing is being used to further the goal of affordability.

While Emerald Equity Group is far from a small landlord in an underserved market, they secured refinancing through the SBL program. They did this through Sabal Capital Partners, a third-party originator of Freddie Mac debt; in other words, Sabal provides mortgages to Emerald Equity, which Freddie Mac then buys to package into their investment vehicles. All told, Emerald Equity received \$129 million of refinancing for the Bronx portfolio in 2017,²⁷ and \$189 million for the Dawnay Day portfolio in 2019.²⁸ Sabal succeeded in closing deals of these sizes because they originated simultaneous Small Balance Loans (at a maximum of around \$7.5 million per property) for all of the buildings in each portfolio. Both the deals were the largest to date in Freddie Mac’s SBL program.

²² <https://commercialobserver.com/2019/06/wrestling-fannie-freddie/>

²³ https://mf.freddiemac.com/docs/mf_securitization_investor-presentation.pdf

²⁴ <https://www.housingwire.com/articles/50147-fhfa-moves-to-curb-fannie-mae-freddie-mac-green-loans-for-multifamily/>

²⁵ https://mf.freddiemac.com/docs/small_balance_loans.pdf

²⁶ <https://www.ft.com/content/5fdf52a0-3cca-11e8-b7e0-52972418fec4>

²⁷ <https://www.globenewswire.com/news-release/2017/10/04/1140732/0/en/Sabal-Capital-Partners-Closes-129-Million-Portfolio-of-Freddie-Mac-Small-Balance-Loans.html>

²⁸ <https://www.globenewswire.com/news-release/2017/10/04/1140732/0/en/Sabal-Capital-Partners-Closes-129-Million-Portfolio-of-Freddie-Mac-Small-Balance-Loans.html>

Given Kassirer’s reputation, using Freddie Mac’s SBL program to provide capital to owners of de-facto affordable rental housing suggest questions similar to those that come up in Emerald Equity’s pursuit of Article XI status. Freddie Mac’s activity, post-conservatorship, is more ‘public’ than ever, so why is it lending to a landlord like Kassirer? And given the size of the portfolios and the access to financing that an NYC landlord like Emerald Equity has, are Small Balance Loans justified? How many landlords known locally to be bad-actors have received this sort of financing from a GSE? How does Freddie Mac ensure that its capital is used to further affordability or the improvement of properties where low-income people live?

Freddie Mac began the Small Balance Loan Program in 2015, right in the midst of a nationwide boom in commercial property prices (which includes rental housing) that have not kept pace with rent increases.²⁹ In New York City, at least, prices in low-income, rent-stabilized housing have risen dramatically between about 2014 to the present day (see pricing chart for the Bronx on p. 3), with lenders and investors reaping the benefits. Is it possible, then, that the emphasis on lending through the SBL program – to what one Freddie Mac executive called, “C, B-minus product that just happens to be affordable” – was chiefly motivated by potential financial windfalls from this asset price boom?³⁰

Emerald Equity’s Portfolios: The Two Ways to Make Money in Rental Housing

Most of us can intuit Emerald Equity’s business plan for the Dawnay Day portfolio. One way or another, they aimed for high turnover of their low-income tenants so that they could renovate units and rent them at much higher rates in the rapidly gentrifying neighborhood of East Harlem. The higher rents in the buildings would mean two related things for Emerald Equity’s bottom-line: first, that the net income from operations would increase, leading to a higher profit, and second that the value of the buildings would increase, meaning that Emerald could sell the portfolio at a higher price than they purchased it.

But what is the financial strategy in Emerald Equity’s Bronx portfolio? To use real estate language, there isn’t the same ‘upside potential’ in much of the Bronx, meaning that a landlord can’t necessarily capitalize on gentrification to turn ‘below-market rents’ into ‘market rents’. Households in Bronx buildings like those owned by Emerald Equity are generally low-income, and while their rents are still high, they are lower than in many other parts of NYC and are rent-stabilized. In these buildings, one way to ensure that a building makes money is by keeping expenses down and deferring maintenance, which is why poor conditions are the norm in so many Bronx rental buildings. It’s no surprise, then, that Emerald offered low-income tenants from the Dawnay Day portfolio to move to their Bronx buildings. Emerald could afford to move low-income tenants to the Bronx, where they weren’t necessarily banking on high rents anyway.

If that were the only way to make money on their Bronx portfolio, though, Emerald would have the difficult task of squeezing out profits from a deteriorating building. The other way to make money is by doing what we have described above as, “pulling equity out”. Again, in the Bronx, the price of an average rental building has risen astronomically over the last 25 years or so. In

²⁹ <https://www.ft.com/content/5fdf52a0-3cca-11e8-b7e0-52972418fec4>

³⁰ <https://commercialobserver.com/2018/04/freddie-macs-david-leopold-on-the-insatiable-demand-for-multifamily/>

1995, the average Bronx 10-unit building cost around \$100,000 to purchase; in 2018, that same building might be worth \$2,000,000. And those price changes happened in waves. Between 1995 and 2006, prices rose around 800% in the borough, and, after a short respite around the 2008 Financial Crisis, rose another 135% between 2012 and 2018. This is what Freddie Mac facilitated for Emerald Equity, and to an extreme degree.

Freddie Mac Data on Emerald Equity's Bronx Portfolio

Loans issued and securitized by Freddie Mac are subject to significant reporting requirements, which allow for a much more detailed view into the financials of these properties than is standard for multifamily rentals.³¹ In total, the portfolio has 34 buildings comprised of 851 units, 466 low-income units, and 133 very low-income units. For the purposes of SBL deals, low-income refers to units affordable to households with incomes no higher than 80% AMI, and very low-income refers to units affordable to household with incomes no higher than 50% AMI.

The 34 buildings are divided up into two different SBL deals, each of which have offering circulars provide that additional detail of the Emerald Equity loans. All 34 of the loans are mortgage refinances, and all but two are twenty-year loans with a 5-year fixed rate period and a 15-year variable rate period, known as 5-Year Hybrid loans. All of the loans have an initial interest rate of 3.45%.³² As is standard, these refinance instruments are balloon amortizations, meaning that after the 5-year fixed rate period, 93% of the original principal amount still remains. The first two years of the loans were also interest-only. Emerald Equity was probably interested in refinancing these loans after five years, as they had the potential to get significantly more expensive (see footnote 27).

Below, I'll walk through the timeline of Emerald Equity's purchase, refinance, and (partial) sale of its Bronx portfolio; italicized section indicate commentary. The disaggregated data on these buildings can be found below the financial timeline, which is a combination of Freddie Mac data and public data available on the NYC City Register (ACRIS) portal.

- In March, 2016, all 34 buildings are purchased by Emerald Equity Group for a total of \$126.7 million.
- The purchase is financed by an acquisition loan of \$94.7 million from New York Community Bank (NYCB), a prominent multifamily lender in New York City. This implies a 74% loan to value.

As stated above, 75% LTV is generally considered the maximum amount a bank will loan on a multifamily property.

- In August 2017, the portfolio is appraised for a total of \$217.9 million by a party involved in the refinance of the original NYCB acquisition loans – either Sabal Capital, Emerald

³¹ See here for the Freddie Mac Data Portal: <https://fm-msia.com/>

³² The two non-5-year Hybrids are 15-year fixed rate. For the hybrid loans, after the 15-year period the mortgages allow for a maximum interest rate adjustment of 5%, meaning that depending on movements in LIBOR, the rate in the variable rate period can climb to 8.45%.

Equity, or someone contracted by them. This translates into an \$91.2 million (or 71% increase in the value of the building in approximately 17 months).

This is enormous difference between the actual purchase price and the appraised value in a relatively short amount of time, which suggests that these buildings might have been appraised at inflated values (more below).

Detail about the Freddie Mac appraisal process will be included in the next iteration of this analysis. However, in offering circulars one will find that, while there are standards to the appraisal process in the SBL program, Freddie Mac, “cannot assure you that information regarding Appraised Values accurately reflects past, present or future market values of the mortgaged real properties.”

- Sabal Capital refinances the original NYCB loan for \$129.3 million. This is \$34.6 million more than the mortgages issued in March 2016, and represents a total 61% loan to value ratio.

In this situation, the almost \$35 million in extra funding can be used exclusively to pull equity out. Again, there is no guarantee in the SBL program that refinancing money goes to rehab and improving building conditions. In other words, that is a potential \$35 million that can go into the pocket of Emerald Equity and their investors (in practice, the number is likely somewhat lower than that to account for auxiliary costs). In addition, because the refinance is approximately \$2.5 million more than the original acquisition price, we can assume that Emerald was able to pull all (or nearly all) of its equity out of the portfolio.

However, because of the high appraisal, the loans look relatively safe from an LTV perspective, as they only represent 61% of the total appraised value of the portfolio.

- In the year following the Freddie Mac refinance, 19 of the 34 buildings were subsequently sold to additional buyers, who then assumed the remaining Freddie Mac debt. Those 19 buildings sold for a total of \$93.8 million, when they had been purchased for \$70.2. This translates into a total profit of \$23.6 million, or an average profit on each building of 39%, meaning that the sales price of the building increased 31% between March 2016 and a 1.5 – 2.5 years later.

Even though Emerald Equity made a profit on all of these buildings, it is worth noting that none of the buildings were sold at values even close to the appraised values submitted to Freddie Mac around a year earlier. This is a clear indication that the Freddie Mac appraisals were over-inflated.

- Though those 19 buildings were sold, there is no indication that the original appraised values from August 2017 were updated to reflect the new sales prices, which would clearly be the best indicator the value of the building. However, one can impute a Loan to Value for the sold buildings based on the fact that all of the Freddie Mac loans were interest-only for the first two years, meaning that no principal had been paid down. These 19 buildings had an average of a 79% LTV.

The Freddie Mac SBL program loans up to 80% LTV on properties – any higher than that, and they would consider the loan to be risky, as only a small drop in values could affect the full payback of the mortgage. It is interesting, then, that the sold buildings reach an average of almost exactly the maximum LTV. It is as if Emerald Equity Group was out in the market looking to sell

buildings, but they needed a minimum price in order to make sure that the existing loan did not look dangerous according to Freddie Mac underwriting standards.

Emerald Equity's few years of ownership of their Bronx portfolio has been extremely lucrative. Within a year and a half, they seem to have made back all the equity they put into the building on the heels of a Freddie Mac loan that, because of inflated appraisals, looked to be safe and even conservative. Then, they sold over half of the buildings in the portfolio at an additional profit, provided that they could get to a sales price high enough for Freddie Mac to not consider them risky (i.e. they had to be 80% LTV or less). The Freddie Mac loans, which were interest only until the middle of 2019, provided the incredibly cheap financing that allowed for the quick pull-out of equity, and was probably also an incentive for those landlords to which Emerald Equity sold those additional 19 buildings.

In total, Emerald Equity was likely able to earn over \$50 million in just a few years through the refinance and partial sale of this portfolio. Anything that Emerald earned in net cash flow (after expenses and debt service) during that time was icing on the cake, as the main strategy to capture economic rents was simply by riding the wave of a hot market, first by over-valuing buildings to make high increased debt levels possible, and then trading those buildings to the highest bidder within just a few years of acquisition.

The next version of this analysis will include more on the building conditions of Emerald Equity's Bronx portfolio, but for now we can ask: is there any way that even a small fraction of that \$50 million was reinvested in the building? The answer is almost certainly not.

Simplified Sensitivity Analysis – What happens when values drop?

Now that we've seen how this has worked in practice during the last number of years of unabated asset price increases, we can ask some questions about what happens in a different sort of market – the kind that seems to be emerging post the June passage of the HSTPA.

Let's take some of the facts from the financial timeline to make a conservative estimate of how risky these Freddie Mac loans are today, now that prices have dropped. The major assumption I will use is that the capitalization (cap) rate on these portfolios was approximately 4.5% prior to the rent law changes, and went up to 6% following the rents law changes, which comports with the anecdotal experience of market participants in the Bronx generally.³³

First, let's look at values of the 34 buildings not based off of the appraised values of the Freddie Mac loans, but assuming that those loans correspond to a 75% LTV. This is a conservative assumption, given that most of the buildings *sold* following the Freddie Mac valuations were done at purchase prices that totaled almost an 80% LTV. In this scenario, the most accurate valuation of the portfolio would be \$172.4 million. At a 4.5% cap rate, in the pre-June scenario, this would translate into a total portfolio net operating income (NOI) of \$7.76 million (cap rate is just the NOI / building value).

³³ The following version of this working paper will attempt to include a detailed analysis of the actual NOI numbers from the Freddie Mac reporting. For now, though, this back-of-the-envelope analysis is illustrative.

Now, let's assume that following June the prevailing cap rates in the Bronx went up to 6%, and the NOI stayed the same. In this scenario, the buildings would then be worth \$129.3 million, or in other words exactly the amount of the original loan! This would translate into an LTV of 100%, meaning that the Freddie Mac loans are extremely risky / on the verge of being underwater.

Why do these assumptions make sense? First, we know that the loan is structured as very interest-dominant (interest-only over the first two years, and then a balloon mortgage in the following three years at least). In this situation, we can be sure that the vast majority of the debt principal still remains on the loans post June 2019. Second, we can assume the NOI has likely stayed the same because the reported data on the portfolio shows just an approximately \$200,000 annual increase in rental payments on all 34 buildings from the time of underwriting to the next reporting period (presumably a year later). In other words, we know from Freddie Mac data that in August 2017 the rent collected was \$12.47 million, and in the next reporting period the rent collected was \$12.65 million.

Of course, NOI is income *after* expenses, and it is possible that Emerald Equity (and other current owners of buildings in the portfolio) increased its NOI by a significant amount by cutting expenses – deferring maintenance, spreading supers between buildings, cutting down on fees paid to the City etc. However, in this case, we would be saying that the expenses on these already distressed buildings had to be cut *significantly* in order to justify the loan amounts provided by Freddie Mac, which is an indictment in and of itself.

All in all, what can be seen here is that the drop in sales prices (which implies an increased cap rate) that seems to be the experience in the half-year following the rent laws has turned these otherwise standard loans into highly risky ones. Freddie Mac, being the mortgage holder, is not only complicit in the lead-up, but would now be on the hook for those loans should they not be able to be paid back. At the very least, they should be adjusting the values of the properties in this portfolio to reflect their actual risk.

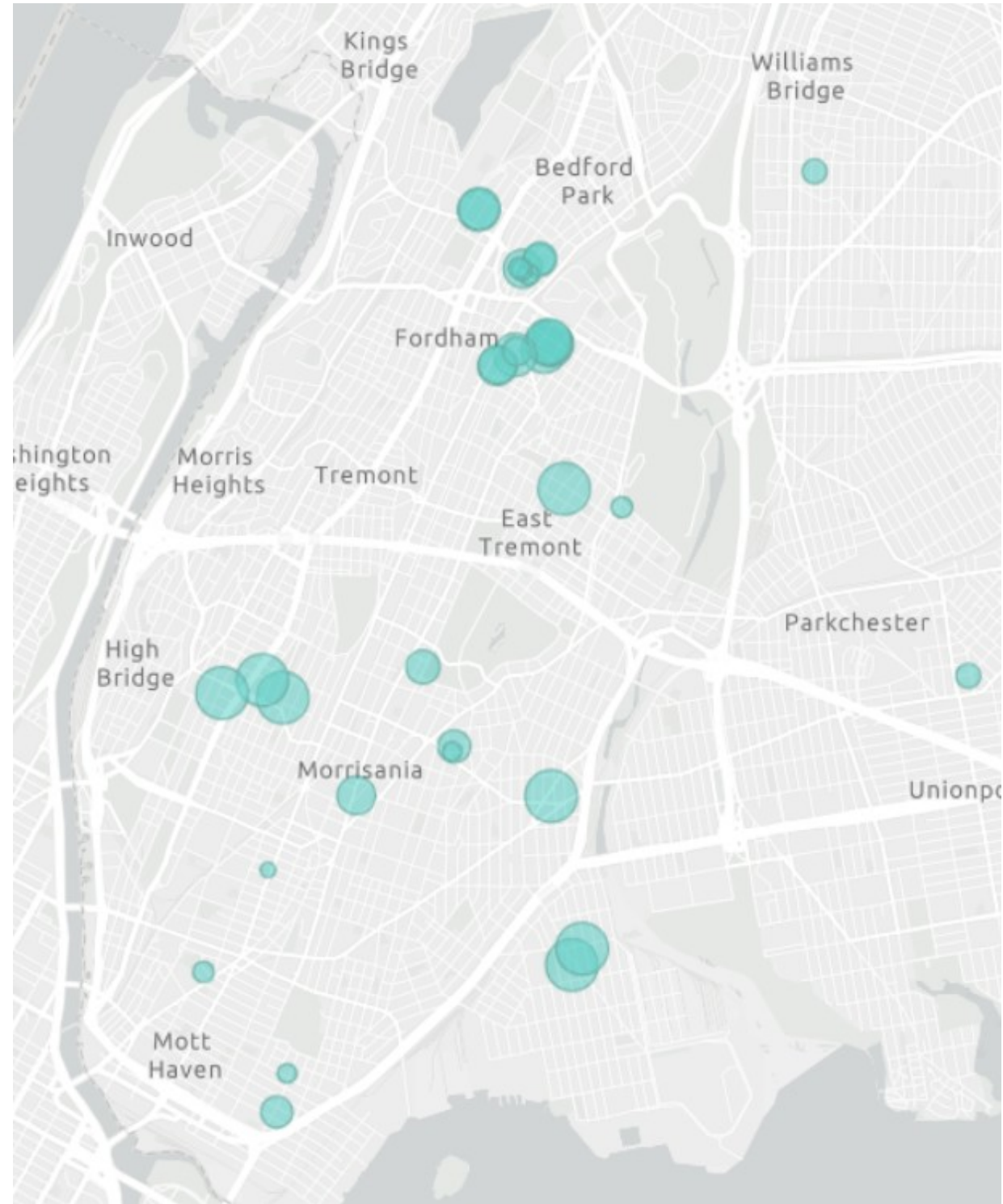
Emerald Equity – Bronx Portfolio: Finance Table

BBL	Purchase Amount - March 2016	PPU at Purchase	Loan at Purchase - NYCB	Purchase LTV	Freddie Mac Appraised Value - June 2017	PPU at Appraisal	Purchase to Appraisal %increase	Freddie Mac Loan Amount	Original Purchase to FM Loan LTV	Freddie Mac LTV	Sale Amount	Sale Date	PPU at Sale	Profit	Purchase to Sale % increase	Freddie Mac LTV at Time of Sale
2027630150	\$ 8,581,745	\$ 153,245	\$ 6,440,000	75%	\$ 15,850,000	\$ 283,036	85%	\$ 7,500,000	87%	47%						
2024570021	\$ 5,847,146	\$ 119,330	\$ 4,390,000	75%	\$ 10,810,000	\$ 220,612	85%	\$ 6,277,000	107%	58%						
2024630030	\$ 6,100,211	\$ 148,786	\$ 4,845,000	79%	\$ 9,890,000	\$ 241,220	62%	\$ 5,711,000	94%	58%	\$ 7,700,000	10/19/2017	\$ 187,805	\$ 1,599,789	26%	74%
2030960052	\$ 4,846,871	\$ 138,482	\$ 3,640,000	75%	\$ 7,860,000	\$ 224,571	62%	\$ 4,903,000	101%	62%						
2030400007	\$ 4,608,457	\$ 164,588	\$ 3,460,000	75%	\$ 7,450,000	\$ 266,071	62%	\$ 4,820,000	105%	65%						
2030580017	\$ 4,303,766	\$ 143,459	\$ 3,170,000	74%	\$ 7,560,000	\$ 252,000	76%	\$ 4,561,000	106%	60%	\$ 5,705,000	3/27/2018	\$ 190,167	\$ 1,401,234	33%	80%
2033170049	\$ 4,265,486	\$ 157,981	\$ 3,202,500	75%	\$ 6,600,000	\$ 244,444	55%	\$ 4,453,000	104%	68%	\$ 5,750,000	3/27/2018	\$ 212,963	\$ 1,484,514	35%	77%
2033170047	\$ 4,265,486	\$ 157,981	\$ 3,202,500	75%	\$ 6,950,000	\$ 257,407	63%	\$ 4,364,000	102%	63%	\$ 5,635,000	3/27/2018	\$ 208,704	\$ 1,369,514	32%	77%
2030580018	\$ 4,302,114	\$ 143,404	\$ 3,170,000	74%	\$ 7,440,000	\$ 248,000	73%	\$ 4,348,000	101%	58%	\$ 5,485,000	3/27/2018	\$ 182,833	\$ 1,182,886	27%	79%
2032870016	\$ 3,795,983	\$ 151,839	\$ 2,850,000	75%	\$ 6,620,000	\$ 264,800	74%	\$ 4,120,000	109%	62%	\$ 5,150,000	3/27/2018	\$ 206,000	\$ 1,354,017	36%	80%
2026080001	\$ 4,049,865	\$ 161,995	\$ 3,040,000	75%	\$ 6,100,000	\$ 244,000	51%	\$ 3,920,000	97%	64%						
2032870001	\$ 2,290,909	\$ 208,264	\$ 1,720,000	75%	\$ 4,520,000	\$ 410,909	97%	\$ 2,940,000	128%	65%	\$ 3,675,000	3/27/2018	\$ 334,091	\$ 1,384,091	60%	80%
2029680035	\$ 2,379,998	\$ 113,333	\$ 1,740,000	73%	\$ 4,030,000	\$ 191,905	69%	\$ 2,553,000	107%	63%						
2045700020	\$ 1,651,586	\$ 127,045	\$ 1,210,000	73%	\$ 2,360,000	\$ 181,538	43%	\$ 1,300,000	79%	55%						
2031190058	\$ 1,125,476	\$ 102,316	\$ 845,000	75%	\$ 2,080,000	\$ 189,091	85%	\$ 1,170,000	104%	56%						
2027630220	\$ 6,940,842	\$ 157,746	\$ 5,240,000	75%	\$ 14,020,000	\$ 318,636	102%	\$ 6,900,000	99%	49%	\$ 8,706,830	7/26/2018	\$ 197,883	\$ 1,765,988	25%	79%
2024500048	\$ 6,246,723	\$ 127,484	\$ 4,700,000	75%	\$ 10,900,000	\$ 222,449	74%	\$ 6,475,000	104%	59%						
2027540005	\$ 5,495,118	\$ 124,889	\$ 4,125,000	75%	\$ 9,620,000	\$ 218,636	75%	\$ 5,330,000	97%	55%						
2030580042	\$ 4,748,309	\$ 158,277	\$ 3,400,000	72%	\$ 8,380,000	\$ 279,333	76%	\$ 5,085,000	107%	61%	\$ 6,416,395	7/26/2018	\$ 213,880	\$ 1,668,086	35%	79%
2030580019	\$ 4,097,523	\$ 136,584	\$ 3,170,000	77%	\$ 7,600,000	\$ 253,333	85%	\$ 4,634,000	113%	61%	\$ 5,800,000	3/27/2018	\$ 193,333	\$ 1,702,477	42%	80%
2032820019	\$ 3,911,547	\$ 186,264	\$ 2,925,000	75%	\$ 7,270,000	\$ 346,190	86%	\$ 4,443,000	114%	61%	\$ 5,560,000	3/27/2018	\$ 264,762	\$ 1,648,453	42%	80%
2032820016	\$ 3,746,269	\$ 178,394	\$ 2,812,500	75%	\$ 7,100,000	\$ 338,095	90%	\$ 4,200,000	112%	59%	\$ 5,250,000	3/27/2018	\$ 250,000	\$ 1,503,731	40%	80%
2030310063	\$ 3,364,440	\$ 134,578	\$ 2,557,500	76%	\$ 6,120,000	\$ 244,800	82%	\$ 3,800,000	113%	62%	\$ 4,794,425	7/26/2018	\$ 191,777	\$ 1,429,985	43%	79%
2030310060	\$ 3,443,023	\$ 137,721	\$ 2,557,500	74%	\$ 5,670,000	\$ 226,800	65%	\$ 3,751,000	109%	66%	\$ 4,732,800	7/26/2018	\$ 189,312	\$ 1,289,777	37%	79%
2029270054	\$ 3,682,769	\$ 167,399	\$ 2,770,000	75%	\$ 6,070,000	\$ 275,909	65%	\$ 3,362,000	91%	55%						
2030410001	\$ 3,103,383	\$ 182,552	\$ 2,330,000	75%	\$ 5,000,000	\$ 294,118	61%	\$ 2,977,000	96%	60%						
2025660001	\$ 3,416,835	\$ 170,842	\$ 2,570,000	75%	\$ 4,530,000	\$ 226,500	33%	\$ 2,850,000	83%	63%	\$ 3,570,000	3/27/2018	\$ 178,500	\$ 153,165	4%	80%
2032760038	\$ 2,743,763	\$ 249,433	\$ 1,750,000	64%	\$ 4,280,000	\$ 389,091	56%	\$ 2,568,000	94%	60%	\$ 3,210,000	3/27/2018	\$ 291,818	\$ 466,237	17%	80%
2032870018	\$ 2,344,186	\$ 213,108	\$ 1,760,000	75%	\$ 3,440,000	\$ 312,727	47%	\$ 2,151,000	92%	63%	\$ 2,690,000	3/27/2018	\$ 244,545	\$ 345,814	15%	80%
2029680028	\$ 1,991,226	\$ 199,123	\$ 1,370,558	69%	\$ 3,250,000	\$ 325,000	63%	\$ 1,985,000	100%	61%						
2039630035	\$ 1,624,927	\$ 124,994	\$ 1,225,000	75%	\$ 2,300,000	\$ 176,923	42%	\$ 1,664,000	102%	72%						
2025540002	\$ 1,232,030	\$ 123,203	\$ 925,000	75%	\$ 2,190,000	\$ 219,000	78%	\$ 1,643,000	133%	75%	\$ 2,055,000	3/27/2018	\$ 205,500	\$ 822,970	67%	80%
2023260028	\$ 919,027	\$ 83,548	\$ 690,000	75%	\$ 2,410,000	\$ 219,091	162%	\$ 1,390,000	151%	58%	\$ 1,990,000	3/27/2018	\$ 180,909	\$ 1,070,973	117%	70%
2024040022	\$ 1,214,422	\$ 151,803	\$ 915,000	75%	\$ 1,690,000	\$ 211,250	39%	\$ 1,164,000	96%	69%						
Totals	\$126,681,461	\$ 152,941	\$94,718,058	74%	\$ 217,960,000	\$ 259,338	71%	\$129,312,000	104%	61%	\$93,875,450		\$ 217,094	\$23,643,701	39%	79%

Emerald Equity – Bronx Portfolio: Descriptive Table

BBL	Deal	Loan No. / Property No.	Address	Total Units	Low Income Units	Very Low Income Units
2027630150	2017-SB43	1	741 Hunts Point Avenue	56	21	6
2024570021	2017-SB43	3	214 East 168th Street	49	24	13
2024630030	2017-SB43	8	1184 Walton Avenue	41	23	9
2030960052	2017-SB43	13	2120 Crotona Avenue	35	16	7
2030400007	2017-SB43	15	444 East 187th Street	28	10	2
2030580017	2017-SB43	21	490 East 189th Street	30	12	0
2033170049	2017-SB43	23	2705 Morris Avenue	27	7	3
2033170047	2017-SB43	24	2707 Morris Avenue	27	10	2
2030580018	2017-SB43	25	496 East 189th Street	30	11	2
2032870016	2017-SB43	26	2605 Marion Avenue	25	10	1
2026080001	2017-SB43	28	1071 Franklin Avenue	25	25	5
2032870001	2017-SB43	47	301 East 193rd Street	11	7	2
2029680035	2017-SB43	53	810 Ritter Place	21	18	6
2045700020	2017-SB43	96	3038 Holland Avenue	13	12	1
2031190058	2017-SB43	101	2150 Crotona Parkway	11	11	3
2027630220	2018-SB47	2	769 Bryant Avenue	44	19	7
2024500048	2018-SB47	5	1235 Morris Avenue	49	27	11
2027540005	2018-SB47	16	1134 West Farms Road	44	24	8
2030580042	2018-SB47	18	495 East 188th Street	30	7	2
2030580019	2018-SB47	23	502 East 189th Street	30	9	2
2032820019	2018-SB47	28	2654 Marion Avenue	21	12	4
2032820016	2018-SB47	33	2650 Marion Avenue	21	12	4
2030310063	2018-SB47	44	4585 Park Avenue	25	12	3
2030310060	2018-SB47	46	4589 Park Avenue	25	14	5
2029270054	2018-SB47	55	1473 & 1479 Fulton Avenue	22	21	3
2030410001	2018-SB47	70	441 East 187th Street	17	10	2
2025660001	2018-SB47	73	232 Cypress Avenue	20	19	8
2032760038	2018-SB47	87	349 East 193rd Street	11	7	4
2032870018	2018-SB47	108	311 East 193rd Street	11	8	5
2029680028	2018-SB47	120	801 Freeman Street	10	9	0
2039630035	2018-SB47	145	2224 Lyon Avenue	13	11	1
2025540002	2018-SB47	148	627 East 141st Street	10	10	0
2023260028	2018-SB47	161	346 East 146th Street	11	10	1
2024040022	2018-SB47	183	773 Melrose Avenue	8	8	1

Emerald Equity – Bronx Portfolio: Map



* The sizes of the circles reflect the number of units in each property.