



# Digital Traces of the Predatory Landlord - FINAL REPORT

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## ABSTRACT

Approximately 70 percent of New York City residents rent the place they call home, making landlords of residential properties some of the most influential people in the lives of New Yorkers. A variety of high profile instances of illegal and harmful landlord practices, particularly around illegal and coercive actions taken to push tenants of rent regulated units out in order to create a larger return on these units. These cases and the public outcry around them motivate further exploration into the question of how to better identify and prosecute landlords engaging in illegal behavior. Based on an original model of predatory landlord behaviors, our team presents a set of methods to identify this behavior across a variety of datasets. The scale of this analytic work has never been tackled before, and can substantially improve the way illegal landlord activity is discovered, prosecuted and regulated.

## 1 INTRODUCTION

In December 2017, Steve Croman, a landlord charged with twenty felonies ranging from tenant harassment to document falsification, pled guilty to grand larceny and tax fraud, among other charges. He was made to pay former tenants eight million dollars, and was ordered to spend between a month to a year of jail time on Rikers Island. Steve Croman is a particularly egregious example of a landlord engaged in illegal and harmful practices of tenant harassment, but he is far from the only one. Public Advocate Letitia James publishes an annual “Landlord Watchlist,” including landlords with the highest number of Department of Housing Preservation and Development and Department of Buildings violations. And the Housing Rights Initiative, a nonprofit group focused on tenant advocacy, recently uncovered paperwork filed by the Kushner Corporation for DOB construction permits falsely claiming a lack of rent stabilized units on their properties, likely to avoid scrutiny by public agencies into activities by their company that could be used to harass tenants out of their rent stabilized apartments.

In addition to the prosecution of landlords engaged in illegal practices that are damaging to the lives of their tenants, there have also been some efforts aimed at using data to understand the quality and stability of housing in New

York City. Rentlogic is a company that uses publicly available data on building-level complaints and violations to rate buildings on tenant quality of life. The Displacement Alert Project also uses publicly available data to create scores at the building and city council scale measuring the risk of tenant displacement.

Recent media coverage has highlighted the New York City and State governments lack of a proactive approach to address this systematic issue. Advocates have suggested large-scale work aimed at how data can be used to help identify, characterize and make the case for systematic tenant harassment across a landlord’s building portfolio may offer a comprehensive solution. Currently, data is used in prosecutorial and advocacy work as circumstantial evidence indicating a motive for illegal harassment and some likely outcomes of this harassment, but these uses have not been made publicly available, and are not done in a way that is scalable beyond a specific landlord’s portfolio.

Building off of the work done by last year’s capstone team focused on this question, our team is looking to fill this gap between legal advocacy and data-based work on housing quality. In this project, we will look through publicly available data to identify traces of systematic and illegal tenant harassment by New York City’s landlords, and will create a model of predatory landlord behaviors and a set of methods to identify these behaviors. This comprehensive set of methods can help bring rigor and extensive coverage to data-driven investigations of landlords suspected of engaging in predatory behavior. The case studies we present in this paper demonstrate this, while also showing the unique nature of each landlord’s portfolio and set of suspected predatory tactics. Ultimately, while it is not possible to use data to prove definitively that landlords are engaging in illegal behavior aimed at harassing tenants (particularly rent stabilized ones), the set of methods presented in this paper, when applied together, can paint a damning picture of a landlord by showing they are likely engaged in a plethora of predatory actions throughout the property ownership cycle. While not a finding of statistical certainty, the repeated flagging of a landlord of suspicion for a variety of predatory



actions suggests that each flag is not an outlier but rather one piece in a larger picture of predatory landlord behavior.

2 DATA (DELETE EVERYTHING BESIDES TABLE?)

Name	Description
Building Sales (2007-2017)	Sales records from 2007-2017. Each record includes information such as address, Building-Block-Lot (BBL, a key identifier for buildings in New York City), sales price, date of sale, number of residential units, area, and building class, among other features. This dataset is collected by NYC's Department of Finance (DOF) and can be found on the DOF's website. Each record includes the Building Block-Lot (BBL, a key identifier for buildings in New York City), sales price, date of sale, number of residential units, area, and building class, among other features. This dataset is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].
DOB Complaints (2013-2017)	Filed through 311 and through the DOB's own complaint system. Each record includes the Building Identification Number (BIN, another key identifier for buildings in NYC), date of complaint, type of complaint, and complaint status (e.g. was the complaint received, forwarded to relevant agencies, etc.), among other features. This data is available from 2010 to present, and is updated daily.
Construction Permits (1999-2018)	All construction permits given to building owners. These permits are what allow building owners to legally make improvements, repairs or build new structures. Each record includes information on the type of construction being granted, the date the permit was granted, the expiration date for the permit and the BBL, among other features.
311 Complaints (2010-present)	NYC 311 is a hub of information for NYC residents and visitors and an important outlet for filing complaints. NYC 311 collects data on all complaints filed through their system and has made these complaints available on the NYC Open Data Portal. Each record (or complaint) includes BBL, date of complaint, type of complaint and complaint status (e.g. was the complaint received, forwarded to relevant agencies, etc.), among other features. This data is available from 2010 to present, and is updated daily.
ACRIS	ACRIS is a registry of a variety of different property records, including mortgages and tax records. These complaints are filed through 311 (a hub of information for NYC residents and visitors and an important outlet for filing complaints) and through the DOB's own complaint system. Each record (or complaint) includes the Building Identification Number (BIN, another key identifier for buildings in NYC), date of complaint, type of complaint, and complaint status (e.g. was the complaint investigated, was it converted to a building violation, etc.), among other features. This dataset of complaints is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].
PLUTO	NYC's Primary Land Use Tax Lot Output, a dataset of all buildings in New York City improved (outlets for filing complaints) and through the DOB's own complaint system. Each record (or complaint) includes the Building Identification Number (BIN, another key identifier for buildings in NYC), date of complaint, type of complaint, and complaint status (e.g. was the complaint investigated, was it converted to a building violation, etc.), among other features. This dataset of complaints is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].
Evictions (2013-2017, excluding 2016)*	It includes BBL and the date of eviction. Each record (or complaint) includes the Building Identification Number (BIN, another key identifier for buildings in NYC), date of complaint, type of complaint, and complaint status (e.g. was the complaint investigated, was it converted to a building violation, etc.), among other features. This dataset of complaints is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].
RSU Count (2007-2016)*	Rent stabilized unit estimates from New York City Department of Finance. This dataset of complaints is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].
Property Listings*	Streteasy property listings archive (private data accessed through Streteasy partnership). Street Easy
Displacement Typology*	The index uses demographic data from the US Census American Community Survey, and aims at measuring the human impacts of gentrification and displacement. These permits are what allow building owners to legally make improvements, repairs or build new structures. Each record in this dataset includes information on the type of construction being granted, the date the permit was granted, the expiration date for the permit and the BBL, among other features. This dataset of permits is available in full from NYC's Open Data Portal from 1999 to 2018, see [c].
Renovation Index*	This index aimed at measuring gentrification created the Renovation Index. It uses repairs and construction permit data to measure the built factors involved in the process of gentrification.

Table 1. Data Sources (\* indicates data with special processing or privacy considerations)

All of the data used in our analysis are publicly available. Most of these data are easily accessible through New York City's (NYC's) Open Data portal [a], although a few datasets required a more intensive procedure to collect and process before incorporating into our analysis. Additionally, several other datasets were incorporated into our research by forming relationships with third party partners. These processes are detailed below, and our publicly available code repository [LINK HERE] makes available all data and scripts used to collect and process these data. Finally, our team also

used a few indices generated by other urban science initiatives. The data to generate these indices will be made publicly available in the near future, and links to the methodologies used to generate them (when available) are included below.

Data from NYC's Open Data Portal or another public NYC website

1. Building sales data collected by NYC's Department of Finance (DOF)

Each record includes information such as address, Building-Block-Lot (BBL, a key identifier for buildings in New York City), sales price, date of sale, number of residential units, area, and building class, among other features. This dataset is collected by NYC's Department of Finance (DOF) and can be found on the DOF's website. Each record includes the Building Block-Lot (BBL, a key identifier for buildings in New York City), sales price, date of sale, number of residential units, area, and building class, among other features. This dataset is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].

2. Complaints compiled by NYC's Department of Buildings (DOB)

The DOB receives complaints from NYC residents detailing issues they are having with their buildings. Those complaints are filed through 311 (a hub of information for NYC residents and visitors and an important outlet for filing complaints) and through the DOB's own complaint system. Each record (or complaint) includes the Building Identification Number (BIN, another key identifier for buildings in NYC), date of complaint, type of complaint, and complaint status (e.g. was the complaint investigated, was it converted to a building violation, etc.), among other features. This dataset of complaints is available in full from NYC's Open Data Portal from 2013 until 2017, see [a].

3. Construction permits compiled by NYC's DOB

The DOB compiles data on all construction permits given to building owners. These permits are what allow building owners to legally make improvements, repairs or build new structures. Each record in this dataset includes information on the type of construction being granted, the date the permit was granted, the expiration date for the permit and the BBL, among other features. This dataset of permits is available in full from NYC's Open Data Portal from 1999 to 2018, see [c].

4. Complaints submitted to NYC 311

NYC 311 is a hub of information for NYC residents and visitors and an important outlet for filing complaints. NYC 311 collects data on all complaints filed through their system and has made these complaints available on the NYC Open Data Portal. Each record (or complaint) includes BBL, date of complaint, type of complaint and complaint status (e.g. was the complaint received, forwarded to relevant agencies, etc.), among other features. This data is available from 2010 to present, and is updated daily.

## 5. NYC's Automated City Register Information System (ACRIS)

ACRIS is a registry of a variety of different property records, including mortgages and tax records, among other types of records. It is compiled by NYC's Department of Finance. Data from ACRIS is available on the NYC Open Data Portal (coming in multiple different files) but it may be too large for many to download, as it contains at least 3 files of around 1 gigabyte each. [e] Our team used ACRIS' mortgage records exclusively, but the utility of this extensive dataset in analyzing predatory landlord behavior extends far beyond what is discussed in this paper.

## 6. NYC's Primary Land Use Tax Lot Output (PLUTO)

PLUTO is a dataset of all buildings in New York City divided into tax lots.

Existing Indices

### 1. Displacement Typology: Urban Displacement Project

Generated by the NYU Center for Urban Science + Progress (CUSP) 2018 capstone group entitled "Map of gentrification and displacement for the greater New York", this index was created using a methodology created by the Urban Displacement Project, a research initiative of the University of California, Berkeley. [d] The index uses demographic data from the US Census' American Community Survey, and aims at measuring the human impacts of gentrification and displacement. Their data is not publicly available at the moment but will be published in the coming months.

### 2. Renovation Index: "Digital Traces of Gentrification" Project from CUSP 2018's Capstone Cohort

The NYU Center for Urban Science + Progress (CUSP) 2018 capstone group entitled "Digital Traces of Gentrification" designed an index aimed at measuring gentrification entitled the "Renovation Index." This index uses sales and construction permit data to measure the built factors involved in the process of gentrification. Their data and methodology are not publicly available at the moment but will be published in the coming months.

Data with extraction and processing demands

### 1. Evictions data from the New York City Housing Court and the Department of Investigations, compiled by nyc-db

Evictions data is available on NYC Open Data (provided by the Department of Investigations), but the records only include evictions occurring in 2017 or after. [b] To acquire evictions data over an extended period of time we used the nyc-db, a postgresql database that compiles a variety of publicly available datasets on buildings on NYC. [b] One of these datasets is a dataset of evictions in New York City from 2013 to 2015. It includes BBL and the date of eviction, among other features. These data are technically public, but given that they are stored in a postgresql database the technical skills

necessary to read it in is more substantial than for the datasets described above, which can be downloaded through the use of a download link. A set of instructions to create a personal instance of nyc-db can be found on nyc-db's github repository. Ultimately, our team ended up using evictions data from 2013-2017 excluding the year 2016, as neither dataset contains data on this year.

### 2. Property listings from Street Easy

Our team developed with a relationship with Street Easy keywords our team was interested for analysis. [a] The data we collected contains only properties for sale at the date of collection (mid-July 2018) and only contains properties listed on Zillow.

### 3. Rent stabilized unit estimates from New York City Department of Finance, compiled by John Krauss and nyc-db

Another dataset in the nyc-db is of estimated counts of rent stabilized units for each building, by year, from 2007 through 2016. These counts are either collected or estimated (depending on the record in question) using NYC's tax lot data by John Krauss, a civic hacker. His methods are thoroughly documented on Github. [c]

## 3 METHODS

### 3.1 Entity Resolution

To build out portfolios based on a single building or owner, our team used the open source website <http://whoownswhat.justfix.nyc/>, an entity resolution tool using open data created by the JustFix.nyc team in collaboration with a group of civic hackers and non-profit stakeholders working on housing rights.

(DELETE? OR SHORTEN)

It is incredibly challenging to verify the completeness of portfolios generated through this method, given a variety of complicated shell company structures used to shield identity of the true owner of property from the public. However, our team did find evidence that Justfix's entity resolution method consistently returns the same portfolio regardless of the building used as a preliminary input. Based on what we presume to be a relatively complete portfolio of Steve Croman presented in the New York State Attorney General's consent decree with Cromangen, our team used all buildings listed in this portfolio as an input into Justfix's tool to determine whether it would return comparable portfolios regardless of the building input. Portfolios generated had a consistency of around 90%, suggesting that any residential rental building can be used in Justfix's entity resolution tool to generate a relatively complete portfolio of that building's owner.

3.2 Process Diagram

Based on conversations with many stakeholders involved in tenant’s rights in New York City as well as a substantive review of literature and case law, our team built out a process diagram detailing actions undertaken by landlords at various phases in the property ownership cycle. Based on conversations with a variety of stakeholders working on tenant’s rights in New York City as well as a thorough review of literature (see Appendix A), we identified 6 critical types of actions that are taken by predatory landlords: identified are **property identification, building financing, construction, building management involvement, legal proceedings, and illegal deregulation**. While obviously not capturing all tactics of predatory landlords, these action areas and the specific tactics described in the process diagram below (Table 1) provide the foundation for an analysis of predatory landlord behavior throughout the property ownership cycle.

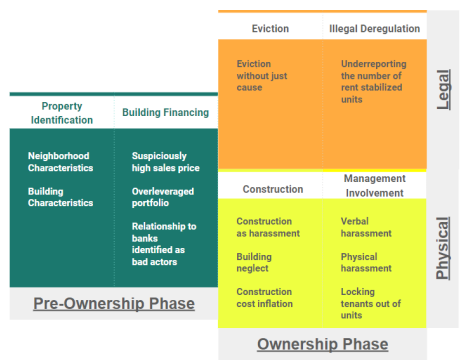


Figure 1. Process model of landlord harassment

Our team generated indicators for five out of the six types, excluding “Management Involvement” given time constraints and concerns about the extent these self-reported data were truly representative of building management harassment across New York City. For a more detailed look at how these indicators were generated, refer to Appendix B.

3.3 Indicators

Average Renovation Index Score (Neighborhood Characteristics)

A higher mean score indicates the presence of buildings in gentrifying neighborhoods, creating a stronger incentive to deregulate rent stabilized units to rent at high and increasing market rates. The baseline for comparison is the city-wide average score.

% of units in portfolio that are rent stabilized (Building Characteristics)

If more units in the building are rent stabilized, more financial opportunity exists to be gained through the conversion of

these units to market rate. The baseline for comparison is the % of units in the city that are rent stabilized.

Change in rent stabilized units between 2007 and 2016 (Building Characteristics)

If the percent change is substantial, a landlord may have already seized upon the financial opportunity described above. The baseline for comparison is the change in rent stabilized units for buildings that had at least one rent stabilized unit in 2007.

Percent of buildings in set of flagged streeteasy listings (Building Characteristics)

Buildings are advertised with language like “value add,” “high upside,” and “upside potential” as a signal to predatory equity investors. The presence of even one building on this list may indicate the landlord’s interest in predatory equity investments. The baseline for comparison is the percent of residential buildings in the city appearing on the list.

Buildings in portfolio with a loan underwritten by a bank known to work with predatory equity investors (Relationship to banks identified as bad actors)

Using a list provided by the Public Advocate for NYC of banks that loan the most to landlords on their “Worst Landlords Watchlist” of 2017 as our set of bad actors, the presence of these banks on loan sheets in a portfolio may indicate a predatory equity investment. The baseline for comparison is the percent of residential buildings in NYC with one of these banks on a loan sheet.

Percent of buildings with construction complaints more than one standard deviation above city average (Construction as Harassment)

A large portion of buildings with a high outlying amount of construction complaints may indicate the use of construction as a systematic tactic for tenant harassment. The baseline is the average and standard deviation deviation of the number of construction-related complaints for all residential buildings in NYC.

Percent of buildings with top 5 over-represented complaints in Kushner + Croman portfolios more than one standard deviation above city average (Construction as Harassment)

A large portion of buildings with a high outlying amount of complaints over-represented in the Kushner + Croman portfolios may indicate a similarity to these two known bad actors in terms of construction-related tactics for harassment. The baseline is the average and standard deviation deviation of the number of complaints over-represented in the Kushner + Croman portfolios for all residential buildings in NYC.

Evictions per unit in portfolio (Evictions)

A high amount of evictions per unit may indicate the use of evictions as a tactic for tenant harassment and unit deregulation. The baseline for comparison is the total number of evictions per unit for all residential units in New York City.

#### **Percent of buildings with at least one eviction (Evictions)**

A high amount of buildings with evictions may indicate the use of evictions as a systematic, portfolio-wide tactic for tenant harassment and unit deregulation. The baseline for comparison is the percent of residential buildings in New York City with at least one eviction.

#### **Percent of buildings in portfolio suspected of engaging in illegal deregulation through the misreporting of rent stabilized units (Illegal Deregulation)**

A large portion of buildings suspected of under-reporting the number of rent stabilized units may indicate the use of misreporting to illegally deregulate rent stabilized units. The baseline for comparison is the percent of all rent stabilized buildings in NYC suspected of engaging in illegal deregulation through misreporting. The list of suspected buildings was generated using a pattern detection algorithm described in Appendix B.

These indicators are calculated in our analysis for the portfolio of a given landlord to help motivate a holistic understanding of a landlord's prospective rental intimidation. Information about the extent of a financial motivation for deregulating units can be combined with indicators of predatory equity to generate an intuition about whether a landlord is a predatory equity investor focused on the deregulation of rent stabilized units (through coercion or otherwise). And this intuition can be synthesized with indicators showing the likelihood landlords are engaged in various tactics of tenant intimidation to get a sense of how landlords are treating tenants based on the financial incentives underlying this relationship.

To help motivate a more intuitive processing of these varied indicators, we created a radar chart with each indicator above as one axis. City-wide baselines are visualized together with the portfolio-specific output to motivate an understanding of how much a portfolio is deviating from the city-wide norms of landlord behavior.

[STAR CHART BELOW]

## **4 RESULTS**

Intro to our results: Croman and Kushner case studies, a comparative analysis of all the portfolios we looked at, and the list of suspicious properties as a one-off. Talk about how we did entity resolution here and mention it first in data (not really worth including in methodology, right?)

### **4.1 List of Properties Suspected of Illegal Deregulation**

An intermediary product of our analysis is a list of properties we suspect to have engaged in the illegal deregulation of rent stabilized units through misreporting. This list has around 7,500 buildings on it, comprising about 16% of all rent stabilized buildings in New York City. It can be found in our github repository. 24% of buildings in Steve Croman's portfolio are on this list, and 12% of the Kushner Corporation's buildings also appear on the list. A glance through the list of Kushner's buildings on this list show that several of them are currently facing lawsuits for harassment and the illegal deregulating rent stabilized units, such as 18 Sydney Place and 184 Kent Avenue.<sup>new</sup> [b]his

### **4.2 Comparative Analysis**

Identify some typologies present in bad actors: those with property in areas experiencing less development vs. those in areas that are; the reliance on predatory equity as evidenced in SE and mortgage data, the different tactics utilized (construction/legal/misreporting), increases + decreases in RSU.

The ultimate conclusion here: there is no one pattern that describes well all landlords in New York City who engage in predatory behavior towards their tenants. The value of our analysis to prove with statistical certainty that any one landlord is engaged in illegal activity; rather, it is in demonstrating how data can be used to help understand a landlord's behavior across a variety of dimensions relevant to tenant's rights and well-being. The outputs of our analysis can be combined with other types of research and knowledge to craft a compelling, nuanced characterization of a landlord. The characterization can be used to guide further investigation into illegal behavior, but in itself is not evidence of illegal activity.

#### **Introduction**

#### **Property Identification**

Both Kushner's and Croman's portfolios have similar Renovation Index scores below the mean. It is not entirely clear what this indicates, but one reason portfolios of known bad actors feature buildings in areas with lower rates of development could be the larger presence of older buildings with longer-term rent stabilized tenants, whose rents are likely lower than the average rent stabilized unit as a result of this length of occupancy and therefore who are more vulnerable to landlords looking to achieve the large financial gain resulting from deregulating these long-term rent stabilized units. However, this would have to be investigated further before a definite conclusion can be reached.

Property Financing

Construction

Involvement of Building Management

Legal Proceedings

Illegal Deregulation

Star Chart

Discussion

### 4.3 Case Study: Anonymous CUSP Student

#### Introduction

In attempting to validate the value of our analysis for uncovering previously unknown or under-reported instances of landlord intimidation, our team conducted analyses based on the portfolios of several CUSP students' landlords. While most of these portfolios did not seem to indicate a significant amount of harassment across the various dimensions we analyzed, one portfolio did stand out. After the analyses were completed and our team determined that this portfolio seemed to have signs of landlord intimidation, we were able to determine through a quick internet search that the landlord of the portfolio in question was indeed a landlord with a history of tenant harassment who was at one point in the past few years featured in a New York Times report on tenant harassment. We have chosen not to reveal the name of the student or landlord to preserve anonymity, but this finding is an anecdotal demonstration of how our analysis can be used to uncover instances of landlord intimidation unknown to those using it.

#### Property Identification

The portfolio of the anonymous CUSP student's landlord has an average Renovation Index score significantly above the city-wide mean of 25. This suggests that many buildings in this portfolio are in areas that are seeing more new development and a higher pace of gentrification. The increased demand for units in these areas represented by this score suggest a strong financial incentive to deregulate rent-stabilized units in order to achieve the large financial gain associated with deregulated, market rate rents in gentrifying neighborhoods.

Only 10% of units in the CUSP student's portfolio are rent stabilized as of 2016, 14 percentage points higher than the city-wide baseline of 24%. However, the amount of rent stabilized units declined by 70% from 2007 to 2016, which is dramatically higher than the city-wide baseline of 1.9%. While it is hard to say based solely on the data presented above that the precipitous decline in rent stabilized units is a result of illegal or predatory tactics, this profile is characteristic of a landlord who's financial strategy is founded upon the gains

to be made from deregulating rent stabilized units, putting in place a strong incentive to harass rent stabilized tenants out of their units that appears to have been.

#### Property Financing

37% of buildings in this portfolio received at least one loan from one of the eight banks known to support the practices of predatory equity. This stands in stark contrast to the city-wide baseline, where only 2% of all residential buildings received a loan from one of these banks. Furthermore, one of the buildings in this landlord's portfolio appeared on our list of properties advertised on StreetEasy using one of the terms we believe to be indicative of a property suitable for predatory equity investors. Given that the total number of buildings on this list is around 1000, even one building is a substantial red flag of predatory equity. This fact along with the significantly high percent of buildings in this portfolio related to banks known to facilitate predatory equity suggest a landlord utilizing predatory equity as a financial strategy.

#### Construction

The indicators presented above indicate that a) the financial strategy of the landlord in question is that of the deregulation of rent stabilized units, and b) that the landlord has been effective in this by substantially reducing the number of rent stabilized units. However, they do not get at the extent to which this landlord may have engaged in illegal or predatory tactics to coerce rent stabilized tenants out of units.

An examination of DOB complaints data shows that this landlord has complaint counts much higher than the city average. 25% of buildings in the portfolio had more construction complaints than the city average plus one standard deviation, and 20% of buildings had more than the city average plus two standard deviation. Focusing on complaints that are the top five most over-represented in the Croman and Kushner portfolios, 28% of buildings had more of these complaints than the city average plus one standard deviation, and 25% of buildings had more than the city average plus two standard deviation. Assuming that the count of construction complaints data by building is normally distributed, this means that between 20-25% of buildings in this portfolio are in the top 2% of buildings by over-represented and construction complaint count. These rates are some of the highest out of all the portfolios we examined. At best it is an indication that this landlord engages in construction and other building ownership practices that are illegal and harmful; at worst it is an indication that the landlord uses illegal and predatory strategies around construction and building ownership as part of a larger scheme to coerce tenants out of their units.

#### Legal Proceedings

The portfolio of the anonymous CUSP student's landlord has a much higher rate of evictions per building than the city-wide baseline. 45% of buildings in the portfolio have at least one eviction on record between 2013 and 2015, compared to just 5% of all residential buildings citywide. The ratio of evictions per unit for the portfolio is .23, which is around one standard deviation greater than the city-wide average. While the motivation of these evictions cannot be determined with certainty solely based on these statistics, the significant differences to the citywide baseline suggest some underlying mechanism or incentive to motivate this. Given all the information known about this landlord, it is not difficult to reach the conclusion that this incentive may be the deregulation of units rather than the standard eviction based on lack of payment or disorderly conduct.

#### Illegal Deregulation

About 8% of buildings in the portfolio of the CUSP student's landlord are on the list of buildings suspected of illegal deregulation through the misreporting of rent stabilized units. This is about half the rate of appearance of all rent stabilized buildings in New York City on this list (16%). This does suggest that, while illegal deregulation may have been conducted by this landlord, it is not necessarily a practice done systematically across the portfolio. Given the precipitous drop in rent stabilized units seen from 2007 to 2016, the high rate of construction complaints and the high rates of eviction, it would seem as if the primary tactic is construction-as-harassment and evictions without just cause.

#### Star Chart

#### Discussion

Across almost every dimension of predatory landlord behavior analyzed, the landlord of the anonymous CUSP student seems significantly more likely to be engaged in wrongdoing than the average landlord. The motive for predatory behavior is established through the presence of buildings in neighborhoods with high rates of development (as proxy for gentrification and high market rents), the reliance on banks known to support predatory equity investors for loans, and the purchase of a building listed using coded language to suggest a predatory equity opportunity. All these facts point to an underlying financial incentive scheme reliant on the conversion of rent stabilized units to market rate. The precipitous drop in rent-stabilized units over the past decade, the substantially large number of DOB complaints, and a high rate of eviction all indicate that this landlord uses the tactics of eviction without just cause and construction-as-harassment to coerce rent-stabilized tenants out of their units, enabling them to convert these units to market rate and complete their predatory equity scheme.

While not every portfolio we tested had a set of indicators that clearly seemed to indicate a certain type of landlord (good or bad), this example does demonstrate the way our analysis can be used to generate an intuition about a previously unknown landlord's financial motives and likelihood of engaging in predatory behavior towards their tenants.

## 5 CONCLUSION

### 5.1 Limitations

Systematic enforcement.

Lack of clear definitions

- Impossible to empirically substantiate intimidation tactics;
- Intimidation subject to interpretation;
- Lack of resources for tenants;
- Rent controlled and regulated tenants often from vulnerable populations.

Enforcement Practices

- NYC DOB year backlog of complaint;
- Most enforcement by building rather than portfolio;
- No clear protocol for coordinated government response.

Political sensitivities

- Financial contributions
- Demographic considerations.

Issues with research

Policy experts applications weights to statistical measurement

Lack of open data for necessary fields

Bias or flaws inherent in self-reported data

Analysis does not present evidence of wrong-doing in a statistically rigorous way, what it does do is flesh out an existing investigation with facts supporting anecdotal evidence that can help make the case for predatory behavior on a more systematic, portfolio-wide level. It can also provide clues about where to begin conducting an investigation, although on-the-ground evidence will be needed to confirm the suspicions generated through our analysis.

Lack of "adequate training set". To refine this methodology we need more confirmed cases of successful prosecutions. We would also need confirmed "negative" portfolios, that is, portfolios that are not engaged in illegal behaviour.

Compare to methodology at the OAG (need of informants, etc).

Pros:  
Very interpretable.

Easy to use.

Brings in information from a variety of data sources

Mention stakeholder search?

## 5.2 Implications

If incorporated into government operations, the assembled platform can be leveraged immediately by government actors to develop proactive systems to respond to the rent burden epidemic. The department of buildings may begin to prioritize enforcement on a The State and can perform attrition to maximize the Enforcement agencies can

## 5.3 Future Work

Contingent on members upcoming availability, out team will transition from

### Computational Resources

Find Partner with advanced computing system to execute joint property data scrape. Run tool on all portfolios in New York to scale tool from portfolio level analysis to city-wide portfolio detection system.

### Political Outreach

Leverage relationships to secure meeting with government agencies.

Presentation to local elected officials in key communities.

### PR strategy

Find partners who can strengthen presentation materials.  
Develop social media presence.

Schedule

**July 2018: Partnership Development**

**August 2018: Coordinated Media Campaign**

**September 2018: Academic Outreach**

**Q4 2018: Political Advocacy**

## 6 APPENDIX A: SOURCES USED TO CREATE PROCESS DIAGRAM

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## 7 APPENDIX B: DETAILED METHODS

### Property Identification

The first phase in the pre-ownership phase (i.e. before the prospective landlord purchases a certain building) is property identification. Our hypothesis is that landlords looking to take advantage of vulnerable tenants to achieve higher returns on investment in a property will look for buildings with a significant amount of rent stabilized units in gentrifying neighborhoods. These buildings present maximal opportunity, as the eviction of rent stabilized tenants and subsequent rent increases (and eventually, unit deregulation) results in higher rents per individual, and the presence of the building in a gentrifying neighborhood results in higher market rate rents (which the deregulation of rent stabilized units allows for). Furthermore, a property with a high proportion of rent stabilized units may be sold at a lower price than a predominantly market rate building, as the anticipated returns with rent stabilized tenants are less than a building in the same neighborhood with market rate tenants. In sum, this type of property maximizes return because it may be sold at a lower price than its market rate counterpart, can potentially achieve the same returns as a market rate property after rent stabilized units are deregulated (often through the harassment of rent stabilized tenants), and has the potential to generate further returns based on anticipated rent increases of the neighborhood at large.

When attempting to measure the presence of this type of building in a landlord’s portfolio, we divided the relevant characteristics into two categories: neighborhood characteristics and building characteristics.

#### Methodology: Neighborhood Characteristics

At the neighborhood level, we used two indices of gentrification to measure how the median level of gentrification for the landlord’s portfolio compared to the median level of gentrification for the city at large. The indices used (the Urban Displacement Project Index and the Renovation Index) capture different phenomena significant in measuring the extent of gentrification, resulting in unique insights generated from both. The Urban Displacement Project Index measures the social impacts of gentrification such as displacement and demographic change, whereas the Renovation Index measures the impacts of gentrification on the property market. Taken together, these indices provide an understanding both of how much new development and demographic changes (two of the critical components of gentrification) the portfolio being analyzed has seen.

#### Methodology: Building Characteristics

At the building level, the critical indication that a property is susceptible to landlord predation is the percent of units in the building that are rent stabilized. The higher the number of rent stabilized unit count, the larger the financial gain the landlord can net through harassing rent stabilized tenants out of their

units. Our team measures these indicators in two ways: statically, through the percent of units in a portfolio that are rent stabilized, and dynamically, by measuring the decline in rent stabilized units over the past ten years for a given portfolio. The static indicator should be interpreted as the extent of the financial incentive a landlord has to harass rent stabilized tenants out of their apartments at present: the higher the amount of rent stabilized units, the greater the incentive. The dynamic indicator should be interpreted as the extent to which a landlord has already taken advantage of this financial incentive to deregulate rent stabilized units: the larger the percent change, the more the landlord may have already harassed rent stabilized tenants out of their apartments. This dynamic indicator is calculated using the landlord's current portfolio, and therefore does not account for changes in a portfolio that may occur over time.

When applying these indicators, it is important to apply some sort of baseline to understand the extent to which the indicator is an outlier from the standard case. Because our team does not have a full list of residential landlord portfolios, the baseline we used revolved around the full set of apartment buildings in NYC. For the static indicator, the baseline to compare to was the amount of units that are rent stabilized across the city. For the dynamic indicator, the baseline was the change over the last ten years in the amount rent stabilized units per building for all rent stabilized buildings in NYC; the standard deviation of this statistic was calculated as well to get a sense of variance.

It must be noted that these building level indicators on their own are not evidence of illegal or predatory behavior, as any number of unrelated reasons could generate these statistics (e.g. natural flow in and out of units, the presence of subsidies mandating a certain amount of rent stabilized units, etc...). These numbers must be combined with further indicators (such as the ones detailed below) and an on-the-ground understanding gleaned through conversations with stakeholders involved organizing tenants to conclude with more certainty that these indicators truly are indicative of a portfolio being taken advantage of for the landlord's financial gain.

#### Methodology: Listings coded for predatory landlords

Through conversations with stakeholders involved in tenant advocacy, we learned that the property listings of buildings of the type described in this section (i.e. in a gentrifying neighborhood with a lot of rent stabilized units) will often use specific descriptors such as "value add," "high upside," and "upside potential" to indicate to buyers that the property has potential financial value for a landlord willing to harass tenants out of units. Our team used a list of rental properties advertised on StreetEasy using these search terms. The percent of buildings within a portfolio that were marketed using this coded language for predatory landlords was calculated,

indicating the extent to which a landlord purchased properties marketed with the intention of harassing and removing rent stabilized tenants: the higher this amount, the more likely it is that a landlord has as central to their financial strategy the conversion of units through the harassment and displacement of rent stabilized tenants. As with the building level indicator, this indicator alone is not evidence of a landlord intent on harassing tenants out of rent stabilized units. However, taken with further indicators and evidence from tenants past and present, it can be a compelling piece of evidence in an argument about the extent of a landlord's predatory behavior.

#### Property Financing

The practice of purchasing property at a price much higher than properties with comparable neighborhood and rent regulated status is known as "predatory equity", and is a significant enough concern in NYC that in november of 2017 the New York City Council passed the "Predatory Equity Bill." This bill directs New York City's Department of Housing Preservation and Development (HPD) to create a "Speculation Watch List" of properties whose tenants are at risk of losing their rent stabilized units so that property investors can achieve their expected financial returns. Indicators of predatory equity include suspiciously high sales prices, a revenue to debt ratio skewed heavily towards debt (indicating property owners must increase revenue to balance their books) and the presence of loans underwritten by banks who have been known to grant loans for the purchase of properties where the only strategy to achieve profitability is a decline in the number of rent stabilized units. Our team chose to conduct an analysis for the final indicator: portfolio's relationship with banks known to engage in practices of predatory equity.

#### Methodology: Suspicious Sales Price

There are many factors other than the presence of rent stabilized units that influence the sales price of a property: the amount of construction necessary to make it livable and attractive, neighborhood characteristics, characteristics of the specific block, time in the economic cycle, and the relationship between buyer and seller, to name a few. In order to characterize a sale as suspiciously high, one would need to devise a method of controlling for all the additional factors influencing sales price. Given the complexity of this analysis, our team decided not to conduct an analysis that could determine suspicious sales.

If a list of suspicious sales were to be compiled, one could conduct a portfolio scale analysis by comparing the percent of buildings in the portfolio on this list to the percent of buildings across New York City that appeared on this list. The higher the number of buildings appearing on this list, the more likely it is that a property owner's financial strategy relies on the eviction of rent stabilized tenants, thereby motivating further predatory behavior.

#### Methodology: Overleveraged Portfolio

To calculate whether or not a building has an overleveraged portfolio (e.g. whether its portfolio has a high debt to revenue ratio), one would have to have an accurate idea about how much debt and how much value is contained in the revenue. It is almost impossible to find the latter in publicly available, given that property valuations provided in PLUTO do not correspond closely to market valuations. If one had a more accurate account of property valuations, one could calculate the debt to revenue ratio of a portfolio to determine the extent to which a portfolio is overleveraged. The higher the debt to revenue ratio, the more pressing it is that the owner increase their revenue streams. If this owner has a lot of rent stabilized units, it is sensible that they may consider the harassment and removal of rent stabilized tenants an effective strategy to increase their revenue.

#### Methodology: Relationship to Banks Supporting Predatory Equity

To build out our set of banks supporting predatory equity, our team used a list provided by the Public Advocate for NYC of banks that loan the most to landlords on their “Worst Landlords Watchlist” of 2017. The ten banks they listed were:

1. Signature Bank
2. Capital One
3. Customers Bank
4. JPMorgan Chase
5. New York Community Bank
6. Dime Community Bank
7. Investors Bank
8. Peapack-Gladstone Bank
9. Deutsche Bank
10. Astoria Bank

We chose to conduct our analysis on 8 of these 10 banks, excluding JPMorgan Chase and Capital One as the only two national banks with assets of greater than fifty billion dollars. Our team calculated two indicators aimed at characterizing a property owner’s relationship to these banks: the percent of loan sheets in a portfolio with one of these banks as the underwriter, and the percent of buildings in the portfolio with at least one loan underwritten by one of these banks. These indicators were compared to a city-wide baseline: the percent of loan sheets for all residential buildings in NYC with one of these banks as the underwriter and the percent of all residential buildings in NYC with at least one loan underwritten by one of these banks. The higher the percent of loan sheets and buildings related to these banks known to support predatory landlords, the more likely it is that the portfolio in question

contains predatory property investments motivating tactics of harassment to achieve enough return to be profitable.

#### Construction

Perhaps the most recognizable form of landlord harassment relates to the power landlords have over the physical spaces tenants call home. Landlords use both construction and the lack of construction as methods to make conditions for tenants so uncomfortable (and in some cases, dangerously unlivable) in an attempt to coerce them to leave their units. Steven Croman, for example, has been accused in engaging both in construction-as-harassment and its converse, intentional neglect, as tactics to harass tenants, many of whom are rent stabilized, out of their units.<sup>new</sup> [a]

Another way landlords can use construction as a way to raise rents is through Major Capital Improvements (MCIs) and Individual Apartment Improvements (IAI). MCIs are building-scale renovations to essential components of the building such as boilers, and NYC law allows landlords who make these improvements pass some of the cost of these improvements on to the tenant through rent increases. IAI’s are apartment-scale improvements, all of which can be passed on to the tenant through rent increases. These rent increases apply to rent stabilized and non-rent stabilized tenants alike.<sup>boa</sup> In theory this idea is sensible, but in practice it can be manipulated by landlords. There is not much effort put into determining whether the improvements landlords claim to have done actually took place at the cost they are claiming<sup>cou</sup>, creating an incentive for landlords to inflate the amount of construction they are doing and the cost of that construction.

#### Methodology: Construction-as-harassment and Building Neglect

To determine whether a portfolio engages in construction-related harassment (both through invasive construction and the lack of essential repairs), our team compiled a list of relevant construction complaint types from a dataset of complaints collected by the DOB. These complaints relate both to construction-as-harassment and building neglect. We calculated the number of construction complaints (e.g. complaints whose type fell into our list of relevant types) per unit for a given portfolio, and compared that to our baseline statistics: the number of construction complaints per unit for all residential buildings in New York City, and the standard deviation of this count across New York City buildings. The higher the number of construction complaints per unit, the more likely it is that the landlord in question is engaged in practices of construction harassment, be it invasive construction or building neglect.

There are variety of datasets collecting similar information on building issues, ranging from 311 to DOB violations (complaints that are inspected and found to be in violation of NYC law) to HPD complaints or violations. Our team chose to

use DOB complaints because it was the standard dataset used by many stakeholders in tenant advocacy we talked with, in part because violations often under-represent the number of true violations given the backlog of inspections DOB faces. A comparable analysis could be conducted with other datasets, to determine the extent to which these datasets are similar to one another.

There are a few issues with the data and analysis discussed here. The data used in this analysis is reported data, creating some bias related to who is and is not likely to complain. Construction-as-harassment and building neglect are not separated, resulting in some coarseness with respect to how the analysis can be used to characterize landlords' predatory behavior.

As the information in this dataset is user-generated, there is an inherent bias in the data that could be related to different propensities from various demographics that use the DOB complaint service. This is a limitation of using this dataset.

Also, the method of outlier detection we are using is counting the percentage of buildings from a portfolio that are outside one and two standard deviations when compared to the average number of complaints by building identification number (BIN). Since this dataset only contains the buildings that have complaints, the mean and standard deviation are overestimated (since we are not including all of the buildings that have 0 complaints). For this reason, we consider this a conservative approach for outlier detection.

#### Methodology: Construction Cost Inflation

In our review of publicly available datasets, our team did not find a dataset of MCIs and IAs being claimed by landlords. Without this dataset it is effectively impossible to conduct a data analysis to determine whether or not landlords are lying about the improvements resulting in rent hikes. If this dataset were available, one could compare the type of improvement being claimed to building complaints following the date of completion. If complaints were filed about the issue the improvement was aimed at addressing on a date after construction was supposed to be complete, then one could flag that improvement as potentially not actually taking place. This would be much harder to do with IAs, as well as with MCIs that may have been undertaken but whose cost may have been inflated.

#### Involvement of Building Management

In addition to the use of construction as a tactic to harass tenants directly in their apartments and their building, landlords may also direct their staff to harass tenants directly. Steve Croman used this strategy, employing an ex-cop to harass

tenants both in their apartments and at their places of employment.<sup>apa</sup> However, this in-your-face style of harassment is not the only kind of harassment building management can engage in to intimidate tenants into leaving their units. Landlords can also direct building staff to change the locks in apartments prior to eviction, locking lease-holding tenants out of their apartments. This occurred at 85 Bowery, a building embroiled in legal and regulatory conflict following accusations by tenants that their landlord waged a campaign to intimidate them out of their rent stabilized units.<sup>ret</sup>

Tactics employing building management personnel in the intimidation of tenants is slightly harder to find in public data. These actions are not registered in the DOB's datasets of complaints and violations, given that they do not fall under the agency's jurisdiction of regulating the physical quality of buildings. Tenants may file complaints through 311, but the comparatively irregular categorizations in this dataset as well as the highly specific and variant nature of these complaints may make it much harder to compile a relatively complete dataset on complaints of harassment by building personnel. Furthermore, given the highly personal nature of these forms of harassment, there is a significant concern that these complaints will be under-reported as tenants may be fearful of further harassment as retaliation for complaining. For these reasons, our team chose not to conduct an analysis in this area.

Theoretically, if one were to develop an indicator aimed at measuring the extent to which a portfolio uses building management to harass tenants, the approach would be similar to that of the construction-as-harassment indicator. A dataset of building management harassment complaints would be generated from the full 311 dataset. This dataset would be combined with a dataset of all residential buildings in NYC to calculate the baseline statistic: the number of complaints of building management harassment per unit for all rental units in NYC. The standard deviation of this statistic at the building level would also be calculated to get a sense of variance. These statistics would then be calculated for buildings within a portfolio as well as for the portfolio at large and compared to the baseline. If the portfolio has a much higher number of harassment complaints per unit (based on the mean and standard deviation), then one can infer that the portfolio has a substantial problem with building personnel harassing tenants.

#### Legal Proceedings

The New York Times' feature on the erosion of affordable apartments in New York City devotes a significant amount of attention to the eviction of rent stabilized tenants as a common tactic taken by landlords to force tenants out of rent stabilized apartments. The Times characterizes many of these evictions as based on "the flimsiest of evidence," noting that they

are a part of a standard playbook to push tenants out including construction-as-harassment and the coercion of tenants into taking buyouts forcing them out of their rent stabilized apartments. While many of these evictions may technically be legal, the Times' analysis of evictions data shows that a third of evictions were dropped before the conclusion of proceedings (either because rent had been paid or because the tenant moved) and another third were the result of tenants withholding rent while they awaited critical building repairs, "rais[ing] questions about whether such suits are aimed at harassing tenants."cit

Given that two thirds of evictions examined in the New York Times' analysis seem to suggest harassment as a motivating factor, our team chose to examine evictions data as a key indicator of landlord harassment. The approach to developing this indicator is similar to the approach for the construction-as-harassment indicator. We merged the full dataset of evictions taken from nyc-db and NYC Open Data with the dataset of all residential buildings in NYC to calculate the average number of evictions per building from 2013 to 2017 (excluding 2017) and the standard deviation of this statistic. These statistics are the baseline to which we compare a given portfolio. If a portfolio's number of evictions per building is significantly higher than the city-wide average (e.g. at least a standard deviation higher), this is an indication that the owner of this portfolio may be filing eviction suits in order to harass tenants out of their units. While it may be the case that some of these evictions are for some reason other than harassment, the Times' analysis described above supports this approach by suggesting that the majority of eviction suits are linked in some part to harassment.

### Illegal Deregulation

As discussed earlier, landlords such as Kushner Companies have historically under-reported the amount of rent stabilized units in their buildings on building permit applications. This practice allows landlords to complete construction jobs without the oversight from DOB required for rent stabilized apartments to ensure that construction is not being used to harass tenants out of their apartments. In the longer term, it may also allow landlords to illegally deregulate units simply by lying about the rent stabilized status of a unit. This would allow landlords to raise rents and remove tenants more easily.

In order to identify buildings where illegal deregulation and the misreporting of rent stabilized units occurred, our team employed a simple pattern recognition algorithm on the list of all buildings that at any point in time had rent stabilized units, according to nyc-db's count of rent stabilized units. The theory underlying this analysis was that the practice of misreporting follows a similar pattern in the data: a non-zero rent stabilized unit count for one or multiple years, followed by a rent stabilized unit count of zero for one or multiple

year, then followed by a non-zero rent stabilized unit count for one or multiple years. This pattern is distinct from that of standard deregulation (both resulting from natural flows in and out of units and from landlord harassment) in that there is a decline to zero followed by an increase to a non-zero count of units. While there is a chance that this is because the building received some subsidy in exchange for increasing the amount of rent stabilized units, it is more likely that the count of zero is the result of misreporting.

To find buildings following this pattern, the rent stabilized unit counts for all rent stabilized buildings were converted from separate yearly columns into one string per building. This string was in chronological order (e.g. the first character was the unit count from 2007 and the last was the unit count from 2016), and each character was either an "N" (non-zero) or "0" (zero). A list of strings denoting the non-zero-zero-nonzero pattern was generated (e.g. [N0N, N00N, N000N, ...]) and each building's full string was checked against this list to see whether it contained one of the strings in the list. Those that did were flagged as potentially having misreported their unit counts.

There are two limitations of note with this approach. First, as mentioned above it may be the case that the increase from zero to some non-zero amount of rent stabilized units could be the result of something other than the illegal deregulation of a unit: the terms of some subsidy received may demand rent stabilized units, for example. To determine whether or not this may be the case, our team merged a list of properties receiving housing subsidies from the Furman Center and the list of misreporting buildings generated through our analysis. Only five percent of buildings suspected of misreporting the number of rent stabilized units receive subsidies, meaning that subsidies can be ruled out as a reason for a zero to non-zero change in at least ninety five percent of buildings suspected of misreporting.

The second limitation is that there may be instances where the number of rent stabilized units could be misreported but not misreported as zero rent stabilized units. The approach we adopt will not capture these records. However, it is reasonable to assume that misreporting will almost always occur as zero units, given that a key motivation for misreporting is to not trigger a building inspection. If a landlord misreported the stabilized unit count above zero, then the building inspection would still be triggered. This means that, while hard to verify, it seems likely that most misreporting of rent stabilized unit counts will misreport the number as zero.

While this list is of value to regulators and housing rights advocates in isolation, we also use this list as a portfolio-scale indicator in our broader analytic approach. The indicator is

the percent of buildings in a portfolio that is suspected of mis-reporting the number of rent stabilized units, and the baseline for comparison is the percent of buildings in NYC with rent stabilized units that appear on the list.

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