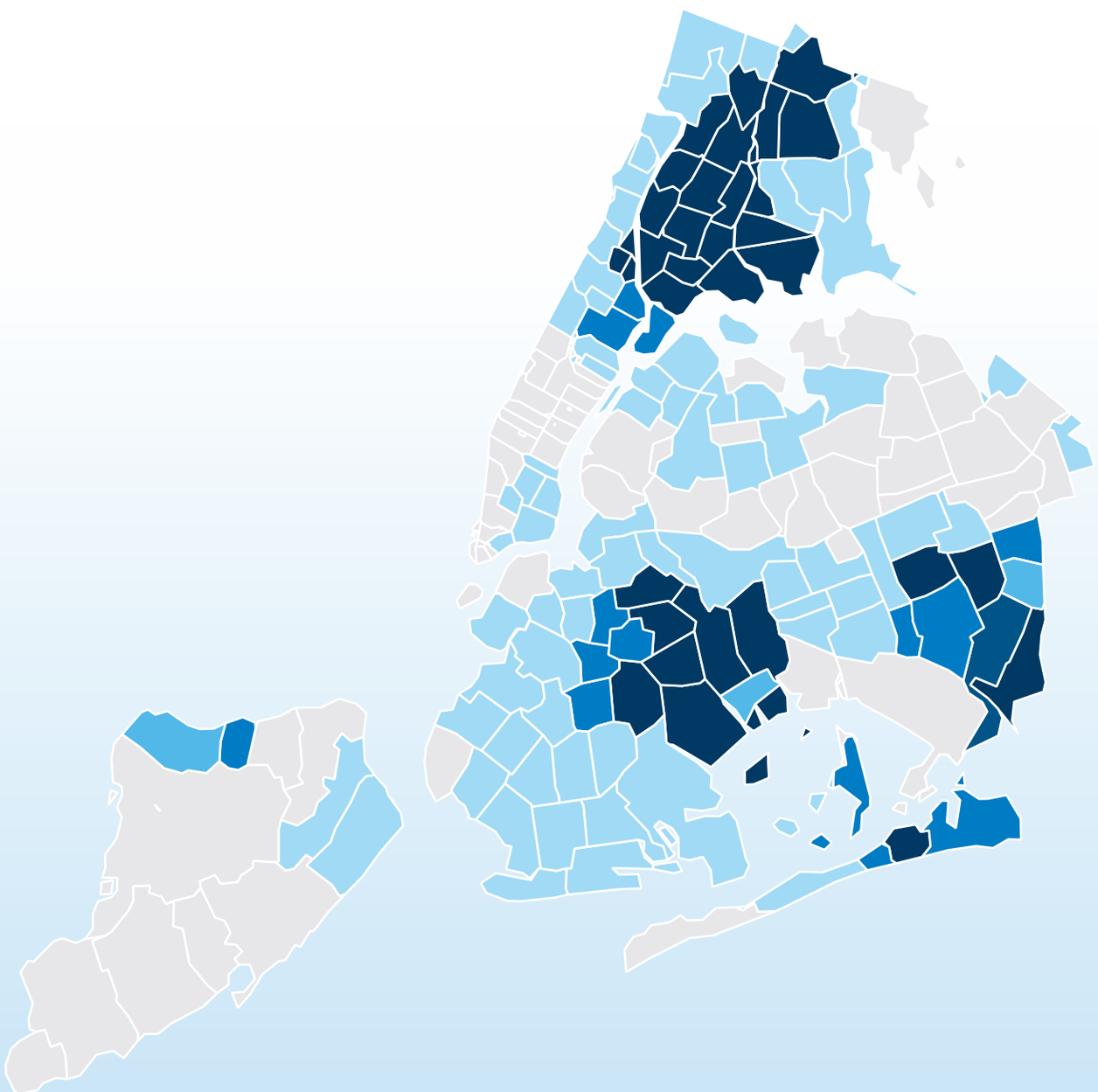
NEW YORK CITY
CREDIT PROFILE

2018



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PREFACE

In 2014, the Federal Reserve Bank of New York released *Community Credit: A New Perspective on America's Communities*.[1] Unlike previous efforts that used credit data primarily to assess households' well-being, Community Credit is designed to meet the need for reliable local data that can be used to evaluate a community's well-being. The Community Credit paradigm uses residents' credit data to gauge and benchmark the economic resiliency of their communities, helping to inform choices and monitor responses to programs.

We viewed that effort as the start of a conversation and the response from the community has been very encouraging. The most frequent request was for more micro-level data. More refined analytics are needed for several reasons. As is becoming increasingly apparent, overall prosperity can mask underlying inequality. Thriving cities and communities have distressed segments that are being missed in the macro metrics. We discuss this issue of inclusive growth in more detail within the main report. Micro data analytics are a useful way to identify and understand the needs of underserved segments within a community.

Also, as data are more widely used to inform policy and are integrated into programs and practice, the need for more data is growing. Is the proverbial needle being moved? Is it being moved in the communities of interest? Are midcourse policy adjustments needed? Micro data analytics that indicate directionally how conditions are changing, or not, are very much needed.

Perhaps the biggest challenge is to design metrics that are relevant and useful in practice. Individuals in underserved communities live very challenging lives, the details of which are often not captured in aggregate statistics. The metrics must acknowledge these realities and align with how intervention programs are administered.

The Community Credit project is a work in progress. The credit profile format was piloted for the City of Rochester, N.Y. in 2017. Subsequent feedback was so positive that we were asked to produce similar products for other communities; in 2018, we released a credit profile for Long Island, N.Y., and this Credit Profile of New York City represents our most recent work. We continue to work with communities to advance the community credit framework and provide value for community leaders, residents, policymakers, and other stakeholders.

Our conversations with communities on how to make the analytics more useful are continuing. We are pleased to contribute to and be a part of this very important discussion.

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1 http://www.nyfed.org/communitycredit

OVERVIEW

Access to credit is a portal to financial security and economic opportunity for households and communities alike. In practice, access to credit gaps exist. Even cities that are thriving economically are a mix of credit-sufficient and credit-constrained neighborhoods. Underlying the headline good news, New York City has one of the weakest credit inclusion rates in the nation. Credit-constrained communities warrant attention because persistent credit distress may slow or even stop the momentum of prosperity for an entire community, not just the poor segments, and thereby threaten a city's long-term prospects and competitiveness.[2]

This report presents detailed credit data, maps, and analytics for New York City as a whole, for each of its five boroughs, and for its 184 zip codes.[3] Viewed together, they provide a rich picture of the City's credit well-being and the gaps in credit for economic opportunity in its neighborhoods. The analytics spotlight the disparate conditions and needs, especially in the 118 credit-constrained neighborhoods, to inform economic strategies that serve everyone. The analytics can direct the right type and amount of resources to neighborhoods according to severity and persistence of needs, and community programs can be aligned and evaluated to achieve the highest social impact. By providing this information, we hope to help the City continue on a path that promotes prosperity for all.

FRAMEWORK

The key premise of Community Credit is that financially secure households are a source of strength and stability for their community, and that a community's well-being and resiliency may be gauged by their presence.[4] Credit is the analytical lens because it supports wealth building if used prudently, opens doors for economic opportunity, and is a data proxy for overall financial well-being.[5]

Access to credit and the financial well-being that ensues, however, is a complex issue with no simple data measure. Individuals may have institutional access to credit but lack access to credit that can enhance economic opportunity for themselves, their families, and their communities. Recognizing the need to measure the latter while administrative data often measure the former, our analysis takes a multi-factorial approach where each Community Credit indicator is an in-depth look at one facet of a complex reality. The indicators are then examined in combinations to gauge and diagnose a community's access to credit for financial well-being and economic opportunity.

The report is structured as follows. Section 1 discusses inclusive growth and briefly reviews the Community Credit paradigm. Section 2 presents data analytics, indicator by indicator, for New York City at the city, borough, and zip code levels. Section 3 describes the framework for combining the indicators and a typology for interpreting the results to identify credit-constrained neighborhoods. Section 4 presents a detailed data snapshot of the 118 New York City zip codes that are identified as credit-constrained as of the fourth quarter of 2017. Section 5 provides tables on the credit product prevalence and delinquencies for the U.S., New York State, New York City, and the five boroughs. Section 6 presents notes about the data and methodology.

2 Joseph Parilla and Alan Berube, "Achieving Inclusive Growth in Cities." The Avenue, July 5, 2016. Available at https://www.brookings.edu/blog/the-avenue/2016/07/05/achieving-inclusive-growth-in-cities/. See also discussions by OECD Secretary-General Angel Gurria and JPMorgan Chase's Peter Scher.

3 There are additional New York City zip codes that do not correspond to physical areas, such as post office boxes, and are not able to be mapped. We analyzed only the 184 zip codes.

4 Community Credit: A New Perspective on America's Communities, 2014. Available at https://www.newyorkfed.org/data-and-statistics/data-visualization/community-credit-profiles/index.html#overview.

5 Also because, as a practical matter, credit data are available in a timely manner and are relatively error-free since they are used for business decision-making.

TAKEAWAYS

New York City

With over 6.8 million adult residents, New York City presents a range of credit outcomes and conditions. Even so, the data show New York City as having one of the weakest rates of credit inclusion in the nation: 22.2% of residents were not included in the credit economy as of the fourth quarter of 2017, which translates to over 1.5 million adults without a credit file or a credit score and without ready access to mainstream financial lenders. The pattern of low credit inclusion persists at the borough and zip code levels.

Other indicators of credit capacity, credit quality, and debt management for the City are midrange, or only slightly better. Despite the midrange scores, the City has shown credit resiliency over the past decade. Like the nation, the City was adversely affected by the financial crisis in 2007, though less severely. By the fourth quarter of 2017, all of the City's indicators had either fully recovered or exceeded their fourth-quarter 2007 levels.

The Five Boroughs

The City's topline numbers mask a more uneven credit picture at the borough level. New York City has five counties, called boroughs, each with distinct credit conditions. While all the boroughs have shared in the City's credit recovery following the financial crisis, some have had a stronger recovery path than others. Even so, the relative rankings among the boroughs are fairly constant, with Manhattan generally having the strongest credit indicator scores and the Bronx having the weakest.

Credit inclusion rates rank among the nation's weakest for all boroughs except Staten Island. The Bronx also has debt management indicators in the lowest tier.

i. Manhattan (New York County)

With an adult population of 1.4 million residents in 2017, median household income of $85,071, and a poverty rate of 16.2%,[6] Manhattan is viewed as the most prosperous borough in New York City.[7] Indeed, some of Manhattan's zip codes are among those with the highest concentration of billionaires in the world. Not surprisingly, Manhattan ranks highest among the five boroughs by most credit indicators.

When examined indicator by indicator, Manhattan has a credit inclusion gap that is one of the largest in the nation. About 271,000 Manhattan residents are not in the credit economy, meaning they do not have access to mainstream credit lenders. Manhattan's indicator values for credit quality, credit capacity, and debt stress are stronger than for the City as a whole, New York State, and the country.

At the neighborhood level, Manhattan has 48 zip codes that can be mapped. Nearly half (22) are credit-constrained in that they rank among the nation's weakest on some credit indicators.

Weak credit inclusion is the most prevalent credit barrier at the neighborhood level. Seventeen of the credit-constrained zip codes have credit inclusion as the dominant credit barrier, with credit-sufficient residents living next door to residents who are without a credit file or a credit score.

6 Adult (18 years and older) population is sourced from the 2017 Population Estimates Program, U.S. Census Bureau. Median household income and poverty rate are sourced from the 2017 1-Year American Community Survey, U.S. Census Bureau.

7 Nick Conway, Inequality in New York City Neighborhoods, 1990-2015. https://nickconwayblog.wordpress.com/2017/08/08/inequality-in-new-york-city-neighborhoods-1990-2015/. Manhattan is also quite diverse, with 28.2% of the population being foreign-born.

Next in prevalence are three zip codes where most of the credit indicators are among the weakest in the nation. In these broadly credit-constrained communities, credit barriers exist in the form of low credit inclusion, low credit capacity, and weak debt payment histories. These communities are in need of policy attention and an array of layered programmatic solutions to build access to credit for economic opportunity.

ii. Queens

With an adult population of 1.9 million residents in 2017,[8] Queens is the second most populous borough in the City and the most diverse: Nearly half of all residents are foreign-born.[9] With median household income of $64,509, a poverty rate of 12.1%,[10] and the lowest income inequality of any borough,[11] Queens is described as the most middle-class of the five boroughs.[12]

When examined indicator by indicator, Queens' credit indicator values for credit quality, credit capacity, and debt stress are in the midrange. However, credit inclusion is the exception and the rate in Queens is among the lowest in the nation. About 360,000 Queens residents are not in the credit economy. Given its demographics, low credit inclusion may reflect Queens' high foreign-born population, some of whom may be unfamiliar with the U.S. credit system or have cultural reservations about using credit as a tool for financial well-being.

At the neighborhood level, Queens has 62 zip codes that may be mapped. Over half (34) are identified as credit-constrained and have a range of credit barriers.

Weak credit inclusion is the most prevalent credit barrier at the neighborhood level. In 23 of the credit-constrained zip codes, credit inclusion is the primary barrier to accessing credit for economic opportunity.

Next in prevalence are four zip codes where most credit indicators are among the weakest in the nation. These broadly credit-constrained communities show widespread and entrenched weakness in credit conditions. They need policy attention and an array of programmatic solutions to build access to credit for economic opportunity.

iii. Brooklyn (Kings County)

With an adult population of over 2 million residents, Brooklyn is the most populous borough in New York City.[13] Given median household income of $56,942 and a poverty rate of 19.8%, Brooklyn is characterized by some researchers as the most representative of the City as a whole.[14]

When examined indicator by indicator, Brooklyn consistently ranks a little below all other boroughs except the Bronx. Not surprising, the rate of credit inclusion in Brooklyn is among the weakest in the nation. Over 506,000 Brooklynites are not in the credit economy and are without a credit file or a credit score.

At the neighborhood level, Brooklyn has 37 zip codes that may be mapped. Nearly all (34) are credit-constrained and have various credit barriers.

8 Adult (18 years and older) population is sourced from the 2017 Population Estimates Program, U.S. Census Bureau.
9 47.3% of Queens' population is foreign-born. Based on the 2017 1-Year American Community Survey, U.S. Census Bureau.
10 Median household income and poverty rate are sourced from the 2017 1-Year American Community Survey, U.S. Census Bureau.
11 Nick Conway, Inequality in New York City Neighborhoods, 1990-2015. https://nickconwayblog.wordpress.com/2017/08/08/inequality-in-new-york-city-neighborhoods-1990-2015/.
12 Zoe Rosenberg, Where do middle-class New Yorkers live? Charting the change in income distribution throughout the five boroughs between 1990 and 2015, August 9, 2017. https://ny.curbed.com/2017/8/9/16119400/income-distribution-nyc-map.
13 Adult (18 years and older) population is sourced from the 2017 Population Estimates Program, U.S. Census Bureau.
14 See: https://ny.curbed.com/2017/8/9/16119400/income-distribution-nyc-map.

Weak credit inclusion is the most prevalent credit barrier at the neighborhood level. Twenty-two of the credit-constrained zip codes have severe credit inclusion gaps. The frequently occurring pattern of credit-sufficient residents living next door to credit-constrained residents may reflect the City's recent prosperity. Residents are increasingly moving out of Manhattan and into the outer boroughs to seek more affordable real estate options for housing and businesses. In addition, Brooklyn's high media visibility may be drawing young adults seeking an innovative and cool place to live and work, which may have contributed to this pattern.

Next in prevalence are seven credit-constrained zip codes where most credit indicators are among the weakest in the nation. These broadly credit-constrained communities have weak credit conditions that are widespread and entrenched, and access to credit for economic opportunity is among the weakest in the nation. They merit policy attention and an array of programmatic solutions to build access to credit for economic opportunity.

iv. Bronx

With an adult population of 1.1 million residents,[15] the Bronx is similar in size to Manhattan. However, the two boroughs are quite different. With the lowest median household income ($37,397) and highest poverty rate (28.0%) in the City,[16] the Bronx is the least prosperous borough.

When examined indicator by indicator, the Bronx consistently ranks last among the five boroughs when measured by all credit indicators. Similar to the other boroughs, credit inclusion in the Bronx remains among the weakest in the nation; nearly 333,000 residents remain outside the mainstream credit economy—that is, they are without a credit file and a credit score.

At the neighborhood level, the Bronx has 25 zip codes that may be mapped. Nearly all (24) are credit-constrained, or are neighborhoods where access to credit for economic opportunity is depressed.

Barriers to credit take two dominant forms at the neighborhood level: weak credit inclusion and broadly entrenched credit distress. Of the 24 credit-constrained zip codes, seven are flagged primarily for weak credit inclusion. This pattern of the credit-sufficient living side by side with the credit-constrained may be influenced by the seven zip codes' location on New York City's shoreline along the Hudson, Harlem, and East Rivers, making the zip codes attractive for real estate development and drawing more creditworthy residents to desirable locations.

Among the boroughs, the Bronx has the most neighborhoods (17 zip codes) that are identified as broadly credit-constrained. Most of their credit indicators are among the nation's weakest. These 17 communities have a broad combination of credit barriers, making access to credit for economic opportunity one of the weakest in the nation. They merit policy attention and an array of programmatic solutions to build access to credit for economic opportunity.

v. Staten Island (Richmond County)

Some researchers characterize Staten Island as an anomaly within New York City.[17] With an adult population of only about 375,000 residents in 2017, it is the smallest borough and has almost a suburban atmosphere. It is relatively prosperous, having the second highest median household income ($79,201) and the lowest share of residents in poverty (11.8%) in the City.[18] It is economically and culturally the most homogeneous of the boroughs, having the lowest share of foreign-born residents (21.9%).[19]

15 Adult (18 years and older) population is sourced from the 2017 Population Estimates Program, U.S. Census Bureau.
16 Median household income and poverty rate are sourced from the 2017 1-Year American Community Survey, U.S. Census Bureau.
17 See: https://ny.curbed.com/2017/8/9/16119400/income-distribution-nyc-map.
18 Median household income and poverty rate are sourced from the 2017 1-Year American Community Survey, U.S. Census Bureau.
19 Share of foreign-born is sourced from the 2012-2016 5-Year American Community Survey, U.S. Census Bureau.

When examined indicator by indicator, Staten Island consistently ranks first among the five boroughs for credit inclusion and is second only to Manhattan when measured by the other indicators. It is the only borough where the rate of credit inclusion is not among the nation's weakest. However, Staten Island's credit recovery was relatively flat post-financial crisis. Given the more robust recoveries in the other boroughs, differentials among indicators by borough have narrowed, especially between Queens and Staten Island.

At the neighborhood level, Staten Island has 12 zip codes that may be mapped. Only four zip codes are identified as credit-constrained—meaning neighborhoods where access to credit for economic opportunity is depressed.

Weak credit inclusion is the main barrier for two of the credit-constrained zip codes; debt management issues are prominent in the other two. Notably, no zip codes in Staten Island are identified as broadly credit-constrained, nor do they have the weakest credit values by most indicators.

POLICY CHALLENGES FOR THE CREDIT-CONSTRAINED ZIP CODES

New York City has 184 zip codes that may be mapped. Using zip codes as a working definition for neighborhoods in our empirical work, we identified 118 zip codes as credit-constrained. That is, one or more of their 2017 indicator values are among the weakest in the nation.

Next, we clustered the credit indicators to better diagnose, for policy and programmatic purposes, the primary credit barriers that result in depressed access to credit for economic opportunity. We focused on three indicator clusters: 1) weak credit inclusion—or too few residents with access to mainstream credit, 2) weak borrowing capacity—or too few residents with credit limits or credit scores that allow for easy or favorable credit approvals, and 3) poor debt payment histories—or too many residents in the community who are late paying their debt obligations during the past year.

The three clusters may occur alone or in combination. Hence, the 118 credit-constrained zip codes are sorted into one of seven groups. (See the map Credit-Constrained Zip Codes, below.)

As noted above, credit-constrained zip codes are found in all the boroughs, though the prevalence and pattern of constraints vary. A striking feature of the map is that credit-constrained zip codes occur in geographic clusters, supporting the value of place-based policy and programmatic solutions.

The largest group of credit-constrained zip codes is Group 1, where credit inclusion is the dominant credit barrier depressing access to credit for economic opportunity. Seventy-one zip codes are in Group 1. The location of these zip codes suggests neighborhoods possibly in economic transition, resulting in a mix of credit-constrained residents living side by side with credit-sufficient residents.

A pattern of "credit gentrification" or credit upgrading may be occurring as residents move from high-cost neighborhoods to areas farther out in search of affordable housing, business options, or other opportunities. It could also be that upscale real estate developments may attract more creditworthy residents to desirable locations, such as the beautiful shorelines of the Hudson, Harlem, and East Rivers.

Group 1 zip codes are ripe for policy interventions and business opportunities. Credit literacy programs that build financial skills might deepen the pool of creditworthy customers for businesses. Also, there may be positive synergies from credit-excluded residents being the neighbors of credit-thriving residents in the form of information exchange and mutual learning. Credit products suited to residents' lifestyles are a business opportunity, especially if the credit-excluded residents are relying on high-priced alternative lenders to meet their credit needs. With time, policy attention, and programmatic support, the Group 1 zip codes may transition to credit sufficiency and financial resiliency in the future.

The second-largest group of credit-constrained zip codes is Group 7, where all three credit barriers—low credit inclusion, low credit capacity, and high and persistent debt payment problems—are widespread and depressing access to credit for economic opportunity and financial resiliency. Thirty-one zip codes are in this group.

From a policy perspective, two distinct dynamics are likely in effect in the Group 7 neighborhoods, each requiring a customized policy response. First, there is the large share of local residents who are not connected to mainstream financial lenders. Credit outreach may help connect them with more affordable credit for economic opportunity and broaden the customer base for credit products. In turn, their stronger financial security will strengthen the financial well-being and resiliency of their communities.

Second, a separate but compounding challenge for Group 7 neighborhoods is that residents who are connected to the credit economy are struggling with their debt obligations and have low capacity to borrow further. The prevalence of delinquent debt histories suggests a gap in budgeting skills or issues related to insufficient income. These are known problems with proven solutions that may be customized to the layered needs of the Group 7 residents.

The last group of credit-constrained zip codes worth highlighting is Group 5, where a combination of weak credit inclusion and pervasive long-term debt payment problems is depressing access to credit for economic opportunity. Twelve zip codes are in Group 5.

Group 5 zip codes are geographically located between Group 1 and Group 7 zip codes, which suggests several possibilities. First, weak credit inclusion points to zip codes possibly in economic transition, similar to Group 1 neighborhoods. Policy and programmatic solutions that target financial literacy and offer credit products suiting the lifestyle needs of residents would be beneficial.

However, participants in the Group 5 credit economy are struggling to make timely payments on their debt obligations, which suggests possible income insufficiency and the need for budgeting and debt management skills. Surprisingly, the zip codes do not have serious credit capacity issues; residents have credit cards with borrowing capacity and credit scores in the mid-tier range. In other words, there is capacity to borrow since credit scores are not pervasively low. It is possible that the debt payment problems are legacy issues and residents are in the process of paying off long-term delinquent debt. Alternatively, residents may be juggling credit products to keep financially afloat.

In brief, Group 5 zip codes are consistent with a credit dynamic that is either deteriorating or on the mend. As such, they may be at a "credit tipping point" and attractive for policy and programmatic interventions to assist residents in mending credit issues or to avoid tipping the community into a credit-distressed state similar to Group 7.

Summary Table: Community Credit Indicators, Percent, as of 2017 Q4

	Indicator	Definition	U.S.	New York State	New York City
Credit Inclusion	Included	% of adult population with credit score	89.3	85.2	77.8
	Not Included	% of adult population without a credit score	10.7	14.8	22.2
	Revolving Credit	% of credit economy with revolving credit products	73.1	79.7	82.1
Credit Capacity	Utilization ≤30%	% of credit economy with 70+% capacity on revolving credit products	40.1	44.9	45.7
	Prime Credits	% of credit economy with Equifax Credit Risk Score ≥720	51.9	55.9	51.9
	Subprime Credits	% of credit economy with Equifax Credit Risk Score <660	31.2	26.7	29.4
Credit Stress	On-time Payers	% of credit economy current on all credit obligations for the most recent 4 quarters	79.2	80.9	79.2
	Good History	% of credit economy; based on most recent 5 quarters of payment history	81.2	83.0	81.2
	Improved History		5.2	5.0	5.4
	Declining History		1.3	1.3	1.5
	Struggling History		3.6	3.5	3.9
	Consistently Delinquent History		8.6	7.2	7.9

Data Source: FRBNY Consumer Credit Panel / Equifax

Summary Table: Community Credit Indicators, Percent, as of 2017 Q4 (Continued)

	Indicator	Definition	Brooklyn	Bronx	Manhattan	Queens	Staten Island
Credit Inclusion	Included	% of adult population with credit score	75.2	69.9	81.0	80.9	87.9
	Not Included	% of adult population without a credit score	24.8	30.1	19.0	19.1	12.1
	Revolving Credit	% of credit economy with revolving credit products	82.0	75.8	84.9	83.3	82.2
Credit Capacity	Utilization ≤30%	% of credit economy with 70+% capacity on revolving credit products	44.7	30.1	54.1	48.2	46.8
	Prime Credits	% of credit economy with Equifax Credit Risk Score ≥720	49.8	32.6	63.0	54.6	56.0
	Subprime Credits	% of credit economy with Equifax Credit Risk Score <660	30.9	46.6	21.0	26.2	26.4
Credit Stress	On-time Payers	% of credit economy current on all credit obligations for the most recent 4 quarters	78.2	69.3	84.7	80.9	80.0
	Good History	% of credit economy; based on most recent 5 quarters of payment history	80.2	71.6	86.2	83.1	82.3
	Improved History		5.7	7.9	4.1	5.0	5.1
	Declining History		1.5	2.2	1.1	1.3	1.3
	Struggling History		4.2	6.2	2.9	3.3	3.7
	Consistently Delinquent History		8.3	12.0	5.7	7.3	7.7

Data Source: FRBNY Consumer Credit Panel / Equifax

Distribution of New York City Credit-Constrained Zip Codes by Borough

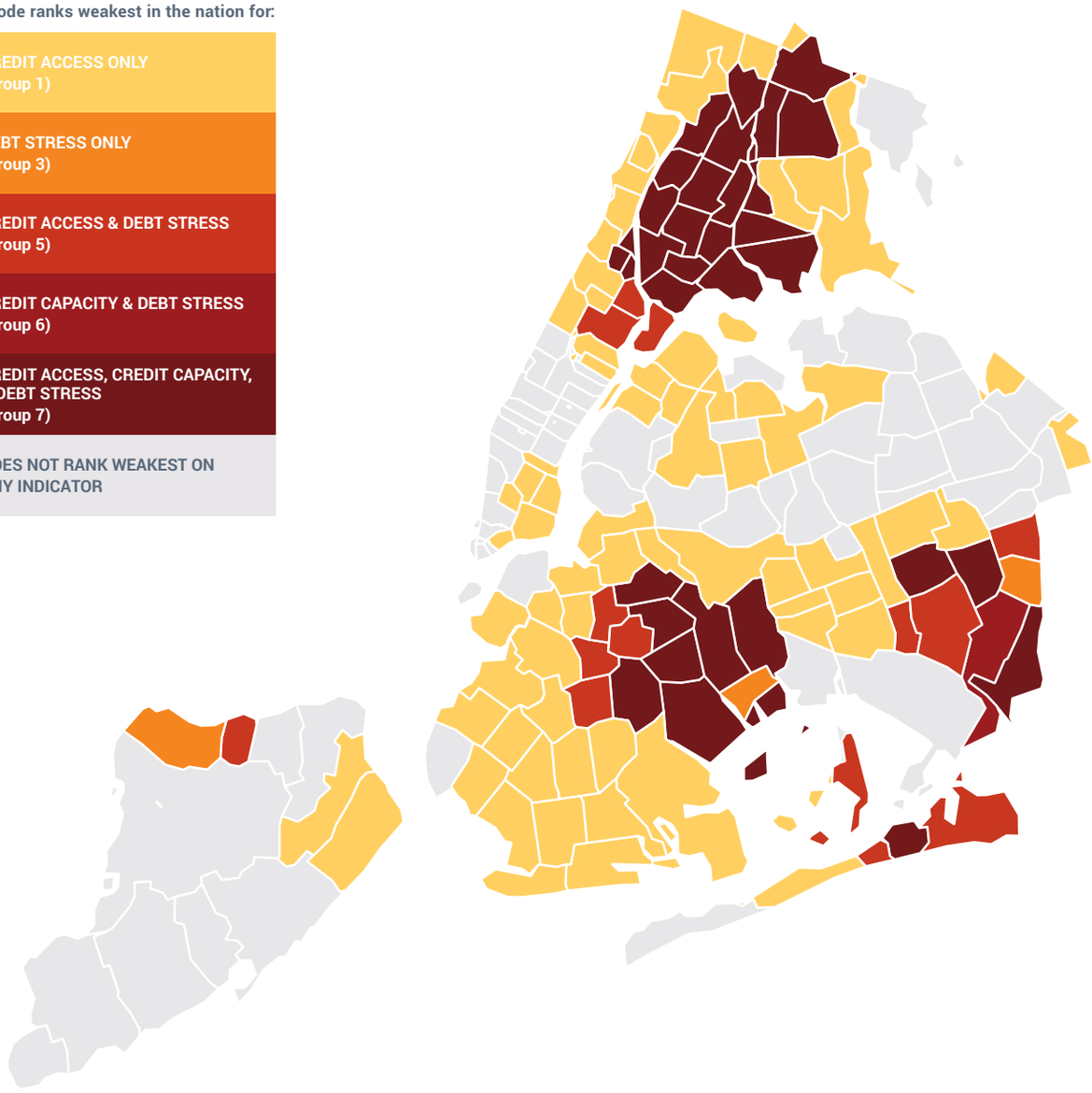
Credit-Constrained Groups		NYC	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	Credit Inclusion Gap	71	7	22	17	23	2
2	Limited Credit Capacity	0	0	0	0	0	0
3	Debt Stress	3	0	1	0	1	1
4	Inclusion & Credit Capacity	0	0	0	0	0	0
5	Inclusion Gap & Debt Stress	12	0	4	2	5	1
6	Limited Credit Capacity & Debt Stress	1	0	0	0	1	0
7	Inclusion Gap, Limited Credit Capacity, & Debt Stress	31	17	7	3	4	0
Total Credit-Constrained Zip Codes		**118**	**24**	**34**	**22**	**34**	**4**
Total New York City Zip Codes		**184**	**25**	**37**	**48**	**62**	**12**

There are additional New York City zip codes that do not correspond to physical areas, such as post office boxes, and are not able to be mapped. We analyzed only the 184 zip codes.

New York City's 118 Credit-Constrained Zip Codes, 2017 Q4

Zip code ranks weakest in the nation for:

- CREDIT ACCESS ONLY (Group 1)
- DEBT STRESS ONLY (Group 3)
- CREDIT ACCESS & DEBT STRESS (Group 5)
- CREDIT CAPACITY & DEBT STRESS (Group 6)
- CREDIT ACCESS, CREDIT CAPACITY, & DEBT STRESS (Group 7)
- DOES NOT RANK WEAKEST ON ANY INDICATOR



SECTION 1:
COMMUNITY CREDIT AND INCLUSIVE GROWTH

INTRODUCTION

As cities[20] shed their industrial pasts and reinvent for the 21st century, the paradigm of inclusive growth—an economic growth strategy that systematically values prosperity for all residents in a community [21]—is receiving increased attention. The importance of looking at smaller geographies, such as cities and neighborhoods, when assessing conditions of economic inequality is also being discussed.[22]

Fortunately, the growing availability of "big data"[23] is fostering the development of analytic tools that are granular enough for these micro-geographic applications. This report uses consumer credit data as a lens for viewing communities' economic well-being. Specifically, it uses the Community Credit paradigm[24] and metrics, created by the Federal Reserve Bank of New York, as proxy indicators of a community's broader economic prosperity.

INCLUSIVE GROWTH

Previous growth strategies focused largely on rebuilding deteriorated downtowns, restoring physical infrastructures, attracting new business ventures, and establishing amenities to reverse population outflows and attract new workers.[25] These strategies assumed, implicitly or explicitly, that positive economic growth would benefit all residents in a community, that the proverbial rising tide would lift all boats, and that economic growth was sufficient to ensure broader prosperity.

Evidence from cities further along the economic revitalization trajectory, however, reveals that the growth tide has not raised all boats equally—and some boats not at all.[26] Not all segments of society have benefited from an expanding economy, and some may have fallen even farther behind. In case after case, inequality manifests itself in local conditions repeatedly characterized as "a tale of two cities," a reference to the disparate outcomes within a single city.

In addition, there is an emerging realization that persistent distress in the form of troubled neighborhoods, poor housing stock, inadequate schools, and an insufficiently skilled workforce may slow or even stop the momentum of prosperity for an entire community, not just the poor segments, and thereby threaten a city's long-term prospects and competitiveness.[27] In order to assess the impact of growth policies and programs, it is important to examine conditions at a more granular level, including by neighborhoods or by particular segments of the population, such as the financially distressed. By looking at zip code-level data, we can examine whether trends at the city and county levels are also reflected in individual communities.

20 The credit profile report was initially piloted for the City of Rochester, N.Y.; hence references to that city and other 'legacy cities' in the introduction section. However, the ideas apply more broadly, as other stakeholders have requested similar credit profiles for their communities.

21 OECD, "Inclusive Growth," available at http://www.oecd.org/inclusive-growth/ and "The 2016 Economic Report of the President." Available at https://obamawhitehouse.archives.gov/blog/2016/02/22/2016-economic-report-president.

22 Amy Liu, "Why Economic Development Matters," The Avenue, Brookings, 2016. Available at http://www.brookings.edu/blog/the-avenue/2016/03/07/why-economic-development-matters/.

23 The increased integration of technology in our daily lives and business and government operations is resulting in the collection and potential analysis of micro data that would have been very difficult, if not impossible, without the technology. These data, usually measured in the thousands and millions of records, are often referred to as 'big data.'

24 For a more complete discussion, please see the Community Credit website and chart book at http://www.nyfed.org/communitycredit.

25 Allan Mallach, "Out of the Shadow: Strategies for Change in Small Postindustrial Cities, A Special Report by the Community Development Studies and Education Department," Federal Reserve Bank of Philadelphia.

26 "Looking for Progress in America's Smaller Legacy Cities: A Report for Place-Based Funders," A joint Publication of the Funders' Network for Smart Growth and Livable Communities, its Members and the Federal Reserve Banks of Atlanta, Boston, Chicago and New York, 2017. Available at http://cdps.chicagofedblogs.org/?p=2376.

27 Joseph Parilla and Alan Berube, "Achieving Inclusive Growth in Cities." The Avenue, July 5, 2016. Available at https://www.brookings.edu/blog/the-avenue/2016/07/05/achieving-inclusive-growth-in-cities/. See discussions by OECD Secretary-General Angel Gurria and JPMorgan Chase's Peter Scher.

MICRO DATA ANALYTICS

Data are valuable to address at least three essential information gaps:

- **To identify and understand the financial circumstances and needs of communities:** Data can describe local conditions and communicate both needs and successes to leaders and key stakeholders. Measurable metrics allow communities to be compared, either as peers or potential competitors. Within a community, changes in local conditions can be tracked over time to measure local progress.
- **To develop policies and identify effective practices:** Data can help prioritize resources for competing policy objectives by informing the costs, benefits, and trade-offs of alternative strategies. For example, data metrics are useful for comparing local needs and targeting resources in communities where needs are most critical.
- **To evaluate programs and assess community impact:** Indicators of residents' well-being, coupled with metrics of program-specific outcomes, are useful for gauging the broader effectiveness of policy actions and social programs. Data analysis also helps in identifying the lessons learned, which can be used to improve the efficiency of programs customized for a specific region or to adapt policies in mid-course. Increasingly, investors and funders are seeking greater accountability from their grantees by requesting performance metrics that can be used to assess progress over time.

In practice, policymakers and practitioners often have had to rely on broader indicators of growth—population, employment, income per capita, and so on—to assess growth in smaller geographies such as cities or towns and their component neighborhoods. These broader indicators, however, are not well designed for analyzing micro-level differences or for identifying conditions of economic inequality within a city or a community.

Data analytics, ideally, need to be granular enough for analysts to be able to understand and monitor the more incremental changes and to document long-term trends from an inclusive growth perspective, whether by place or by segment of society.[28] Hence, the emergence of micro data analytics is particularly useful. Increasingly, public and nonprofit organizations are mapping data, designing dashboards, and otherwise making U.S. Census and other micro data more readily accessible for public use.[29] Unfortunately, micro-level metrics may not always be available to the actual problem solvers in communities[30] due to a lack of availability, capacity, or resources.

THE COMMUNITY CREDIT PARADIGM

After reviewing the available micro analytic tools, the New York Fed created the Community Credit framework, which uses local credit conditions as a lens for examining the financial well-being of a community of people identified by location.[31] We focus on consumer credit data, which are 1) more frequently available than more direct measures of prosperity such as income and net wealth, 2) carefully updated at a timely frequency to be highly accurate, since diverse stakeholders make important business decisions based on these data,[32] 3) good proxies, since they are highly correlated with the income and net wealth indicators of prosperity that are available only with a longer lag, and 4) a recognized expertise of the Federal Reserve Bank of New York.

28 IBM. "Rochester USA Smarter Cities Challenge Report." p. 3 and pp. 38–42.
29 Many examples exist including PolicyMap.com, Scorecard Prosperity Now, and the Federal Reserve Bank of Chicago's Peer Cities Identification Tool.
30 The IBM report cited above mentions data gaps.
31 For a more complete discussion, please see the Community Credit website and chart book at http://www.nyfed.org/communitycredit.
32 For example, on June 1, 2017, the U.S. Census Bureau released the 2013 "Wealth and Asset Ownership Detailed Tables," highlighting household net worth from the Survey of Income and Program Participation. In contrast, credit data, in principle, is available daily for clients.

Community Credit indicators measure the percentage of adults (18+ years of age) in a community exhibiting specific credit traits and experiences. With these indicators, communities can track their own progress over time and compare themselves with peers and competitors. The community of interest may be the entire nation or an individual state or county.[33]

Over time, we received requests for Community Credit indicators at a more micro-geographic level. These requests made sense; community development programs and initiatives are often executed at the neighborhood level, where data are frequently sparse or unavailable, progress is difficult to monitor, and practices need to be modified as circumstances change.

This series of report is our first response. We continue to use the Community Credit framework, but take the analytics from the U.S., state, and county levels to the city and zip code levels. Our analysis uses the New York Fed Consumer Credit Panel/ Equifax data, which include a little over 11 million individual credit files, all in anonymous form, up to and including the fourth quarter of 2017.[34] The most recent values for the Community Credit indicators show year-over-year change on an annual basis for the years 2007 to 2017.
(See www.nyfed.org/communitycredit).

Data are no substitute for good judgment and experience, however, and the Community Credit indicators should be viewed only as tools to help policymakers and others advance the well-being of communities. We hope that this deeper drill-down to smaller geographies will help officials, planners, business leaders, funders, practitioners, and others in their attempts to build more prosperous communities for all, and not just some, residents.

ACCESS TO CREDIT IS AN INDICATOR OF INDIVIDUAL WELL-BEING

Credit is a useful proxy for individual well-being because it affects the lives of individuals through multiple channels, both financial and nonfinancial, making it a broad-based measure of economic behavior.[35] It is also a financial tool that individuals use to pursue economic prosperity, not something to be accumulated for its own sake. Accordingly, changes in the demand for and uses of credit are likely to capture and mirror changes in economic circumstances and behavior.[36]

The familiar financial channel is individuals' access to credit and the associated costs of borrowing. Individuals with a history of on-time credit payments can obtain funds to finance special opportunities, or they can access emergency funds when needed, at reasonable rates and terms. Without such a history, individuals may find their credit options limited or nonexistent for activities such as obtaining education loans to invest in their future. Or it may be that credit will be available to them only on expensive terms, possibly through predatory channels, which can lead to prolonged cycles of mounting debt and costly default.

33 The most recent values for the indicators show year over year change on an annual basis for the years 2007–2017. See http://www.nyfed.org/communitycredit.

34 See About the Data section for details.

35 "Financial inclusion is a key driver of inclusive growth. Connecting people to a secure way to receive, store and use money enables their full economic participation. And by bringing the 2 billion people who are currently excluded into the formal financial system, countries can grow at a much faster pace for the benefit of everyone." MasterCard Center for Inclusive Growth. Available at https://mastercardcenter.org/about-inclusive-growth/.

36 Center for Financial Services Innovation, Understanding and Improving Consumer Financial Health in America. Available at https://assetfunders.org/wp-content/uploads/CFSI_Consumer_Financial_Health_0415.pdf.

Access to credit also affects one's ability to access economic opportunities more broadly. For example, credit information is frequently used by employers, landlords, and mobile phone companies to prescreen and qualify individuals; insurance companies sometimes use credit scores to determine premiums; and utilities and other companies may waive security deposits for those with established credit histories. Researchers have highlighted how young adults with heavy student loan debt often delay marriage and household formation.[37] Meanwhile, nonexistent or uneven credit histories may result in higher costs for services and impede, or perhaps even prevent, individuals' efforts to pursue economic opportunities. For these reasons, access to credit is an important financial asset for individuals.

ACCESS TO CREDIT IS AN INDICATOR OF COMMUNITY WELL-BEING

Individuals with assets, while personally prosperous, can also be a potential source of strength to their community. For example, in the wake of Super Storm Sandy in the New York/ New Jersey area, wealthier communities seemed to recover sooner than other communities.[38] In other words, we posit that residents' ability to access credit not only describes their personal situation but also says something useful, in the aggregate, about the financial well-being of their community.

Persons with more financial assets, such as income and net wealth, are referenced as financially better off than those with fewer assets. Communities with higher concentrations of financially well-off individuals are ranked as more financially prosperous than communities with lower concentrations.[39] Analogously, communities with high concentrations of individuals with access to credit, viewed as a financial asset, are posited to be financially stronger than communities with lower concentrations. In other words, access to credit is used as a relative indicator of a community's financial well-being, and the Community Credit indicators are useful place-based metrics for assessing the well-being of cities and their component neighborhoods.

The use of place-based descriptors by researchers is well established.[40] Communities are frequently referenced as low, moderate, middle, or high income for analytical purposes.[41] Researchers have shown that where people live affects their future earning power and well-being.[42] Others have documented that cities offering attractive amenities, including good schools, transportation, and well-kept neighborhoods, attract individuals and families. And the financial crisis illustrated firsthand the negative externalities of a single foreclosure adversely affecting the value of nearby houses and even entire neighborhoods.[43] Likewise, place-based measures of credit access, usage, and payment histories—as provided in the Community Credit framework—are useful complements to existing community-level metrics.

37 AICPA Survey, "68 Percent of Americans Regret How They Financed College," April 29, 2015.

38 The Federal Reserve Bank of New York held several outreach events in the aftermath of the storm; this pattern was observed from those meetings and discussions.

39 Credit allows individuals to access resources from the future for use today. As such, it is a complement to other financial assets, namely income (i.e., financial resources earned today) and net wealth (i.e., resources earned in the past). Since persons with more financial assets are generally viewed as 'richer' and better off financially than others in similar circumstances but with fewer assets, so also does the ability to access credit make a community 'richer.'

40 Justin Wolfers. "Why the New Research on Mobility Matters: An Economist's View." *The Upshot, The New York Times*. Available at https://www.nytimes.com/2015/05/05/upshot/why-the-new-research-on-mobility-matters-an-economists-view.html?_r=1.

41 See the *Federal Financial Institutions Examination Council's Geocoding System* for definitions of these classifications. Available at https://geomap.ffiec.gov/FFIECGeocMap/GeocodeMap1.aspx.

42 Raj Chetty and Nathaniel Hendren. "The Impacts of Neighborhoods on Intergenerational Mobility: Childhood Exposure Effects and County-Level Estimates." Harvard University Working Paper Series, 2015. Available at http://www.equality-of-opportunity.org/images/nbhds_exec_summary.pdf.

43 G. Timothy Kingsley, Robin Smith and David Price. "The Impacts of Foreclosures on Families and Communities," The Urban Institute, May 2009 and Dan Immergluck and Geoff Smith, "The External Cost of Foreclosure: The Impact of Single-Family Mortgage Foreclosures on Property Values," Housing Policy Debate, 17(6), 2006, pp. 57–79.

ACCESS TO CREDIT IS AN INDICATOR OF INCLUSIVE GROWTH

Access to credit may be particularly well-suited as a tool for assessing inclusive growth. It may be reasoned that credit behavior is a sensitive barometer of early and small changes in family circumstances, especially for individuals on the middle or lower rungs of the economic ladder. This segment of the population is known to be financially fragile,[44] experiencing uneven income flows while having limited financial buffers. Some families are often just one emergency away from financial distress.[45] For them, the ability to access credit for income smoothing may be even more consequential than for more affluent segments of the population. Obtaining credit from traditional mainstream sources may be their most cost-effective debt option. Also, for these individuals, access to credit is likely to be a larger component of their financial portfolio than are income and net wealth.

It is important to note that the Community Credit indicators do not reflect causal inferences. Moreover, the indicators do not measure who or how many adult residents are actually contributing to community prosperity. For example, individuals in a community may be accessing credit through informal[46] or alternative[47] channels instead of using mainstream financial products.[48] As a result, they would not be in the Community Credit measures, while they may be contributing to their community's prosperity.

Also, structural barriers may exist in the form of financial products and practices that do not mesh well with the financial lives and exigencies of lower-income families. Such factors may contribute to variations in credit access rates among communities across the nation and over time.

SUMMARY

Growth strategies are likely to be more effective when coupled with good data and metrics. Metrics are useful for identifying where resources are most needed and for assessing progress over time, both within and across geographies. Yet, acute knowledge gaps exist at the community level, where programs are implemented and individuals live. Metrics such as median income or average or total debt balances are blunt measures for assessing inequality, yet they are widely used for this purpose because better options are lacking.

The Community Credit indicators are place-based metrics that examine the collective credit behaviors of residents to infer the well-being of the community, where the geography is broadly or narrowly defined. The micro analytics version of the indicators is a useful complement to other economic measures for gauging economic inclusiveness. Communities can track their own progress over time and compare themselves with peers and competitors.

44 "Preliminary USFD data reveal that household incomes are complex. Incomes often fluctuate from month to month in both amount and timing, and in ways that are often outside of the households' control. Income fluctuations create problems even for households whose finances are adequate on average over the course of the year. Households regularly experience swings in their ability to cover basic expenses, pay down debt or save for the future. In this context, budgeting and planning become quite difficult." Jonathan Morduch and Rachel Schneider. "Spikes and Dips: How Income Uncertainly Affects Households." Available at http://www.usfinancialdiaries.org/issue1-spikes. See also Annamaria Lusardi, Peter Tufano, and Daniel Schneider, "Financially Fragile Households: Evidence and Implications," Brookings Papers on Economic Activity, Spring 2011. Available at https://www.brookings.edu/bpea-articles/financially-fragile-households-evidence-and-implications/.

45 The Federal Reserve Board of Governors Report on Economic Well-Being of U.S. Households in 2016 indicated 44% of adults would not be able to cover an emergency expense of $400 without selling something or borrowing money. Available at https://www.federalreserve.gov/publications/files/2016-report-economic-well-being-us-households-201705.pdf.

46 Friends and family are examples of this channel. This option may be preferred, or be the only option available, for families for small dollar loans.

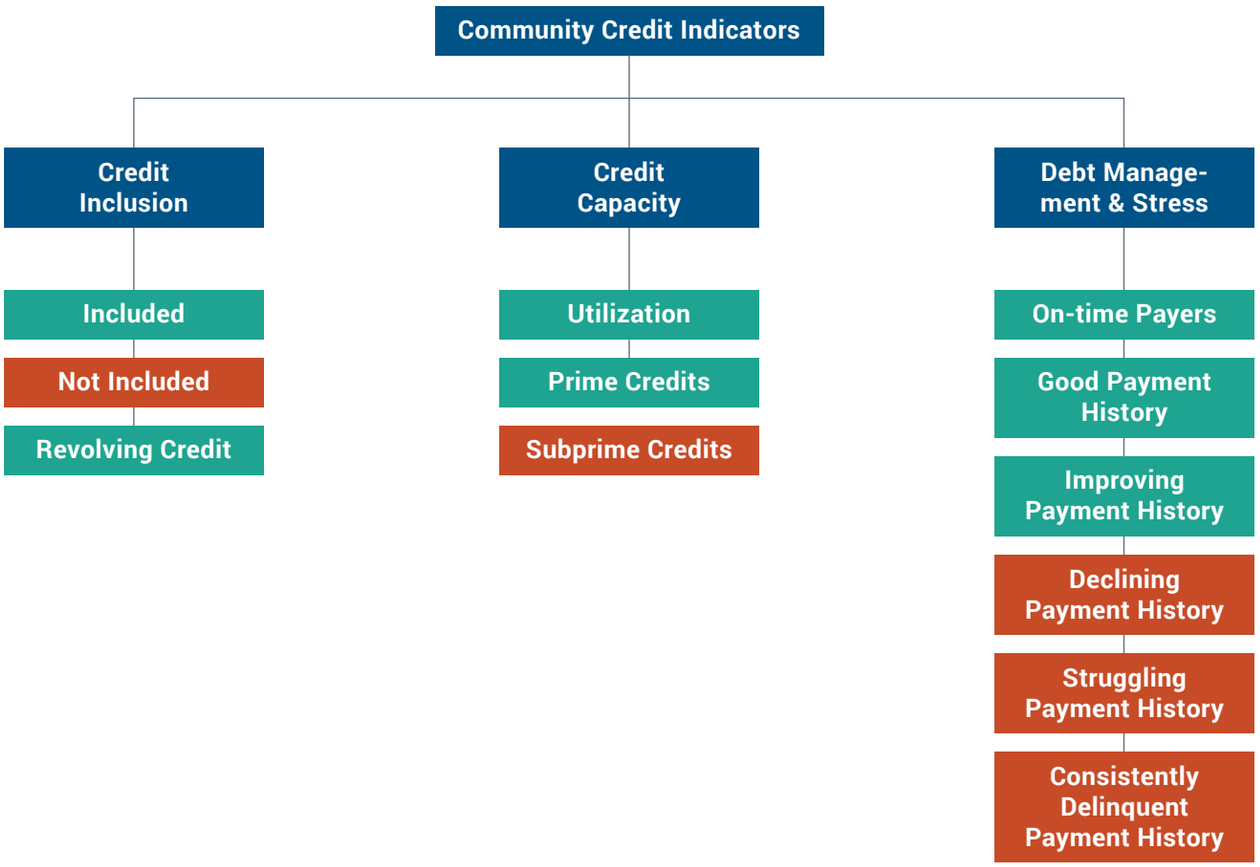
47 Payday lenders and pawnshops are examples of this channel.

48 Evidence from the U.S. Financial Diaries indicates that especially lower income families use multiple channels to access credit. See Jonathan Morduch, Timothy Ogden and Rachel Schneider, "An Invisible Finance Sector: How Households Use Financial Tools of Their Own Making." Available at http://www.usfinancialdiaries.org/issue3-informal.

In the Community Credit paradigm, access to credit is a financial asset since it allows individuals to access resources from the future for use today. Residents' access to and use of credit, however, enhances not just their individual well-being but also that of their community because these residents are a potential source of strength.

BRIEF OVERVIEW OF COMMUNITY CREDIT INDICATORS[49]

In the community credit paradigm, a community is defined as all adults in a geography with a credit file and a credit score in a database of about 11 million people in 2017 (New York Fed Consumer Credit Panel/Equifax data). We can assess communities at the U.S., state, county, or local level. The indicators are sorted thematically into three groups of credit attributes, Credit Inclusion, Credit Capacity and Debt Management and Stress, which will be referenced in the discussion of credit distressed zip codes in Section 3 and 4 of this report. The Community Credit indicators are:



49 See Community Credit 2014 for detailed description at http://www.nyfed.org/communitycredit.

Credit Inclusion

The first group of indicators, Credit Inclusion, gauges a community's "access to credit" by examining its residents' ability to obtain credit when needed or as desired. Credit behaviors that contribute to credit access are calculated separately as indicators of different aspects of the ability to access credit from traditional financial sources. The three indicators are:

i. **Included**—the percent of adult residents (18+ years of age) with a credit file and credit score at a major credit bureau. This indicator measures the relative size of the local credit economy.

ii. **Not Included**—the percent of adult residents who do not have a credit file and credit score at a major credit bureau. This indicator is the reverse of the Included indicator, used to highlight geographies with low credit access.

iii. **Revolving Credit**—the percent of the credit economy with a revolving credit product and a non-zero credit limit. This indicator measures the ability of the local credit economy to access credit as needed and without having to apply or reapply and requalify for a loan.

Credit Capacity

The second group of indicators, Credit Capacity, examines credit attributes that gauge whether a community and its residents will be able to obtain credit in the amounts that they need or desire. These indicators focus on borrowing capacity, whether in the form of unmet credit limits on revolving credit products or credit quality in the form of credit scores that allow timely and affordable loan approvals. The three indicators in this group are:

i. **Utilization**—the percent of the credit economy with at least 70% available capacity on their revolving credit limits.

i. **Prime Credits**—the percent of the credit economy that has a "prime" credit score.[50]

ii. **Subprime Credits**—the percent of the credit economy that has a "subprime" credit score.

Debt Stress

The third group of indicators gauges debt management in the community by examining residents' payment histories over the previous year. The first indicator measures the share that is managing debt well:

i. **On-time Payers**—the percent of the credit economy that was current on all credit obligations (or less than 30 days past due) for each quarter of the past year.

The other indicators in this group measure how credit-distressed a community is as a whole. Every individual in the credit economy is sorted into one of five categories based on the five most recent quarters of payment history. The three filters used to sort are:

- **Delinquency status today**—Is the individual 60+ days past due on any credit obligation as of year-end?
- **Most severe delinquency status over the preceding four quarters**—Was the individual 60+ days past due during any of the preceding four quarters?
- **Number of quarters 60+ days late**—Was the individual 60+ days past due during any or all of the preceding four quarters?

50 The credit score here is Equifax Risk Score® 3.0, which ranges in values from 280 to 850. Individuals with higher score values are viewed as having lower credit risk than those with lower score values. Thresholds for quality classifications such as "prime" or "subprime" vary in the industry and among credit products. For this report, we designate risk scores of 720 and higher as prime; scores less than 660 as subprime; and scores between 660 and 719 as near prime.

Based on the pattern of their payment history, individuals are placed into one of the five groups listed below, which are the Credit Stress indicators:

i. **Good Payment History**–payments on all credit obligations were less than 60 days past due during each of the most recent five quarters; these residents are unlikely to have a credit problem.

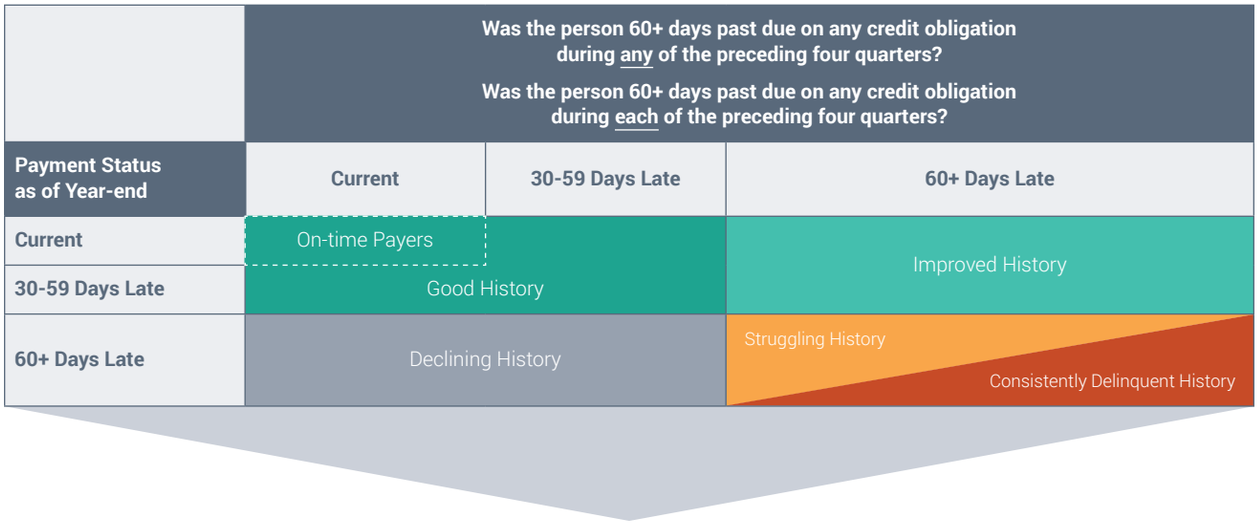
ii. **Improved Payment History**–payment status today is improved over the past year.

iii. **Declining Payment History**–payment status today is worse than during the past year.

iv. **Struggling Payment History**–payments were overdue during some, but not all, of the past year.

v. **Consistently Delinquent Payment History**–payments were 60+ days overdue for each of the previous five quarters.

Because the indicator groups are mutually exclusive, the measures sum to 100 percent for a given geography.

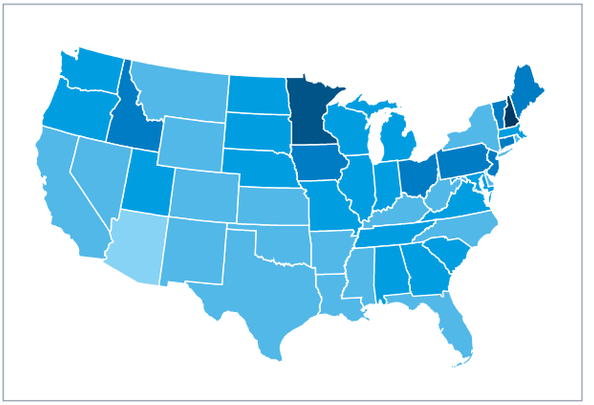


Credit Stress based on Five Quarters of Payment History of Individuals				
Good History Current or only 30-59 days late	**Improved History** Improved from 60+ days late to current or less than 60 days late	**Declining History** Deteriorated from current or less than 59 days late to 60+ days late	**Struggling History** Was 60+ days late for some, but not all, of the period	**Consistently Delinquent History** Was 60+ days late the entire period

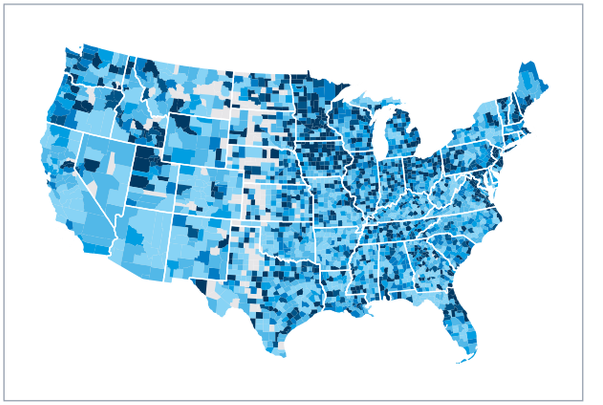
In our online data interactive (www.nyfed.org/communitycredit), there are three levels of data mapping: national, state, and county values. This report extends these metrics to examine credit stress in New York City as a whole, and in its constituent boroughs and zip codes.

Lastly, in our online data interactive, the indicators are grouped a little differently, not clumped into the three credit attributes of credit inclusion, credit capacity, and debt stress. Instead, the framing in this report reflects our most recent thinking and supports a more layered discussion of the credit-constrained zip codes. Nevertheless, the definitions of each indicator are the same and consistent with all measures in our other Community Credit profiles.

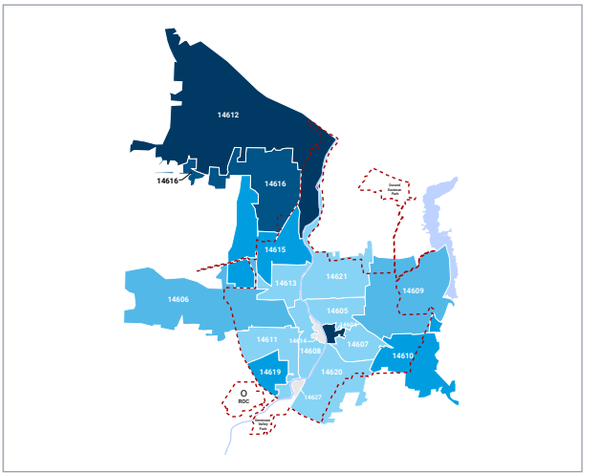
U.S. and State Level



County Level



City and Zip Code Level Data



SECTION 2:

COMMUNITY CREDIT INDICATORS

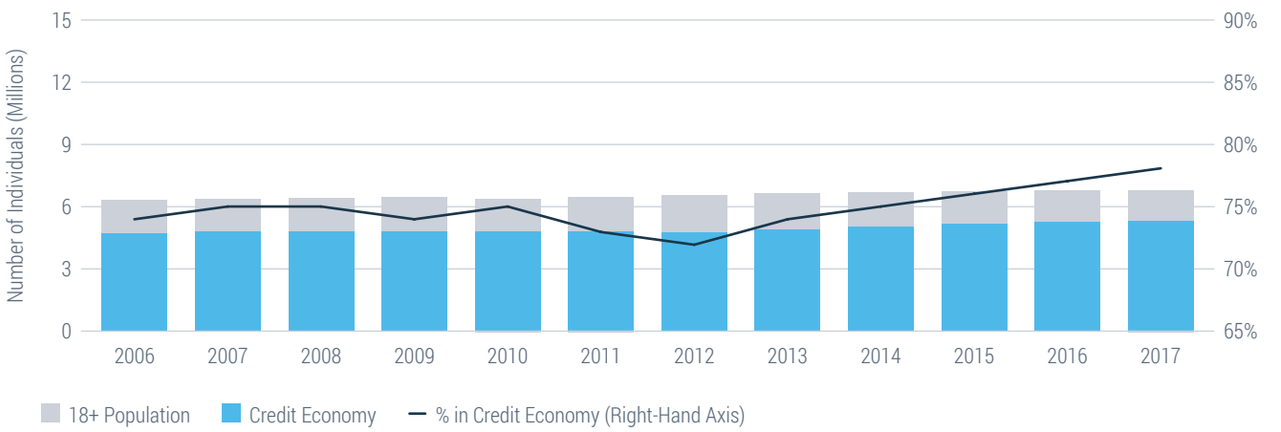
NEW YORK CITY AND BOROUGHS

CREDIT ECONOMY / **INCLUDED**

INCLUDED is the broadest gauge of the ability to access credit. It measures the percent of adult residents (18+ years of age) in a community that have a credit file and a credit score with a major credit bureau, which positions them to borrow from mainstream credit channels. These residents comprise what we call the "credit economy." A larger credit economy within a community means more residents are likely to be able to access credit when needed or desired.

77.8% of New York City's adult population was INCLUDED in the credit economy in 2017 Q4, compared to 85.2% for New York State and 89.3% for the U.S. This value places the City in the lowest tier in the nation. The City's share has grown steadily since 2012, following a dip after the financial crisis.

New York City Credit Economy: Included, 2006–2017



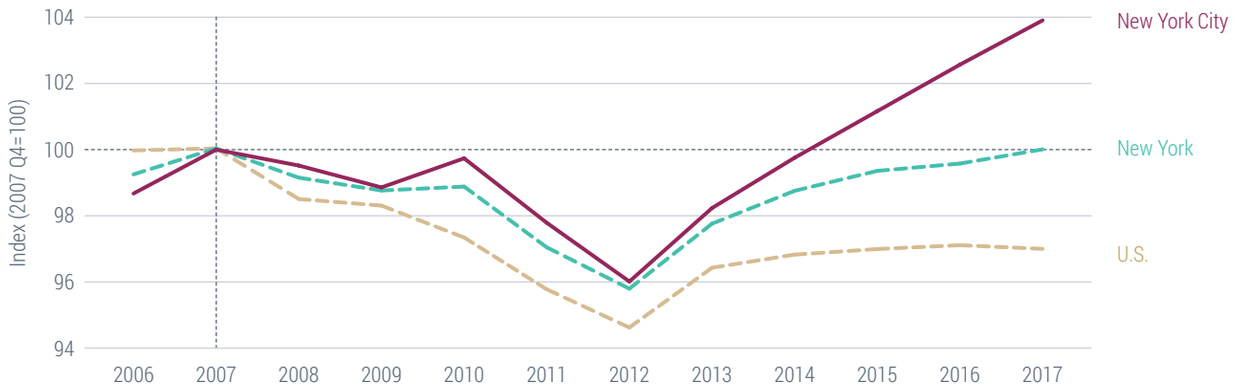
Another way to gauge credit inclusion is with an index of annual values normalized to a base year.[51] For the index, we normalize the annual values of the INCLUDED indicator to 2007 Q4. By doing so, the index illustrates the post-crisis trajectory of credit conditions and whether the indicator values have returned to, exceeded, or remain below their 2007 Q4 values.

The index of the INCLUDED indicator illustrates the trend seen in the bar chart above. The New York City credit economy shrank post-2007 Q4, though less severely than the U.S. By 2017 Q4, the City's credit economy had exceeded its 2007 Q4 relative size. The chart shows the recovery path: an early decline through 2012, similar to the nation, followed by a steady recovery. While the City's INCLUDED value is lower than that for the nation and New York State, its recovery path has been stronger over the last five years.

51 In these charts, we use 2007 Q4 values as the base and equal to 100 in the index. All other values are calculated relative to the 2007 Q4 base. For example, the value for 2007 Q4 is always 100 percent of the 2007 Q4 value by definition. However, the U.S. 2016 Q4 value for the index of the INCLUDED indicator is 97.5, meaning the values in 2016 Q4 had only recovered to 97.5% of their 2007 Q4 values. In other words, the chart is useful to see the path of recovery relative to the base year.

Data Source: FRBNY Consumer Credit Panel / Equifax

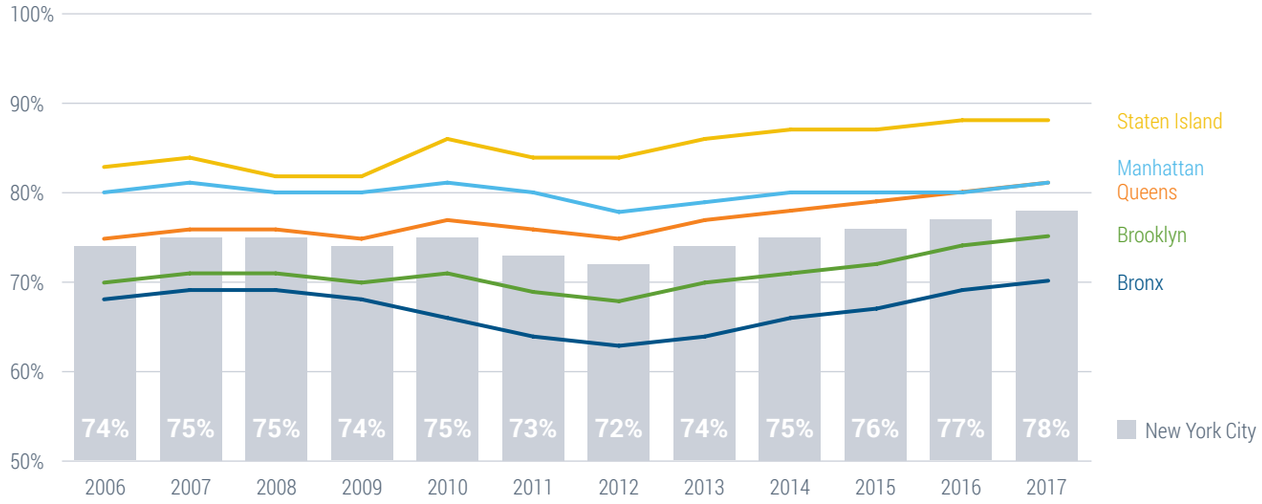
Index of Included Indicator



County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. Credit inclusion is highest on Staten Island (Richmond County) and lowest in the Bronx. The relative rankings hold over time, though the differentials among county values vary.

New York City Credit Economy: Included, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The following map illustrates credit inclusion conditions at the county level for 2017 Q4. Four out of the five boroughs exhibit credit inclusion that is among the lowest in the nation (less than 85% of the adult population). Staten Island ranks a bit higher, at 88%.

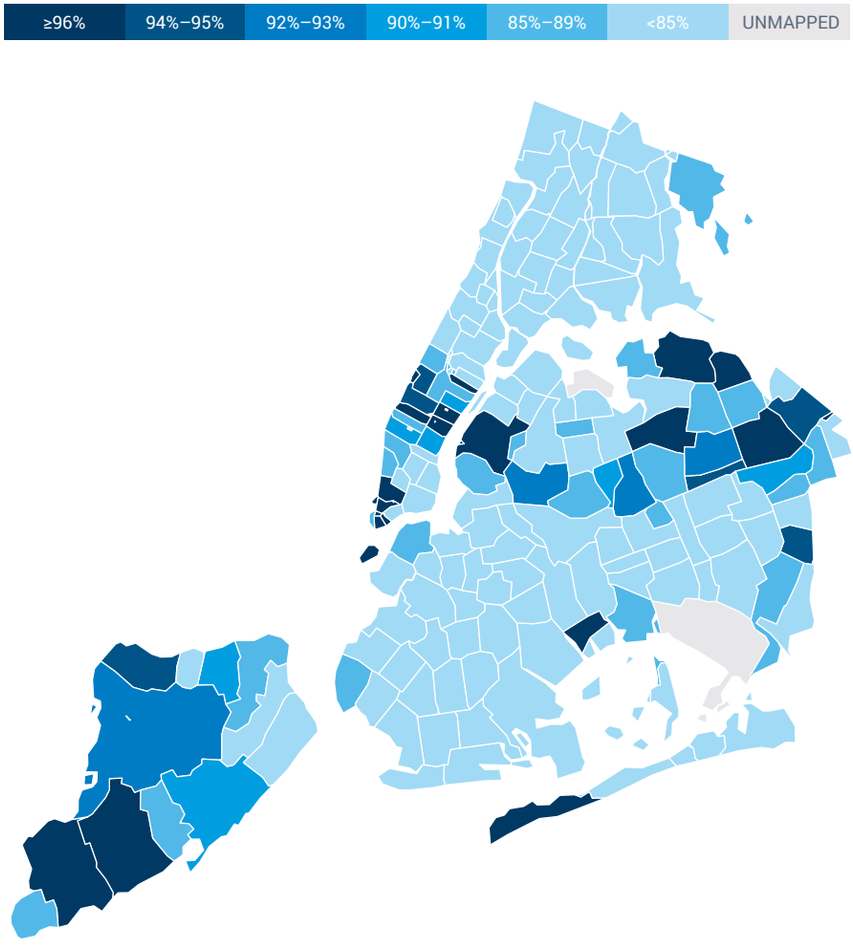
New York City Map: Included

Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

Drilling down to examine conditions at a more granular level, we look at zip code-level data to see variation among the City's neighborhoods and communities. The micro data analytics show that credit conditions and needs vary considerably across neighborhoods, defined as zip codes, with high-needs neighborhoods frequently located adjacent to neighborhoods with higher well-being.

New York City Map: Included



Some zip codes are ranked among the lowest in the nation by the INCLUDED indicator and are colored in the lightest shade of blue on the zip code map. Throughout New York City, there are 114 lowest-tier credit inclusion zip codes. The number of zip codes in the lowest tier for the INCLUDED indicator by borough is as follows:

- Bronx: 24 (out of 25)
- Brooklyn: 33 (out of 37)
- Manhattan: 22 (out of 48)
- Queens: 32 (out of 62)
- Staten Island: 3 (out of 12)

Zip codes are discussed in a separate section, *Credit-Constrained Zip Codes*, later in the report.

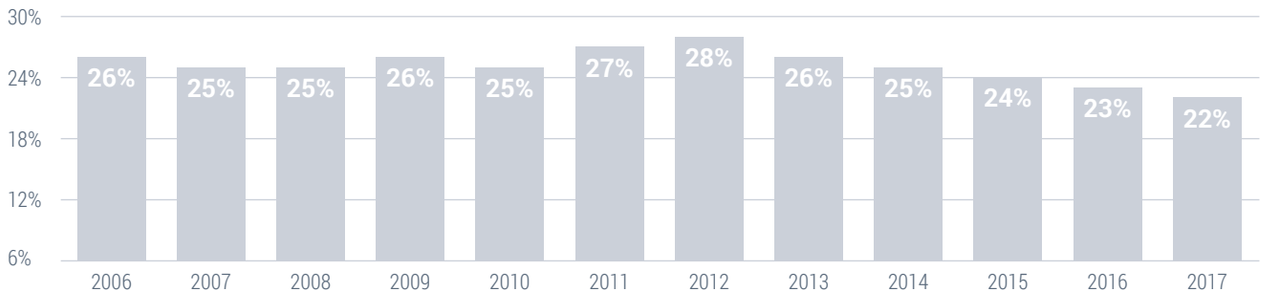
Data Source: FRBNY Consumer Credit Panel / Equifax

CREDIT ECONOMY / **NOT INCLUDED**

The NOT INCLUDED indicator, which is the reverse of the INCLUDED measure, is useful to identify areas of highest need and opportunity for policy and programmatic interventions. NOT INCLUDED is the percent of the adult population that does not have a credit file and a credit score with a major credit bureau, and is therefore not a part of the credit economy; this group is sometimes referred to as "credit invisible."[52] However, these persons may access credit from informal or alternative credit channels not captured by our indicators.

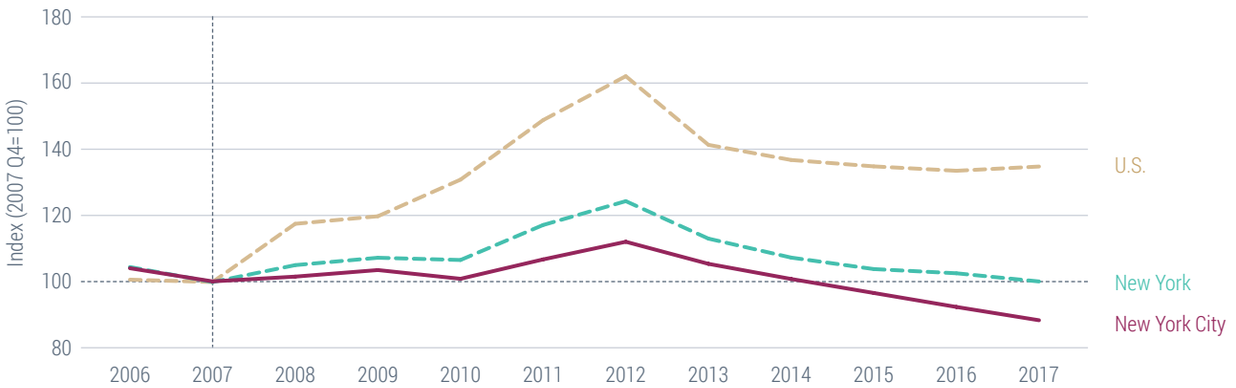
22.2% of New York City's adult population did not have mainstream credit access in 2017 Q4, compared to 14.8% for New York State and 10.7% for the U.S. As noted earlier, New York City credit inclusion values are among the lowest in the nation.

New York City Credit Economy: Not Included, 2006–2017



The index of the NOT INCLUDED indicator shows the change over time most strikingly. While credit inclusion deteriorated from 2007 through 2012, consistent recovery has manifested since then.

Index of Not Included Indicator



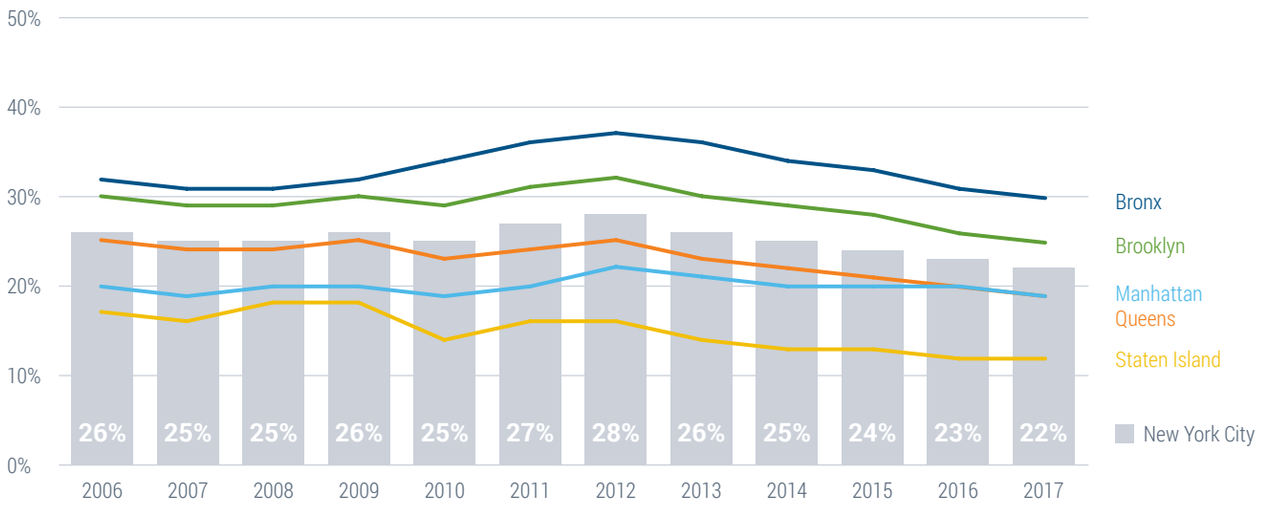
52 See the Consumer Financial Protection Bureau's report, "CFPB data point: Becoming credit visible," 2017. https://www.consumerfinance.gov/data-research/research-reports/cfpb-data-point-becoming-credit-visible/.

Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. As noted above, credit inclusion is lowest in the Bronx. The relative rankings hold over time, though the differentials among county values widen or narrow.

New York City Credit Economy: Not Included, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The county map of New York City illustrates the pattern shown previously with the INCLUDED indicator, with all boroughs except Staten Island having among the lowest levels of credit inclusion in the nation.

New York City Map: Not Included

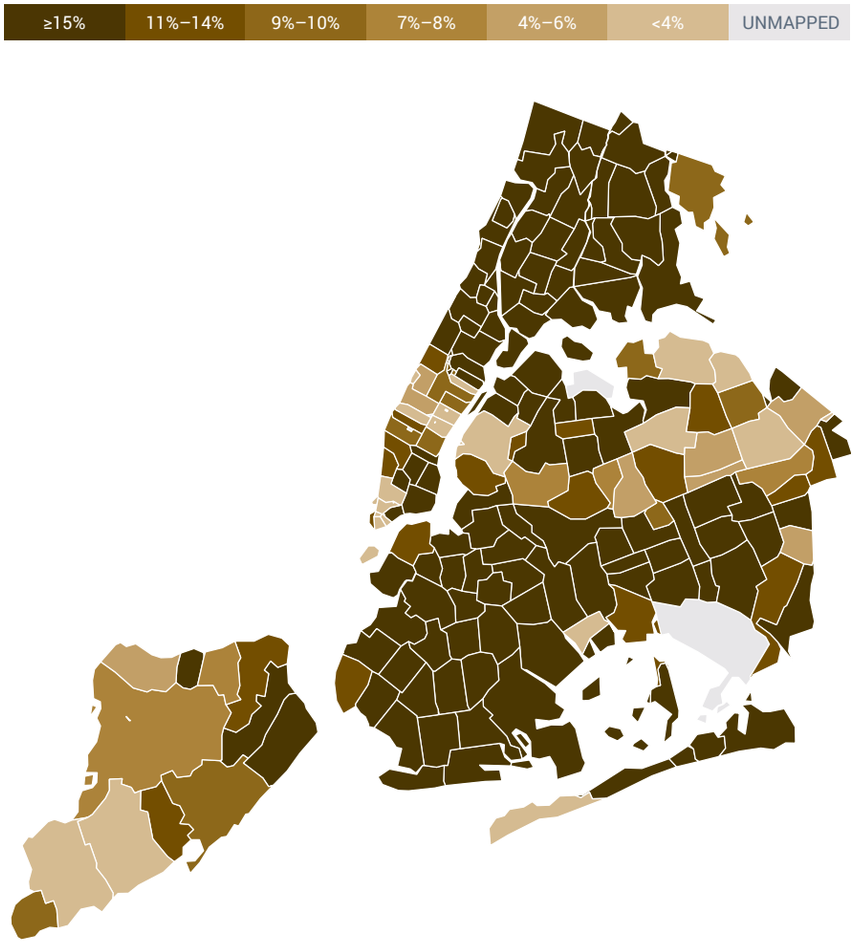
Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The micro data analytics show that credit conditions and needs vary considerably across neighborhoods, defined as zip codes, with high-needs neighborhoods frequently located adjacent to high-performing ones.

The zip codes ranked among the lowest in the nation by the INCLUDED/NOT INCLUDED indicators are colored dark brown on the map. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Not Included



Data Source: FRBNY Consumer Credit Panel / Equifax

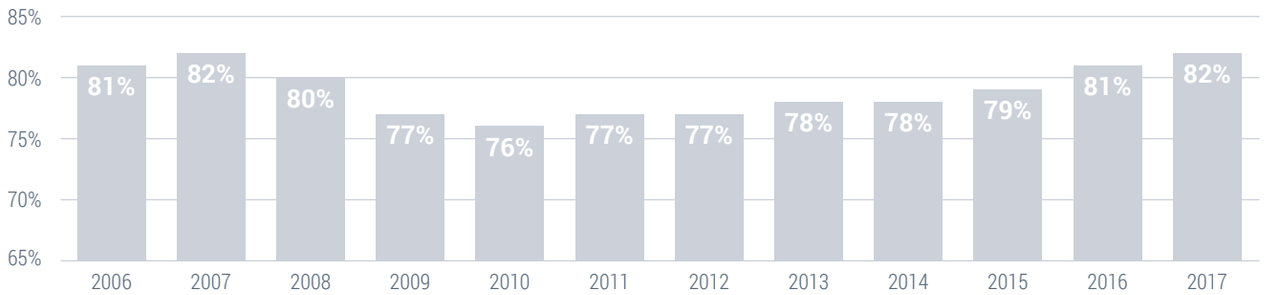
CREDIT ECONOMY / **REVOLVING CREDIT**

The REVOLVING CREDIT indicator measures the percent of the credit economy with a REVOLVING CREDIT product and a non-zero credit limit.

Having a credit file and a credit score does not ensure that an individual may obtain credit at all or in a timely way. The ability to access credit might be better gauged, in practice, by the ability to obtain credit as needed and without having to apply or reapply and requalify for a loan. REVOLVING CREDIT products, such as bank-issued credit cards and HELOCs, are convenient credit options since they allow individuals to incur credit, up to a limit, at their own discretion.

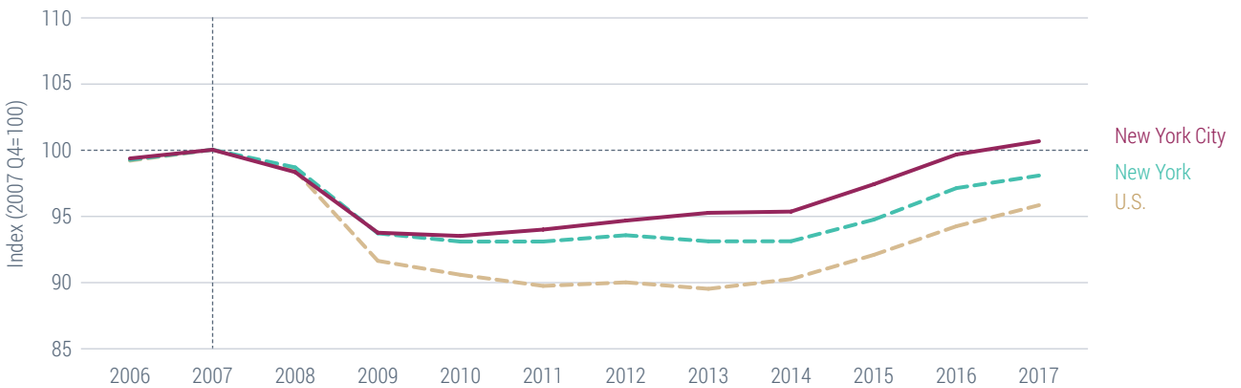
82.1% of New York City's credit economy had REVOLVING CREDIT, compared to 79.7% for New York State and 73.1% for the U.S. While a lower share of New York City's adult residents is in the credit economy, a majority of the credit economy participants holds REVOLVING CREDIT products. Indeed, the City had among the highest REVOLVING CREDIT indicator values in the nation in 2017 Q4.

New York City Credit Economy: Revolving Credit, 2006–2017



The index of the REVOLVING CREDIT indicator shows New York City's access to REVOLVING CREDIT has recently grown above its 2007 Q4 level. Post-crisis, REVOLVING CREDIT access deteriorated and remained relatively low for several years. Although consistent with the national pattern, the decline was less severe for New York City than for the U.S. as a whole. The turnaround, which started in 2010, is also clearly visible in the following chart.

Index of Revolving Credit Indicator

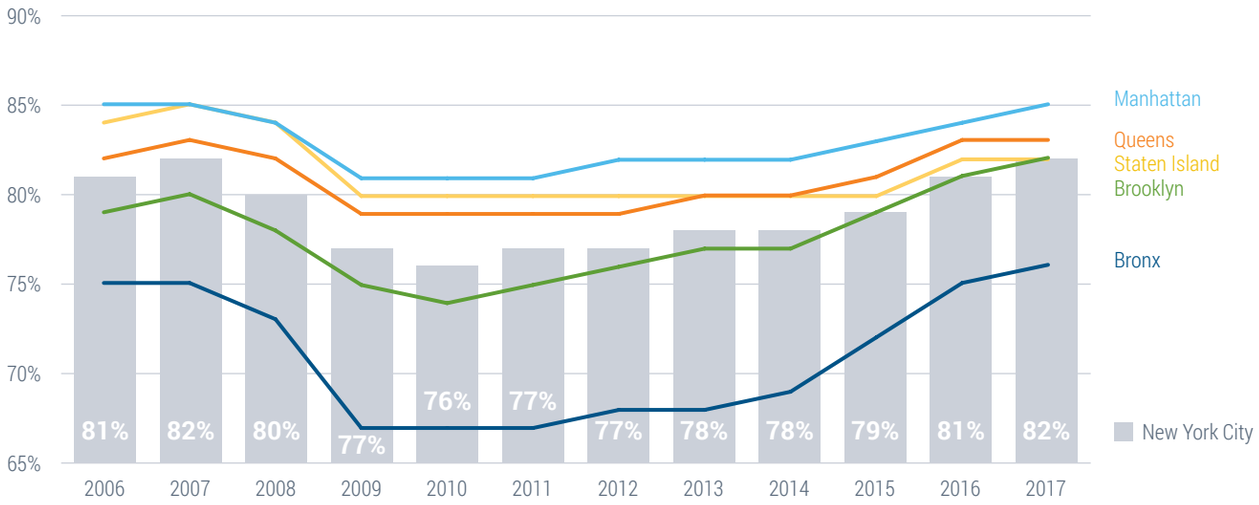


Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. The prevalence of individuals with revolving credit products is highest in Manhattan and lowest in the Bronx. The relative rankings have varied over time.

New York City Credit Economy: Revolving Credit, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The county map shows that all five boroughs have a high prevalence of revolving credit holders, and therefore, rank among the highest in the nation for REVOLVING CREDIT.

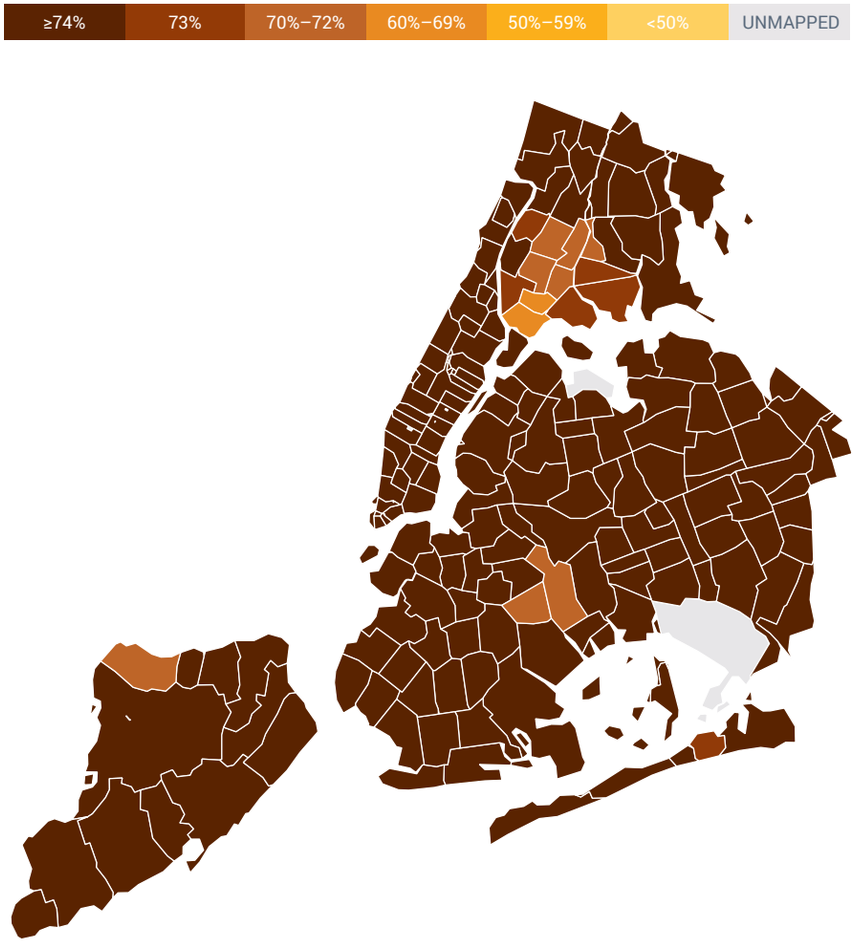
New York City Map: Revolving Credit

Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The zip code-level map shows that revolving credit products are widely held in most NYC neighborhoods. There are no NYC zip codes in the lowest tier value. However, the Bronx, Brooklyn, and Staten Island have zip codes where values are lower than elsewhere in the City. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Revolving Credit



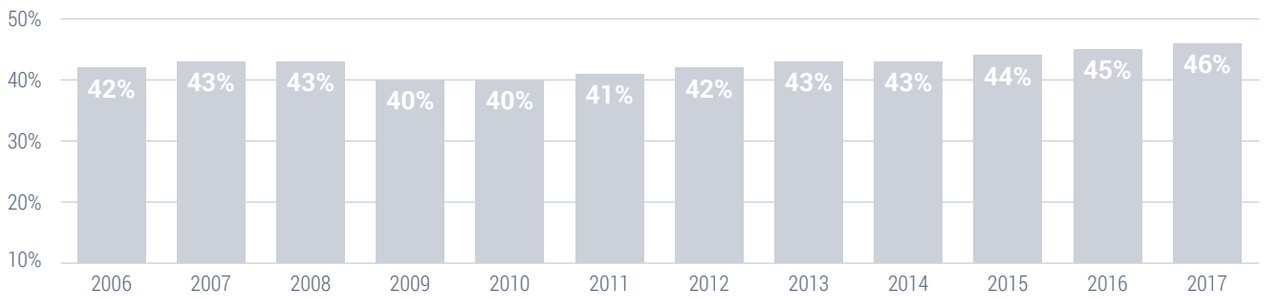
Data Source: FRBNY Consumer Credit Panel / Equifax

CONVENIENT CREDIT / **UTILIZATION**

The UTILIZATION indicator complements the REVOLVING CREDIT indicator. As a practical matter, only individuals with borrowing capacity within their revolving credit limits will be able to conveniently access credit when desired and without lowering their credit score. While opinions vary, we use a sufficiency threshold of 70% of unused revolving credit limits to identify individuals with clearly available borrowing capacity. In other words, these individuals have utilized no more than 30% of their available credit lines.

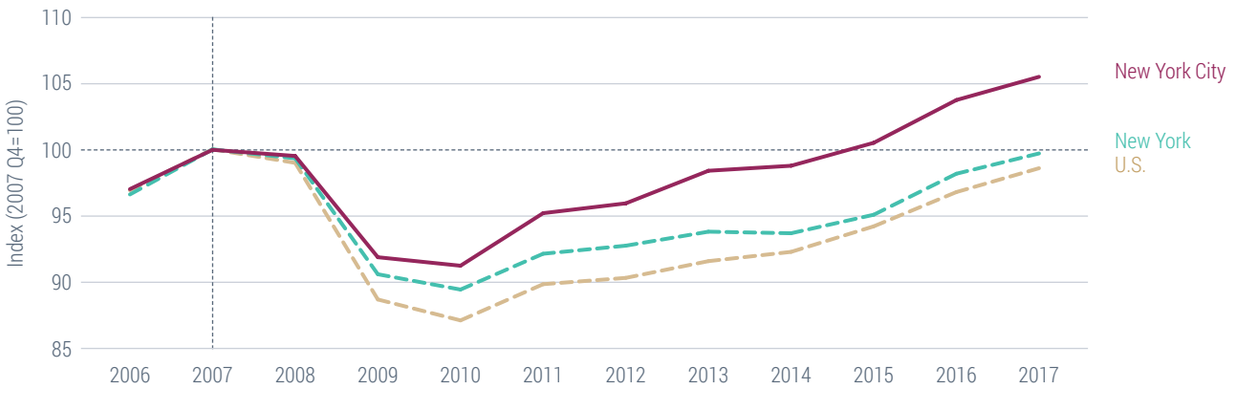
45.7% of New York City's credit economy had borrowing capacity on their revolving credit products, compared to 44.9% for New York State and 40.1% for the U.S.

New York City Credit Economy: Utilization, 2006–2017



The index of the UTILIZATION indicator illustrates a pattern of post-financial crisis recovery, similar to the previous indicators. The sharp decline post-2007 is noticeable and similar to the U.S. and New York State patterns. The City's 2017 Q4 UTILIZATION value was above that of the U.S. and New York State, and its growth in recent years has outpaced that of both of the other geographies.

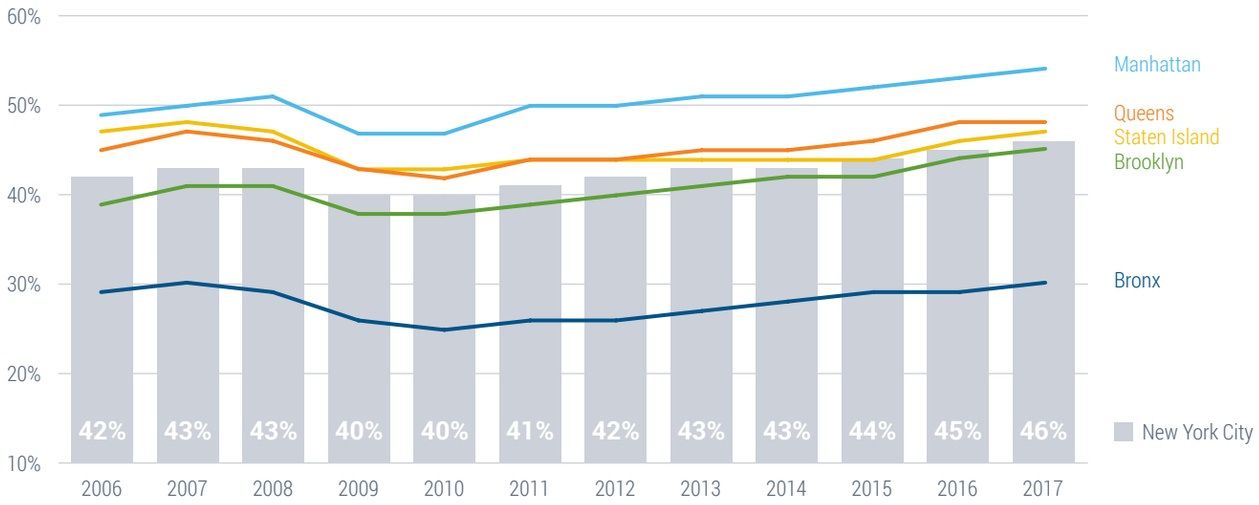
Index of Utilization Indicator



County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. Revolving credit borrowing capacity is highest in Manhattan and lowest in the Bronx. The relative rankings over time were fairly consistent through 2010, when Queens overtook Staten Island on the UTILIZATION indicator.

New York City Credit Economy: Utilization, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The map shows more variation among the boroughs through the UTILIZATION indicator lens than the other indicators examined so far. While access to revolving credit is broad, residents' borrowing capacity varies. The Bronx has the lowest share (30%) of its credit economy with the ability to tap credit easily and without further credit review with the use of revolving credit. In contrast, 54% of Manhattan's credit economy has the capacity to borrow conveniently, and is ranked among the highest in the nation for UTILIZATION in 2017 Q4.

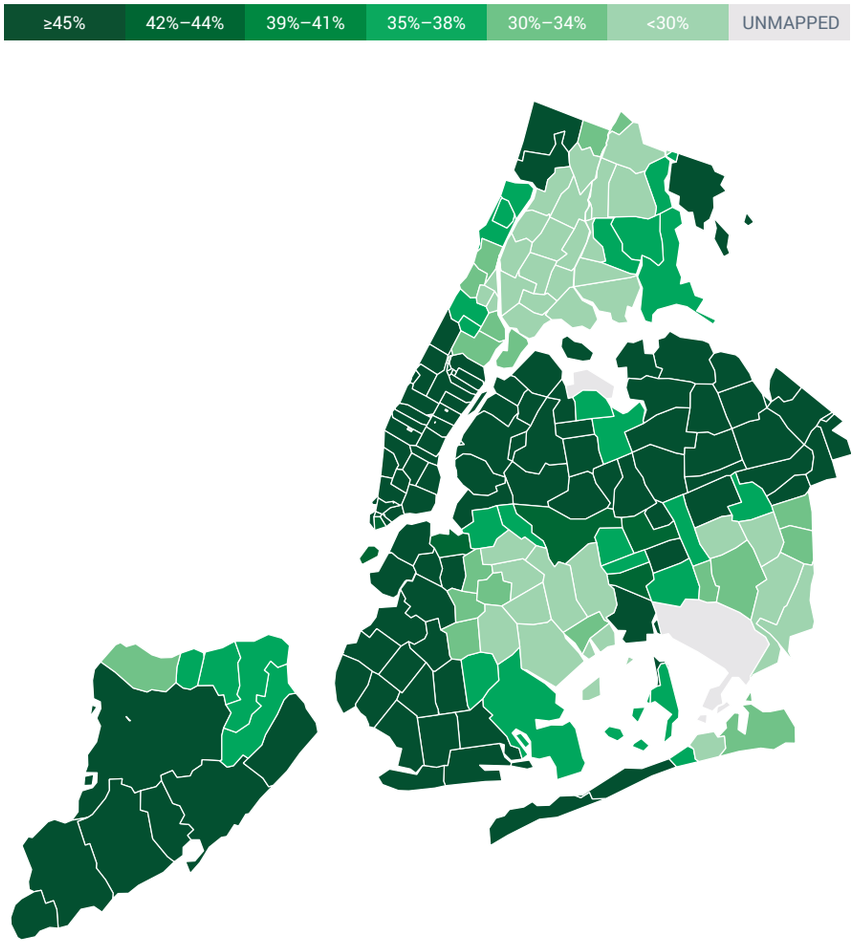
New York City Map: Utilization

Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

Drilling down to examine conditions at a more granular level, the zip code-level map shows that revolving credit UTILIZATION varies considerably at the neighborhood level. 32 NYC zip codes are in the lowest tier of UTILIZATION indicator values. The Bronx, Brooklyn, and Queens have clusters of zip codes where values are among the lowest in the nation. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Utilization



Data Source: FRBNY Consumer Credit Panel / Equifax

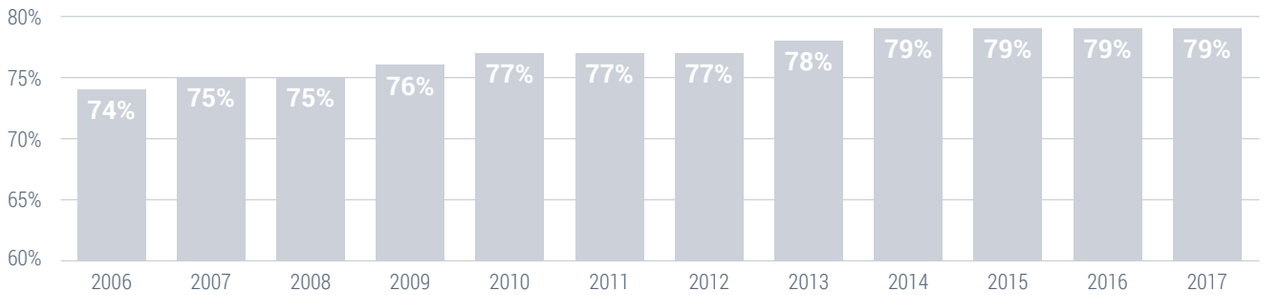
CONVENIENT CREDIT / **ON-TIME PAYERS**

Creditworthiness affects an individual's ability to access credit and broader economic opportunities such as qualifying for a rental or a job. Lenders and other organizations often assess creditworthiness through one's payment history and credit risk score.

The ON-TIME PAYERS indicator focuses on payment history. It measures the percent of the credit economy that is current, or never more than 30 days past due on any of their credit obligations, for every quarter of the analyzed year. It is intended to gauge how well the community is handling credit obligations, regardless of loan size and the number or types of credit products held. This indicator may be interpreted as a measure of debt management skills in the local economy.

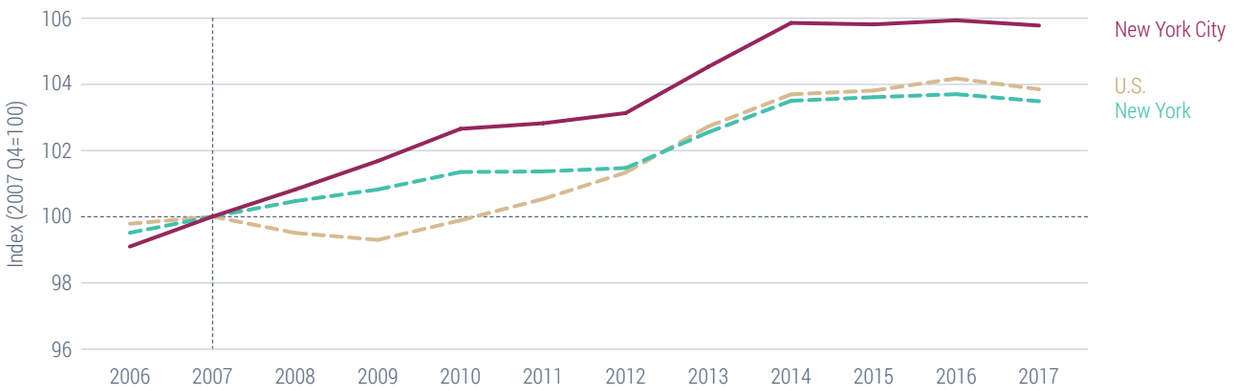
79.2% of New York City's credit economy was current on all their debt obligations for every quarter of 2017, compared to 80.9% for New York State and 79.2% for the U.S. Following a gradual upward trend from 2006 to 2014, the region has since seemed to level off around 79%.

New York City Credit Economy: On-time Payers, 2006–2017



The index of the ON-TIME PAYERS indicator shows New York City's growth since 2007 Q4. New York City did not see a post-crisis decline for this indicator; instead, the region has continued to see higher shares of individuals in the credit economy who are current on all debt for the four quarters of a given year. Still, New York City's share of ON-TIME PAYERS has yet to overtake that of the U.S. or New York State.

Index of On-time Payers Indicator

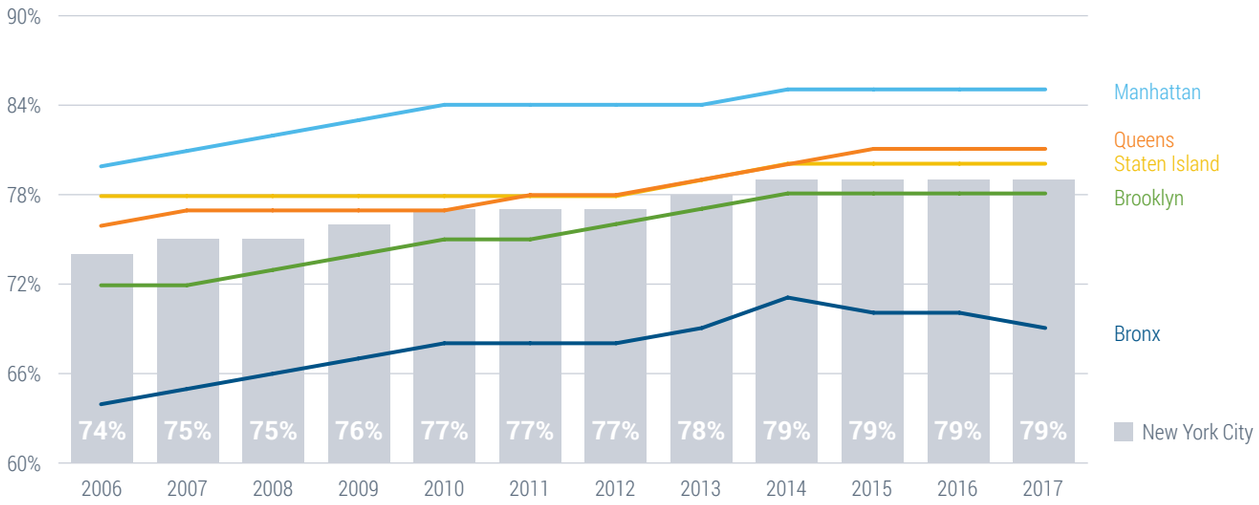


Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. Manhattan has the highest share of ON-TIME PAYERS while the Bronx has the lowest share among New York City boroughs. The relative rankings over time have narrowed among all the boroughs except the Bronx.

New York City Credit Economy: On-time Payers, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The map of ON-TIME PAYERS shows variation among the boroughs. In the Bronx, depicted in the lightest purple on the map, 69% of the credit economy was current on all debt payments for all four quarters of 2017. In contrast, Manhattan ranks high for ON-TIME PAYERS, with 85% of its credit economy participants current on all their debt obligations during 2017.

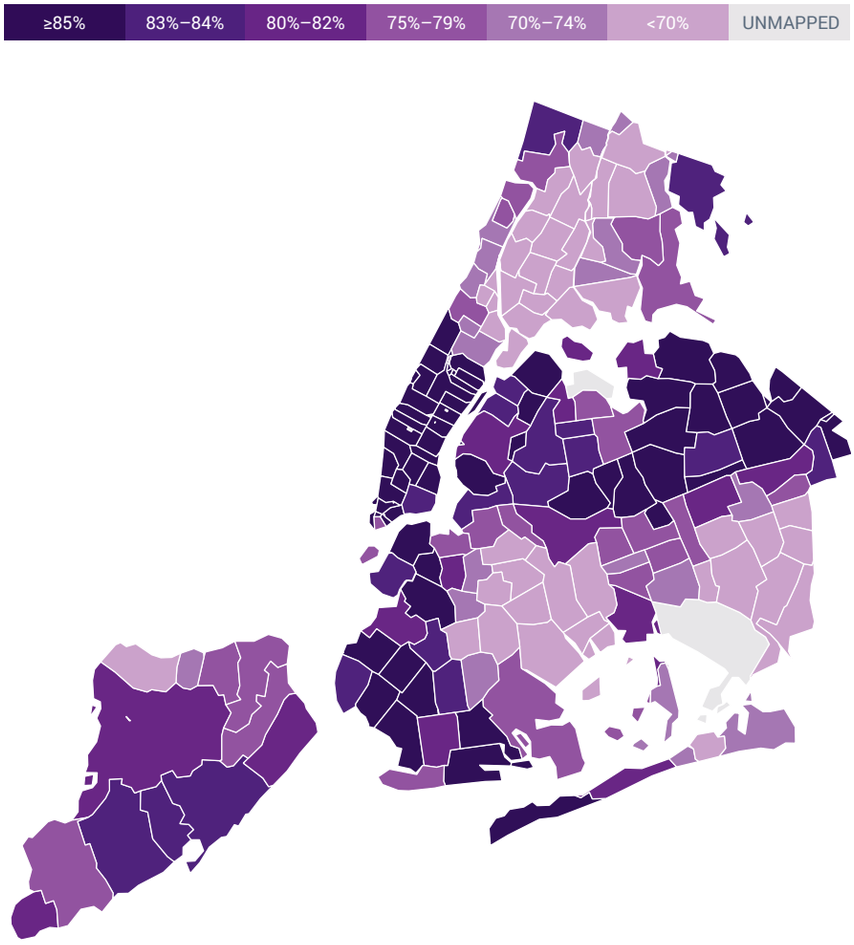
New York City Map: On-time Payers

Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The zip code-level map shows that credit quality as measured by the share of ON-TIME PAYERS in the credit economy varies considerably at the neighborhood level. Forty NYC zip codes are in the lowest tier of ON-TIME PAYERS indicator values. The Bronx, Brooklyn, and Queens have clusters of zip codes where values are among the lowest in the nation; Staten Island has one. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in this report.

New York City Map: On-time Payers



Data Source: FRBNY Consumer Credit Panel / Equifax

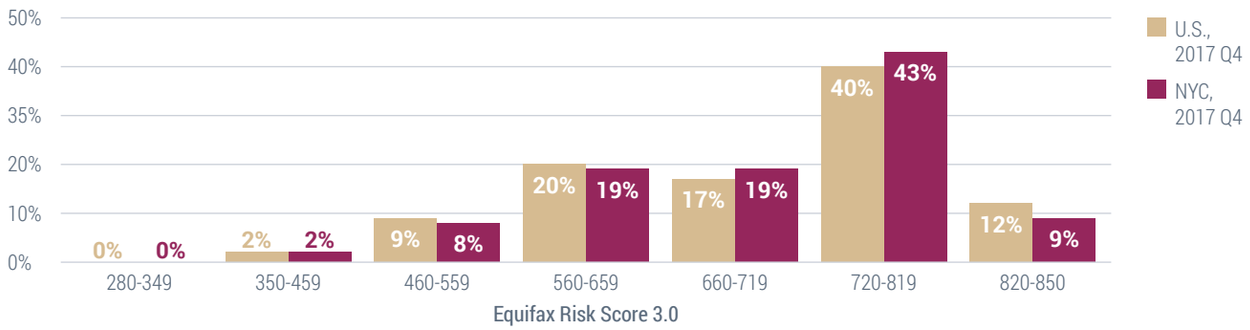
CREDIT QUALITY / **CREDIT SCORES**

Credit scores are a measure of credit quality and are relevant for accessing credit and broader economic opportunities, as discussed in the introduction.

The credit score used in this report is Equifax Risk Score® 3.0, which ranges in values from 280 to 850. Individuals with higher score values are viewed as being lower credit risk than those with lower credit score values. Thresholds for quality classifications such as "prime" or "subprime" vary in the industry and among credit products. For this report, we designate risk scores of 720 and higher as prime; scores less than 660 as subprime; and scores between 660 and 719 as nearprime. All individuals in a community's credit economy are sorted into one of these mutually exclusive groups.

To better understand credit quality in New York City, we present two comparisons. First, we compare the distribution of scores in the U.S. and New York City as of 2017 Q4. The chart illustrates that New York City's distribution is slightly higher in the nearprime range (720-719) and slightly lower in the subprime range (<660) than the values for the nation. In addition, the City has higher shares in the 720-819 range of prime and fewer in the 'super' prime range of 820-850 than the nation overall.

U.S. and New York City | Equifax Risk Score 3.0, 2017 Q4

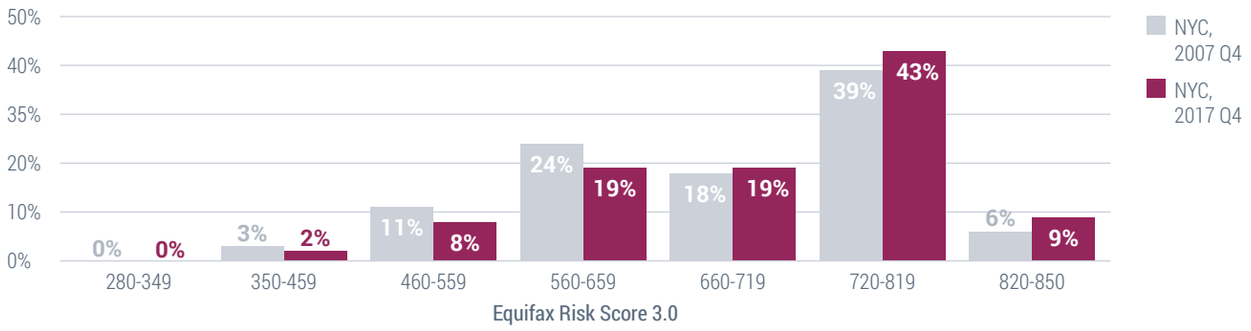


Second, to gauge change over time, we compare the risk score distribution for New York City at two points in time: 2007 Q4 and 2017 Q4. The chart suggests an improvement at both ends of the risk spectrum, with the share of the credit economy rising in the 'super' prime range and decreasing in the subprime range. Of course, this chart does not indicate underlying drivers of the improvements, such as better payment or debt management practices, a net inflow of individuals into the region with higher credit scores, a net outflow of individuals from the region with lower credit scores, or net exits from the credit data base.[53]

53 This concept of subprime mobility is shown for select geographies in https://www.newyorkfed.org/medialibrary/media/outreach-and-education/CommunityCredit-2014-BookofSummaryCharts.pdf, p 39.

Data Source: FRBNY Consumer Credit Panel / Equifax

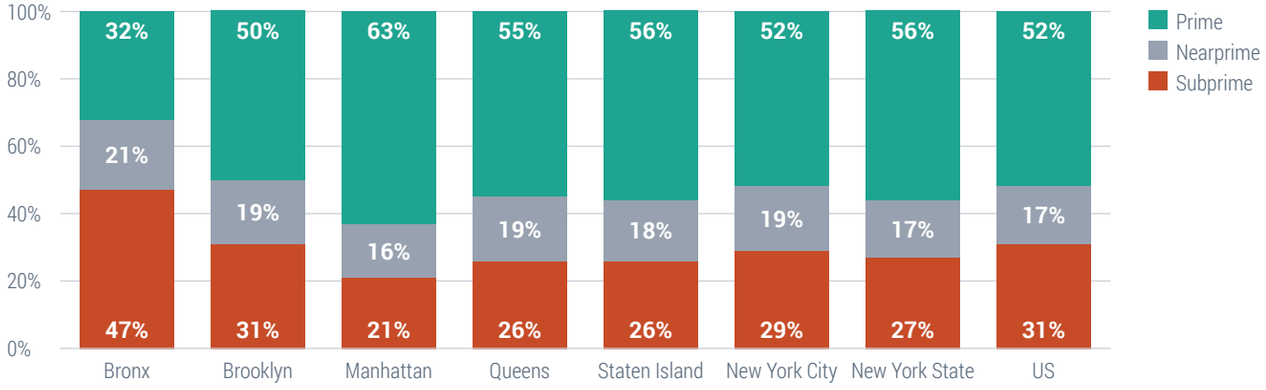
New York City | Equifax Risk Score 3.0, 2007 Q4 & 2017 Q4



A regional perspective on credit quality is shown in the following bar chart, with the percent of the credit economy in each risk score group for each of the five boroughs, New York City, New York State, and the U.S.

In 2017 Q4, the share of the credit economy with subprime credit scores was slightly lower in New York City than in the U.S. Among the boroughs, the Bronx had the highest share of individuals with subprime credit scores, while Manhattan had the lowest share in 2017 Q4.

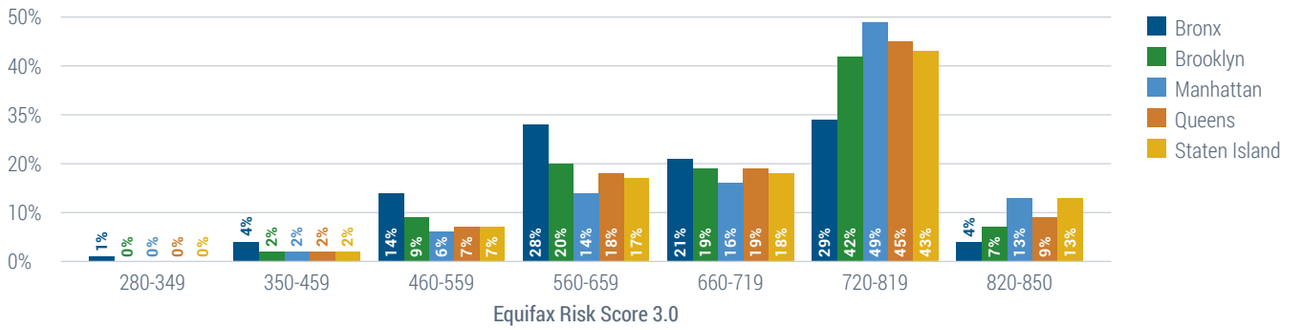
Credit Score Groups, 2017 Q4



Data Source: FRBNY Consumer Credit Panel / Equifax

The following bar chart presents credit score distributions for each of the boroughs.

New York City | Equifax Risk Score 3.0, 2017 Q4



Notably, subprime and 'super' prime individuals reside in every borough, but the shares in each score band vary greatly. For example, even though the Bronx ranks lowest among the boroughs by the percent of prime scores, 4% of its credit economy participants have 'super' prime credit scores. In addition, the Bronx is a promising market for financial education and remediation programs because 28% of its credit economy is what is sometimes referred to as high-end subprime (credit scores of 560-659), a segment that could be raised to nearprime with appropriate interventions.

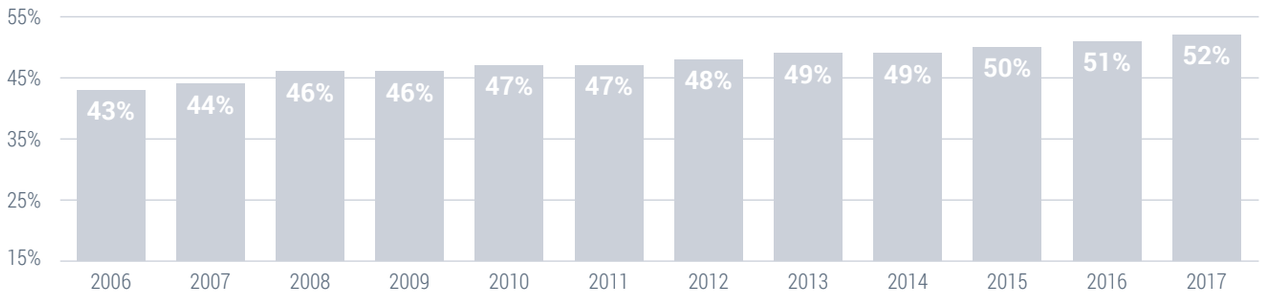
Data Source: FRBNY Consumer Credit Panel / Equifax

CREDIT QUALITY / **PRIME CREDITS**

In the Community Credit framework, we designate as PRIME all individuals in the credit economy with Equifax Risk Score® 3.0 values of 720 or higher.

51.9% of New York City's credit economy had a prime credit score, compared to 55.9% for New York and 51.9% for the U.S.

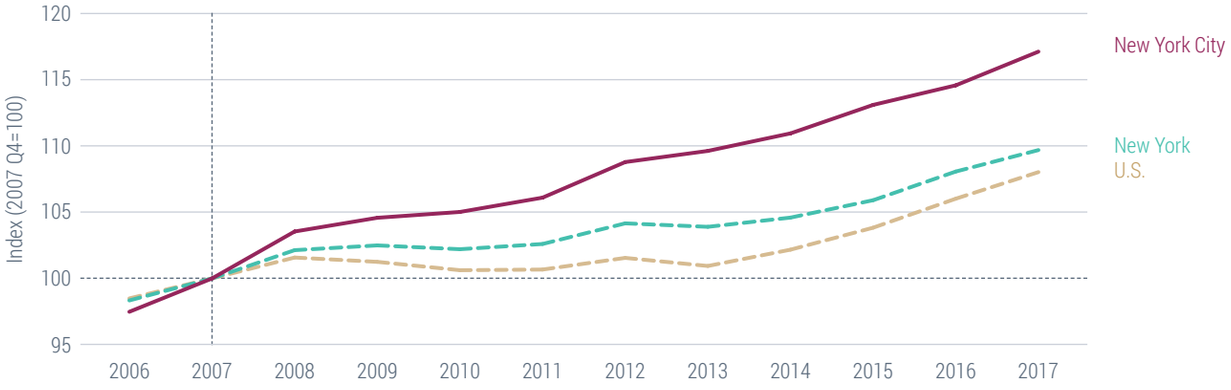
New York City Credit Economy: Prime Credits, 2006–2017



The percent of the credit economy with prime credit scores has steadily increased since 2006; whether this growth was due to a net inflow of prime credit score residents to the region or the credit economy, or credit quality upgrades among longer-term residents is not discernible from this indicator.

The index of the PRIME CREDITS indicator shows the continued rise in the share of prime credit score individuals post-crisis. In other words, today's New York City credit economy is higher quality in terms of the share of prime credit scores than it was in 2007 Q4. This result mirrors the fatter high-end tail in the credit score distributions presented previously.

Index of Prime Credits Indicator

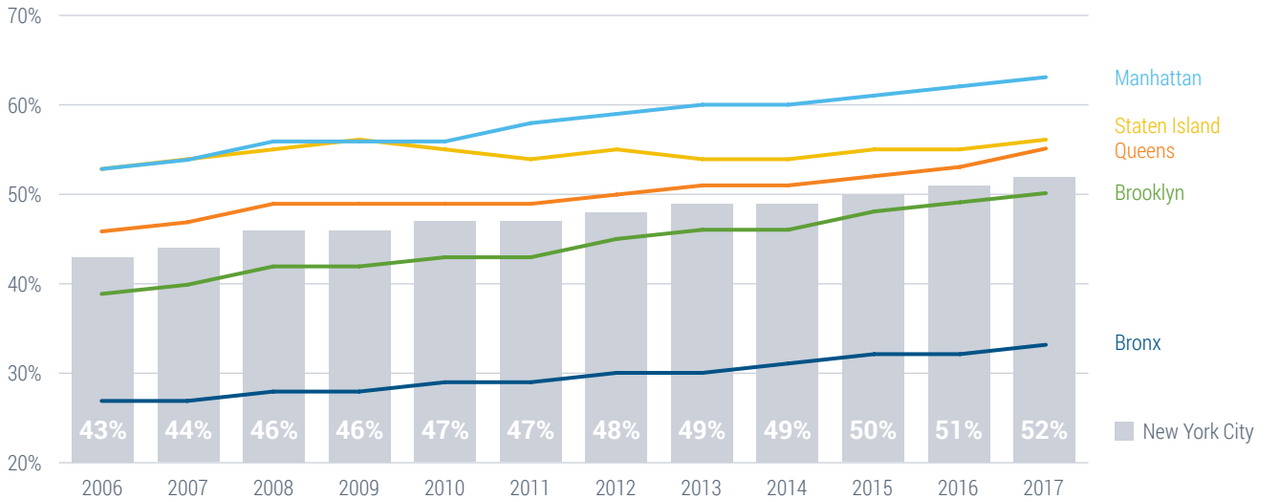


Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. All the boroughs have improved over this time period. Manhattan continues to have the highest share of PRIME CREDITS while the Bronx has the lowest share among New York City boroughs. Over time, Staten Island's ranking has slipped, though it remains second-highest among the boroughs.

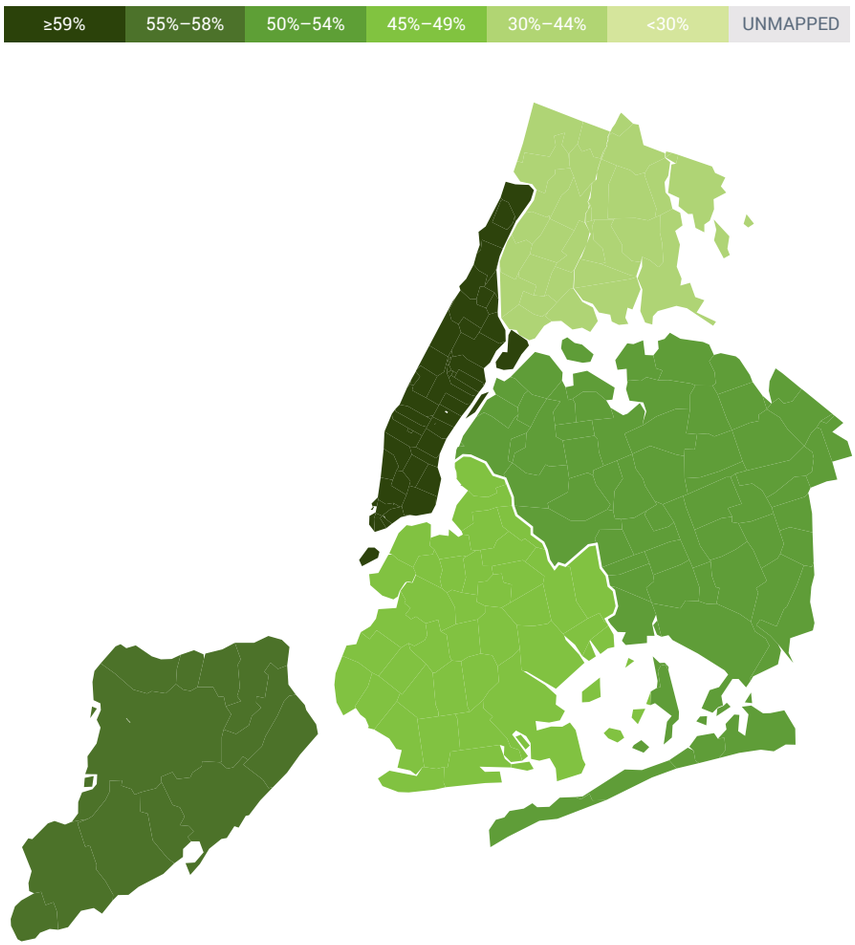
New York City Credit Economy: Prime Credits, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The map shows the share of the credit economy with a prime credit score for each New York City borough. Manhattan's share is among the highest, not only in the City, but also in nation. In contrast, the Bronx is the weakest among the City boroughs, but not in the nation. Staten Island, Queens, and Brooklyn fall in the middle range of values.

New York City Map: Prime Credits

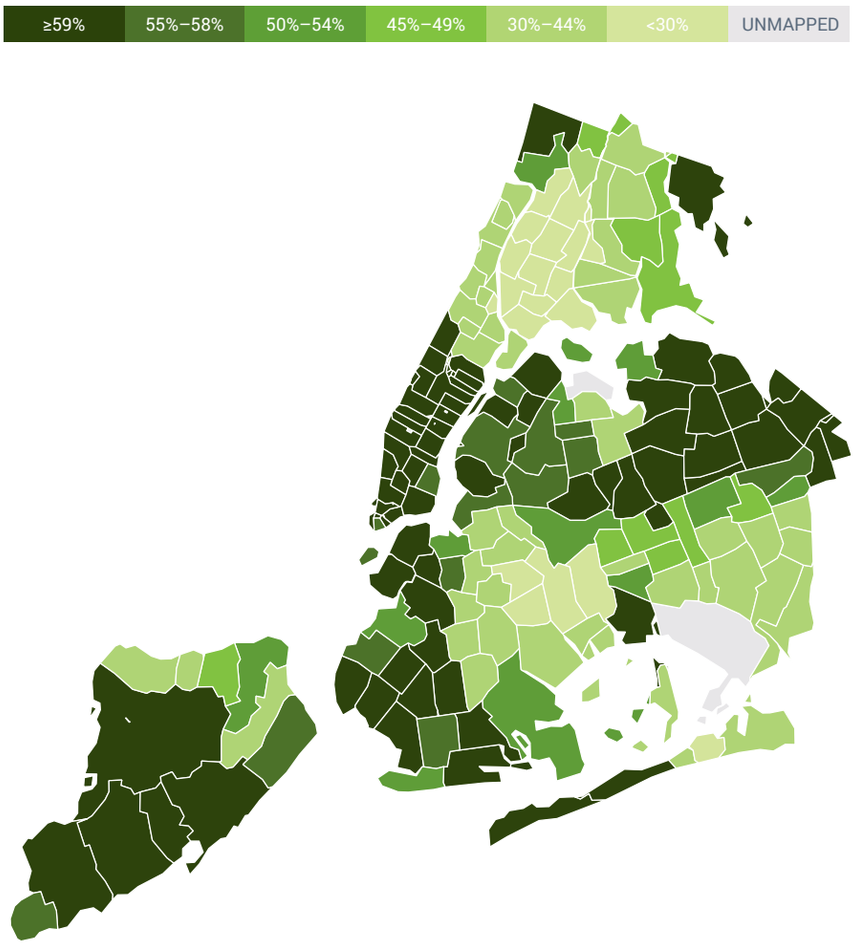


Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The zip code-level map shows that credit quality as measured by the share of PRIME CREDITS in the credit economy varies considerably at the neighborhood level. 18 NYC zip codes are in the lowest tier of this indicator's values. The Bronx, Brooklyn, and Queens have clusters of zip codes where values are among the lowest in the nation. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Prime Credits



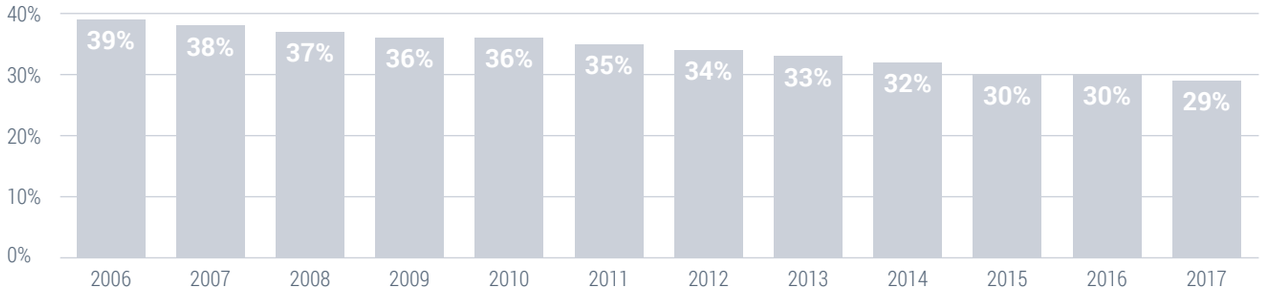
Data Source: FRBNY Consumer Credit Panel / Equifax

CREDIT QUALITY / **SUBPRIME CREDITS**

The SUBPRIME CREDITS indicator measures the percent of the credit economy that has an Equifax Risk Score® 3.0 below 660.

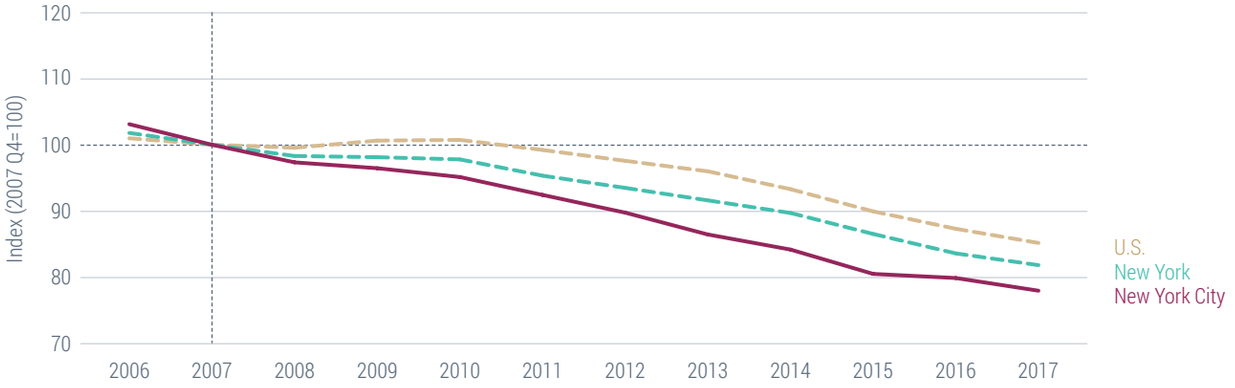
29.4% of New York City's credit economy had a subprime credit score, compared to 26.7% for New York State and 31.2% for the U.S. Similar to the PRIME CREDITS indicator, the share of subprime residents has gradually decreased over the last decade.

New York City Credit Economy: Subprime Credits, 2006–2017



The index of the SUBPRIME CREDITS indicator shows a familiar post-2007 trajectory of New York City's credit quality improvement.

Index of Subprime Credits Indicator

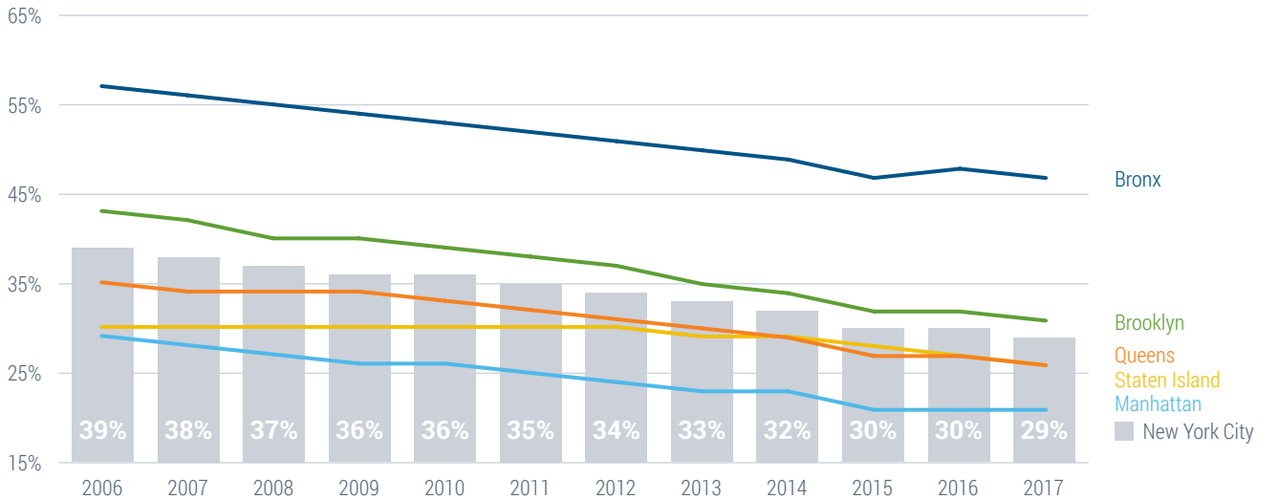


Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. The data show a general strengthening of credit quality since 2006. Among the boroughs, Manhattan has the lowest share of SUBPRIME CREDITS, while the Bronx has the highest share. Over time, Staten Island has experienced the smallest improvement.

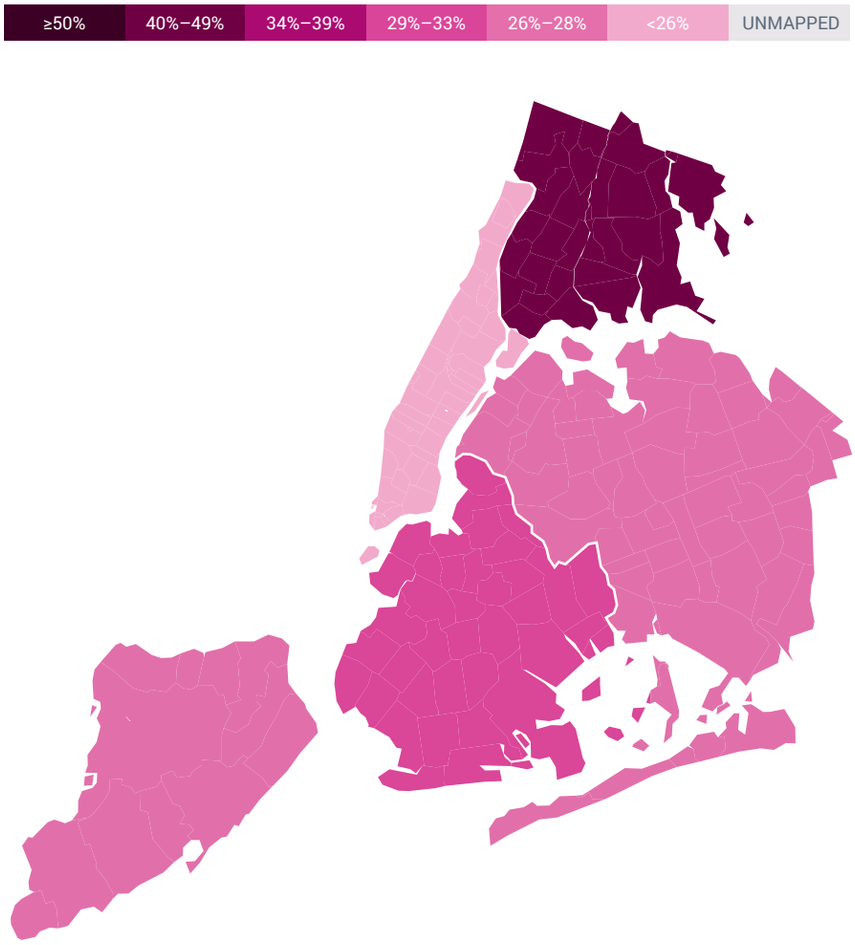
New York City Credit Economy: Subprime Credits, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The following map shows the share of the credit economy with a subprime credit score in each of New York City's boroughs.

New York City Map: Subprime Credits

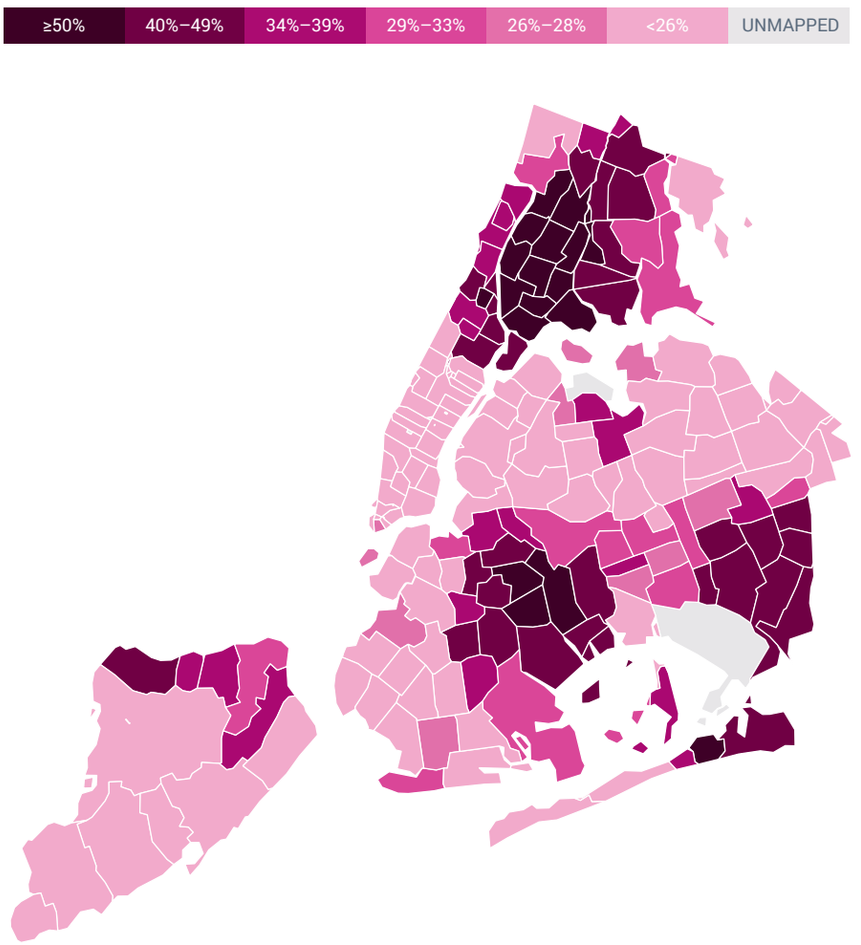


Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The zip code-level map shows that credit quality as measured by the share of SUBPRIME CREDITS in the credit economy varies considerably at the neighborhood level. Ninety-one New York City zip codes are in the highest tier for SUBPRIME CREDITS indicator values. The Bronx, Brooklyn, and Queens have the highest shares of credit economy residents who are subprime, including clusters of zip codes where SUBPRIME CREDITS indicator values are among the highest in the nation. Zip codes are discussed in more detail in a special section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Subprime Credits



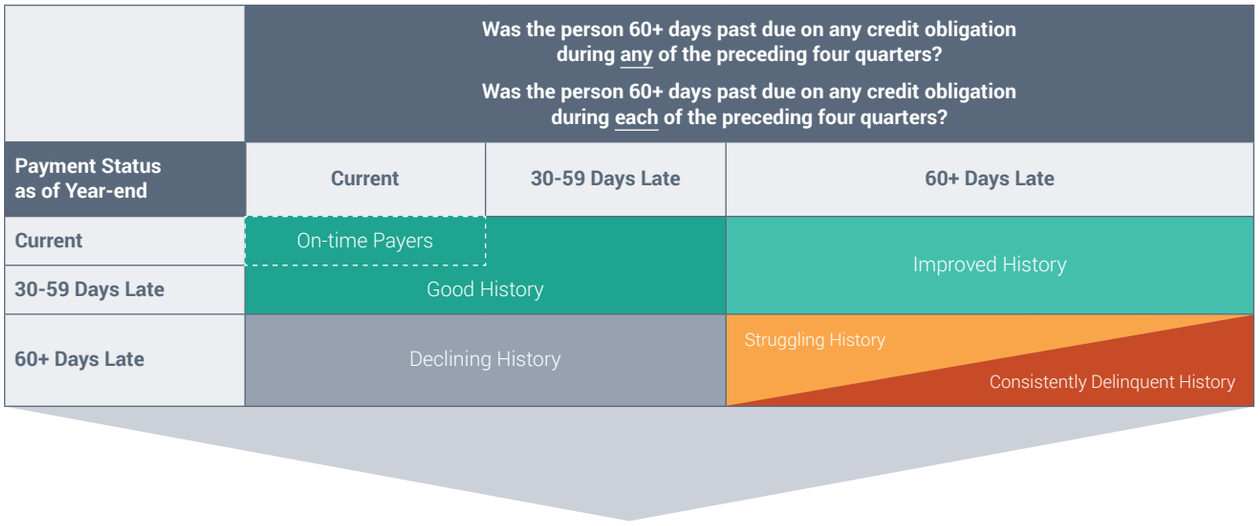
Data Source: FRBNY Consumer Credit Panel / Equifax

CREDIT STRESS / **TAXONOMY**

The previous indicators focus on specific attributes that enhance individuals', and therefore community, financial well-being. Another way is to examine debt outcomes for the community collectively by examining the relative shares of different subgroups.

To do so, we created credit stress indicators, with every individual in the credit economy placed into one of five mutually exclusive categories based on five quarters of their payment history using three filters:

- Delinquency status today
- Most severe delinquency status over the previous four quarters
- Number of quarters 60+ days late

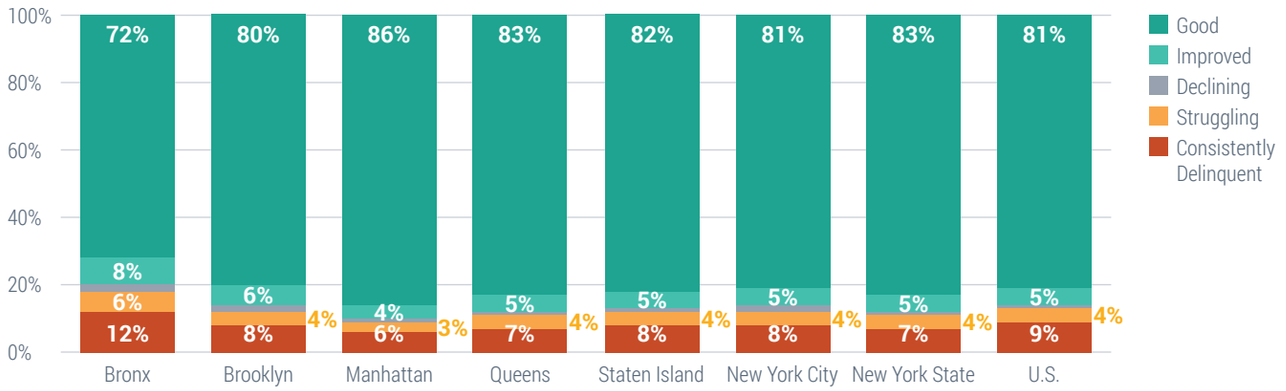


Credit Stress based on Five Quarters of Payment History of Individuals				
Good History Current or only 30-59 days late	**Improved History** Improved from 60+ days late to current or less than 60 days late	**Declining History** Deteriorated from current or less than 59 days late to 60+ days late	**Struggling History** Was 60+ days late for some, but not all, of the period	**Consistently Delinquent History** Was 60+ days late the entire period

The 2017 Q4 data show that the large majority (81%) of U.S. credit economy participants have GOOD PAYMENT HISTORY; in other words, they are current or less than 60 days late on all credit obligations for the most recent five quarters. While 83% of New York State's credit economy has GOOD PAYMENT HISTORY, New York City is on par with the nation at 81%. This indicator is discussed in more detail in the GOOD PAYMENT HISTORY section.

Data Source: FRBNY Consumer Credit Panel / Equifax

Credit Stress, 2017 Q4



At the other end of the spectrum, 9% of the U.S. credit economy was consistently delinquent on one or more credit obligations during each of the most recent five quarters (2016 Q4 through 2017 Q4). New York City had an 8% share. This indicator is discussed in more detail in the CONSISTENTLY DELINQUENT PAYMENT HISTORY section.

The three categories between GOOD PAYMENT HISTORY and CONSISTENTLY DELINQUENT PAYMENT HISTORY likely capture individuals in transition. Together, they constitute about 10% of the credit economy, in general, and are discussed briefly below:

The IMPROVED PAYMENT HISTORY group is comprised of individuals in the credit economy who were either current or less than 60 days overdue in the most recent quarter analyzed, but have a more blemished credit history during the previous four quarters. This group constitutes about 5% of the U.S. credit economy and 5.4% of the New York City credit economy. At the borough level, the Bronx has the largest share (7.9%) of the IMPROVED PAYMENT HISTORY borrowers among the NYC boroughs; Brooklyn is second at 5.7%. This positive news may reflect improving economic conditions and opportunities for local residents, or perhaps the gentrification that is occurring in many parts of the City, among other possibilities. Practitioners with local presence may shed insight on these dynamics.

The DECLINING PAYMENT HISTORY group is comprised of those in the credit economy who were 60+ days delinquent in the most recent quarter analyzed, while having been current or less than 60 days overdue during each of the previous four quarters. In other words, their credit situation is weaker today than during the recent past. This group is typically a little over 1% of the U.S. credit economy. New York City's share is 1.5%. Among the boroughs, the Bronx's share is the highest at 2.2% of the credit economy.

The STRUGGLING PAYMENT HISTORY group is defined as similar to the CONSISTENTLY DELINQUENT HISTORY group, except that individuals were not delinquent in each and every of the previous four quarters. In other words, they are definitely credit distressed, but not as long-term as the consistently delinquent group. This group typically comprises 3% to 4% of the credit economy, or half the size of the CONSISTENTLY DELINQUENT group. For credit remediation purposes, the STRUGGLING and the CONSISTENTLY DELINQUENT groups may be analyzed together.

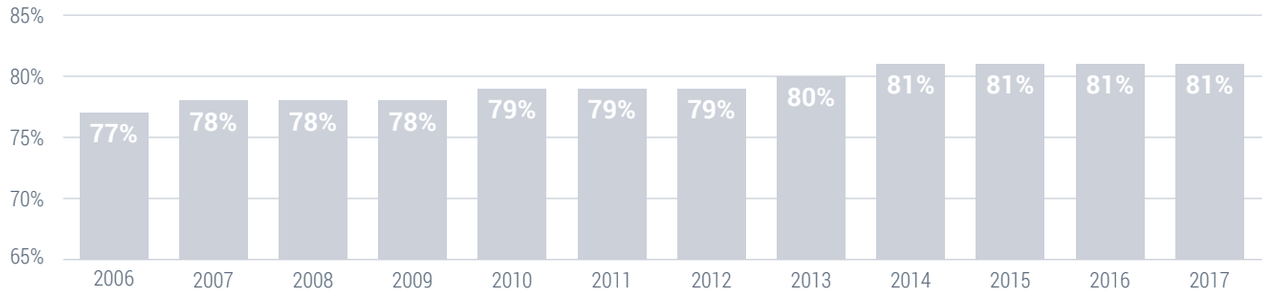
Data Source: FRBNY Consumer Credit Panel / Equifax

CREDIT STRESS / **GOOD PAYMENT HISTORY**

The GOOD PAYMENT HISTORY indicator is intended to gauge the share of the credit economy that most likely does not have a credit stress problem. To do so, we start with individuals current on all credit products in the quarter of analysis and the four previous quarters, and then add in those who were never more than 59 days past due on any credit obligation. We include the latter group because some individuals may occasionally miss payment deadlines due to busy schedules, sickness, travelling, or other factors. Unless this pattern persists, however, they are more likely to be 'sloppy payers' rather than nascent credit stress cases.

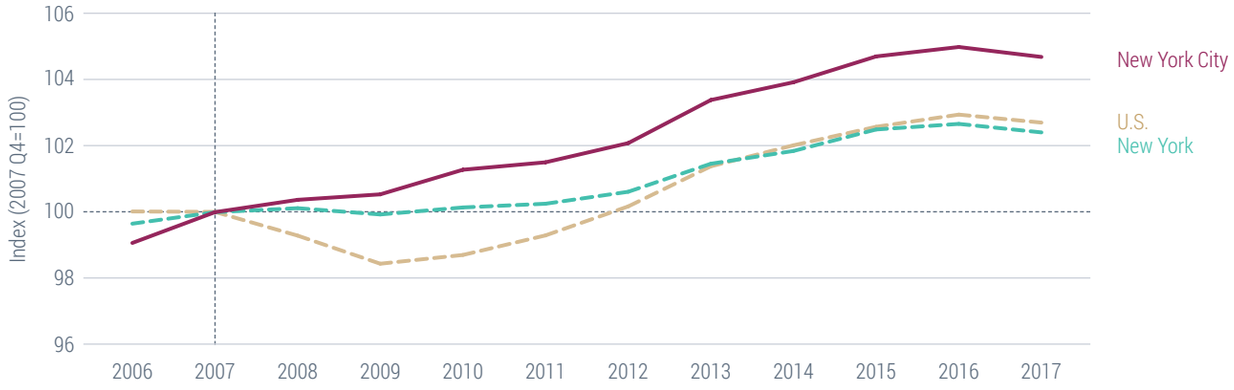
81.2% of New York City's credit economy had GOOD PAYMENT HISTORY, meaning they were current or less than 60 days delinquent on all their debt obligations for the most recent five quarters. This value compares with 83.0% for New York and 81.2% for the U.S.

New York City Credit Economy: Good Payment History, 2006–2017



The index of the GOOD PAYMENT HISTORY indicator shows a familiar pattern of credit recovery. The impact of the financial crisis is more striking for the U.S. than for New York City or New York State. New York City continues to see a higher share of "Good Payers" compared to its 2007 Q4 level.

Index of Good Payment History Indicator

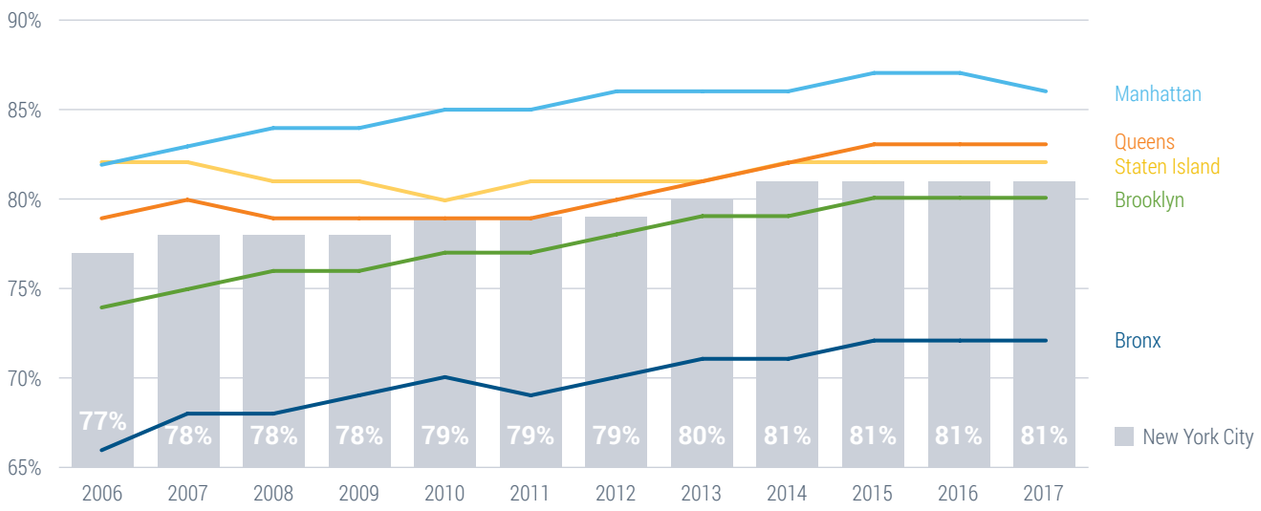


Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. Manhattan has the highest share of individuals with GOOD PAYMENT HISTORY, while the Bronx has the lowest share among NYC boroughs. Over time, Staten Island's GOOD PAYMENT HISTORY indicator value has leveled off while the values for the other boroughs have risen. As a result, Staten Island's relative ranking has worsened, though it still ranks high relative to the other boroughs.

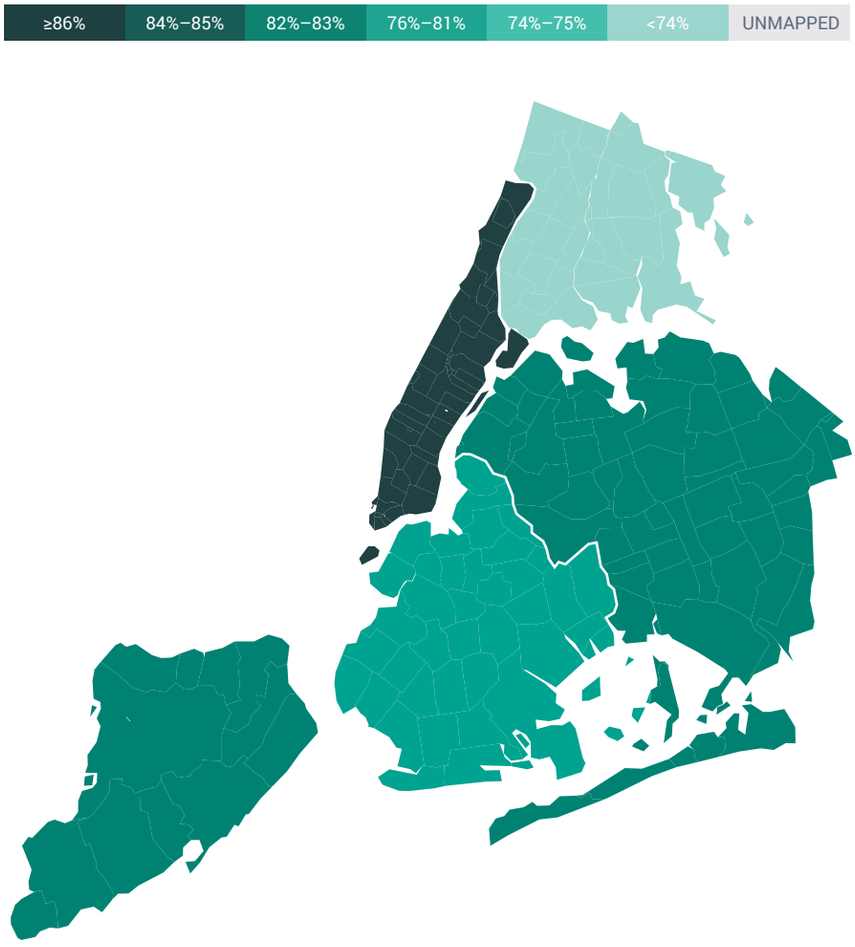
New York City Credit Economy: Good Payment History, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The following county map shows spatial patterns consistent with the other indicators. The share of "Good Payers" in the Bronx is among the lowest in the nation, while the share in Manhattan is among the highest.

New York City Map: Good Payment History

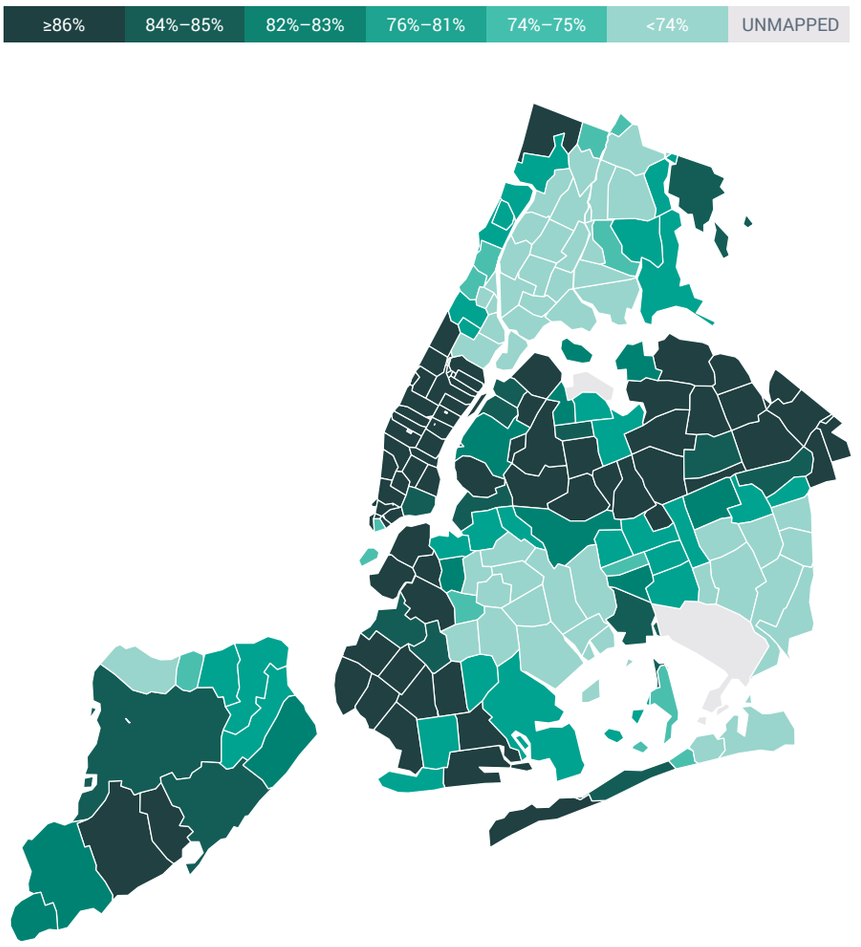


Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The zip code-level map shows that credit quality, as measured by the GOOD PAYMENT HISTORY indicator, varies considerably at the neighborhood level. Forty-four NYC zip codes are in the lowest tier of GOOD PAYMENT HISTORY indicator values. The Bronx, Brooklyn, and Queens have clusters of zip codes where values are among the highest in the nation. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Good Payment History



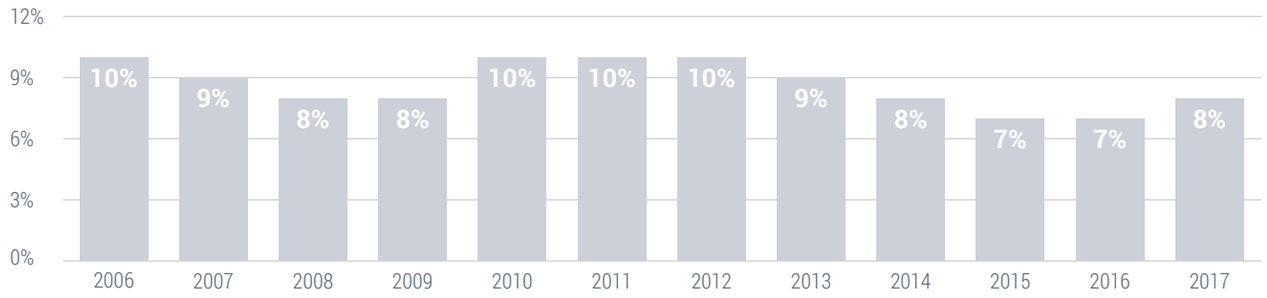
Data Source: FRBNY Consumer Credit Panel / Equifax

CREDIT STRESS /
CONSISTENTLY DELINQUENT PAYMENT HISTORY

The CONSISTENTLY DELINQUENT PAYMENT HISTORY indicator is intended to measure the share of the credit economy that has persistent credit problems. Individuals with consistently delinquent payment histories have had balances 60 or more days past due for each of the five most recent quarters.

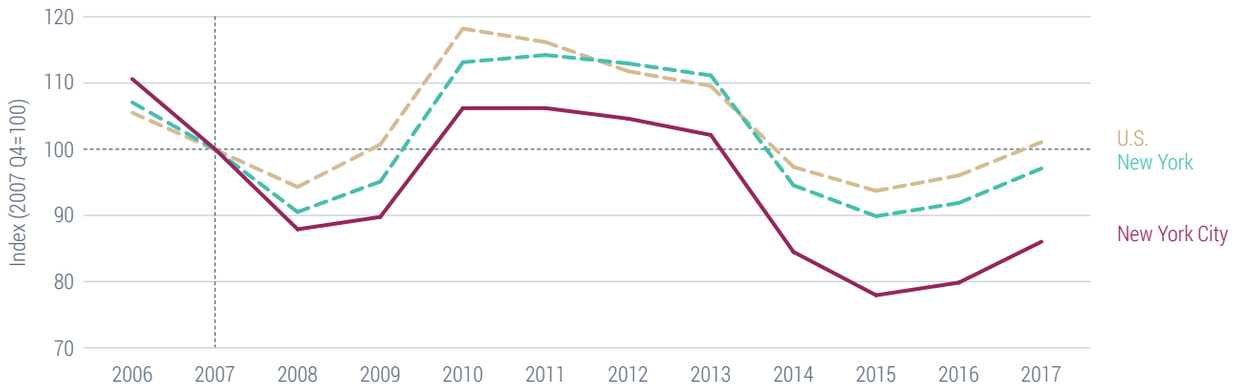
7.9% of New York City's credit economy had CONSISTENTLY DELINQUENT PAYMENT HISTORY, compared to 7.2% for New York State and 8.6% for the U.S.

New York City Credit Economy: Consistently Delinquent Payment History, 2006–2017



The index of the CONSISTENTLY DELINQUENT PAYMENT HISTORY indicator shows a roller-coaster pattern after 2007 for New York City and the nation. In all cases, initially the share of consistently delinquent payers declined, but then rose only to fall again between 2010 and 2015. Since then, the share has been rising again. Throughout the period of analysis, New York City has performed better than New York State and the nation.

Index of Consistently Delinquent Payment History Indicator

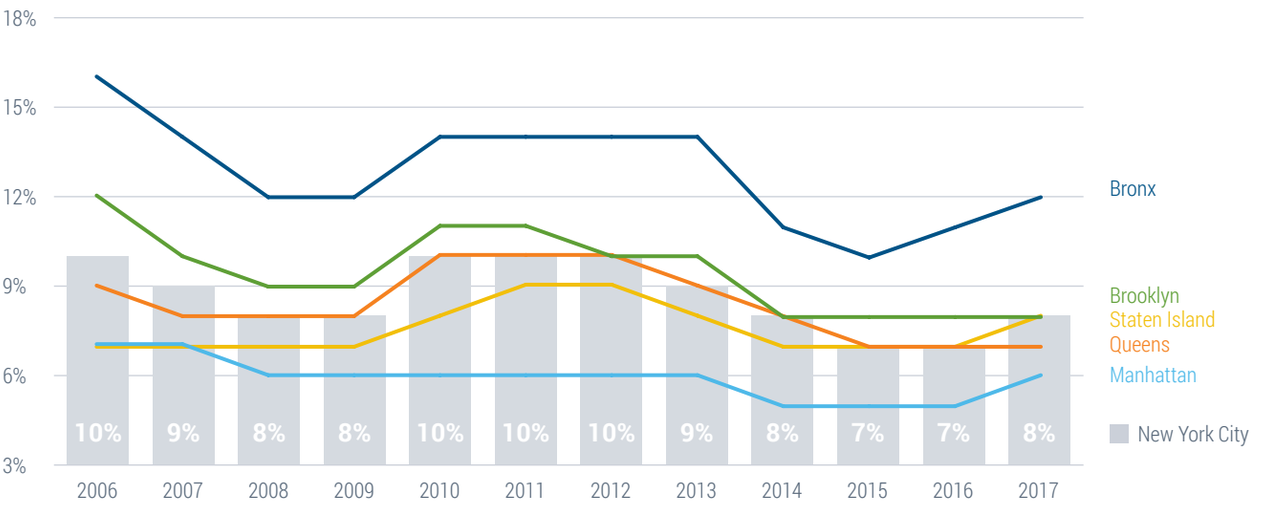


Data Source: FRBNY Consumer Credit Panel / Equifax

County Data Analytics and Map

County-level data show how the five boroughs rank relative to each other and over time. The Bronx has the highest share of individuals with CONSISTENTLY DELINQUENT PAYMENT HISTORY, while Manhattan has the lowest share among NYC boroughs.

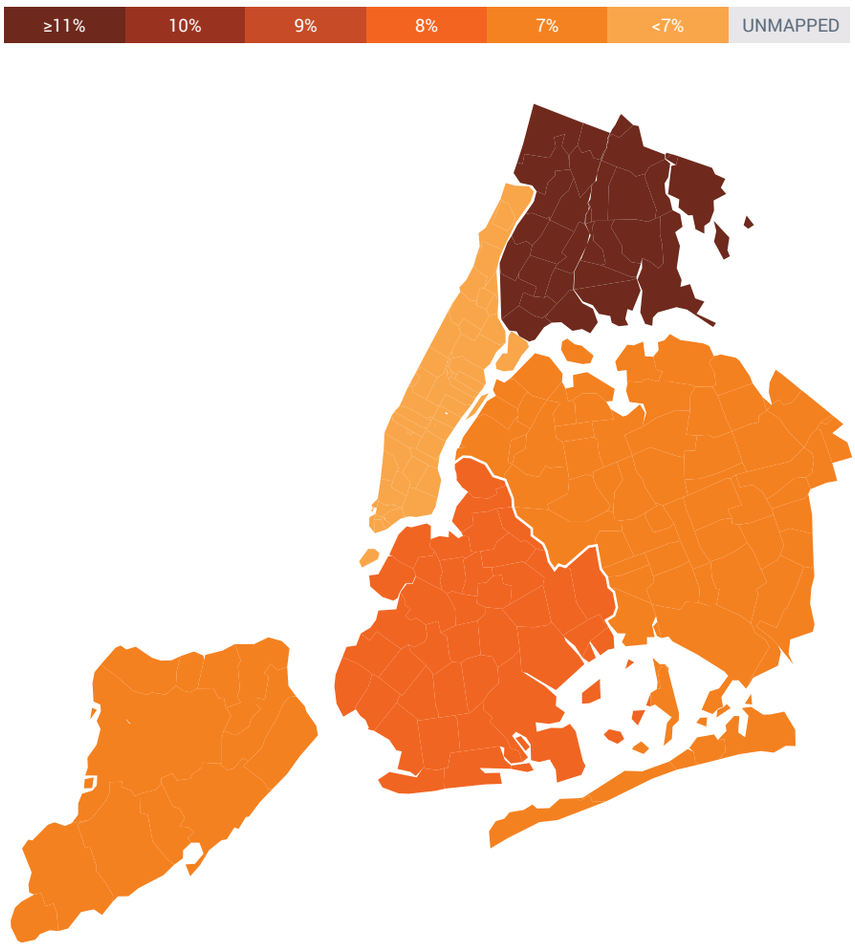
New York City Credit Economy: Consistently Delinquent Payment History, 2006–2017



Data Source: FRBNY Consumer Credit Panel / Equifax

The map shows spatial patterns consistent with the other indicators. The share of individuals with CONSISTENTLY DELINQUENT PAYMENT HISTORY is among the highest in the nation for the Bronx, and among the lowest in the nation for Manhattan.

New York City Map: Consistently Delinquent Payment History

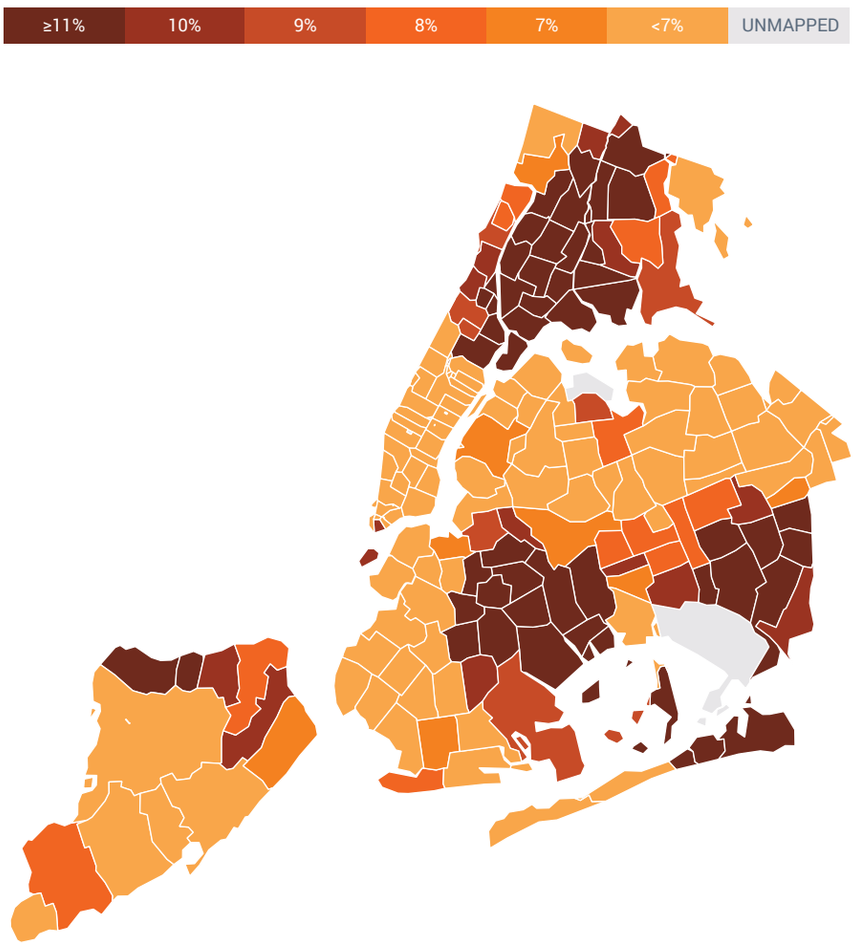


Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The zip code-level map shows that credit quality, as measured by the CONSISTENTLY DELINQUENT PAYMENT HISTORY indicator, varies considerably at the neighborhood level. Ninety-one New York City zip codes are in the lowest tier of indicator values (where 11% or more of the population is consistently delinquent). Clusters of zip codes in the Bronx, Brooklyn, and Queens ranked in the lowest band and are shown colored the darkest orange on the map. Zip codes are discussed in more detail in a separate section, *Credit-Constrained Zip Codes*, later in the report.

New York City Map: Consistently Delinquent Payment History



Data Source: FRBNY Consumer Credit Panel / Equifax

SECTION 3:
DATA IN ACTION
ANALYTIC FRAMEWORK AND TOOLS

The key premise of Community Credit is that financially secure households are a source of strength and stability for their community; and in turn, a community's well-being and resiliency improves with their presence.[54] Credit is the analytical lens because it helps build wealth if used prudently, opens doors for economic opportunity, and acts as a data proxy for overall financial well-being.[55]

Access to credit and the financial well-being that may ensue is, however, a complex issue with no simple data measures. Individuals may have institutional access to credit but lack borrowing capacity to build well-being for themselves, their families and their communities. When designing analytics to inform policy makers and others, diagnose barriers, and evaluate policy solutions, the metrics must reflect institutional, structural, and behavioral realities in the community. Recognizing these challenges, Community Credit takes a multi-factorial approach, where each indicator is an in-depth look at one facet of a complex reality; while no single indicator may be sufficient, the indicators together create a mosaic to infer and understand a community's access to credit for financial well-being and economic opportunity.

The discussions of Section 2 were an indicator-by-indicator approach. Using zip codes as a working definition for neighborhoods in the empirical work, the maps show range values for New York City zip codes for each Community Credit indicator. In this section, the discussion examines the Community Credit indicators in combinations in order to identify the most credit-constrained communities in the nation. But first, an analytical framework for the discussion is presented.

Framework

The Community Credit overview in Section 1 grouped the eight indicators thematically into three credit attributes that support or detract from a community's financial well-being and resiliency—*Credit Inclusion; Credit Capacity;* and *Debt Management and Stress*. These attributes influence whether individuals get approved for a mortgage, obtain a loan to start a business or further their education, can rent an apartment, can get a job, and are able to obtain preferential insurance rates and avoid fees, among other benefits.

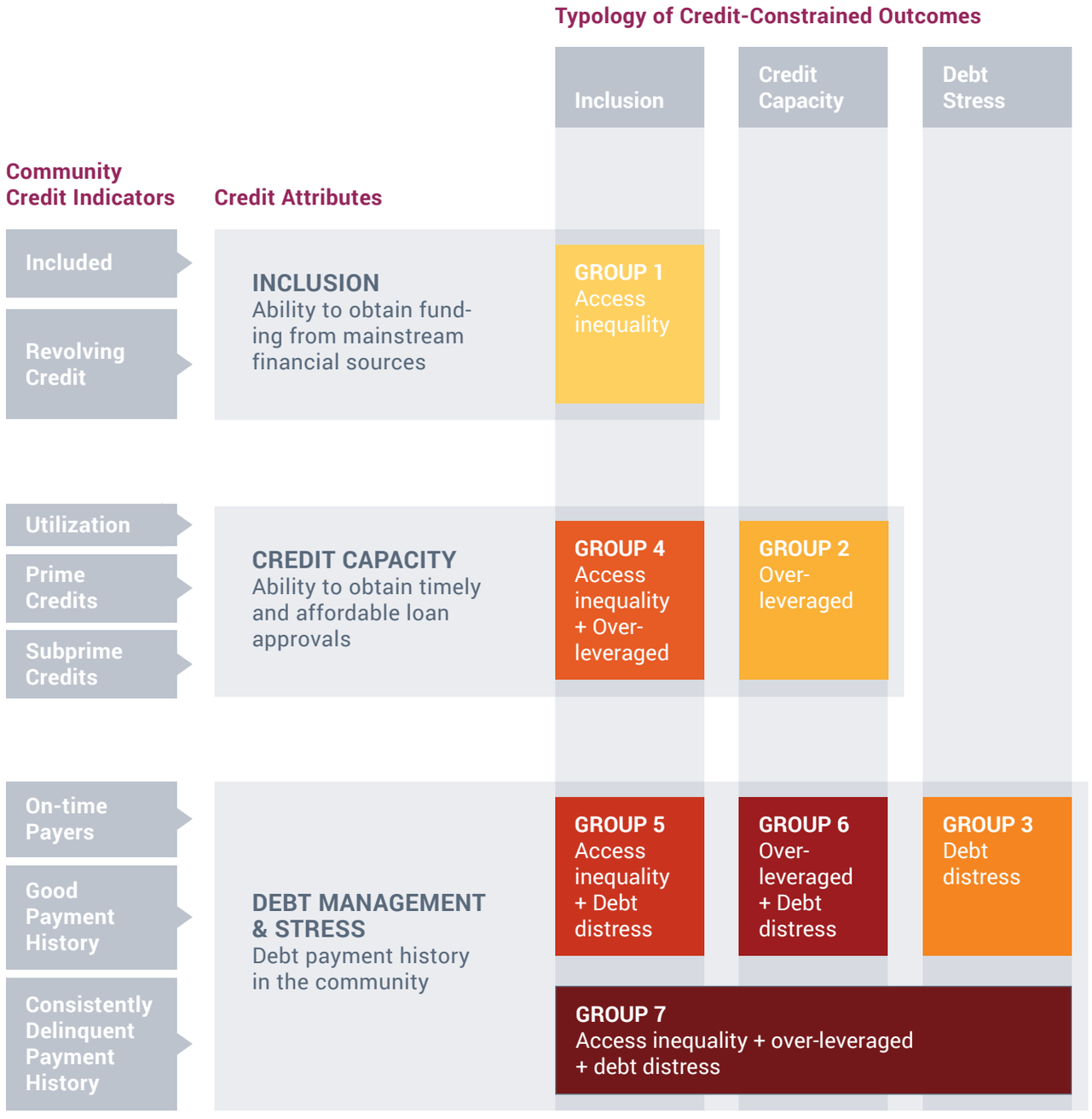
In short, these attributes individually describe how large the local credit economy is, as well the extent to which that credit economy can access credit for economic opportunity. To gauge robustness, the three credit attributes are interpreted, individually and in combination, within a typology of possible credit outcomes. Communities with values among the weakest in the nation are categorized as credit-constrained communities. In the subsequent discussion, only communities with credit constraints are examined, though the framework is also equally useful to identify and examine credit-thriving communities.

The following chart illustrates the framework connecting the Community Credit indicators to a typology of credit outcomes.

54 Community Credit: A New Perspective on America's Communities, 2014. Available at https://www.newyorkfed.org/data-and-statistics/data-visualization/community-credit-profiles/index.html#overview.

55 Also because as a practical matter, credit data are available in a timely manner, and are relatively error-free since they are used for business decision-making.

Data Source: FRBNY Consumer Credit Panel / Equifax



Data Source: FRBNY Consumer Credit Panel / Equifax

Typology of Credit-Constrained Outcomes

In Section 2, 118 New York City zip codes were identified as having one or more Community Credit indicator values among the weakest in the nation. This group of zip codes is referred to as the credit-constrained communities.

Some zip codes were flagged as among the weakest by only one credit indicator, while other zip codes were flagged by several indicators. We use the following groups of indicators to explore the possible constraints on a community's ability to access credit for economic opportunity and resiliency.

The three credit attributes can occur in seven combinations, which are identified as seven Credit-Constrained Outcomes in the table below.

Credit-Constrained Outcomes

	Credit Attributes	**Credit Inclusion**	**Credit Capacity**	**Debt Stress**
	Indicators	Included Revolving Credit	Utilization Prime Credits Subprime Credits	On-time Payers Good Payment History Consistently Delinquent Payment History
Credit Inclusion	Included Revolving Credit	**GROUP 1** Access inequality		
Credit Capacity	Utilization Prime Credits Subprime Credits	**GROUP 4** Access inequality + Over-leveraged	**GROUP 2** Over-leveraged	
Debt Management and Stress	On-time Payers Good Payment History Consistently Delinquent Payment History	**GROUP 5** Access inequality + Debt distress	**GROUP 6** Over-leveraged + Debt distress	**GROUP 3** Debt distress
		GROUP 7 Access inequality + over-leveraged + debt distress		

Data Source: FRBNY Consumer Credit Panel / Equifax

The seven combinations identified in the typology table are as follows:

- **Group 1**—only the values for the Credit Inclusion indicators—*Included or Revolving Credit*—are among the weakest in the nation.
- **Group 2**—only the values for the Credit Capacity indicators—*Utilization, Prime Credits, or Subprime Credits*—are among the weakest in the nation.
- **Group 3**—only the values for the Debt Stress indicators—*On-time Payers, Good Payment History,* or *Consistently Delinquent Payment History*—are among the weakest in the nation.
- **Group 4**—low Credit Inclusion and low Credit Capacity are prevalent in the community (i.e. values for the Inclusion and Credit Capacity indicators are among the weakest in the nation).
- **Group 5**—low Credit Inclusion and high Debt Stress are prevalent in the community (i.e. values for the Inclusion and Debt Stress indicators are among the weakest in the nation).
- **Group 6**—low Credit Capacity and high Debt Stress are prevalent in the community (i.e. values for the Credit Capacity and Debt Stress indicators are among the weakest in the nation).
- **Group 7**—low Credit Inclusion, low Credit Capacity, and high Debt Stress are prevalent in the community (i.e. values for the Inclusion, Credit Capacity, and Debt Stress indicators are all among the weakest in the nation).

A zip code needs to rank among the weakest on only one Community Credit indicator to be assigned to a given credit-constrained group. For example, if a zip code ranks among the lowest in the nation on the Included indicator but does not rank among the lowest on the Revolving Credit, it still qualifies for Group 1. Zip codes that do not rank among the lowest in the nation on any Community Credit indicator are not sorted into any of the credit-constrained groups, and are colored grey on the maps.

The analytics are for zip codes because community development stakeholders requested granular information; however, this framework may be applied to examine other units of geography.

To keep the analytics manageable, we focus only on zip codes that are flagged by at least one Community Credit indicator as being among the weakest in the nation; we refer to these neighborhoods as the credit-constrained zip codes. New York City has 184 zip codes that we can map;[56] of these, 118 zip codes were credit-constrained as of 2017 Q4. We classify each zip code into one of the seven groups detailed previously.

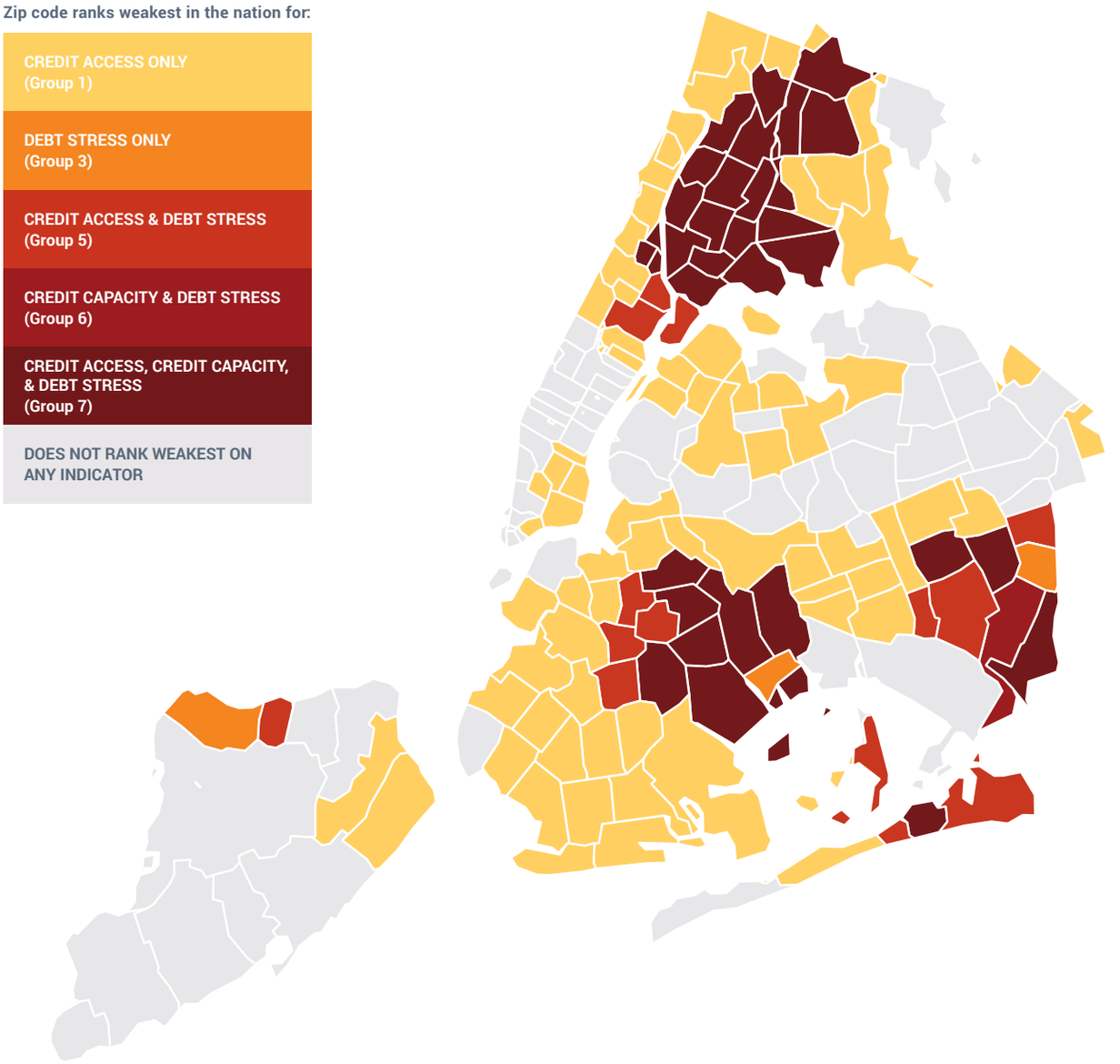
Lastly, there is judgment involved in the classification process, and stakeholders with local information and expertise may differ in their views. For that reason, we present detailed tables so that stakeholders may re-classify the zip codes according to their information and applications.

56 There are additional New York City zip codes that do not correspond to physical areas, such as post office boxes, and are not able to be mapped. We analyzed only the 184 zip codes.

Data Source: FRBNY Consumer Credit Panel / Equifax

The following map shows the 118 NYC zip codes that rank among the weakest in the nation on at least one indicator. They are also categorized and color-coded according to their credit-constrained group. There were no zip codes identified as being in Groups 2 and 4.

New York City's 118 Credit-Constrained Zip Codes, 2017 Q4



Data Source: FRBNY Consumer Credit Panel / Equifax

Distribution of New York City Credit-Constrained Zip Codes by Borough

Credit-Constrained Groups		NYC	Bronx	Brooklyn	Manhattan	Queens	Staten Island
1	Credit Inclusion Gap	71	7	22	17	23	2
2	Limited Credit Capacity	0	0	0	0	0	0
3	Debt Stress	3	0	1	0	1	1
4	Inclusion & Credit Capacity	0	0	0	0	0	0
5	Inclusion Gap & Debt Stress	12	0	4	2	5	1
6	Limited Credit Capacity & Debt Stress	1	0	0	0	1	0
7	Inclusion Gap, Limited Credit Capacity, & Debt Stress	31	17	7	3	4	0
Total Credit-Constrained Zip Codes		**118**	**24**	**34**	**22**	**34**	**4**
Total New York City Zip Codes		**184**	**25**	**37**	**48**	**62**	**12**

There are additional New York City zip codes that do not correspond to physical areas, such as post office boxes, and are not able to be mapped. We analyzed only the 184 zip codes.

Data Source: FRBNY Consumer Credit Panel / Equifax

The following tables show the 118 credit-constrained zip codes, sorted by borough and approximate neighborhood name (based on the zip code). A yellow-colored cell in the table means that the indicator value for that zip code is among the weakest in the nation. A green-colored cell means that the indicator value is among the strongest in the nation. The remaining cells correspond to zip codes where the indicator value is somewhere in between. The pattern of yellow and green cells is used to interpret possible credit-constraining conditions in the community.

New York City Credit-Constrained Zip Codes by Borough

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
BRONX										
10461	Westchester Square	1								
10462	Van Nest	1								
10463	Riverdale	1								
10465	Eastchester Bay	1								
10470	Wakefield	1								
10471	Fieldston	1								
10475	Coop City	1								
10451	Melrose	7								
10452	Highbridge	7								
10453	Morris Heights	7								
10454	Mott Haven	7								
10455	Mott Haven	7								
10456	Melrose	7								
10457	Bathgate	7								
10458	Belmont	7								
10459	Longwood	7								
10460	Bronx Park South	7								
10466	North Baychester	7								
10467	Van Cortlandt Park	7								
10468	Jerome Park	7								
10469	Pelham Gardens	7								
10472	Soundview Bruckner	7								
10473	Soundview	7								
10474	Hunt's Point	7								

Best tier value for the indicator Weakest tier value for the indicator

Data Source: FRBNY Consumer Credit Panel / Equifax

New York City Credit-Constrained Zip Codes by Borough (Continued)

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
BROOKLYN (KINGS COUNTY)										
11204	Bensonhurst	1								
11205	Navy Hill	1								
11206	Williamsburg	1								
11210	Marine Park	1								
11211	Williamsburg	1								
11214	Southwest Brooklyn	1								
11215	South Slope	1								
11217	Boreum Hill/ BoCoCa	1								
11218	Borough Park	1								
11219	Borough Park	1								
11220	Sunset Park	1								
11223	Bensonhurst	1								
11224	Coney Island	1								
11228	Dyker Heights	1								
11229	Homecrest/ Sheepshead Bay	1								
11230	Bensonhurst	1								
11231	Red Hook	1								
11232	Sunset Park	1								
11234	Bergen Beach	1								
11235	Sheepshead Bay	1								
11237	Ridgewood	1								
11238	Prospect Heights	1								
11239	Spring Creek	3								
11213	Crown Heights	5								
11216	Bedford Stuyvesant	5								
11225	Prospect Leffert	5								
11226	Flatbush	5								
11203	East Flatbush	7								
11207	East New York	7								
11208	City Line	7								
11212	Brownsville	7								
11221	Bushwick	7								
11233	Ocean Hill	7								
11236	Canarsie	7								

Best tier value for the indicator Weakest tier value for the indicator

Data Source: FRBNY Consumer Credit Panel / Equifax

New York City Credit-Constrained Zip Codes by Borough (Continued)

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
MANHATTAN (NEW YORK COUNTY)										
10002	Lower East Side	1								
10003	East Village	1								
10009	East Village	1								
10010	Stuyvesant Park	1								
10012	NoHo	1								
10025	Upper West Side	1								
10026	Harlem	1								
10027	Morningside Heights	1								
10028	Yorkville	1								
10031	Hamilton Heights	1								
10032	Washington Heights	1								
10033	Washington Heights	1								
10034	Inwood	1								
10038	City Hall	1								
10040	Washington Heights	1								
10044	Roosevelt Island	1								
10128	Yorkville	1								
10029	East Harlem	5								
10035	East Harlem	5								
10030	Harlem	7								
10037	Harlem	7								
10039	Washington Heights	7								
STATEN ISLAND (RICHMOND COUNTY)										
10304	Grymes Hill	1								
10305	Rosebank	1								
10303	Mariners Park	3								
10302	West Brighton	5								

Best tier value for the indicator Weakest tier value for the indicator

Data Source: FRBNY Consumer Credit Panel / Equifax

New York City Credit-Constrained Zip Codes by Borough (Continued)

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
QUEENS										
11004	Glen Oaks	1								
11102	Long Island City	1								
11103	Long Island City	1								
11105	Steinway	1								
11106	Long Island City	1								
11354	Murry Hill	1								
11363	Douglaston	1								
11368	Corona	1								
11369	East Elmhurst	1								
11370	Steinway	1								
11373	Elmhurst	1								
11377	Woodside	1								
11385	Glendale	1								
11416	Woodhaven	1								
11417	Ozone Park	1								
11418	Richmond Hill	1								
11419	Richmond Hill	1								
11420	South Ozone Park	1								
11421	Woodhaven	1								
11423	Jamaica Estates	1								
11432	Jamaica Hills	1								
11435	Jamaica	1								
11694	Belle	1								
11411	Laurelton	3								
11429	Cambria Heights	5								
11434	Springfield Gardens	5								
11436	South Jamaica	5								
11691	Bayswater	5								
11693	Rockaways	5								
11413	Brookville	6								
11412	St. Albans	7								
11422	Southeast Queens	7								
11433	St. Albans	7								
11692	Arverne-Edgemere	7								

Best tier value for the indicator Weakest tier value for the indicator

Data Source: FRBNY Consumer Credit Panel / Equifax

SECTION 4:

CREDIT-CONSTRAINED ZIP CODES

NEW YORK CITY MICRO DATA ANALYTICS

GROUP 1: CREDIT INCLUSION GAP

Group 1 zip codes have values among the weakest in the nation only for only the Credit Inclusion indicators, Included or Revolving Credit. However, all of New York City's zip codes perform quite strongly on the Revolving Credit indicator, so all Group 1 zip codes were only flagged as having among the weakest values for the Included indicator. These communities have low access to credit in that the share of adult residents with a credit file and credit score is among the lowest in the nation as of 2017 Q4. However, revolving credit is widespread in the local credit economy and other credit indicators are healthy. These neighborhoods are possibly in economic transition, reflecting a combination of long-term residents, both economically distressed and not, and upwardly mobile newcomers. These zip codes may be undergoing a form of 'credit gentrification;' their financial well-being could be constrained over the long-term by the relatively large numbers of residents who are not connected to mainstream financial lenders and thus not able to access credit for economic opportunity.

Seventy-one New York City zip codes are categorized as Group 1 credit-constrained, with most located in Brooklyn and Queens. The distribution by borough is as follows:

- Bronx: 7
- Brooklyn: 22
- Manhattan: 17
- Queens: 23
- Staten Island: 2

The following table lists the 71 New York City zip codes and their approximate neighborhood name. A yellow-colored cell in the table identifies which indicator values are in the weakest tier, a green-colored cell identifies which indicator values are in the strongest tier, and all other values are in the mid-range.

A striking feature of the table is the abundance of green colored cells for REVOLVING CREDIT and other indicators. In other words, Group 1 zip codes are categorized as credit-constrained only by the INCLUDED indicator values.

This seemingly anomalous combination suggests that Group 1 zip codes consist of two heterogeneous populations: many residents without a credit file and credit score live adjacent to others who are highly credit-sufficient. While less than 85% of local adult residents are in the credit economy, they are doing well. Revolving credit products (such as credit cards) are highly prevalent, many have over 70% capacity on their credit lines, credit scores are "prime" quality, and debt payment histories are healthy.

These neighborhoods are likely in economic transition. The map of New York City zip codes often places Group 1 zip codes as a broad geographical band between the credit-sufficient and other credit-constrained neighborhoods in the City. Given the economic boom underway in the City over the past decade, many neighborhoods have benefitted economically, which may have resulted in uneven credit upgrading in some neighborhoods. Or, these neighborhoods might have immigrants who are newcomers to the U.S. and are unfamiliar with or have cultural barriers to incurring debt. Another explanation is that this pattern may indicate the presence of young adults who are wary of debt in the post-financial crisis environment. Local knowledge and examining additional data may help sort among the hypotheses.

The possibility of synergistic externalities makes Group 1 zip codes attractive for policy interventions and business opportunities. Credit literacy programs that build financial skills might yield positive results to deepen the pool of creditworthy customers; these programs may benefit from positive externalities of the credit-excluded residents being the neighbors of credit-thriving residents. Similarly, credit products suited to residents' lifestyles are a business opportunity, especially if the credit-excluded residents are relying on high-priced alternative lenders to meet their credit needs.

Data Source: FRBNY Consumer Credit Panel / Equifax

Group 1 Zip Codes: Low Credit Inclusion is the Single Credit Threat

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
BRONX										
10461	Westchester Square	1								
10462	Van Nest	1								
10463	Riverdale	1		■						
10465	Eastchester Bay	1								
10470	Wakefield	1								
10471	Fieldston	1		■	■	■	■		■	■
10475	Coop City	1								
BROOKLYN (KINGS COUNTY)										
11204	Bensonhurst	1		■	■	■	■	■	■	■
11205	Navy Hill	1								
11206	Williamsburg	1								
11210	Marine Park	1								
11211	Williamsburg	1		■	■		■			■
11214	Southwest Brooklyn	1		■	■	■	■	■	■	■
11215	South Slope	1		■	■	■	■	■	■	■
11217	Boreum Hill/ BoCoCa	1		■	■	■	■	■	■	■
11218	Borough Park	1		■	■	■	■			■
11219	Borough Park	1		■	■	■	■	■	■	■
11220	Sunset Park	1		■		■	■	■	■	■
11223	Bensonhurst	1		■						
11224	Coney Island	1		■						
11228	Dyker Heights	1		■	■	■	■	■	■	■
11229	Homecrest/ Sheeps-head Bay	1		■	■	■	■	■	■	■
11230	Bensonhurst	1		■	■	■	■		■	■
11231	Red Hook	1		■	■	■	■		■	■
11232	Sunset Park	1		■	■					■
11234	Bergen Beach	1		■						
11235	Sheepshead Bay	1		■	■	■	■	■	■	■
11237	Ridgewood	1		■						
11238	Prospect Heights	1		■	■		■			■

Continued on next page

Data Source: FRBNY Consumer Credit Panel / Equifax

Group 1 Zip Codes: Low Credit Inclusion is the Single Credit Threat (Continued)

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
MANHATTAN (NEW YORK COUNTY)										
10002	Lower East Side	1								
10003	East Village	1								
10009	East Village	1								
10010	Stuyvesant Park	1								
10012	NoHo	1								
10025	Upper West Side	1								
10026	Harlem	1								
10027	Morningside Heights	1								
10028	Yorkville	1								
10031	Hamilton Heights	1								
10032	Washington Heights	1								
10033	Washington Heights	1								
10034	Inwood	1								
10038	City Hall	1								
10040	Washington Heights	1								
10044	Roosevelt Island	1								
10128	Yorkville	1								
QUEENS										
11004	Glen Oaks	1								
11102	Long Island City	1								
11103	Long Island City	1								
11105	Steinway	1								
11106	Long Island City	1								
11354	Murry Hill	1								
11363	Douglaston	1								
11368	Corona	1								
11369	East Elmhurst	1								
11370	Steinway	1								
11373	Elmhurst	1								
11377	Woodside	1								
11385	Glendale	1								
11416	Woodhaven	1								
11417	Ozone Park	1								

Continued on next page

Data Source: FRBNY Consumer Credit Panel / Equifax

Group 1 Zip Codes: Low Credit Inclusion is the Single Credit Threat (Continued)

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
QUEENS (CONTINUED)										
11418	Richmond Hill	1								
11419	Richmond Hill	1								
11420	South Ozone Park	1								
11421	Woodhaven	1								
11423	Jamaica Estates	1								
11432	Jamaica Hills	1								
11435	Jamaica	1								
11694	Belle	1								
STATEN ISLAND (RICHMOND COUNTY)										
10304	Grymes Hill	1								
10305	Rosebank	1								
WEAKEST TIER VALUE FOR THE INDICATOR			**<85%**	**<50%**	**<30%**	**≥50%**	**<30%**	**<70%**	**<74%**	**≥11%**

Best tier value for the indicator Weakest tier value for the indicator

GROUP 2: OVER-LEVERAGED RESIDENTS

Group 2 zip codes have values among the lowest in the nation for only for the Credit Capacity indicators, UTILIZATION, PRIME CREDITS, or SUBPRIME CREDITS.

There were no zip codes in New York City with this credit attribute in 2017 Q4. This outcome may be a theoretical option without practical examples.

Data Source: FRBNY Consumer Credit Panel / Equifax

GROUP 3: PAYMENT HISTORY PROBLEMS

Group 3 zip codes have values that are among the lowest in the nation only for the Debt Stress indicators—On-time Payers, Good Payment History, or Consistently Delinquent Payment History. The financial well-being of these communities is long-term constrained by the relatively large numbers of credit economy participants who are not able to manage their debt prudently, allowing delinquencies to linger consistently for over a year.

New York City has three zip codes that are categorized as Group 3 credit-constrained: one each in Brooklyn, Queens, and Staten Island. The table lists the three New York City zip codes and their locally familiar neighborhood name. A yellow-colored cell in the table identifies which indicator values are in the weakest tier, a green-colored cell identifies which indicator values are in the strongest tier, and all other values are in the mid-range.

Group 3 Zip Codes: Debt Stress is Single Credit Threat

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
BRONX										
11239	Spring Creek	3								
QUEENS										
11411	Laurelton	3								
STATEN ISLAND (RICHMOND COUNTY)										
10303	Mariners Park	3								
WEAKEST TIER VALUE FOR THE INDICATOR			<85%	<50%	<30%	≥50%	<30%	<70%	<74%	≥11%

Best tier value for the indicator Weakest tier value for the indicator

In this group of zip codes, delinquencies appear to be widespread and persistent with at least 11% of the credit economy delinquent on some credit product during each of the last five quarters. Similarly, the concentrations of ON-TIME PAYERS and those with GOOD PAYMENT HISTORY are among the weakest in the nation. However, credit inclusion is often high, such as in Spring Creek in the Bronx, and the communities have acceptable credit-worthiness and credit capacity on their revolving credit products.

The New York City zip code map locates the Group 3 zip codes amidst zip codes with more indicators of high credit distress. The pattern of credit distress manifesting only in weak payment histories suggests two possibilities: (1) the communities are on the credit mend but legacy debts, such as student loans, persist while borrowers handle new debts well, or (2) it may point to a deteriorating credit environment. Income distress may be emerging as residents juggle their credit products to pay their bills. Again, input from local experts would help identify which dynamic best describes the communities.

Data Source: FRBNY Consumer Credit Panel / Equifax

GROUP 4: LOW CREDIT INCLUSION AND LOW CREDIT CAPACITY

Group 4 zip codes have among the weakest values in the nation for one or more of the indicators that comprise the Inclusion and the Credit Capacity attributes.

There were no zip codes in New York City with this combination in 2017 Q4.

GROUP 5: LOW CREDIT INCLUSION AND WEAK PAYMENT HISTORIES

Group 5 zip codes have values among the lowest in the nation for one or more of the indicators that comprise the Inclusion and Debt Stress attributes. Given their geographic placement between Group 1 and more credit-constrained zip codes, these zip codes may also be in economic transition, but with possible income sufficiency concerns. The financial well-being of these communities is long-term constrained by the relatively large numbers of residents who are not connected to mainstream financial lenders, coupled with the weak payment histories of residents with loans outstanding. Both of these dynamics undermine the communities' financial well-being, resiliency, and ability to access credit for economic opportunity in the future.

Twelve New York City zip codes are categorized as Group 5 credit-constrained; the distribution by borough is as follows:

- Bronx: 0
- Brooklyn: 4
- Manhattan: 2
- Queens: 5
- Staten Island: 1

The following table lists the 12 New York City zip codes and their approximate neighborhood names that are in Group 5. A yellow-colored cell in the table identifies which indicator values are in the weakest tier, a green-colored cell identifies which indicator values are in the strongest tier, and all other values are in the mid-range.

Data Source: FRBNY Consumer Credit Panel / Equifax

Group 5 Zip Codes: Double Credit Threats of Low Credit Inclusion and Debt Distress

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
BROOKLYN (KINGS COUNTY)										
11213	Crown Heights	5								
11216	Bedford Stuyvesant	5								
11225	Prospect Leffert	5								
11226	Flatbush	5								
MANHATTAN (NEW YORK COUNTY)										
10029	East Harlem	5								
10035	East Harlem	5								
QUEENS										
11429	Cambria Heights	5								
11434	Springfield Gardens	5								
11436	South Jamaica	5								
11691	Bayswater	5								
11693	Rockaways	5								
STATEN ISLAND (RICHMOND COUNTY)										
10302	West Brighton	5								
WEAKEST TIER VALUE FOR THE INDICATOR			<85%	<50%	<30%	≥50%	<30%	<70%	<74%	≥11%

Best tier value for the indicator Weakest tier value for the indicator

Each zip code ranks among the lowest in the nation on the INCLUDED indicator; in other words, the local credit economies are small. Again, revolving credit products are highly prevalent among residents who are in the credit economy. Additionally, the share of the credit economy that is delinquent on at least one credit obligation for each of the most recent five quarters is among the highest in the nation.

The geographic placement of Group 5 zip codes between the low inclusion only (Group 1) and more distressed neighborhoods points to heterogeneous populations as neighborhoods undergo change, and the need for customized policy responses.

Low inclusion suggests that many residents do not have access to credit from mainstream financial lenders. As with Group 1, Group 5 zip codes provide opportunities for credit literacy programs that build financial skills and credit products suited to residents' lifestyles, especially if residents were formerly relying on high-priced alternative lenders to meet their credit needs.

Data Source: FRBNY Consumer Credit Panel / Equifax

However, many are struggling to make timely payments on their debt obligations. This pattern suggests an income sufficiency problem. Might these zip codes be like Group 3, with either deteriorating economic conditions or being on the mend? Their geo-placement is consistent with either dynamic. Either way, programs that teach budgeting and prudent debt management would be beneficial for residents. Again, local knowledge of the community may best determine the underlying dynamics and appropriate solutions.

GROUP 6: LIMITED BORROWING CAPACITY AND WEAK PAYMENT HISTORIES

Group 6 zip codes have values among the lowest in the nation for one or more of the indicators that comprise the Credit Capacity and Debt Stress attributes. The community's financial well-being is long-term constrained by shrinking credit capacity in the face of prevalent debt payment problems.

Only one zip code in New York City (Brookville, Queens) is in this group. The table lists the indicator value tier for Brookville. A yellow-colored cell in the table identifies which indicator values are in the weakest tier, a green-colored cell identifies which indicator values are in the strongest tier, and all other values are in the mid-range.

Group 6 Zip Codes: Double Credit Threats of Credit Capacity and Debt Distress

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
QUEENS										
11413	Brookville	6								
WEAKEST TIER VALUE FOR THE INDICATOR			<85%	<50%	<30%	≥50%	<30%	<70%	<74%	≥11%

Best tier value for the indicator Weakest tier value for the indicator

The map of New York City zip codes suggests that Brookville is a transition neighborhood. Credit inclusion is in the mid-range of values, so a substantial share of residents have access to credit products. However, the combination of shrinking borrowing capacity on revolving credit products coupled with debt payment problems suggests that residents might be relying on debt to supplement income. Alternatively, given Brookville's location, the community may be on the mend.

Local knowledge of the community will provide insight on whether this neighborhood is on the upswing or deteriorating.

Data Source: FRBNY Consumer Credit Panel / Equifax

GROUP 7: CREDIT DISTRESS IS PREVALENT AND ENTRENCHED

Group 7 zip codes have values among the lowest in the nation for indicators in each of the credit attributes (Inclusion, Credit Capacity, and Debt Stress). These zip codes are denoted as stressed by most indicators and all credit attributes. Again, there are two somewhat different dynamics in effect in these neighborhoods, each requiring a different policy response. First, there is the large share of local residents who are not connected to mainstream financial lenders. Their relative size in the neighborhoods is a long-term constraint on the financial well-being of the neighborhoods. An additional layer is the debt management outcomes of residents in the credit economy, pointing to possible income insufficiency issues. Both of these dynamics combine to constrain the financial well-being of the communities.

These zip codes are possibly undergoing a form of 'credit gentrification,' and their financial well-being is long-term constrained by the relatively large numbers of residents who are not connected to mainstream financial lenders and thus able to access credit for economic opportunity.

Thirty-one New York City zip codes are categorized as Group 7 credit-constrained, with most located in the Bronx. The distribution by borough is as follows:

- Bronx: 17
- Brooklyn: 7
- Manhattan: 3
- Queens: 4
- Staten Island: 0

The following table lists the 31 New York City zip codes and their approximate neighborhood name. A yellow-colored cell in the table identifies which indicator values are in the weakest tier, a green-colored cell identifies which indicator values are in the strongest tier, and all other values are in the mid-range.

Group 7 Zip Codes: Triple Credit Threats from all Credit Attributes

			Credit Inclusion		Credit Capacity			Debt Stress		
Zip code	Neighborhood Name	Credit Attribute Group	Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
BRONX										
10451	Melrose	7								
10452	Highbridge	7								
10453	Morris Heights	7								
10454	Mott Haven	7								
10455	Mott Haven	7								

Continued on next page

Data Source: FRBNY Consumer Credit Panel / Equifax

Group 7 Zip Codes: Triple Credit Threats from all Credit Attributes

Zip code	Neighborhood Name	Credit Attribute Group	Credit Inclusion: Included	Credit Inclusion: Revolving Credit	Credit Capacity: Utilization	Credit Capacity: Prime Credits	Credit Capacity: Subprime Credits	Debt Stress: On-time Payers	Debt Stress: Good Payment History	Debt Stress: Consistently Delinquent Payment History
10456	Melrose	7								
10457	Bathgate	7								
10458	Belmont	7								
10459	Longwood	7								
10460	Bronx Park South	7								
10466	North Baychester	7								
10467	Van Cortlandt Park	7								
10468	Jerome Park	7								
10469	Pelham Gardens	7								
10472	Soundview Bruckner	7								
10473	Soundview	7								
10474	Hunt's Point	7								
BROOKLYN (KINGS COUNTY)										
11203	East Flatbush	7								
11207	East New York	7								
11208	City Line	7								
11212	Brownsville	7								
11221	Bushwick	7								
11233	Ocean Hill	7								
11236	Canarsie	7								
MANHATTAN (NEW YORK COUNTY)										
10030	Harlem	7								
10037	Harlem	7								
10039	Washington Heights	7								
QUEENS										
11412	St. Albans	7								
11422	Southeast Queens	7								
11433	St. Albans	7								
11692	Arverne-Edgemere	7								
WEAKEST TIER VALUE FOR THE INDICATOR			<85%	<50%	<30%	≥50%	<30%	<70%	<74%	≥11%

Best tier value for the indicator Weakest tier value for the indicator

Data Source: FRBNY Consumer Credit Panel / Equifax

A few patterns are striking. First, there is strong spatial clustering, as seen in the map in the map of New York City zip codes. The largest cluster is in the Bronx, while the second largest cluster straddles the Brooklyn-Queens border; a third, smaller cluster is in eastern Queens.

The low inclusion values document that many residents do not have access to credit from mainstream credit lenders; concerns about high cost alternative lenders and the failure to build credit histories that support economic opportunities apply here.

The combination of low borrowing capacity on credit cards and weak payment histories also suggest income insufficiency problems and raise concerns that debt may be being used to close or compensate for income gaps.

However, for several of these zip codes, credit scores are not among the weakest tier, which is hopeful. Again, customized and targeted programs and policy solutions are likely needed in these neighborhoods to address the complex and layered needs of residents.

Data Source: FRBNY Consumer Credit Panel / Equifax

SECTION 5:
CREDIT PRODUCT SNAPSHOTS

Share of the Credit Economy with Each of the Following Products (Percent, as of 2017 Q4)

	Mortgage	HELOC	Credit Card	Auto Loan	Student Loan	Other*
Bronx	9.4%	1.1%	69.1%	18.8%	22.0%	41.9%
Brooklyn (Kings County)	14.0%	2.4%	72.2%	16.9%	19.5%	31.3%
Manhattan (New York County)	14.1%	2.0%	75.9%	10.6%	17.3%	23.2%
Queens	17.1%	2.7%	72.9%	21.7%	14.8%	34.4%
Staten Island (Richmond County)	29.1%	6.3%	74.1%	35.5%	18.6%	43.1%
New York City	15.2%	2.5%	72.9%	18.3%	18.0%	32.7%
New York State	23.5%	6.0%	70.6%	31.6%	19.7%	36.8%
U.S.	29.6%	5.3%	65.0%	37.6%	19.1%	38.8%

Individuals with non-zero debt balances of the credit product are counted as holding that credit product.

*Other category includes consumer finance (sales financing, personal loans) and retail (clothing, grocery, department stores, home furnishings, gas etc.) loans.

Median Balance by Credit Product ($, as of 2017 Q4)

	Mortgage	HELOC	Credit Card	Auto Loan	Student Loan	Other*
Bronx	145,026	31,187	2,147	10,994	14,985	1,200
Brooklyn (Kings County)	184,077	50,008	2,200	9,342	18,121	970
Manhattan (New York County)	242,841	62,515	2,957	10,298	22,599	943
Queens	157,452	39,564	2,061	10,000	16,019	877
Staten Island (Richmond County)	150,499	31,111	2,538	8,256	15,786	905
New York City	172,548	43,252	2,332	9,777	17,566	978
New York State	103,540	25,216	2,342	9,480	16,751	979
U.S.	93,723	19,982	2,189	10,544	16,221	1,217

Individuals with non-zero debt balances of the credit product are counted as holding that credit product.

*Other category includes consumer finance (sales financing, personal loans) and retail (clothing, grocery, department stores, home furnishings, gas etc.) loans.

Data Source: FRBNY Consumer Credit Panel / Equifax

Share of Product Holders that are 60+ Days Delinquent by Credit Product (Percent, as of 2017 Q4)

	Mortgage	HELOC	Credit Card	Auto Loan	Student Loan[57]	Other*
Bronx	5.4%	2.9%	17.1%	13.2%	19.1%	18.4%
Brooklyn (Kings County)	3.1%	2.0%	11.5%	7.8%	14.8%	15.6%
Manhattan (New York County)	1.1%	2.3%	7.9%	7.1%	11.6%	13.2%
Queens	3.2%	2.1%	9.9%	6.3%	12.2%	12.1%
Staten Island (Richmond County)	3.5%	1.8%	9.6%	4.4%	11.5%	10.7%
New York City	3.0%	2.1%	10.9%	7.6%	14.1%	14.3%
New York State	2.9%	1.5%	9.2%	5.8%	12.0%	10.9%
U.S.	2.1%	1.2%	9.5%	7.9%	15.4%	12.4%

This is a snapshot of 60 or more days delinquent; not the consistently delinquent indicator, which incorporates five quarters of payment history.

*Other category includes consumer finance (sales financing, personal loans) and retail (clothing, grocery, department stores, home furnishings, gas etc.) loans.

Median Balance 60+ Days Delinquent by Credit Product ($, as of 2017 Q4)

	Mortgage	HELOC	Credit Card	Auto Loan	Student Loan[58]	Other*
Bronx	290,934	52,160	1,474	10,928	11,048	1,092
Brooklyn (Kings County)	313,108	99,908	1,930	10,509	12,667	1,056
Manhattan (New York County)	222,749	152,692	2,002	10,217	14,423	1,122
Queens	349,734	125,305	2,282	10,461	11,976	1,156
Staten Island (Richmond County)	307,266	87,065	2,732	8,860	10,556	1,013
New York City	317,557	105,877	1,949	10,377	12,253	1,093
New York State	204,089	75,191	2,087	8,331	12,128	1,136
U.S.	103,493	45,547	1,657	8,497	11,847	1,088

This is a snapshot of 60 or more days delinquent; not the consistently delinquent indicator, which incorporates five quarters of payment history.

*Other category includes consumer finance (sales financing, personal loans) and retail (clothing, grocery, department stores, home furnishings, gas etc.) loans.

57 Student loan delinquencies reflect 90+ days, due to common reporting practices.

58 Student loan delinquencies reflect 90+ days, due to common reporting practices.

Data Source: FRBNY Consumer Credit Panel / Equifax

SECTION 6:
ABOUT THE DATA

DATA SOURCES

Credit

The Community Credit measures have two data sources. For the credit values, we use the New York Fed Consumer Credit Panel/Equifax (CCP), which consists of quarterly credit report data for a unique longitudinal panel of individuals and households from the Equifax credit bureau. The panel is a five percent nationally representative sample of all individuals with a social security number and a credit report. All information is anonymized. Data are available quarterly, and year-end (Q4) values are used to calculate all indicators unless otherwise noted. For more information about the CCP, see the Federal Reserve Bank of New York Staff Report, *An Introduction to the FRBNY Consumer Credit Panel*.

For 2017, our sample size was 11.25 million U.S. individuals. Because this panel is a five percent nationally representative sample, our sample represents approximately 225.08 million adult residents in the United States.

Population

For the U.S., state, and county population values needed to calculate the Included and Not Included indicators, we use adult population estimates provided by the U.S. Census Bureau's Population Estimates Program (PEP). Population estimates for New York City as a whole are calculated as the sum of the adult populations in the five New York City boroughs (Bronx, Brooklyn, Manhattan, Queens, and Staten Island). For zip code-level calculations of the 2017 INCLUDED and NOT INCLUDED measures, we use the adult population estimates from the 2012-2016 5-Year American Community Survey (ACS).

MICRO DATA MAPS AND ANALYTICS

Zip code values were sourced directly from the New York Fed CCP/Equifax credit records. Zip codes included in the maps are situated within New York City. The zip code maps exclude geographies with fewer than 50 observations in the CCP data as of 2017 Q4. As a result, we do not display values for six zip codes.[59]

When mapping the Community Credit indicators at the zip code level, we assign an interval value (i.e., a range of percentages) to each zip code instead of a point value. We do this for two reasons. First, the data may be less representative at the zip code level, especially in zip codes with smaller populations. Second, some of our CCP samples are small. Both reasons result in small geographies having larger amounts of noise and year-to-year variations. Hence, we provide interval, rather than point, values at the zip code level of aggregation.

To create the percentage breaks, or value bands for each indicator, we calculated each indicator for every zip code in the U.S. based on the fourth quarter of every year from 2005 to 2016. We then graphed the distributions for each indicator (omitting zip codes with fewer than 50 observations) and segmented each into six percentage breaks so that the share of zip codes in each percentage break is approximately comparable. The intention was to create value ranges that allow national comparisons of zip codes across the U.S. and benchmark performance across various time periods.

59 Excluded zip codes are 10020, 10119, 10169, 10278, 11371, and 11430.

COMMUNITY CREDIT INDICATORS

Calculation Notes

Credit Economy: The credit economy for any geography is estimated as 20 times the number of people with a credit score in the CCP for that geography.

Adult Population: Adults are defined as age 18 and above.

Revolving Credit: An individual in the credit economy is counted as holding a revolving credit product if he or she has a bankcard account that has a credit limit greater than $0 and/or a revolving HELOC account that has a credit limit greater than $0. We do not include store-specific credit cards because their use is limited to specific products and services offered by the respective stores.

Utilization Rate: The utilization rate for an individual is computed as the sum of all revolving account balances divided by the sum of credit limits for all revolving accounts.

Credit Score Status: Credit score is the Equifax Risk Score 3.0. It was developed by Equifax and its values range from 280 to 850. Individuals with higher scores are viewed as better credit risks than those with lower scores. We use score classifications of less than 660 as subprime, scores between 660 and 719 as near prime, and scores 720 and higher as prime. However, classifications vary in the industry and in practice.

Indicator Definitions

Credit Economy Included: CCP-based estimate of the number of individuals in the population with a credit file and credit score as of year-end (multiplied by 20) divided by the Census estimate of the population 18 or older for that year. The 2017 zip code-level estimates, however, use a denominator of the 2016 adult population estimate due to data unavailability.

Credit Economy Not Included: 100 percent minus the Included rate. Due to differences between CCP and Census data, this measure is bottom coded at zero percent.

Revolving Credit: Number of individuals with a revolving credit product, divided by the number of individuals in the credit economy.

Utilization Limits: Number of individuals with a revolving credit product and a utilization rate of 30 percent or less, divided by the number of individuals in the credit economy.

On-time Payers: Number of individuals in the credit economy who were current on all debt for the four quarters of the analyzed year, divided by the number of individuals in the credit economy.

Prime Credits: Number of individuals in the credit economy with an Equifax Risk Score of 720 or higher, divided by the number of individuals in the credit economy.

Subprime Credits: Number of individuals in the credit economy with an Equifax Risk Score below 660, divided by the number of individuals in the credit economy.

Credit Stress: For each individual in the credit economy, credit stress status is determined based on year-end data. We first determine whether the person was 60+ days past due on any account as of year-end. Then, using payment history on all accounts for each of the preceding four quarters, we categorize individuals based on the following three filters:

- Was the person 60+ days past due on any account as of year-end?
- Was the person 60+ days past due during any of the preceding four quarters?
- Was the person 60+ days past due during all preceding four quarters?

Using these filters, we classify each individual in the credit economy at year-end into one of the following five mutually exclusive credit stress categories:

- **Good History:** Individual was never 60+ days past due during any of the quarters analyzed.
- **Improved History:** Individual was not 60+ days past due as of year-end, but was 60+ days past due at some point during the preceding four quarters.
- **Declining/ Newly Delinquent History:** Individual was 60+ days past due as of year-end, but was not 60+ days past due during any of the four preceding quarters.
- **Struggling History:** Individual was 60+ days past due as of year-end, and was 60+ days past due during some, but not all, of the preceding four quarters.
- **Consistently Delinquent History:** Individual was 60+ days past due during each of the five quarters analyzed.

Good History	Improved History	Declining/Newly Delinquent History	Struggling History	Consistently Delinquent History
Current or only 30-59 days late	Improved from 60+ days late to current or less than 60 days late	Deteriorated from current or less than 59 days late to 60+ days late	Was 60+ days late for some, but not all, of the period	Was 60+ days late the entire period

NOTES ON CLASS BREAK RANGES FOR THE MAPS

For the sake of visual clarity, the class break ranges on the maps are displayed as whole integers. However, the underlying data are sorted and mapped using up to two decimal places (rounded up from six decimal places). So how do they correspond?

We used the following convention, which is best explained with an example. Assume the following class break ranges from the NOT INCLUDED maps:

Shading on the Maps							
Map Legend	≥15%	11%–14%	9%–10%	7%–8%	4%–6%	<4%	Unmapped
Corresponding Data Values for the Geography	≥15.00%	11.00– 14.99	9.00–10.99	7.00–8.99	4.00–6.99	<4.00%	

For example, a county with the value of 3.88 will be in the class labeled <4 percent. A county with the value of 4.22 percent will be in the class labeled 4 to 6 percent. A county with the value of 6.99 percent will also be in the class labeled 4 to 6 percent. However, a county with the value of 7.01 percent will be in the class labeled 7 to 8 percent.

Data and calculations are subject to future revisions as data are updated.

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