LONG ISLAND CREDIT PROFILE

2017

NASSAU AND SUFFOLK COUNTIES
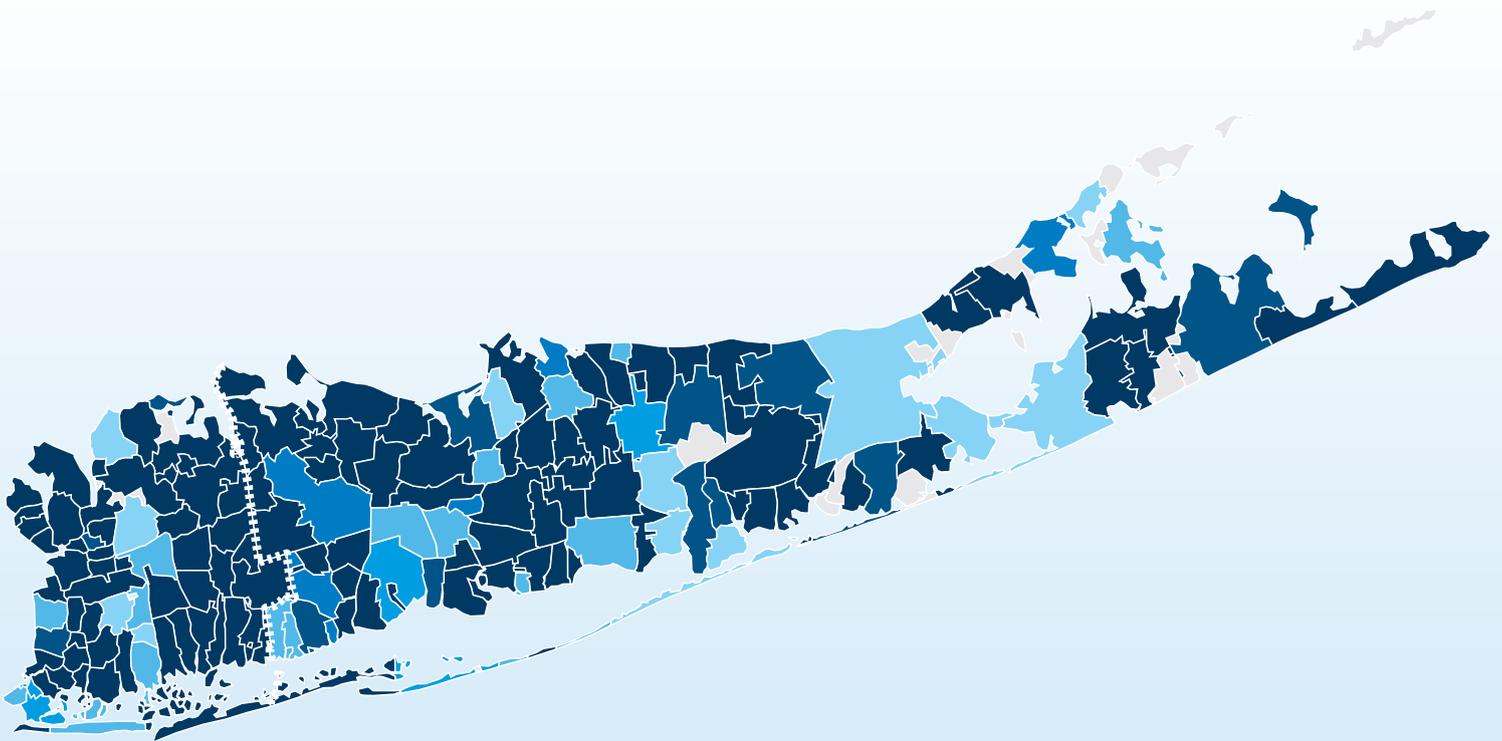
The views presented here are those of the authors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System.

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LONG ISLAND CREDIT PROFILE, 2017

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FOREWORD

For Long Island to thrive, it needs to embrace the economic potential and contributions of every single resident. As a report produced in partnership with PolicyLink outlined,[1] persistent segregation and racial disparities have cost the region billions. In fact, closing the racial wealth gap in 2014 would have led to a $24 billion boost to the local economy. But this economic growth requires intentional, data-driven solutions, ensuring that we help all people on Long Island get access to opportunities that can transform their lives and enable them to truly participate in the economy.

The Long Island Community Foundation has spent decades and invested millions of dollars supporting local nonprofit organizations addressing inequities that impede all Long Islanders from enjoying the same quality of life in our region. Together with the Urban League of Long Island, we have collaborated with Citi Community Development to bring together key local nonprofits and stakeholders for the last two years—examining how local leaders can help low- and moderate-income residents, particularly African Americans, realize greater economic success and thus expand economic growth for the Island as a whole.

Far too often, numbers mask the realities of many residents' financial lives. This new Federal Reserve Bank of New York Community Credit Profile shows that the overall credit metrics rank Long Island among the highest performing in the nation; yet a closer look reveals 18 communities that have some of the lowest credit indicators in the nation. This should indicate an opportunity—and a call to action—for us to work together.

How to best use this data? We need to find partners across all sectors to lead the effort so that all Long Islanders can competitively earn, save, borrow, and invest to enjoy the benefits of our Island's powerful economy. The research is a tool that local community groups, providers, and others can use to make the case for new strategies and solutions that will produce real and lasting change. If we succeed, not only will thousands of families benefit, but the added prosperity could retain residents and lift our entire region.

David M. Okorn
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[1]   http://www.policylink.org/sites/default/files/LongIslandProfile_final.pdf

FOREWORD

As America's "first suburb," Long Island's complex evolution echoes our nation's history and growth. While the region may seem prosperous at first glance, below the surface it quickly becomes clear that zip codes too often determine residents' access to resources and opportunities. Economic security on Long Island has long been uneven in its reach, leaving many communities, particularly communities of color and immigrants, disconnected and unable to fully contribute to, or benefit from the region's economy.

Long Island is not alone. With Federal Reserve research showing that 44% of U.S. households could not cover a $400 financial emergency,[2] it is time to acknowledge that too many families are walking a financial tightrope.

The new Federal Reserve Bank of New York report is a first-of-its-kind community credit profile about Long Island, providing vital research insights that will help stakeholders implement solutions that are responsive to credit needs and opportunities. This research offers much-needed insights on the credit needs, strengths and stresses of Long Island communities.

As a financial institution, we recognize that research is essential in revealing the true financial realities of our communities. Data can be a powerful tool to converge the interests, expertise and resources of local governments, community organizations and private institutions to create solutions that result in more inclusive and resilient communities.

I thank the Federal Reserve for this groundbreaking work and encourage readers to explore how this information can support new local collaborations.

On Long Island and across the country, credit impacts the economic security and stability of families and their wealth. Research and collaboration like this move us forward on the path to helping build financial resilience for all residents—regardless of their zip code.

Natalie Abatemarco
Managing Director, Citi Community Development and Inclusive Finance

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2   https://www.federalreserve.gov/publications/files/2017-report-economic-well-being-us-households-201805.pdf

ACKNOWLEDGMENTS

PREFACE

In 2014, the Federal Reserve Bank of New York released *Community Credit: A New Perspective on America's Communities*.[3] 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. While the Community Credit data provided valuable information for broad-brush benchmarking and identifying areas of greatest need, the data were too blunt for policy implementation and evaluation by communities with active revitalization efforts under way.

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 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. Subsequent feedback was so positive that we were asked to produce similar products for other communities.

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.

Kausar Hamdani, Ph.D.
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3   http://www.nyfed.org/communitycredit

OVERVIEW

TAKEAWAYS

Access to credit is a key contributor to financial security and economic well-being for households and communities alike. This report presents detailed credit analytics for Long Island as a whole and for Nassau and Suffolk counties as distinct places of interest. Viewed together, the analytics offer a rich picture of local credit conditions over the past decade.

Long Island's two counties, Nassau and Suffolk, rank among the highest in the nation by various measures of credit access. In general, Nassau County historically ranks higher than Suffolk County by a few percentage points, regardless of the indicator type. The data show that this pattern of relatively strong performance has persisted over the last dozen years.

However, a less optimistic pattern emerges through the use of micro-data analytics, where neighborhoods are defined by zip codes. The micro-data analytics show experiences across neighborhoods vary considerably, with some zip codes ranked among the lowest in the nation by certain Community Credit indicators. Moreover, this pattern of distress has persisted over time. Our report highlights where credit needs are most extreme and the types of issues that may exist.

We hope readers of this report and users of these analytics will enrich their understanding of conditions in the Long Island region and the diverse needs of its neighborhoods, especially its underserved neighborhoods. This understanding can help civic conversations focus on overall development strategies that are based on the needs of the whole. Resources can be allocated among neighborhoods where the needs are most dire and persistent, and community programs can be aligned to achieve the highest social return. By providing this information, we hope the region will move forward more confidently on a path that promotes prosperity for all.

Long Island Regional Analytics

Credit inclusion on Long Island and its two counties, Nassau and Suffolk, has historically been high.

- Data indicate that the percentage of the adult population in the credit economy (meaning those that have a credit file and a score with a major credit bureau) has fluctuated narrowly between 94.9% and 96.7% in the 2005-17 period.

- As of the fourth quarter of 2017, 96.7% of Long Island's adult population was in the credit economy. By this broadest measure of access to credit, Long Island ranks above the averages for the U.S. (89.3%) and New York State (85.4%). The two counties, Nassau at 96.8% and Suffolk at 96.5%, also rank among the highest in the nation.

- The prevalence of revolving credit is exceptionally strong in the region. The share of the Long Island credit economy with access to revolving credit is 82.9%, compared to 73.1% for the U.S. and 79.8% for New York State. However, Nassau at 83.9% and Suffolk at 81.9% do not rank quite as high as counties that local stakeholders view as peers, such as Fairfield County, CT (94.0%) and Westchester County, NY (90.0%).

- The financial crisis of 2007-08 depressed the use of revolving credit products. On Long Island, the share declined from 85.5% in the fourth quarter of 2007 to 80.9% in the fourth quarter of 2010. Meanwhile, larger credit card balances became more prevalent, thereby lowering borrowing capacity in the region. The share of the credit economy with strong borrowing capacity through bank credit cards remains slightly below pre-financial crisis levels.

- While debt management remains stronger than the U.S. average, there was an uptick from 2016 in the share of the credit economy that is delinquent on at least one credit obligation for each of the previous five quarters. Despite this deterioration, consistently delinquent borrowers comprised 6.2% of Long Island's credit economy in the fourth quarter of 2017, which is lower than the U.S. share of 8.6% and New York State's 7.2%. This share is also below Long Island's high value of 8.2%, from the fourth quarter of 2011.

Micro-data Analytics

The metrics for Long Island are generally positive, ranking the region among the highest-performing in the nation. A similar pattern holds at the county level, though Suffolk consistently ranks a few percentage points lower than Nassau. Even so, both counties rank among the strongest in the nation.

However, a different pattern emerges at the zip code level. The micro-data analytics show that credit conditions, experiences, and needs vary across neighborhoods, with high-need neighborhoods frequently located adjacent to high-performing ones.

Using zip codes as a working definition for neighborhoods in the empirical work, we identify 18 (out of a total of 174) that are among the lowest in the U.S. when measured by one or more of the Community Credit indicators.

To further assist in interpreting the results, we group the Community Credit indicators thematically to gain insights as to conditions on the ground. We ask whether there is a credit inclusion problem, whether there are credit capacity issues, and whether there are debt management issues in the community.

i. **Access to Mainstream Credit**—As described previously, the percentage of adults that have a credit file and a credit score is a clear way to dimension the relative size of the local credit economy. While well-defined and familiar, this measure captures institutional access to credit rather than access to credit for opportunity, which is the ability to borrow when in need or to seize an economic opportunity. For an additional lens, we also use the percentage of the credit economy that has access to revolving credit, since bank credit cards are one of the most convenient ways to obtain funding by choice.[4]

ii. **Credit Capacity**—Institutional access to credit (that is, being in the credit economy) does not ensure that an individual will obtain funding at choice. Even those with a bank credit card must have capacity on their credit lines in order to borrow at will. A high credit score also makes credit available more conveniently and at favorable terms. We therefore examine three Community Credit indicators—utilization, prime, and subprime credit scores[5]—to gauge credit capacity for the community.

iii. **Debt Management Competency**—What percentage of the credit economy has achieved good debt management outcomes? Credit literacy and good debt management skills enhance individuals' access to credit for community well-being. To gauge debt management competency, we examine one year of payment history as an indicator of consistent debt practices. A measure of good debt outcomes is the percentage of the credit economy that consists of individuals who are current on all their debt obligations for the past year. Relaxing the standard a little, we also examine the percentage of individuals who are not seriously delinquent on any debt

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4   In addition to ease of use and convenience, credit cards have other benefits: they help build credit; allow individuals to earn cash-back or travel rewards for every dollar spent; offer valuable consumer protections such as extended warranties, zero fraud liability, price protection, and guaranteed returns; and make money management easier through mobile banking options. However, there are other factors to consider: interest rates may be higher than for other financial products from mainstream lenders; there can be late fees and other charges; and experience has shown that credit card usage can easily lead to imprudent indebtedness.

5   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.

obligations during the previous five quarters. Then, to measure credit distress directly, we examine the percentage of individuals who were consistently delinquent for 60 days or more on some debt obligation for each of the past five quarters.
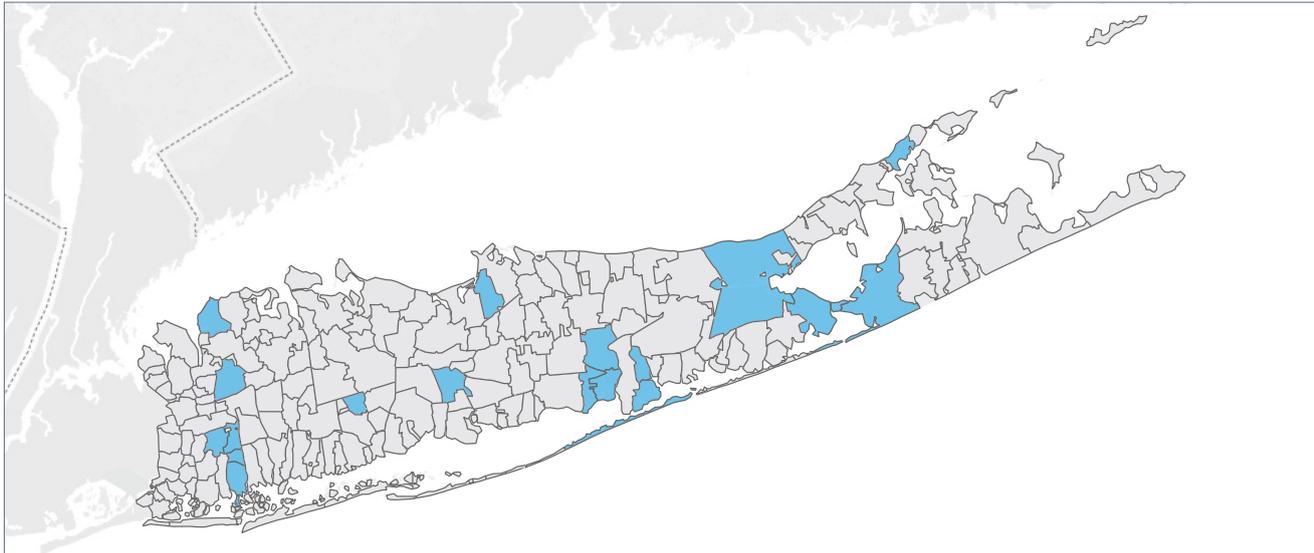
The map above and the table at the end of this section show the 18 Long Island zip codes (also identified by a reference community, be it a city, town, village, hamlet, or other status) that rank among the lowest in the nation on at least one indicator. We categorize them into four groups and suggest the following interpretation of the results. However, we note that these data are just the starting point for deeper conversations among stakeholders. Local knowledge and expertise as to local conditions are essential to identify when a flagged community has a genuine need or the flag is an artifact of the data. The four groups and suggested interpretations are:

- **Group 1: Nine zip codes—11542 (Glen Cove), 11568 (Old Westbury), 11719 (Brookhaven), 11790 (Stony Brook), 11901 (Riverhead), 11944 (Greenport), 11946 (Hampton Bays), 11968 (Southampton), and 11980 (Yaphank)—are flagged by the indicators as having an access-to-credit problem.** They are flagged by the indicators as having the smallest credit economies among all zip codes in the nation, but are not ranked among the lowest by the credit capacity or debt management indicators. This combination suggests that the local credit economy, while relatively small, is managing debt prudently. However, local intelligence is needed before firm conclusions can be drawn because various conditions may manifest in a similar pattern.

  For example, local stakeholders identified Glen Cove as a zip code where high and low wealth areas adjoin; for such an area, a nuanced policy for the in-need residents may be appropriate. In contrast, Old Westbury and Stony Brook have a large university presence, and students may result in understating inclusion because their credit files are identified by the home, rather than their school, address.[6] Or, residents may use alternative or nontraditional credit sources that do not report activity to the major credit bureaus. Southampton, often thought of as a resort area for the very affluent, may indeed belong in this group since many of the permanent year-round residents are not wealthy; indeed, some are at or below the poverty line. Similarly, both Riverhead and Greenport have a strong agriculture presence, which may affect how the inclusion information should be

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6 This problem presents itself in areas where a large portion of the population are college students. Many students report their residence as a different address from their university address, resulting in fewer credit files than population estimates may imply. They may have credit cards linked to a parent's account. The young also tend to make up a large portion of the credit invisibles. 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/.

interpreted. In other words, the data are a useful starting point, but local conditions must be carefully incorporated before policy actions to broaden access to credit, whether through outreach or programs, are undertaken. Two of the nine zip codes are in Nassau County, and seven are in Suffolk County.

▪ **Group 2: Four zip codes—11520 (Freeport), 11553 (Uniondale), 11722 (Central Islip), and 11950 (Mastic)— are flagged by the indicators as having debt management problems.** Like Group 1, the credit needs of these neighborhoods also show a specific pattern. Residents in these neighborhoods have institutional access to credit by being in the credit economy and using revolving credit in high numbers, as elsewhere on Long Island. But, they have more debt distress than other parts of the Island. These four zip codes have low shares of individuals with strong payment histories; that is, a relatively small share was current on all their debt obligations for every quarter of 2017 (on-time payers). These zip codes also have high shares of individuals with consistently delinquent payment histories; that is, they were 60 or more days overdue on any debt obligation in the fourth quarter of 2017 and in each of the previous four quarters.

These neighborhoods may benefit from strategies and interventions that prioritize relieving debt distress. Residents might be struggling due to job loss or other family emergency, or the need to cope with irregular flows of income. Financial literacy and debt management assistance, among other options, might be considered. Two of these zip codes are in Nassau County, and two are in Suffolk County.

▪ **Group 3: Two zip codes—11713 (Bellport) and 11798 (Wyandanch)—are flagged by the indicators as having debt management problems and also credit capacity issues, or the ability to obtain funding easily and at favorable terms.** They do not have extremely low credit inclusion like the first group of zip codes and are similar to the second group in having debt distress. In addition, many residents in these two Suffolk County zip codes have utilized their credit card limits beyond the 30% threshold. Since the prevalence of revolving credit products is high across Long Island, high credit utilization will constrain the capacity to borrow for many in the credit economy. Credit capacity may also be depressed, given the low concentration of individuals with high-value or prime credit scores, and high concentrations of low-value or subprime credit scores.[7]

Zip code 11798 (Wyandanch) has both high credit utilization and low credit score issues, which is not surprising since high utilization adversely affects credit scores.[8] In contrast, zip code 11713 (Bellport) has high credit utilization but not low credit score concerns. Such differences may suggest more focused policy priorities and responses: While both zip codes may benefit from credit education, zip code 11798 (Wyandanch) may benefit from credit remediation and credit-building programs as well, in order to raise credit quality and build credit capacity.

▪ **Group 4: Three zip codes—11550 (Hempstead), 11575 (Roosevelt), and 11951 (Mastic Beach)—are flagged by the indicators as neighborhoods with credit access, credit capacity, and debt management issues.** While zip code 11575 (Roosevelt) has all three categories flagged, the other two zip codes (Hempstead and Mastic Beach) are flagged only by the high credit utilization indicator and not the risk score indicators. This group of zip codes may benefit from a broad spectrum of policy strategies and interventions. Two of these zip codes are in Nassau County, and one is in Suffolk County.

Lastly, it is noteworthy that while county-level data rank Suffolk below Nassau by most of the Community Credit indicators, at the micro-analytics level two zip codes in Nassau and one in Suffolk are in the most-in-need group. Of course, population size, among other factors, is relevant for policy considerations. Even so, the value of micro-analytics to shed light that enriches other metrics is clear.

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7   The credit score here is Equifax Risk Score® 3.0, which ranges in values from 280 to 850. 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.

8   Credit scoring formulas vary but generally take utilization into account. It is commonly recommended to keep one's credit utilization below 30%.

LONG ISLAND ZIP CODES RANKED IN THE LOWEST VALUE BAND

Zip code	Community	County	Access to Mainstream Credit		Credit Capacity			Debt Management		
			Included	Revolving Credit	Utilization	Prime Credits	Subprime Credits	On-time Payers	Good Payment History	Consistently Delinquent Payment History
11542	Glen Cove	Nassau	✓							
11568	Old Westbury	Nassau	✓							
11719	Brookhaven	Suffolk	✓							
11790	Stony Brook	Suffolk	✓							
11901	Riverhead	Suffolk	✓							
11944	Greenport	Suffolk	✓							
11946	Hampton Bays	Suffolk	✓							
11968	Southampton	Suffolk	✓							
11980	Yaphank	Suffolk	✓							
11520	Freeport	Nassau								✓
11553	Uniondale	Nassau						✓	✓	✓
11722	Central Islip	Suffolk						✓	✓	✓
11950	Mastic	Suffolk						✓	✓	✓
11713	Bellport	Suffolk			✓			✓	✓	✓
11798	Wyandanch	Suffolk			✓	✓	✓	✓	✓	✓
11550	Hempstead	Nassau	✓		✓			✓	✓	✓
11575	Roosevelt	Nassau	✓		✓	✓	✓	✓	✓	✓
11951	Mastic Beach	Suffolk	✓		✓			✓	✓	✓
Lowest value band			<85%	<50%	<30%	<30%	≥50%	<70%	<74%	≥11%

COMMUNITY CREDIT INDICATORS SUMMARY TABLE
Percent, as of 2017 Q4

	Indicator	Definition	U.S.	NYS	Long Island	Nassau County	Suffolk County
Credit Economy	Included	% of adult population with credit score	89.3	85.4	96.7	96.8	96.5
	Not Included	% of adult population without a credit score	10.7	14.6	3.3	3.2	3.5
Available Credit	Revolving Credit	% of credit economy with revolving credit products	73.1	79.8	82.9	83.9	81.9
	Utilization ≤30%	% of credit economy with 70+% capacity on revolving credit products	40.1	44.8	47.7	50.4	45.2
Credit Quality	On-time Payers	% of credit economy current on all credit obligations for the most recent 4 quarters	79.2	80.8	82.5	83.8	81.4
	Prime Credits	% of credit economy with Equifax Credit Risk Score ≥720	51.9	55.8	60.7	63.7	58.0
	Subprime Credits	% of credit economy with Equifax Credit Risk Score <660	31.2	26.8	22.2	20.1	24.1
Credit Stress	Good History	% of credit economy; based on most recent 5 quarters of payment history	81.2	82.9	85.0	86.3	83.9
	Improved History		5.2	5.0	4.8	4.4	5.1
	Declining History		1.3	1.3	1.1	1.0	1.2
	Struggling History		3.6	3.5	2.9	2.6	3.2
	Consistently Delinquent History		8.6	7.2	6.2	5.7	6.6

COMMUNITY CREDIT AND INCLUSIVE GROWTH

INTRODUCTION

As cities[9] 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[10]—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.[11]

Fortunately, the growing availability of "big data"[12] 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[13] 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.[14] 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.[15] 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.[16] 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.

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9   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.

10   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.

11   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/.

12   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.'

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

14   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.

15   "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.

16   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.[17] 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.[18] Unfortunately, micro-level metrics may not always be available to the actual problem solvers in communities[19] 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.[20] 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,[21] 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.

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17 IBM. "Rochester USA Smarter Cities Challenge Report." p. 3 and pp. 38–42.

18 Many examples exist including PolicyMap.com, Scorecard Prosperity Now, and the Federal Reserve Bank of Chicago's Peer Cities Identification Tool.

19 The IBM report cited above mentions data gaps.

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

21 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.[22]

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.[23] 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.[24] 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.[25]

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.

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22 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.

23 See About the Data section for details.

24 "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/.

25 Center for Financial Services Innovation, *Understanding and Improving Consumer Financial Health in America*. Available at https://www.metlife.com/assets/cao/foundation/understanding-and-improving-consumer-financial-health-in-america.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.[26] 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.[27] 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.[28] 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.[29] Communities are frequently referenced as low, moderate, middle, or high income for analytical purposes.[30] Researchers have shown that where people live affects their future earning power and well-being.[31] 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.[32] 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.

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

27 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.

28 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.'

29 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.

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

31 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.

32 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,[33] experiencing uneven income flows while having limited financial buffers. Some families are often just one emergency away from financial distress.[34] 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[35] or alternative[36] channels instead of using mainstream financial products.[37] 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.

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33 "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/.

34 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.

35 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.

36 Payday lenders and pawnshops are examples of this channel.

37 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[38]

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. There are two groups of indicators: Inclusion and Credit Stress.

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                        Community Credit Indicators
                    ┌───────────────┴───────────────┐
              A. Inclusion                      B. Credit Stress
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Community Credit Indicators

A. Inclusion

Credit Economy (have a credit file and a credit score)	Convenient Credit (have credit products and sufficient borrowing capacity)	Credit Quality (have a payment history and credit score to obtain timely and affordable credit)
Included	Revolving Credit	On-time Payers
Not Included	Utilization	Prime Credits
		Subprime Credits

B. Credit Stress

- Good Payment History
- Improving Payment History
- Declining Payment History
- Struggling Payment History
- Consistently Delinquent Payment History

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

Inclusion

The first group of indicators, *Inclusion*, gauges a community's "access to credit" by examining its residents' ability to obtain credit when needed or as desired. Three pairs of credit behaviors that contribute to credit access are calculated as indicators, each pair focusing on a separate aspect of creditworthiness. The three groups are:

Credit Economy—What share of a community's residents are attached to the mainstream credit infrastructure, a first step to access credit from traditional financial sources?

i.   **Included**—the percent of residents (18+ years of age) with a credit file and a credit score at a major credit bureau.

ii. **Not Included**—the percent of adult residents who do not have a credit file and credit score at a major credit bureau.

Convenient Credit—What share of the credit economy is able to access credit as needed and without having to apply or reapply and requalify for a loan?

i.   **Revolving Credit**—the percent of the credit economy with a revolving credit product and a non-zero credit limit.

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

Credit Quality—What percent of the credit economy consists of individuals with a credit history and credit score that allows for timely and affordable loan approvals?

i.   **On-time Payers**—the percent of the credit economy that was current on all credit obligations for the past year.

ii. **Prime Credits**—the percent of the credit economy that has a "prime" credit score.[39]

Credit Stress

A separate group of indicators 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 five 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?

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39   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**—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 every quarter of the past year.

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

| Payment Status as of Year-end	Was the person 60+ days past due on any credit obligation during <u>any</u> of the preceding four quarters? Was the person 60+ days past due on any credit obligation during <u>each</u> of the preceding four quarters?		
	Current	30-59 Days Late	60+ Days Late
Current	On-time Payers		Improved History
30-59 Days Late	Good History		
60+ Days Late	Declining History		Struggling History / Consistently Delinquent History

Credit Stress based on Five Quarters of Payment History of Individuals

Good History	Improved History	Declining 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

In our online data interactive (www.nyfed.org/communitycredit), there are two levels of data mapping: the U.S. with state values and county values. In this report, we also provide maps at the zip code level for Long Island.

U.S. and State Level
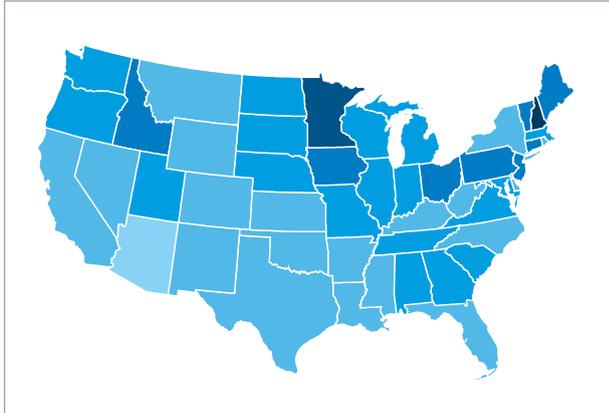

County Level
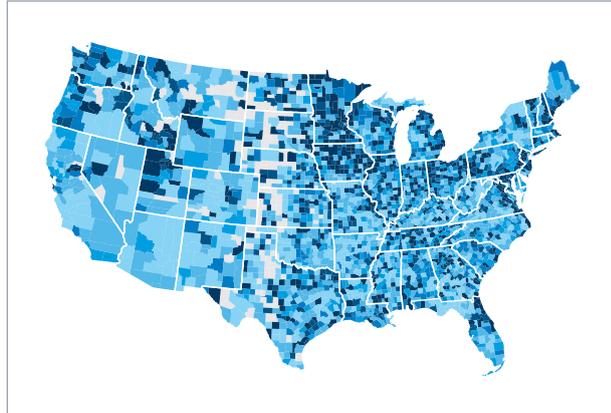
City and Zip Code Level Data
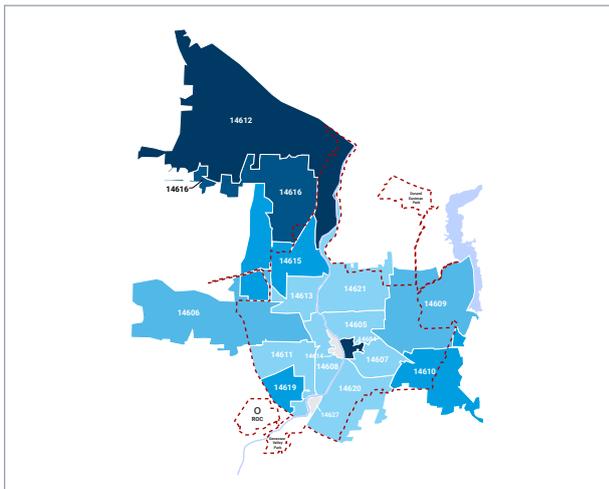
To illustrate differences at the neighborhood level, the maps present values for the zip codes within Long Island, except where too few observations are available (see About the Data for details).

MICRO ANALYTICS AND MAPS

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.

96.7% of Long Island residents, or about 2.2 million individuals, were in the credit economy in 2017 Q4. This level is higher than 89.3% for the U.S. and 85.4% for New York State. Indeed, the region's percentage is among the highest in the nation.

Long Island Credit Economy: Included, 2006–2017

Legend: 18+ Population — Credit Economy — Credit Economy: Included (%, Right-Hand Axis)
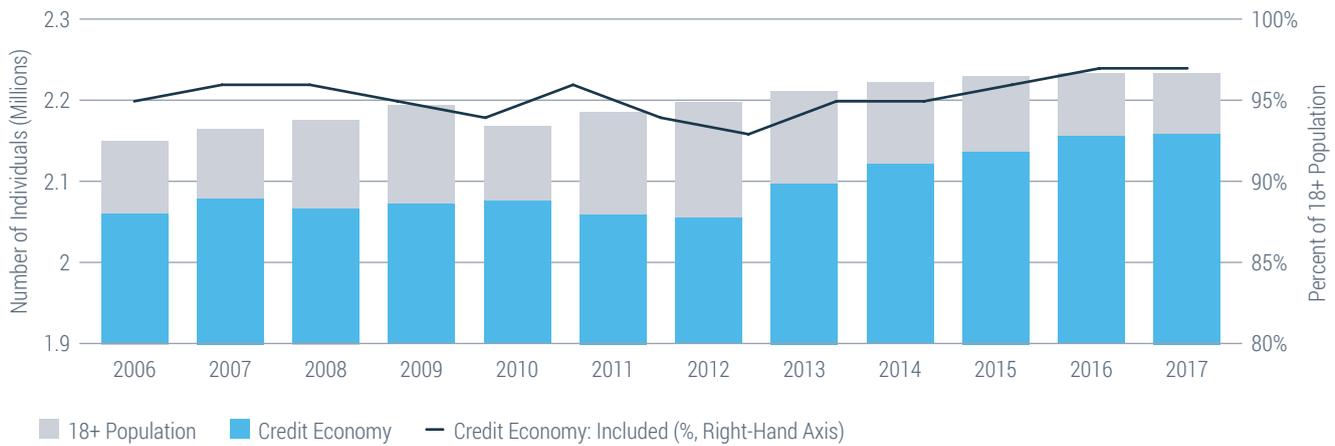
The high level of credit access has generally persisted over the past decade, declining only a little in the post-financial crisis years (2007–2012). The region's credit economy has kept pace with population growth.[40] Another way to examine regional growth is with an index of annual values normalized to a base year.[41] In the following chart, we normalize 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.

40 The high participation value of 95.8% in 2010 must be taken with caution since 2010 was a census year when population estimates were adjusted. Smaller geographies tend to have larger margins of error in population counts, so they may look more erratic at the county and zip code levels.

41 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

The index of the INCLUDED indicator illustrates the trends noted previously. The Long Island credit economy shrank post-2007 Q4, though less severely than the U.S. and New York State, and has now exceeded its 2007 Q4 relative size. The chart shows the recovery path by year—an early decline through 2012, similar to the nation, followed by a steady recovery. Not only is the region's INCLUDED value higher than for the nation and New York state, but its recovery path has also shown more local strength.

Index of Included Indicator
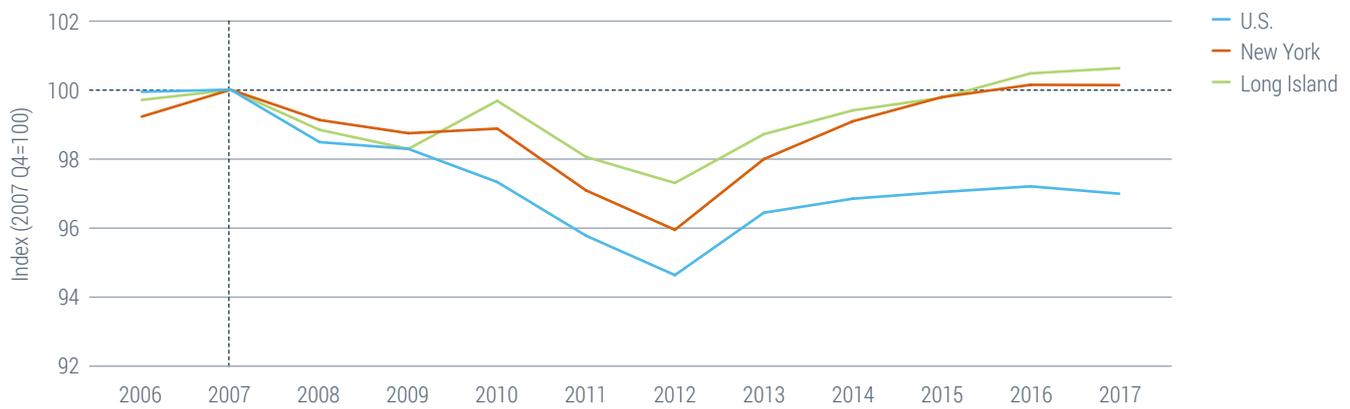
Nassau and Suffolk Counties

Examining the region by county, the following chart shows inclusion in Nassau County is consistently higher than in Suffolk County, though only by about one percentage point. Even so, both counties have high values compared to the rest of the country.

Nassau and Suffolk County Credit Economy: Included, 2006–2017
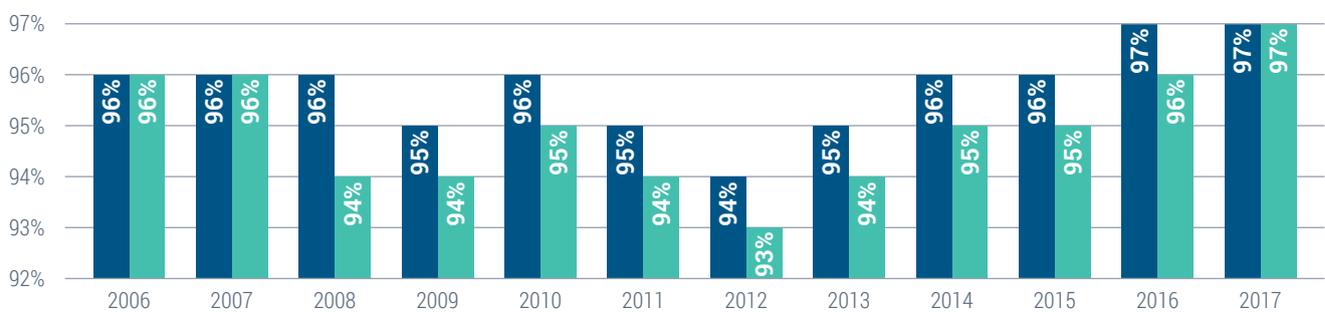
Data Source: FRBNY Consumer Credit Panel / Equifax

The index of the INCLUDED indicator shows both counties have recovered to, and exceeded, their 2007 Q4 levels. Their recovery paths have also been stronger than those of other regions that local stakeholders identified as their peer communities.

Index of Included Indicator
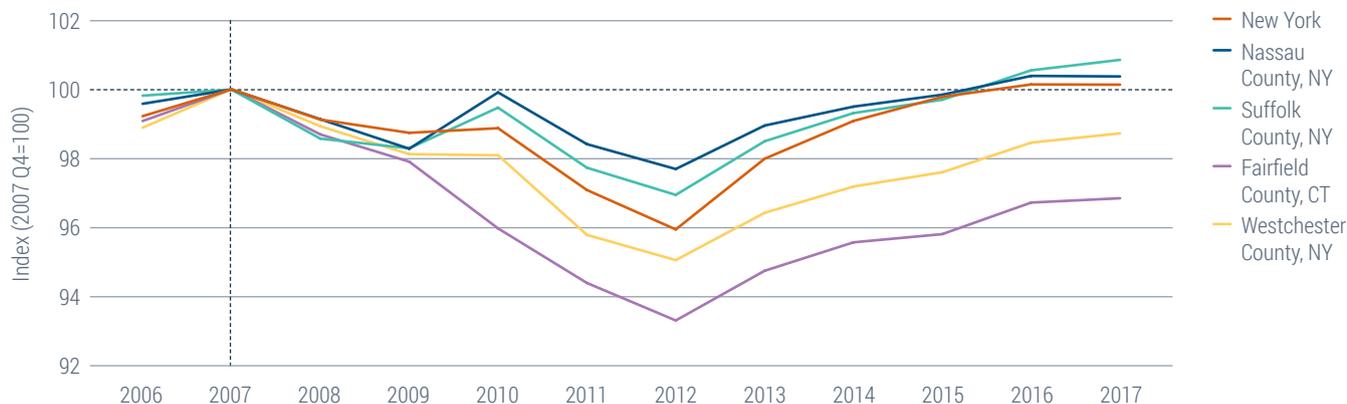
Micro Data Analytics and Map

Despite the overall positive metrics for Long Island and its counties, the micro data map illustrates the variation in conditions that exist across the region's neighborhoods. At the zip code level of aggregation, there are clusters of zip codes where credit inclusion is among the lowest in the nation (<85%). This pattern is discussed in the next section in terms of the NOT INCLUDED indicator.

Long Island Map: Included
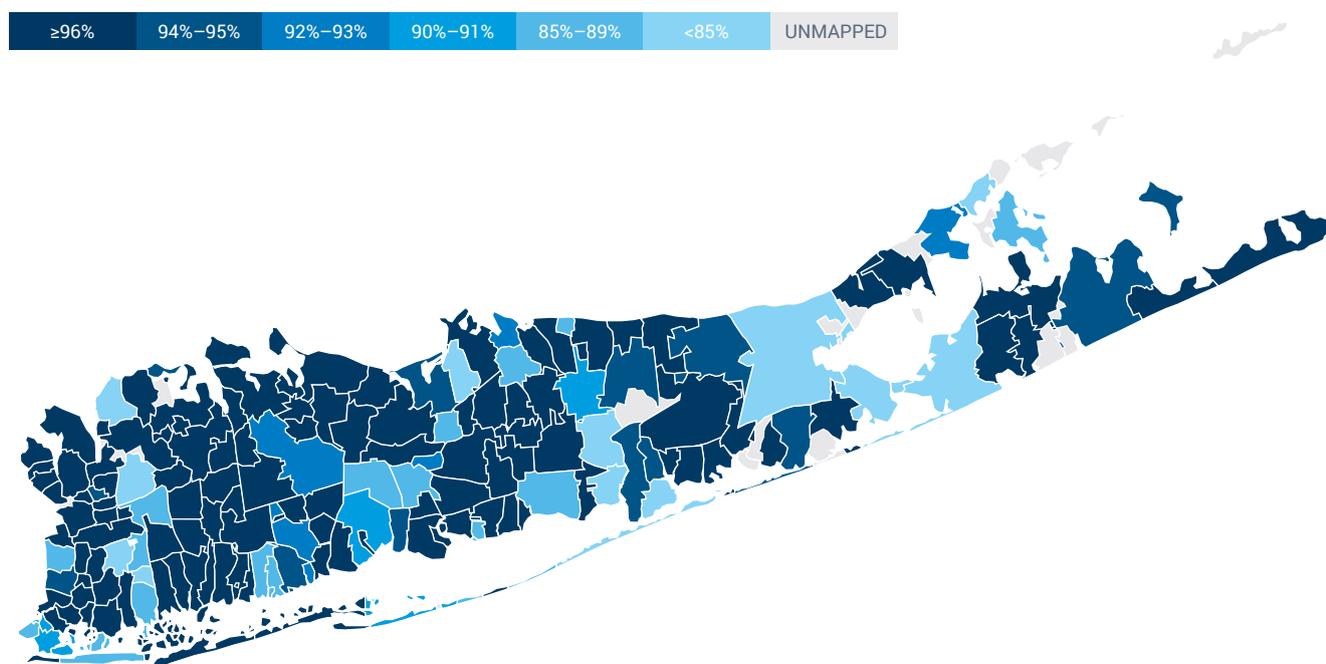
Data Source: FRBNY Consumer Credit Panel / Equifax

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."[42] However, these persons may access credit from informal or alternative credit channels not captured by our indicators.

3.3%, or about 74,800, of Long Island's adult residents were not a part of the credit economy in 2017 Q4. This share is lower than for the U.S. at 10.7%, and New York State at 14.6%.

As noted previously, since 2012, the share of Long Island residents not included in the credit economy has declined, which is similar to the national pattern.

Long Island Credit Economy: Not Included, 2006–2017
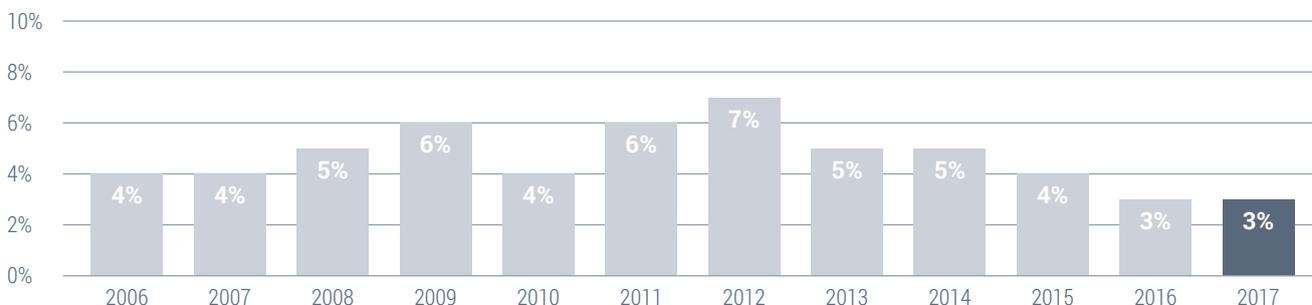
The index of the NOT INCLUDED indicator shows this progress most strikingly. While inclusion deteriorated from 2007 through 2012, consistent recovery has manifested since then.[43]

Index of Not Included Indicator
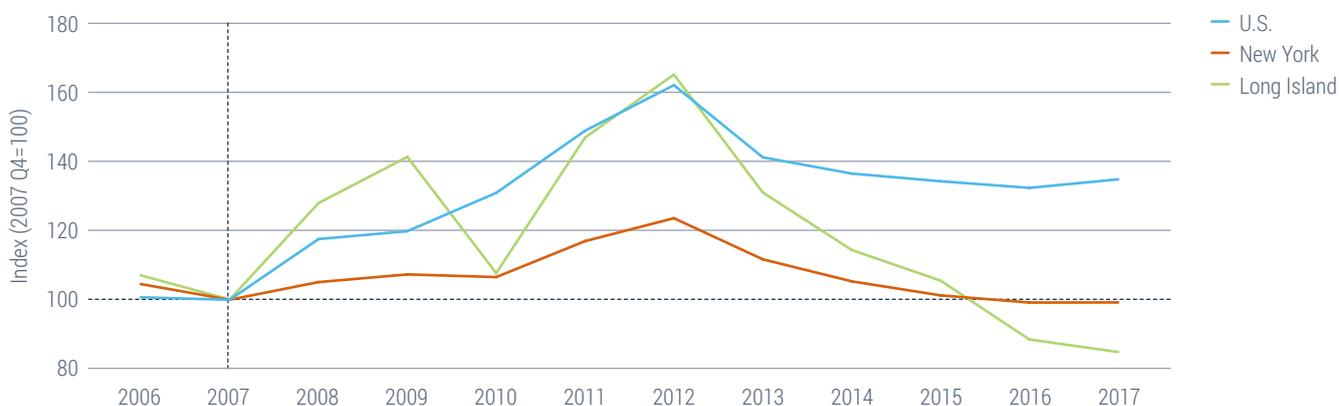
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42 See the Consumer Financial Protection Bureau's report, "CFPB data point: Becoming credit visible," 2017.
    https://www.consumerfinance.gov/data-research/research-reports/cfpb-data-point-becoming-credit-visible/.

43 Recall the previous footnote regarding Census years and the possible impact on data.

Nassau and Suffolk Counties

Examining the region by county, the following chart shows a consistently smaller share of NOT INCLUDED individuals in Nassau County than in Suffolk County, though the difference is small. In 2017 Q4, the value was 3.2% for Nassau and 3.5% for Suffolk.

Nassau and Suffolk County Credit Economy: Not Included, 2006–2017
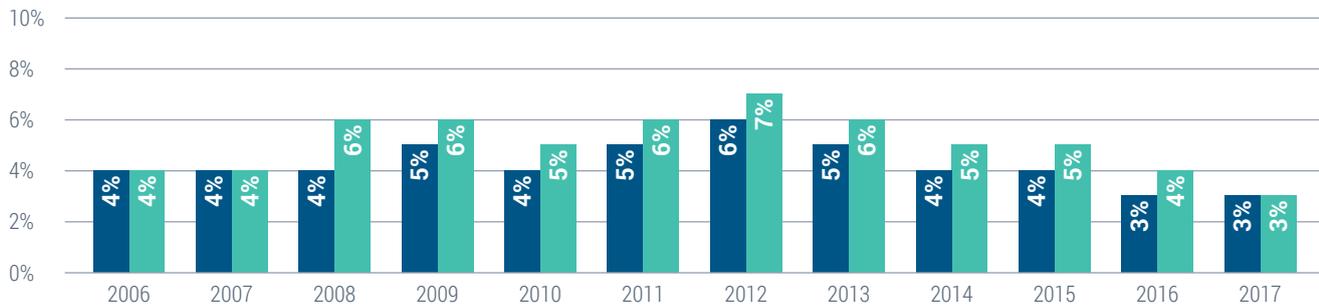
The index of the NOT INCLUDED indicator shows both counties have recovered and are below their 2007 Q4 levels. Their recovery paths have also been stronger than those of other regions that local stakeholders identified as their peer communities.

Index of Not Included Indicator
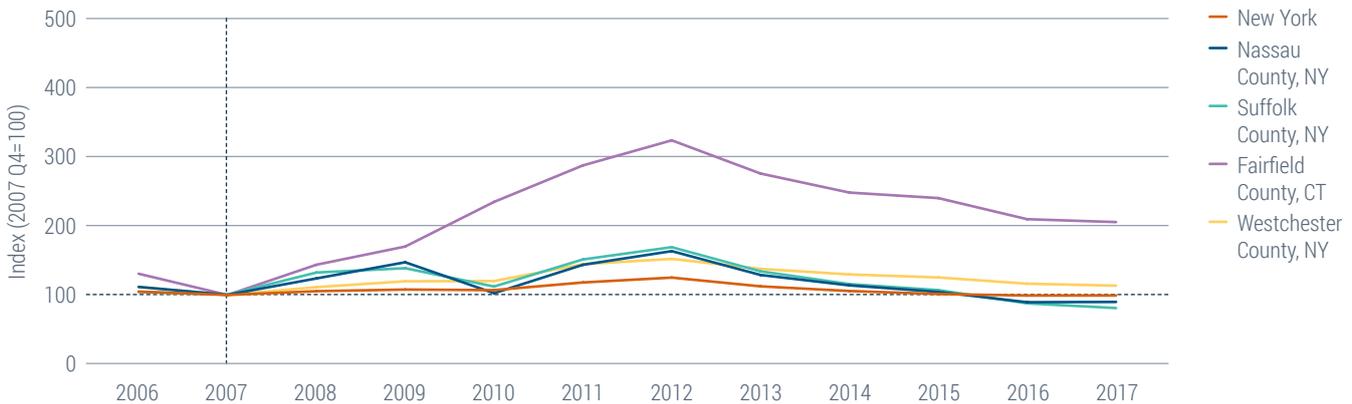
Micro Data Analytics and Map

The micro data map of Long Island illustrates that despite the positive results for the region as a whole and for each county, there are zip codes that have among the lowest levels of credit inclusion in the nation. The lowest-ranked zip codes, where the share of the NOT INCLUDED individuals equals or exceeds 15% of the adult population, are shown by the darkest brown sections on the map.[44]

In Nassau County, the lowest ranked zip codes are 11542 (Glen Cove), 11550 (Hempstead), 11568 (Old Westbury), and 11575 (Roosevelt).

In Suffolk County, the lowest ranked zip codes are 11719 (Brookhaven), 11790 (Stony Brook), 11901 (Riverhead), 11944 (Greenport), 11946 (Hampton Bays), 11951 (Mastic Beach), 11968 (Southampton), and 11980 (Yaphank).

Long Island Map: Not Included

| ≥15% | 11%–14% | 9%–10% | 7%–8% | 4%–6% | <4% | UNMAPPED |

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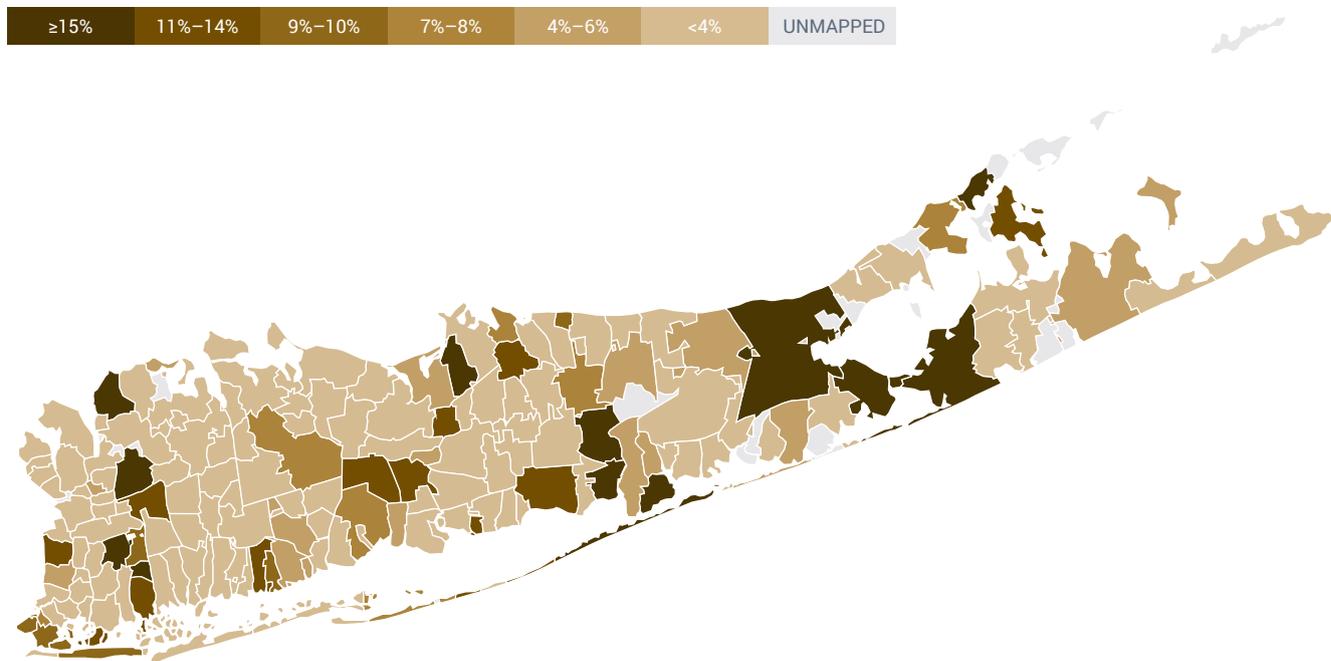
44   In other words, we examined the distribution of indicator values for all U.S. zip codes from 2005 to 2016 to determine the six ranges presented for the various micro-data analytics maps.

CONVENIENT CREDIT / **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.

82.9% of Long Island's credit economy had revolving credit in 2017 Q4, compared with 73.1% for the U.S. and 79.8% for New York State. This value is among the highest in the nation. Long Island's share declined from a high of 85.5% in 2007 and hovered around 81% during most of the past decade. However, since 2014, there has been consistent improvement.

**Long Island Credit Economy: Revolving Credit, 2006–2017**
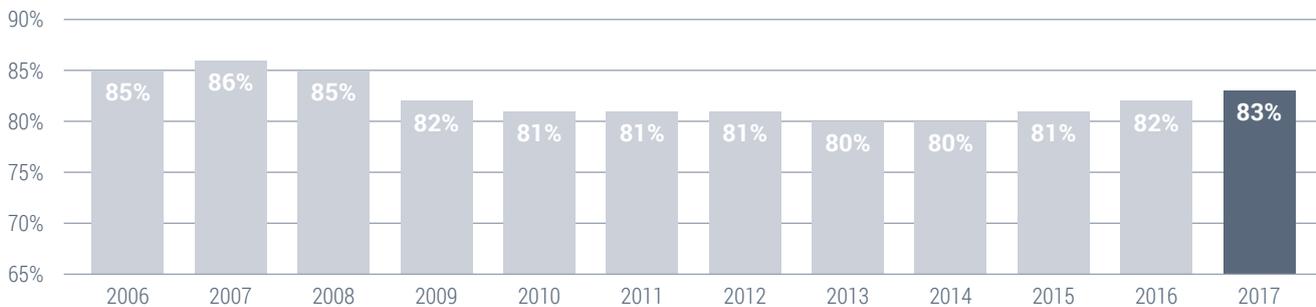
The index of the REVOLVING CREDIT indicator shows Long Island's access to revolving credit remains below its 2007 Q4 level. Post-crisis, revolving credit access deteriorated and remained relatively low for several years. Although consistent with the national pattern, the decline was less severe for Long Island than that for the U.S. as a whole and for New York State. The turnaround, which started in 2014 (as noted in the previous bar chart), is also clearly visible in the following chart.

Index of Revolving Credit Indicator
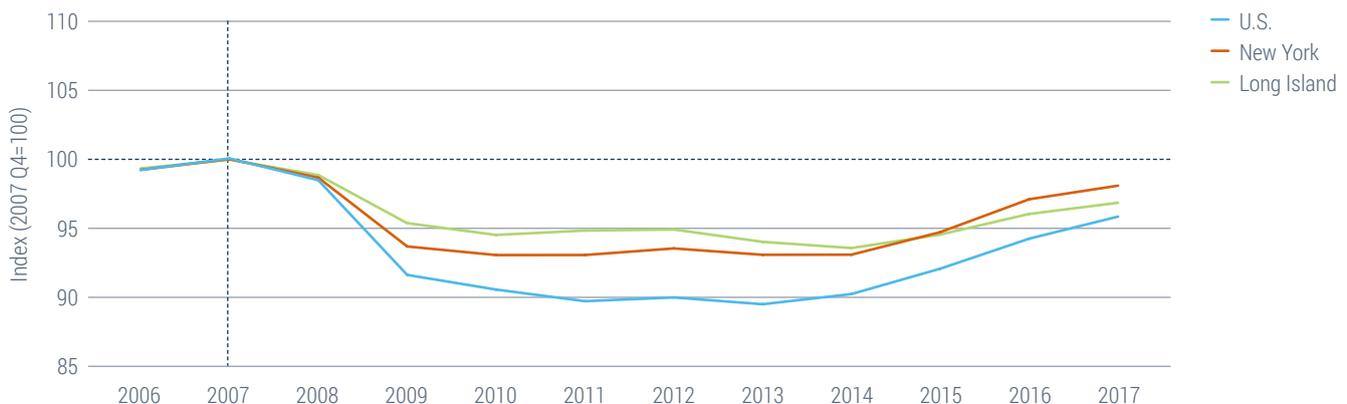
Data Source: FRBNY Consumer Credit Panel / Equifax

Nassau and Suffolk Counties

Examining the region by county, the following data show that the prevalence of revolving credit in Nassau County is higher than in Suffolk County, and a difference of about one to two percentage points has persisted over the past decade. Even so, the values for both counties are among the highest in the nation.

Nassau and Suffolk County Credit Economy: Revolving Credit, 2006–2017
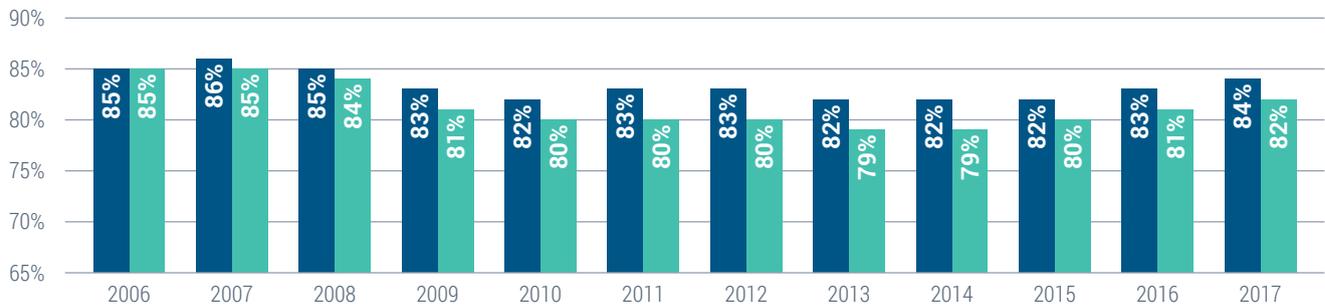
The index of the REVOLVING CREDIT indicator shows both counties remain below their 2007 Q4 levels. This shift in behavior is similar to other regions that local stakeholders view as their peers.

Index of Revolving Credit Indicator
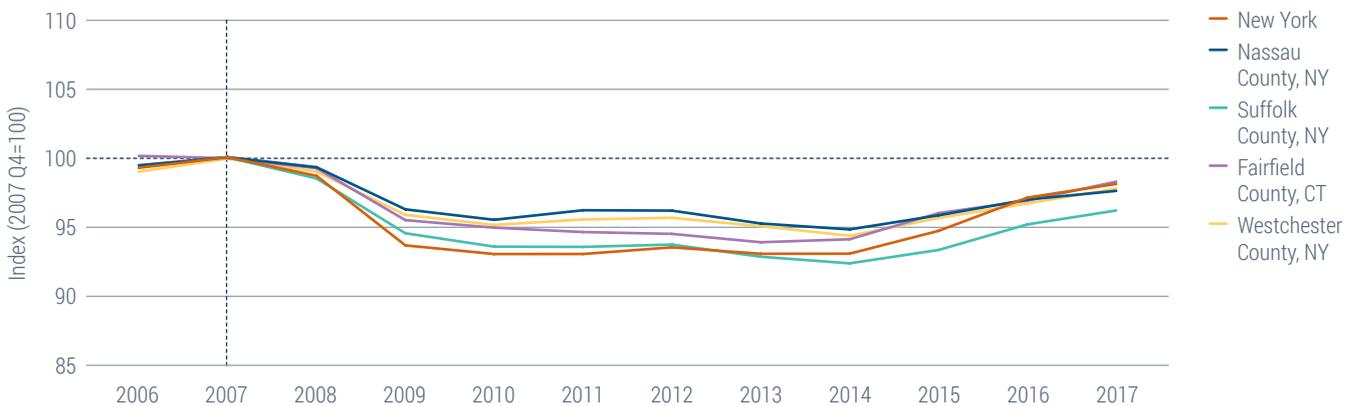
Micro Data Analytics and Map

The micro data map shows high shares of revolving credit holders are distributed over most of the region, since most of the zip codes are among the highest-tier values. The few zip codes that are not the darkest shaded on the map are in the mid-range for the nation.

Long Island Map: Revolving Credit

≥74%	73%	70%−72%	60%−69%	50%−59%	<50%	UNMAPPED
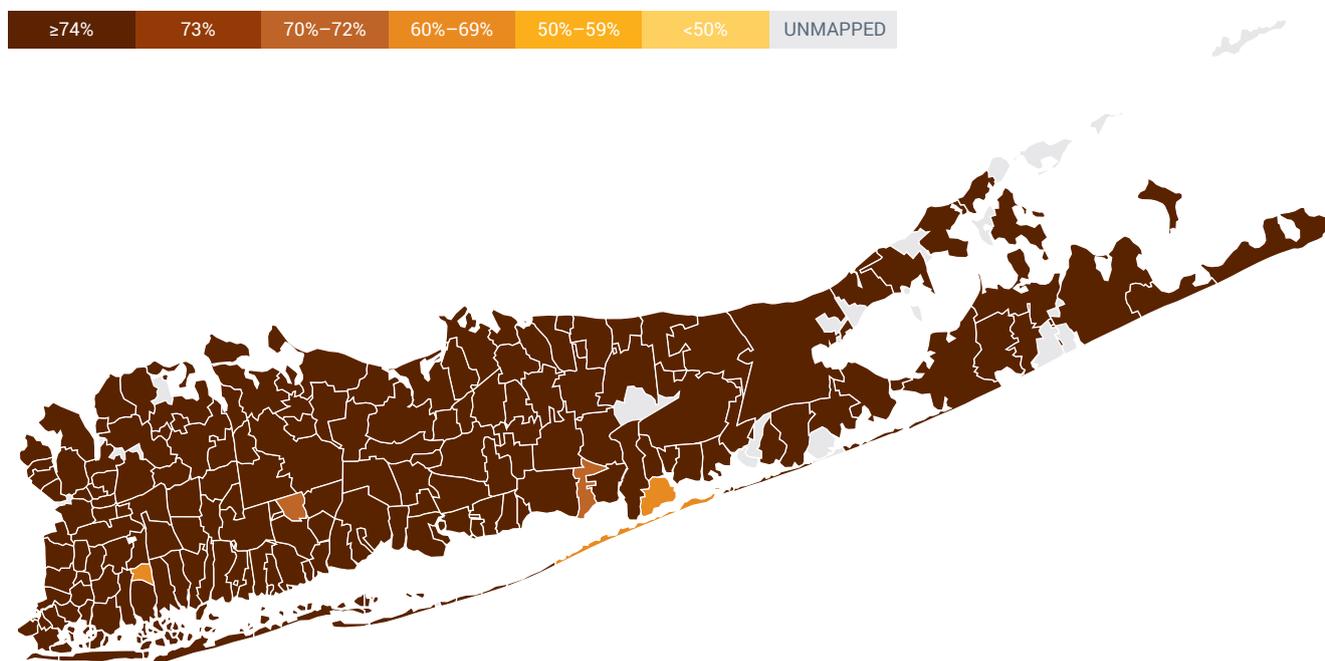
CONVENIENT CREDIT / **UTILIZATION**

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.

47.7% of Long Island's credit economy had 70% or more borrowing capacity on their revolving credit lines as of 2017 Q4. In other words, nearly half of the credit economy had high (≥70%) borrowing capacity on their revolving credit lines. Compare this value with 40.1% for the U.S. and 44.8% for New York State. Again, Long Island's values are among the highest in the nation.

Post-2007, borrowing capacity among the community declined, hitting a low in 2010 of 43.7%. Since then, borrowing capacity has improved, especially since 2015 Q4.

Long Island Credit Economy: Utilization, 2006–2017
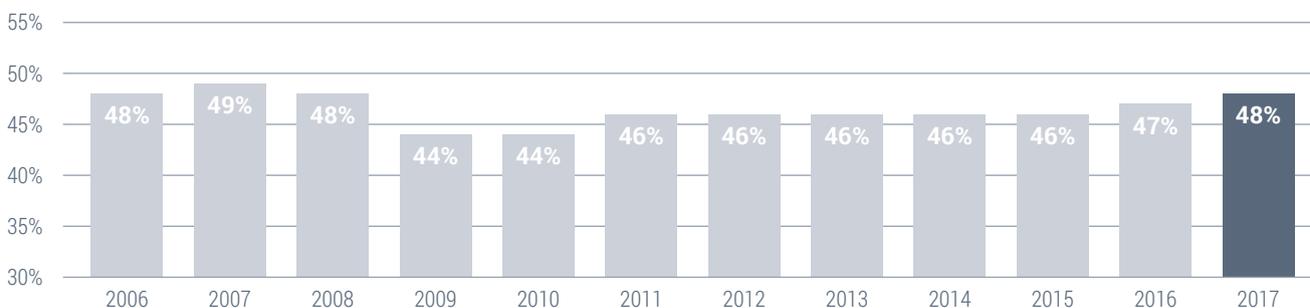
The index of the UTILIZATION indicator illustrates this recovery pattern. The sharp decline post-2007 is easily seen and is similar to the New York State and U.S. patterns. The subsequent recovery is also illustrated, though Long Island has relatively lagged in recent years. Bear in mind that Long Island's actual indicator values were and remain higher through this period.

Index of Utilization Indicator
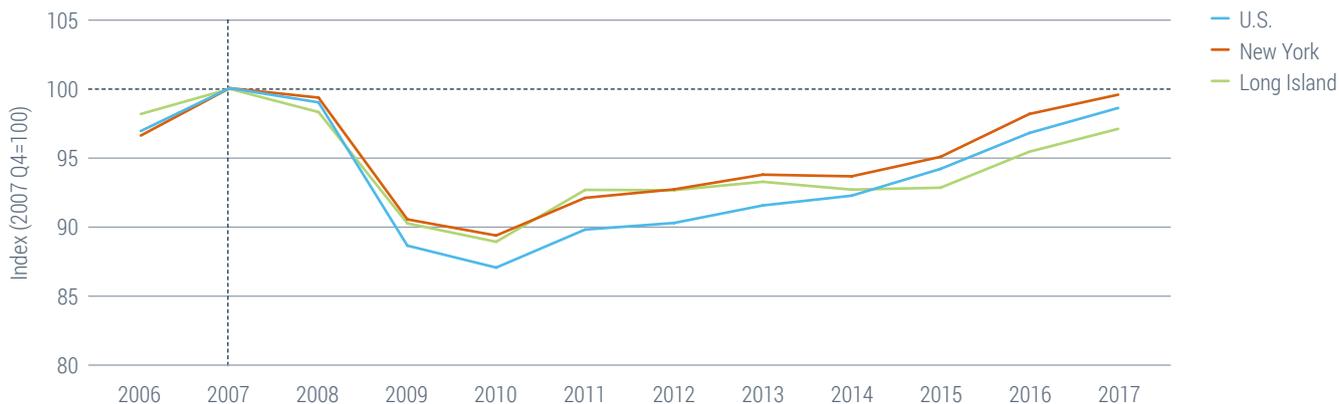
Data Source: FRBNY Consumer Credit Panel / Equifax

Nassau and Suffolk Counties

High borrowing capacity is more prevalent in Nassau County than in Suffolk County. Again, a difference of a few percentage points between the two counties is a persistent pattern based on the past decade of data.

Nassau and Suffolk County Credit Economy: Utilization, 2006–2017
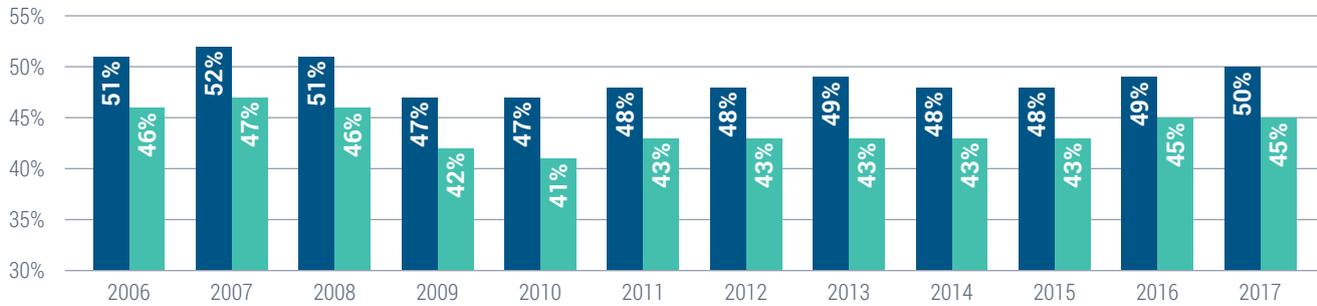
The index of the UTILIZATION indicator shows both counties remain below their 2007 Q4 levels. While their trajectory is similar to regions that local stakeholders view as their peers, their relative recovery is less complete.

Index of Utilization Indicator
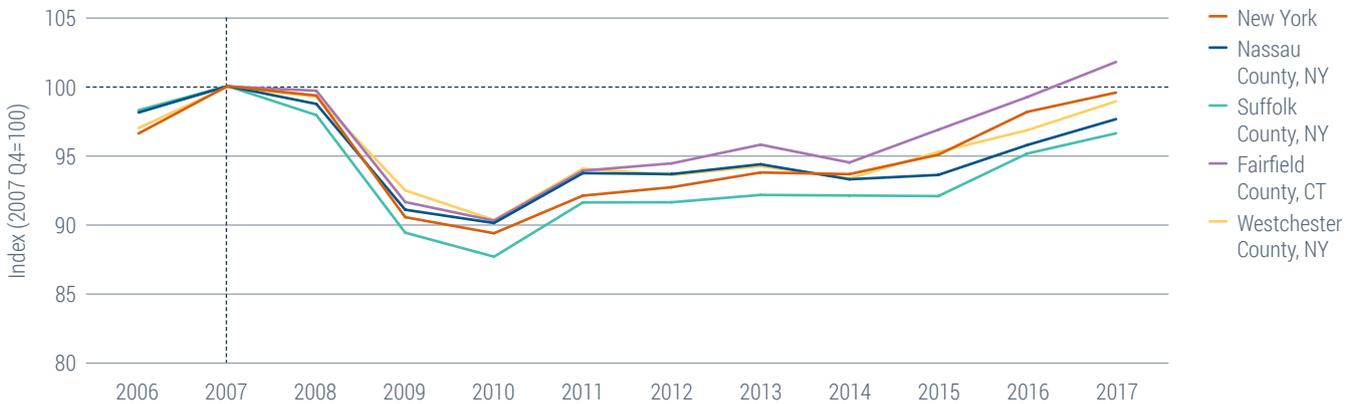
Data Source: FRBNY Consumer Credit Panel / Equifax

Micro Data Analytics and Map

The micro data map shows more variation among communities using the UTILIZATION indicator lens than the REVOLVING CREDIT lens. This divergence suggests that while access to convenient credit is broadly occurring, residents' borrowing capacity is more uneven.

In zip codes depicted in the lightest shade of green on the map, less than 30% of the credit economy has sufficient credit limit capacity on their revolving credit products, such as credit cards, to readily borrow to withstand emergencies or to take advantage of an economic opportunity. In such circumstances and depending on their credit limits, borrowers might need to rely on friends and family, or even nontraditional or predatory products, for their credit needs.[45]

Five Long Island zip codes (11550, 11575, 11713, 11798, and 11951) are ranked in the lowest tier of zip codes in the nation. These zip codes correspond to the communities of Hempstead, Roosevelt, Bellport, Wyandanch, and Mastic Beach, respectively.

Long Island Map: Utilization

| ≥45% | 42%–44% | 39%–41% | 35%–38% | 30%–34% | <30% | UNMAPPED |

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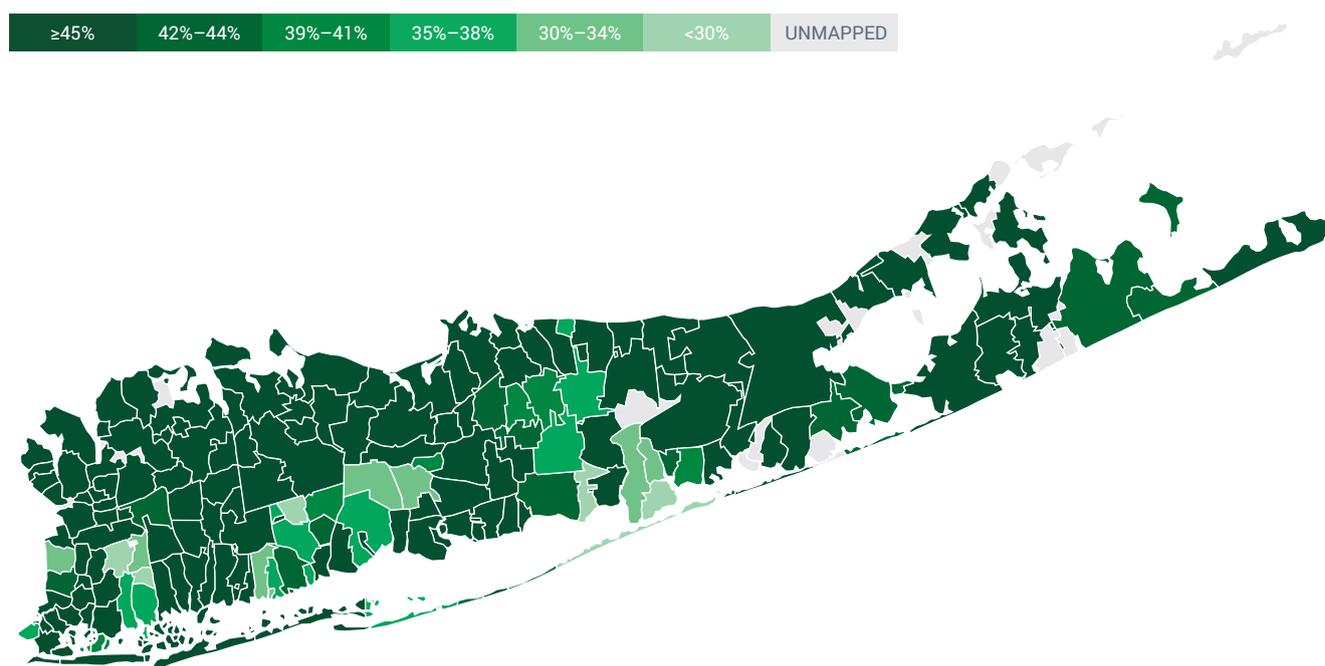
45 While alternative lenders, used prudently, can meet a community need, they are typically a more expensive source of funds, subject to different consumer protections, and often lead to long-term indebtedness.

CREDIT QUALITY / **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.

82.5% of Long Island's credit economy was characterized as ON-TIME PAYERS in 2017 Q4. Again, the region outranks the U.S. at 79.2% and New York State at 80.8%. By this measure, there is an overall positive trend since 2012 Q4 after a post-crisis plateau.

Long Island Credit Economy: On-time Payers, 2006–2017
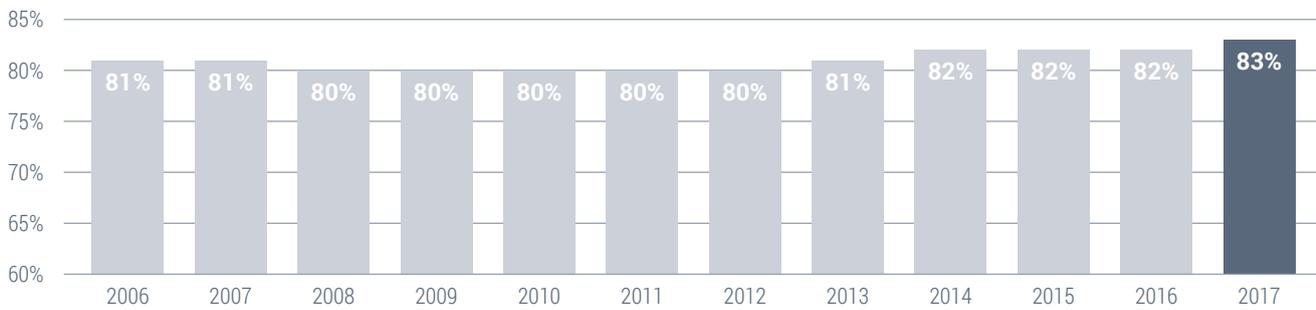
The index of the ON-TIME PAYERS indicator shows Long Island's recovery path. The post-crisis decline is visible and seems to have been deeper, and the recovery more delayed, than for the U.S. and New York State. However, keep in mind that Long Island's 2007 Q4 base value was relatively high and that since 2012, the indicator has exceeded that level.

Index of On-time Payers Indicator
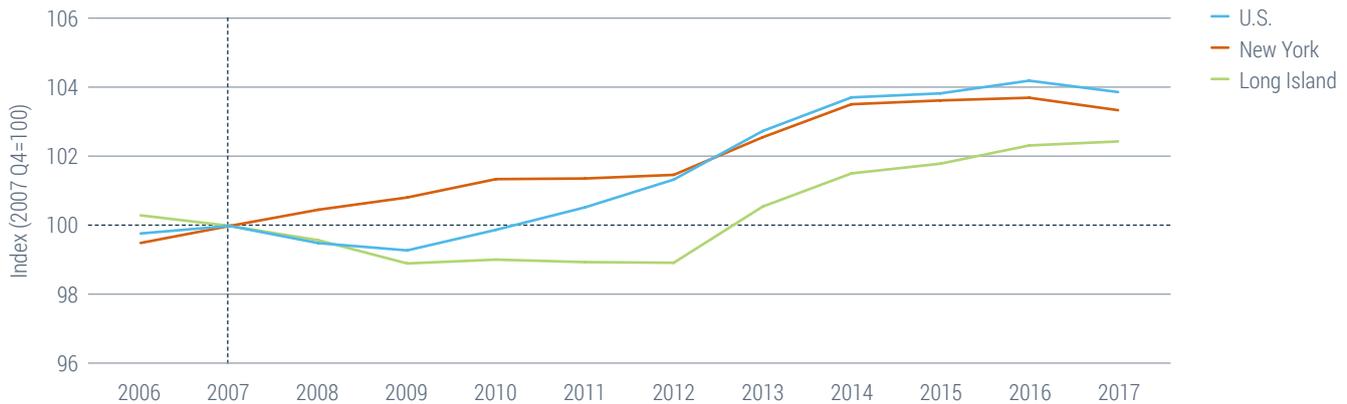
Nassau and Suffolk Counties

Overall, Nassau County continues to have higher values than Suffolk County.

Nassau and Suffolk County Credit Economy: On-time Payers, 2006–2017
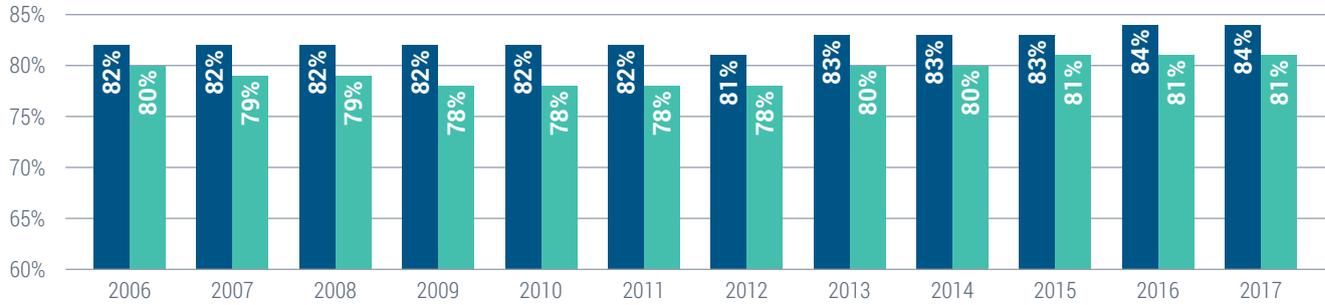
The index of the ON-TIME PAYERS indicator shows annual values normalized to 2007 Q4 as the base year, and demonstrates that both counties have recovered above their 2007 Q4 levels. While the decline in Suffolk County was relatively deeper than in Nassau County, the recovery has also been relatively stronger since 2012 Q4. Also, both counties' trajectories show more similarities with Fairfield County, CT than with Westchester County, NY, two regions that local stakeholders view as their peers.

Index of On-time Payers Indicator
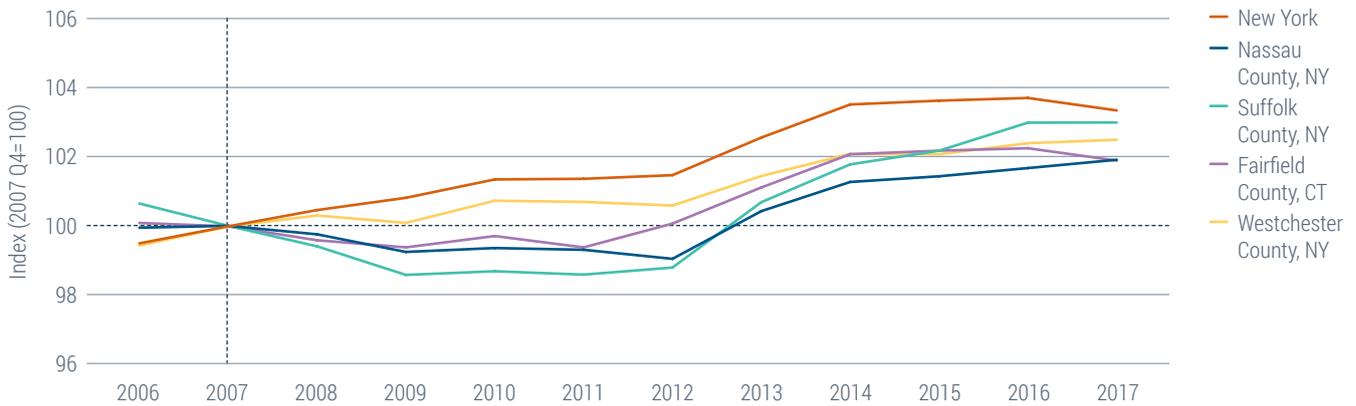
Micro Data Analytics and Map

The micro data map of ON-TIME PAYERS shows a more uneven pattern among communities than shown by the previous indicators. In the zip codes depicted in the lightest purple on the map, fewer than 70% of the credit economy participants were current on all loan payments in all four quarters of 2017.

Eight Long Island zip codes (11550, 11553, 11575, 11713, 11722, 11798, 11950, and 11951) are in the lowest band of zip code values in the U.S. The zip codes correspond to the communities of Hempstead, Uniondale, Roosevelt, Bellport, Central Islip, Wyandanch, Mastic, and Mastic Beach, respectively.

Long Island Map: On-time Payers

≥85%	83%−84%	80%−82%	75%−79%	70%−74%	<70%	UNMAPPED
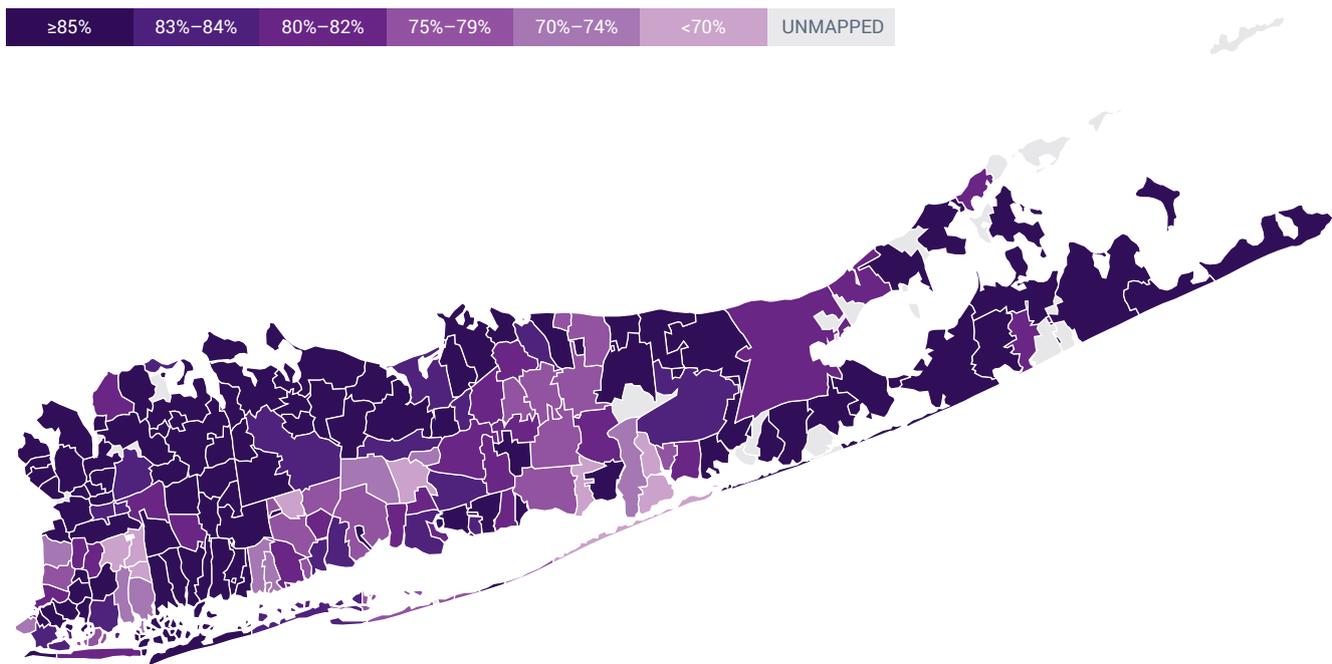
CREDIT QUALITY / **CREDIT SCORES**

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 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. All individuals in a community's credit economy are placed into one of these mutually exclusive groups.

To better understand credit quality on Long Island, we present two comparisons. First, we compare the distribution of scores in the U.S. and Long Island as of 2017 Q4. The chart illustrates that credit quality, as measured through credit risk scores, may be characterized as higher on Long Island than in the nation.

U.S. and Long Island | Equifax Risk Score 3.0, 2017 Q4
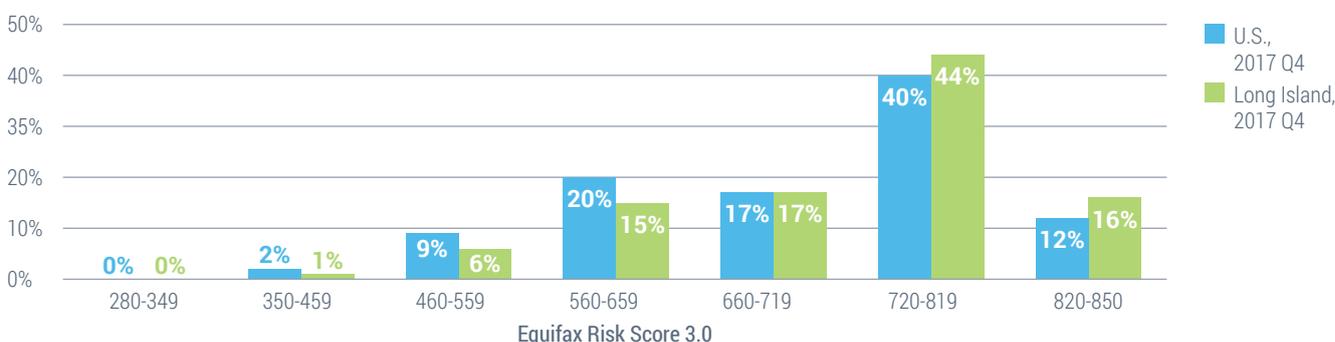
Next, we compare the risk score distribution for Long Island at two points in time: 2007 Q4 and 2017 Q4. The chart suggests an improvement at both ends of the risk spectrum, with the share of the credit economy increasing in the best risk score group (820-850) and decreasing at the lower end of the distribution. Of course, this chart does not indicate underlying drivers of the improvements, such as better payment or debt management practices or an inflow of individuals into the region with higher credit quality.[46]

Long Island | Equifax Risk Score 3.0, 2007 Q4 & 2017 Q4

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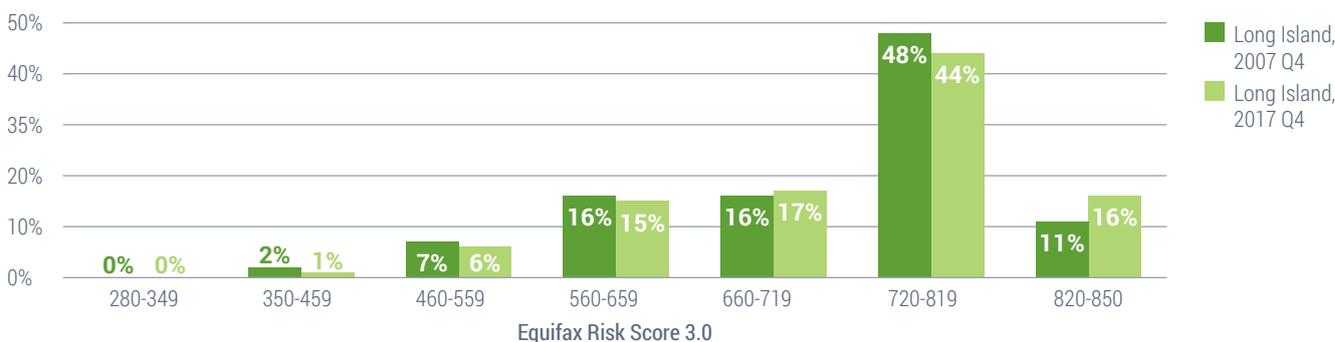
46 This concept of subprime mobility is shown for select geographies in https://www.newyorkfed.org/medialibrary/media/outreach-and-education/CommunityCredit-2014-BookofSummaryCharts.pdf pp. 39.

Nassau and Suffolk Counties

A regional perspective on credit quality is shown in the following bar chart. We present the percent of the credit economy in each risk score group for the U.S., Nassau and Suffolk Counties, and two regions viewed by Long Island stakeholders as peers. In 2017 Q4, the share of the credit economy with subprime credit scores (i.e., below 660) was lower in both Long Island counties than that for the U.S.

Credit Score Groups, 2017 Q4
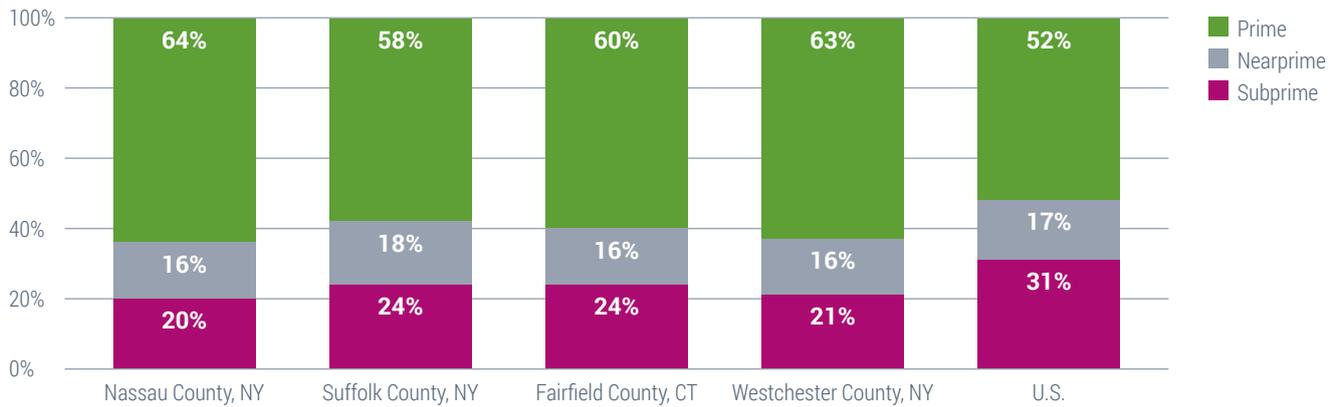
Micro Data Analytics

For a more in-depth understanding, we examined all Long Island zip codes using the three credit score designations of prime, near prime and subprime.

The following are the 20 zip codes on Long Island with the highest concentrations of subprime credit economy participants. Within this group, the share of the subprime ranges from 51% in zip code 11798 (Wyandanch) to 32% in zip code 11727 (Coram). Some of these zip codes have been flagged in earlier sections by other indicators.

Credit Score Groups by Long Island Zip Codes, 2017 Q4
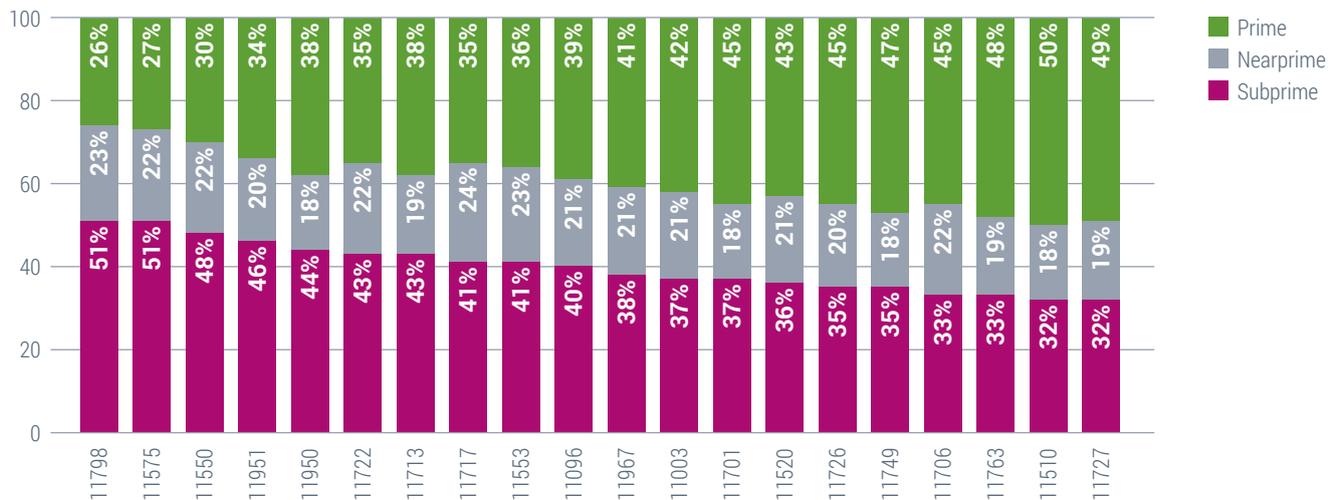
Data Source: FRBNY Consumer Credit Panel / Equifax

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.

60.7% of Long Island's credit economy had a prime risk score as of 2017 Q4. This value compares with 51.9% for the U.S. and 55.8% for New York State.

As with other indicators, there has been a positive trend since 2013 Q4. The percent of the credit economy with prime credit scores rose steadily; whether this increase was due to an inflow of prime credit score residents to the region or credit quality improvements among longer-term residents is not discernible from this indicator.

Long Island Credit Economy: Prime Credits, 2006–2017
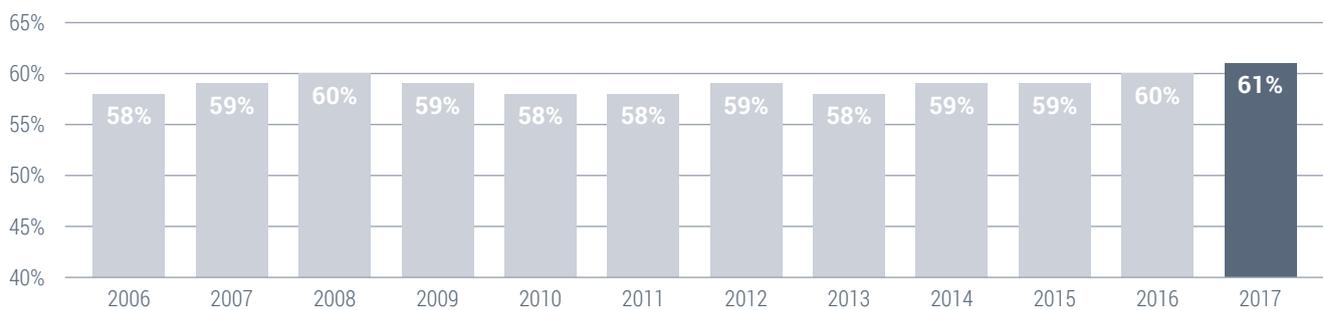
The index of the PRIME CREDITS indicator shows the post-crisis decline in the share of the prime credit score individuals in the credit economy and the subsequent rise. As of 2017 Q4, the prime share had exceeded its 2007 Q4 value. In other words, today's Long Island credit economy is higher quality in terms of the share of high or 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
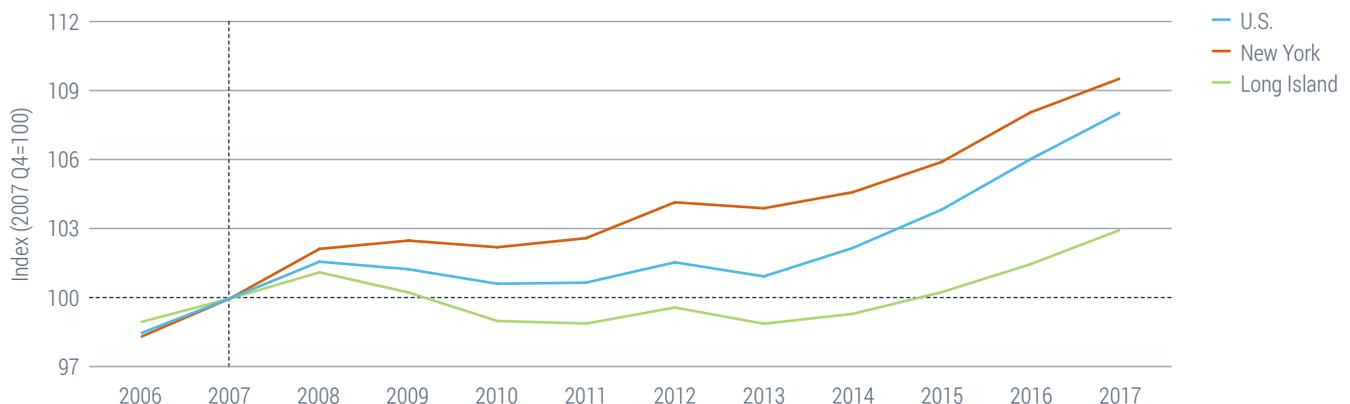
Nassau and Suffolk Counties

Not surprisingly, Nassau County has a higher share of prime credit score individuals in its credit economy than does Suffolk County. However, the patterns over time are not too dissimilar, suggesting that the two counties were subject to similar pressures.

Nassau and Suffolk County Credit Economy: Prime Credits, 2006–2017
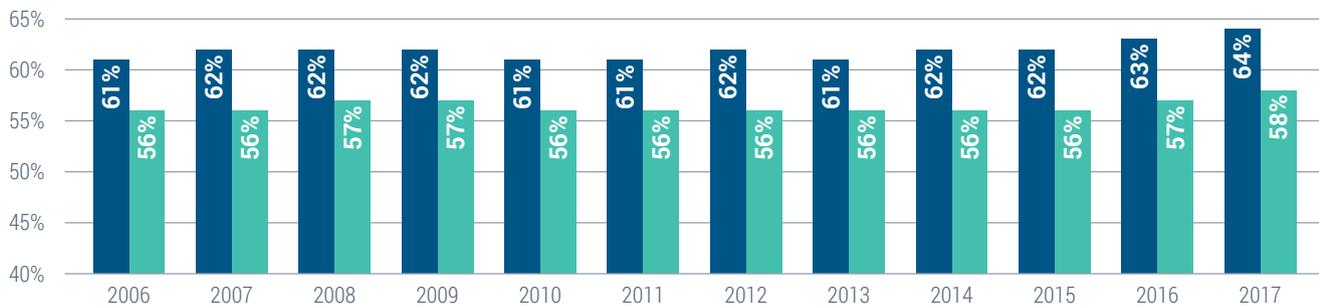
The index of the PRIME CREDITS indicator shows the two counties following a similar post-crisis recovery trajectory. Initially, both counties remained above their pre-financial crisis levels, followed by a path of shallow flat decline and recovery to above the 2007 Q4 levels. However, this trajectory was weaker than for their peer counties and the U.S.

Index of Prime Credits Indicator
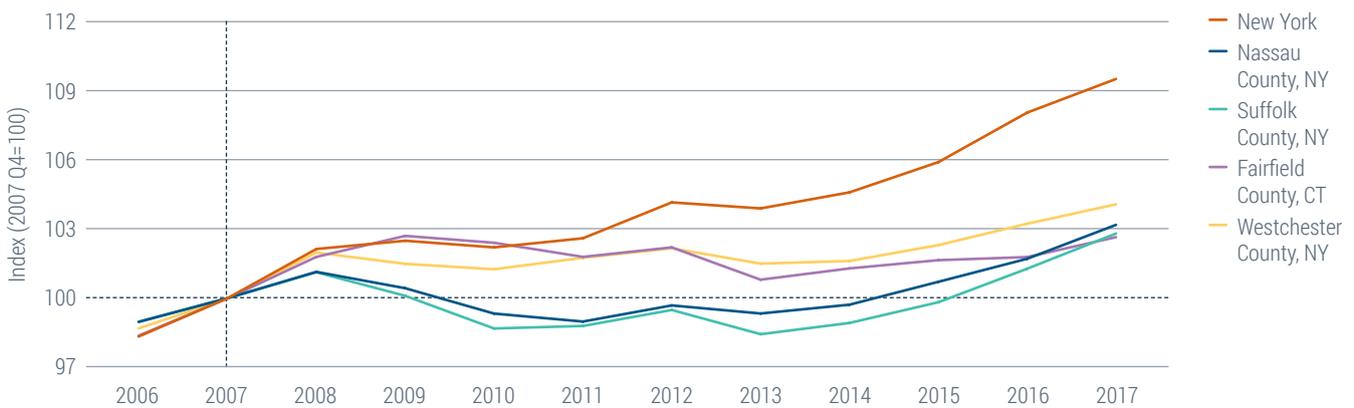
Micro Data Analytics and Map

The micro data map shows spatial patterns similar to the previous indicators. Many zip codes, colored with the darkest shade of green, have among the highest shares of prime residents in the nation. Two zip codes, 11575 (Roosevelt) and 11798 (Wyandanch), are highlighted in the lightest shade, and indicate areas containing among the smallest shares of prime residents (less than 30% of the credit economy) in the nation.

Long Island Map: Prime Credits

≥59%	55%–58%	50%–54%	45%–49%	30%–44%	<30%	UNMAPPED
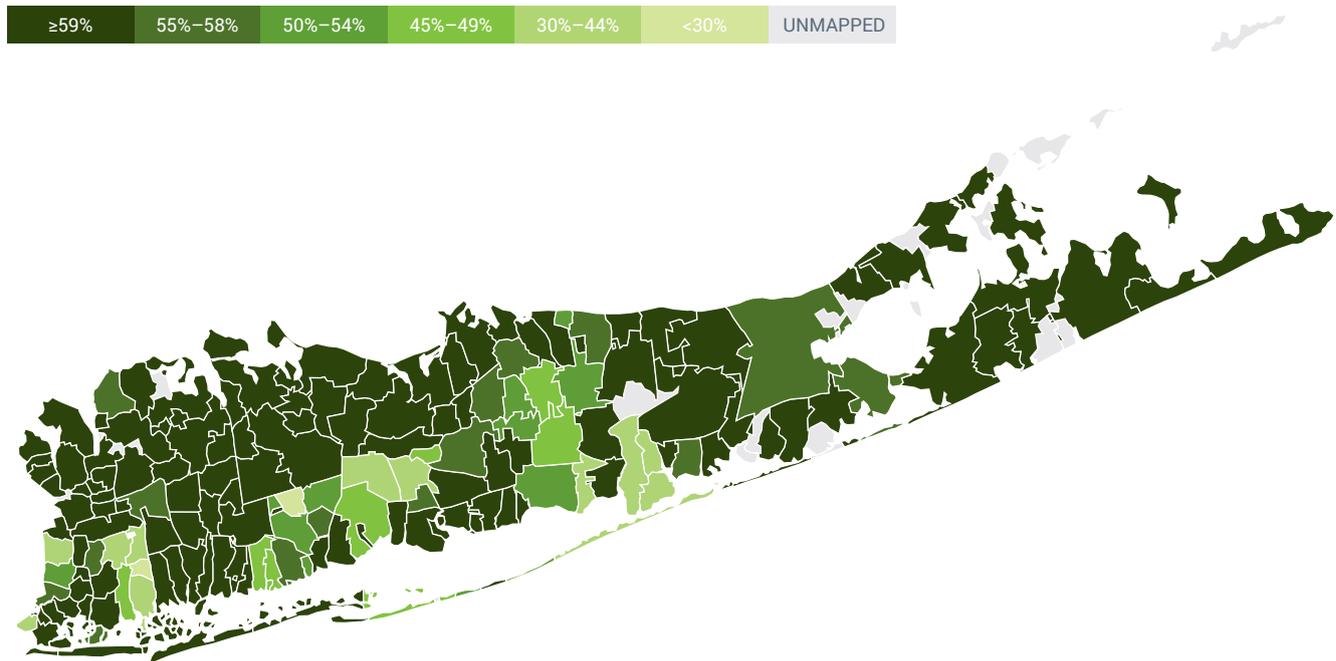
CREDIT QUALITY / **SUBPRIME CREDITS**

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

22.2% of Long Island's credit economy had a subprime risk score as of 2017 Q4. This value compares with 31.2% for the U.S. and 26.8% for New York State for the same time period.

Once again, there is evidence that credit quality on Long Island is better than national and state values, and has been improving in recent years. Since 2010, the subprime share of the credit economy has dropped by five percentage points.

Long Island Credit Economy: Subprime Credits, 2006−2017
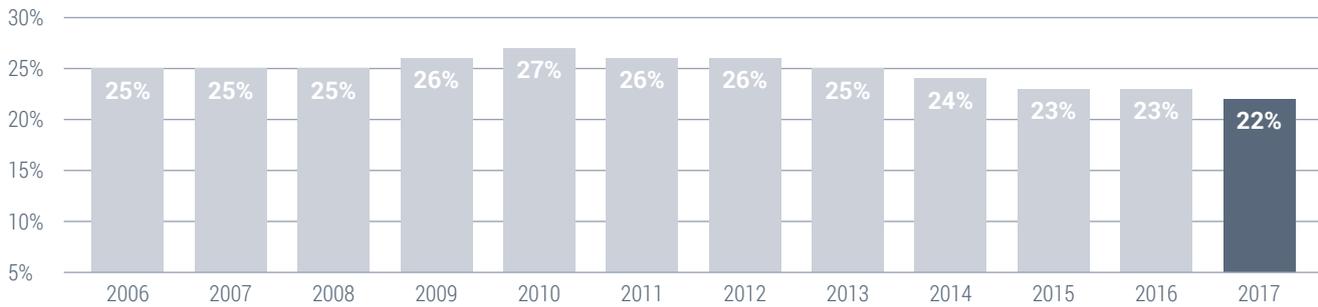
The index of the SUBPRIME CREDITS indicator shows a familiar post-2007 trajectory of immediate worsening in Long Island, followed by consistent credit quality improvement.

Index of Subprime Credits Indicator
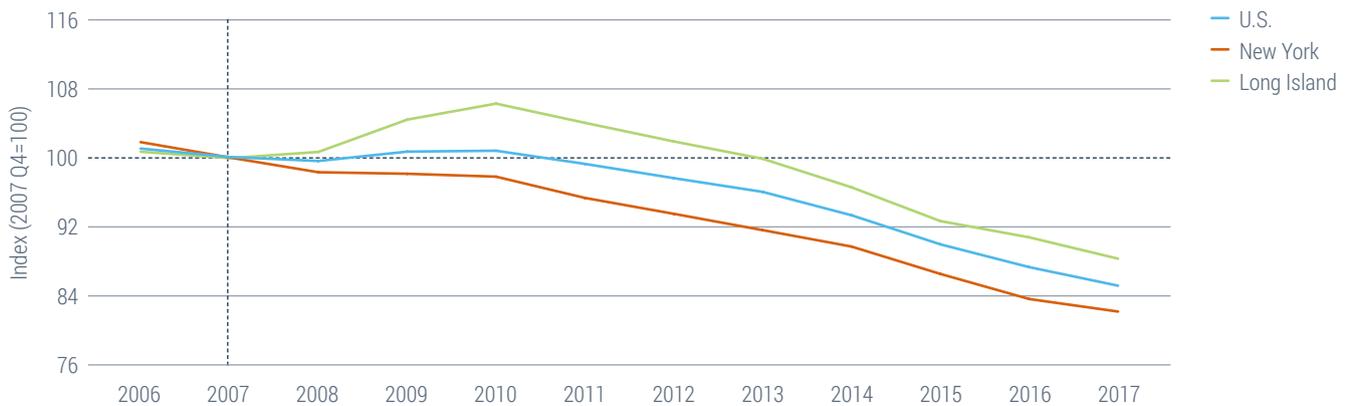
Data Source: FRBNY Consumer Credit Panel / Equifax

Nassau and Suffolk Counties

Consistent with the other Community Credit indicators, Suffolk County has lower credit quality than Nassau County. The historical difference is three to five percentage points.

Nassau and Suffolk County Credit Economy: Subprime Credits, 2006−2017
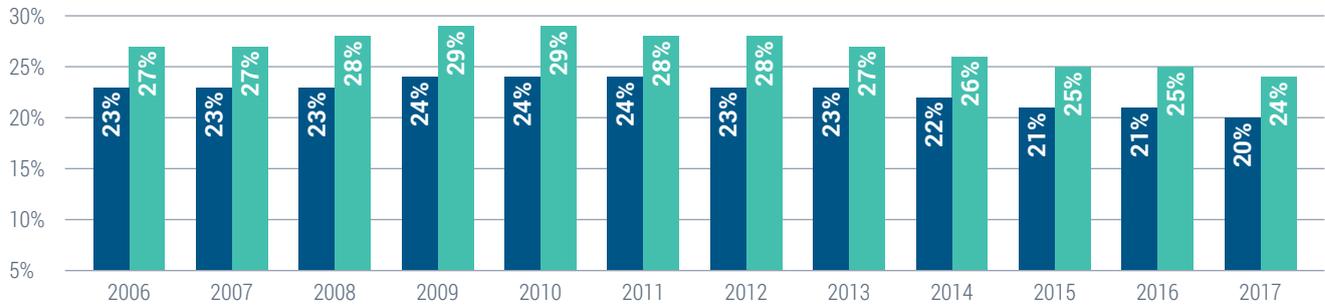
The index of the SUBPRIME CREDITS indicator shows the two counties following a similar post-crisis recovery trajectory. However, compared to peer regions, the Long Island counties experienced more deterioration post-crisis and a relatively weaker improvement. However, all the regions show improved credit quality relative to their respective 2007 Q4 values.

Index of Subprime Credits Indicator
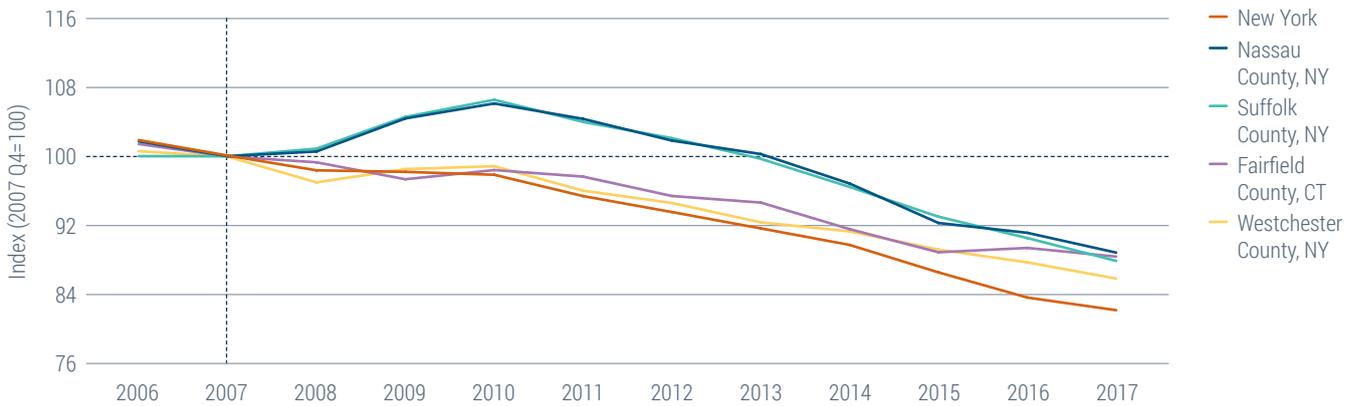
Micro Data Analytics and Map

The subprime distribution by community is shown in the zip code-level map of the region. Zip codes where 50% or more of the credit economy has subprime risk scores are shown by the darkest color shade. The band values identify U.S. zip codes, ranked from highest to lowest, based on subprime indicator values.

Two zip codes that were previously highlighted in the PRIME CREDITS map as having extremely low shares of prime credit risk individuals, 11575 (Roosevelt) and 11798 (Wyandanch), are also highlighted here as areas with a large share of subprime credit economy participants.

Long Island Map: Subprime Credits

≥50%	40%−49%	34%−39%	29%−33%	26%−28%	<26%	UNMAPPED
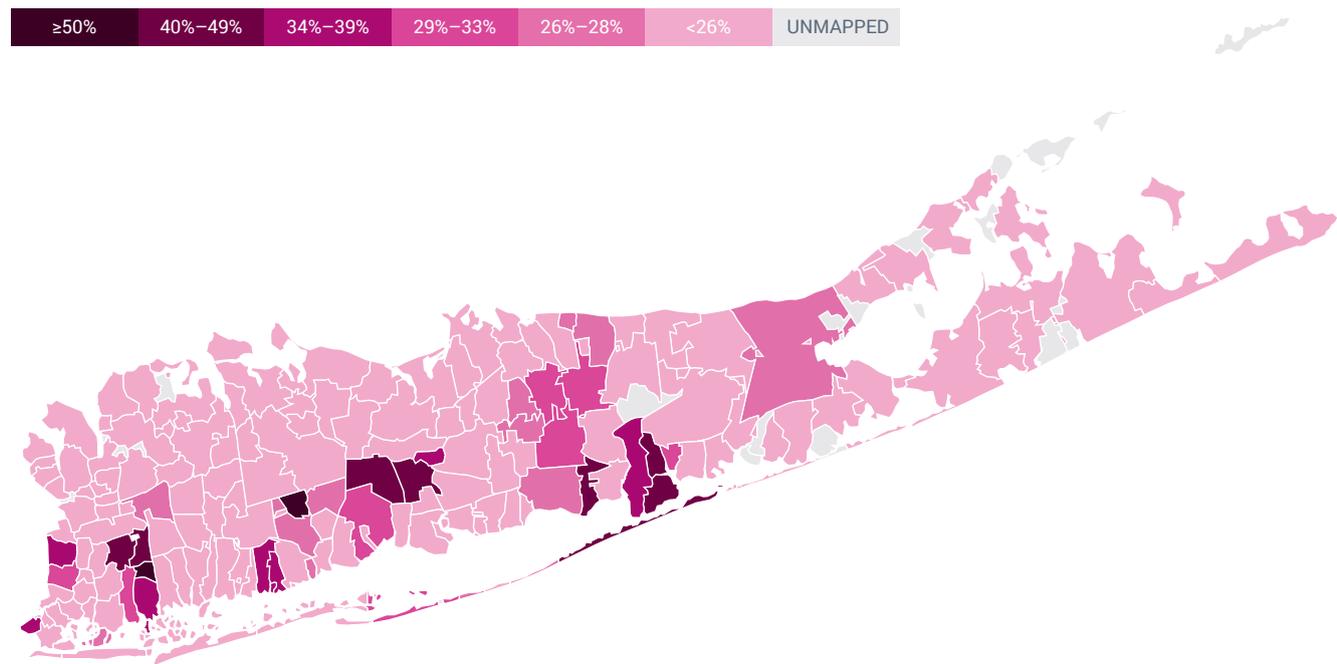
CREDIT STRESS / **TAXONOMY**

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

| Payment Status as of Year-end	Was the person 60+ days past due on any credit obligation during any of the preceding four quarters? Was the person 60+ days past due on any credit obligation during each of the preceding four quarters?		
	Current	30-59 Days Late	60+ Days Late
Current	On-time Payers Good History		Improved History
30-59 Days Late			
60+ Days Late	Declining History		Struggling History / Consistently Delinquent History

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

Credit Stress, 2017 Q4

	Nassau County, NY	Suffolk County, NY	Fairfield County, CT	Westchester County, NY	U.S.
Good	86%	84%	86%	86%	81%
Improved	4%	5%	4%	4%	5%
Struggling	3%	3%	3%	3%	4%
Consistently Delinquent	6%	7%	6%	6%	9%

Legend:
- Good
- Improved
- Declining
- Struggling
- Consistently Delinquent

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 and add in those who were never more than 59 days past due on any credit obligation during the previous five quarters of payment history. We include the latter group because some individuals may occasionally miss payment deadlines due to busy schedules, sickness, traveling, or other factors. Unless this pattern persists, however, they are more likely to be 'sloppy payers' rather than nascent credit stress cases.

85.0% of Long Island's credit economy had good payment history as of 2017 Q4. That compares with 81.2% for the U.S. and 82.9% for New York State in the same period.

Long Island Credit Economy: Good Payment History, 2006–2017
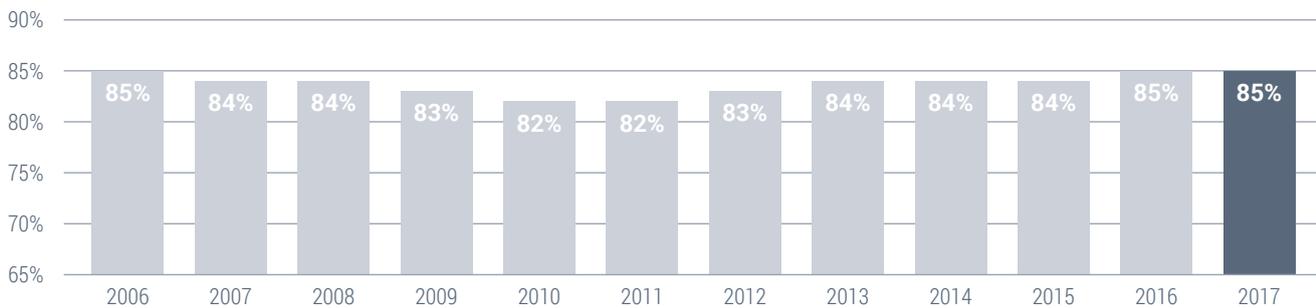
Overall, the trend since 2010 has been positive. Following a low of 82.2% in 2010, the share of individuals with good payment history in the credit economy has been rising steadily.

The index of the GOOD PAYMENT HISTORY indicator shows a similar pattern of improvement. Note that the impact of the financial crisis is more visible for Long Island than for New York State or the nation. Since 2015 Q4, however, Long Island has seen its share of "Good Payers" exceed its 2007 Q4 level.

Index of Good Payment History Indicator
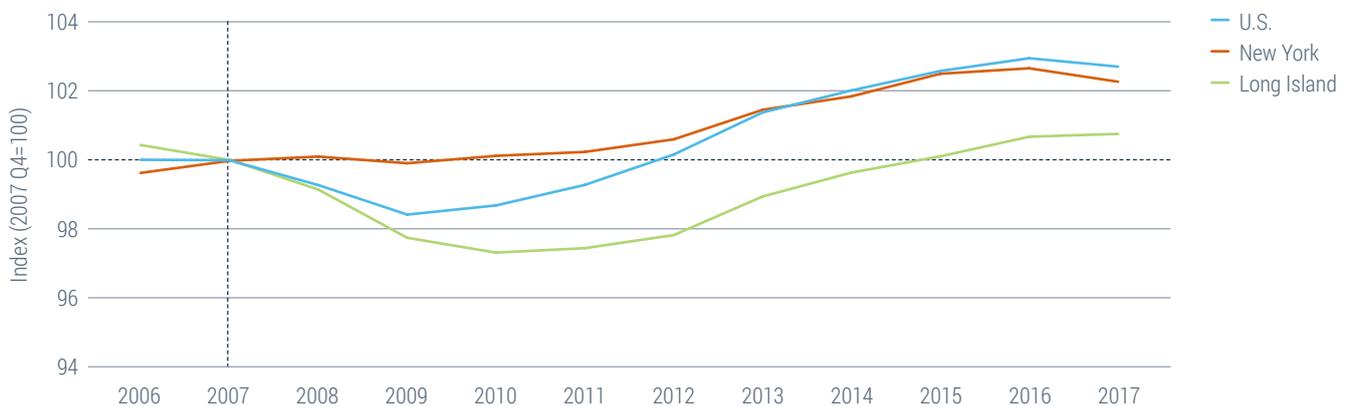
Data Source: FRBNY Consumer Credit Panel / Equifax

Nassau and Suffolk Counties

Again, Nassau County values are higher (by about two to three percentage points) than those for Suffolk County; this pattern that has persisted over the years analyzed.

Nassau and Suffolk County Credit Economy: Good Payment History, 2006–2017
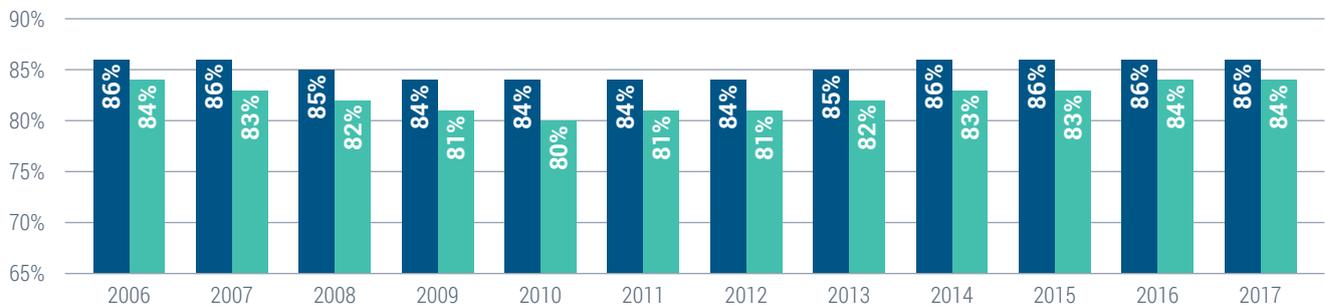
The index of the GOOD PAYMENT HISTORY indicator shows both counties have recovered above their 2007 Q4 levels. While Suffolk County's decline was relatively deeper than Nassau County's, its recovery has been stronger in recent years. Both counties exceeded their 2007 Q4 values in 2015 Q4. Also, the Long Island county trajectories were more similar to Fairfield County, CT than to Westchester County, NY.

Index of Good Payment History Indicator
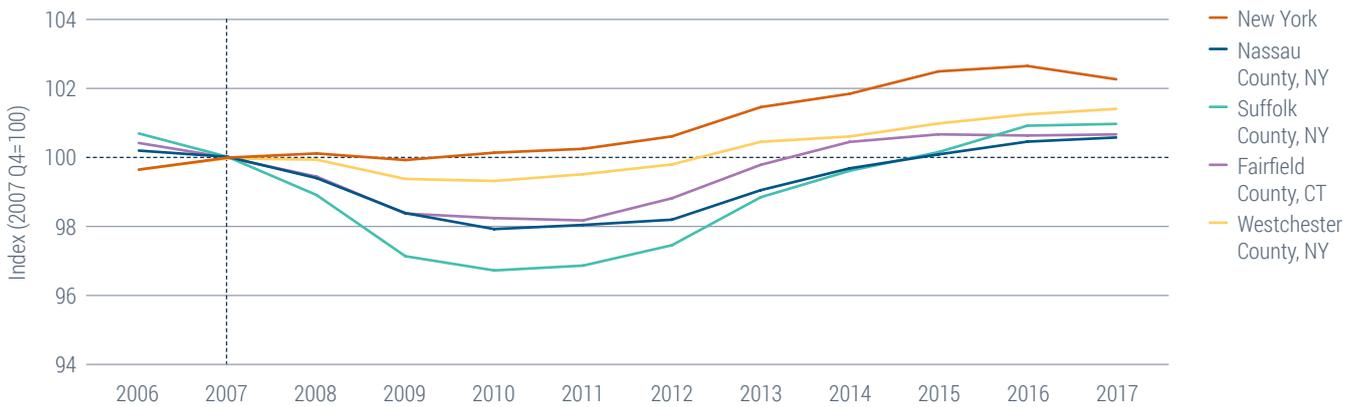
Micro Data Analytics and Map

The zip code micro data map shows spatial patterns consistent with the other indicators. Ninety-five zip codes are highlighted as having concentrations in the highest band in the nation (that is, 86% or higher).

In contrast, eight zip codes—11550 (Hempstead), 11553 (Uniondale), 11575 (Roosevelt), 11713 (Bellport), 11722 (Central Islip), 11798 (Wyandanch), 11950 (Mastic), and 11951 (Mastic Beach)—are in the lowest-ranked band (that is, less than 74% of credit economy participants had good payment histories), and are colored the lightest shade of green on the map. Some of these zip codes also had low credit inclusion, low credit capacity, and a high share of individuals with subprime credit scores.

Long Island Map: Good Payment History

| ≥86% | 84%−85% | 82%−83% | 76%−81% | 74%−75% | <74% | UNMAPPED |
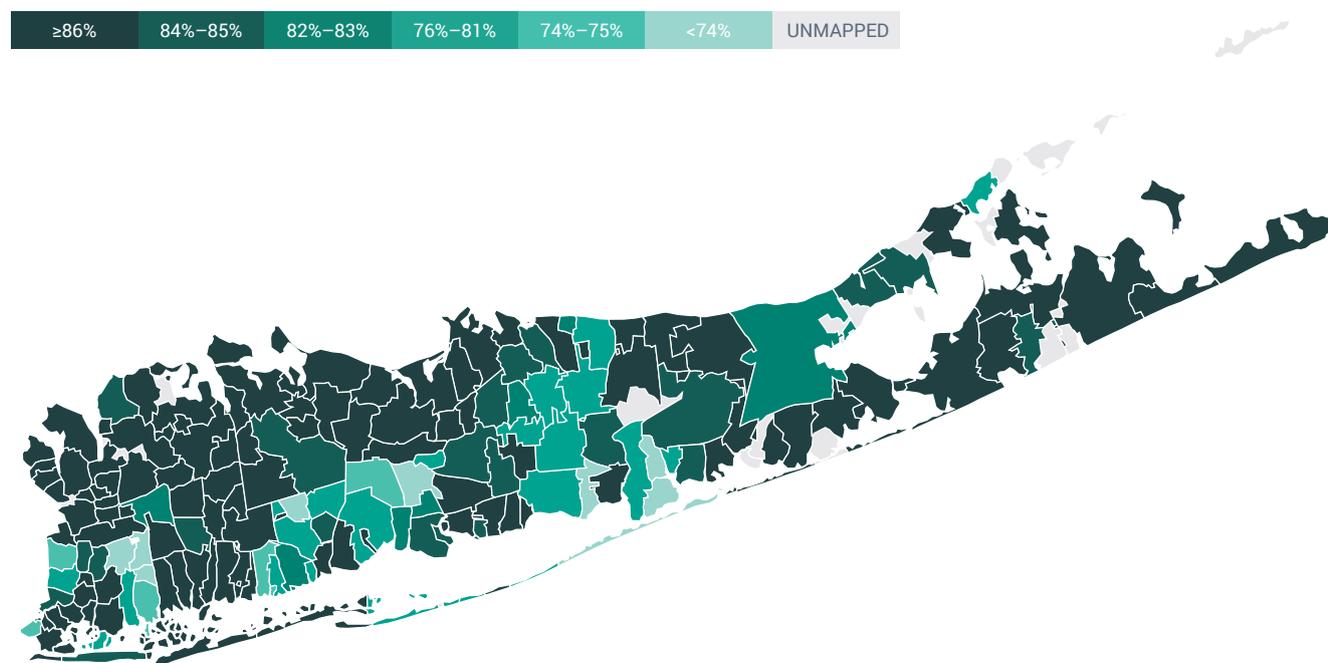
CREDIT STRESS /
CONSISTENTLY DELINQUENT PAYMENT HISTORY

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

6.2% of Long Island's credit economy was consistently delinquent in 2017 Q4. This value compares with 8.6% for the U.S. and 7.2% for New York State as of 2017 Q4.

Long Island's consistent delinquency rates have improved from a high of 8.2% in 2011 Q4, though this improvement has leveled off in recent years.

Long Island Credit Economy: Consistently Delinquent Payment History, 2006–2017
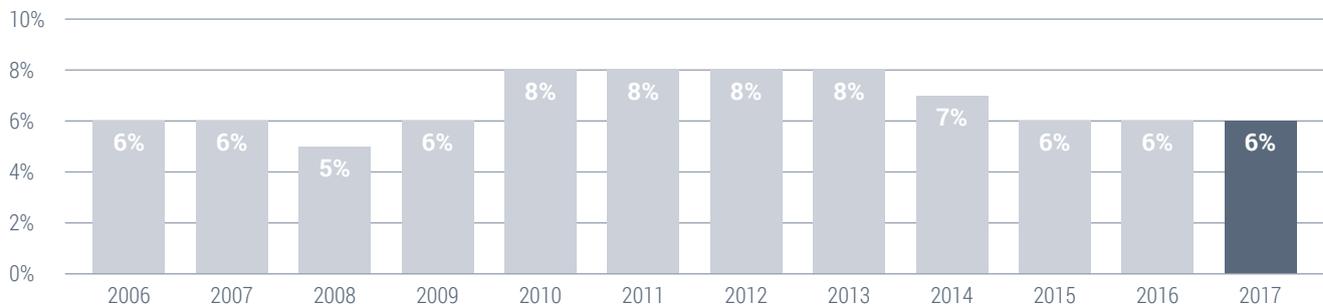
The index of the CONSISTENTLY DELINQUENT PAYMENT HISTORY indicator shows that after a period of worsening and then improvement, the trajectory has leveled out since 2015. Also, the post-crisis impact was more severe on Long Island than in New York State or the U.S.

Index of Consistently Delinquent Payment History Indicator
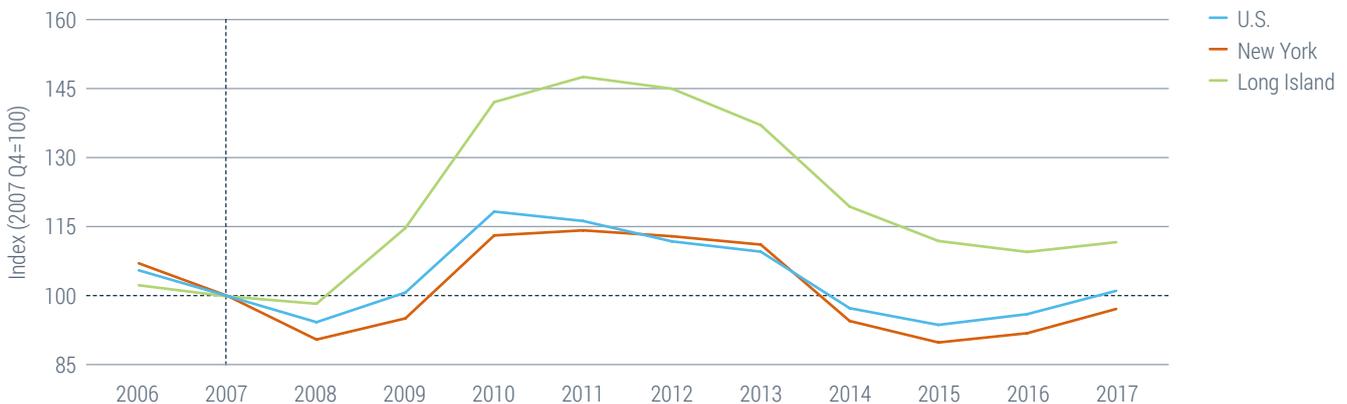
Nassau and Suffolk Counties

Consistent with the other indicators, Suffolk County ranks less favorably than Nassau County. Nassau County has consistently remained about one to two percentage points below Suffolk for this indicator.

Nassau and Suffolk County Credit Economy: Consistently Delinquent Payment History, 2006–2017

The index of the CONSISTENTLY DELINQUENT PAYMENT HISTORY indicator shows annual values normalized to 2007 Q4 as the base year, and shows both counties have not fully recovered to that level. While Suffolk County saw a relatively larger increase in consistently delinquent payers than Nassau County after the financial crisis, a recovery has occurred in both counties since 2011 Q4. However, both counties are still above their pre-crisis levels. By comparison, Fairfield County, CT and Westchester County, NY have had somewhat stronger recovery paths.

Index of Consistently Delinquent Payment History Indicator

Micro Data Analytics and Map

The micro data map shows a broader pattern of credit distress by this indicator than previous indicator maps. Nine zip codes—11520 (Freeport), 11550 (Hempstead), 11553 (Uniondale), 11575 (Roosevelt), 11713 (Bellport), 11722 (Central Islip), 11798 (Wyandanch), 11950 (Mastic), and 11951 (Mastic Beach)—rank in the lowest band (where 11% or more of the population is consistently delinquent), and are shown colored the darkest orange on the map. Again, most of these zip codes have been flagged by some other indicator as high-distress neighborhoods.

Long Island Map: Consistently Delinquent Payment History

| ≥11% | 10% | 9% | 8% | 7% | <7% | UNMAPPED |

Data Source: FRBNY Consumer Credit Panel / Equifax
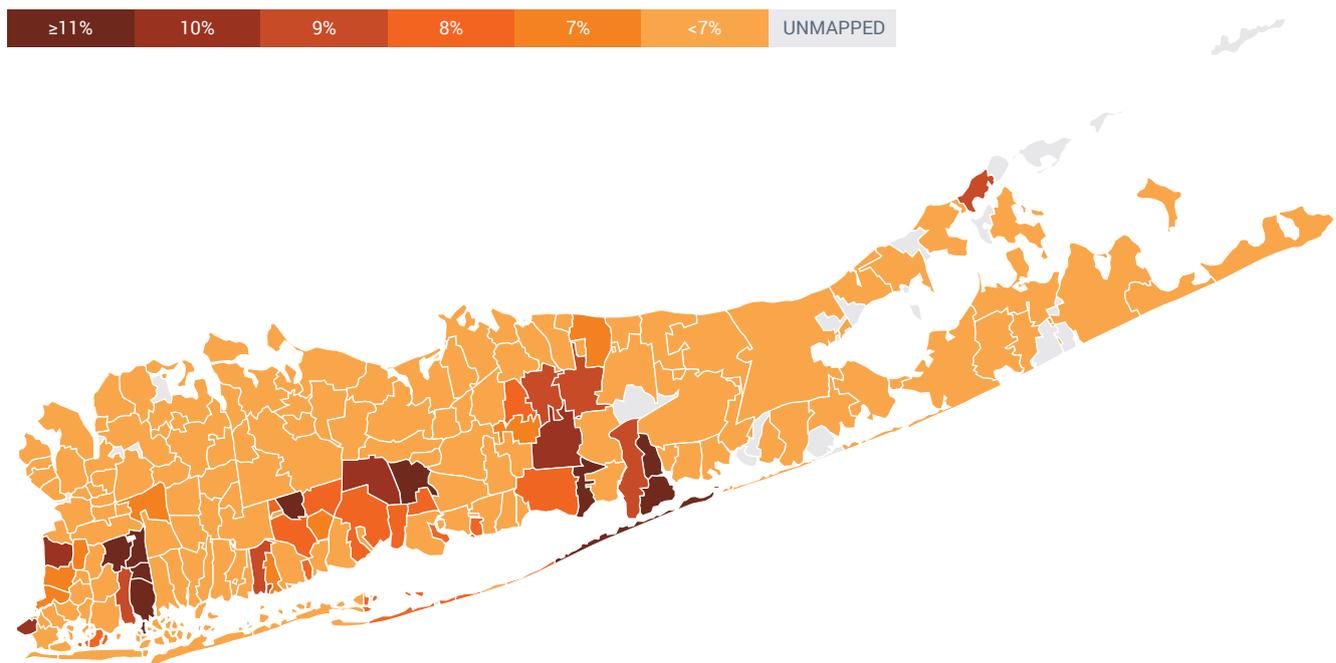
CREDIT PRODUCT SNAPSHOTS

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*
Nassau County, NY	30.3%	8.9%	74.8%	36.3%	19.1%	37.9%
Suffolk County, NY	31.8%	8.2%	73.5%	39.1%	20.2%	42.2%
Fairfield County, CT	32.2%	9.1%	71.7%	33.7%	18.3%	33.2%
Westchester County, NY	29.2%	7.7%	74.1%	34.9%	18.7%	33.8%
Long Island, NY	31.1%	8.6%	74.1%	37.7%	19.6%	40.2%
New York State	23.5%	6.0%	70.7%	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*
Nassau County, NY	157,259	39,190	2,714	9,234	17,863	790
Suffolk County, NY	133,626	31,622	2,727	9,739	16,605	919
Fairfield County, CT	161,775	36,677	2,794	9,254	18,042	692
Westchester County, NY	167,964	40,370	2,781	9,656	18,896	767
Long Island, NY	143,958	34,905	2,719	9,504	17,225	858
New York State	103,529	25,217	2,351	9,488	16,760	988
U.S.	93,724	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.

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[47]	Other*
Nassau County, NY	3.2%	1.8%	7.0%	3.5%	8.7%	7.6%
Suffolk County, NY	3.9%	2.1%	8.1%	4.4%	9.6%	8.3%
Fairfield County, CT	2.7%	1.8%	7.9%	4.6%	11.3%	8.1%
Westchester County, NY	2.0%	1.8%	7.2%	3.7%	9.6%	8.9%
Long Island, NY	3.6%	1.9%	7.6%	4.0%	9.2%	8.0%
New York State	2.9%	1.5%	9.4%	5.8%	12.0%	11.1%
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 5 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[47]	Other*
Nassau County, NY	338,725	109,493	2,718	10,019	14,322	1,254
Suffolk County, NY	290,720	73,470	2,513	8,809	11,576	1,210
Fairfield County, CT	236,849	70,005	1,981	7,037	13,087	978
Westchester County, NY	340,846	125,096	2,304	9,215	13,422	1,310
Long Island, NY	307,373	85,972	2,629	9,271	13,059	1,226
New York State	203,419	74,999	2,158	8,348	12,127	1,176
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 5 quarters of payment history.

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

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

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). Due to data unavailability, the county-level values for 2017 use 2016 adult population estimates. Population estimates for Long Island as a whole are calculated as the sum of the adult populations in Nassau County and Suffolk County. 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 NY Fed CCP/Equifax credit records. Zip codes included in the maps are situated within Long Island. 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 twenty zip codes.[48]

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.

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48 Excluded zip codes are 06390, 11042, 11547, 11548, 11765, 11770, 11939, 11947, 11948, 11956, 11957, 11958, 11959, 11960, 11962, 11965, 11970, 11972, 11973, and 11975.

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 Products: 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 score as of year-end (multiplied by 20) divided by the Census estimate of the population 18 or older for that year. The 2017 county- and 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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