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Natural Disasters and Credit Reporting

QUARTERLY CONSUMER CREDIT TRENDS



This is part of a series of quarterly reports on consumer credit trends produced by the Bureau of Consumer Financial Protection using a longitudinal, nationally-representative sample of approximately five million de-identified credit records from one of the three nationwide credit reporting companies.*

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Natural disasters can cause substantial property destruction and personal injury, including the loss of life. Importantly, natural disasters can also result in negative shocks to household finances such as lost income and major unexpected expenses (e.g., home or automobile repair costs).¹ As a result, many financial institutions offer financial relief or assistance that often includes payment relief for customers affected by natural disasters.

This *Quarterly Consumer Credit Trends* report uses the Bureau's consumer credit panel to examine how natural disasters affect consumers' credit reports and potentially their financial well-being.² It also provides information on how financial institutions furnish information on natural disaster assistance to credit reporting agencies. Financial institutions are not required to furnish this information. For institutions that do, the Consumer Data Industry Association (CDIA) provides a standardized approach for reporting natural disaster assistance that financial institutions may opt to follow.³ The CDIA guidance includes use of a natural disaster special comment code in combination with furnishing information on the current account status that applies or whether the account is deferred.⁴

Little is known about the extent to which financial institutions furnish information on natural disaster assistance or how furnishing may vary by industry and consumer type. This report documents the prevalence of natural disaster comment codes in credit records to shed light on current practices for natural disaster reporting. It also documents how this reporting may vary based on account characteristics and consumer credit score.

The data include information on a special comment code listed as "Affected by natural or declared disaster." In 2017, roughly 8.3 percent of consumer credit reports included this comment code at least once. This estimate is comparable to the Federal Emergency Management Agency's (FEMA) estimates

¹ One recent study of the economic effects of natural disasters on consumers and households estimates that checking a account inflows fall 20 percent and outflows fall by more than 30 percent after a natural disaster. See J.P. Morgan Chase & Co. Institute (2018), "Weathering the Storm: The Financial Impacts of Hurricanes Harvey and Irma on One Million Households." Available at www.jpmorganchase.com/corporate/institute/report/weathering-the-storm.htm. Another study finds a general increase in consumers' credit utilization after an event and, for some groups, an increase in bankruptcies. See Tran, B. and T. Sheldon (2018), "Same storm, different disasters: Consumer credit access, income inequality, and natural disaster recovery." Available at www.aeaweb.org/conference/2018/preliminary/paper/KaN3Ar6t.

² The Bureau of Consumer Financial Protection's Consumer Credit Panel (CCP) is a 1-in-48 sample of consumer credit profiles. The data contain detailed information on the balances and payment status of loans and other debts held by de-identified consumers in the panel.

³ See Consumer Data Industry Association (June 2018), "FAQ 58 – Reporting of Natural or Declared Disaster". Available at www.cdiaonline.org/resources/furnishers-of-data-overview/metro2-information/.

⁴ Deferment is a temporary pause on required payments creditors offer consumers in specific situations.

that disasters affected roughly 8 percent of U.S. residents in 2017.⁵ Among tradelines that received this comment code, the code was present for two months, on average.

The remainder of this report focuses on Hurricane Harvey, which made landfall on August 25, 2017, near Houston, Texas. Hurricane Harvey is tied with Hurricane Katrina as the costliest hurricane in U.S. history with roughly \$125 billion in damages⁶ and roughly 373,000 individuals requesting FEMA assistance.⁷ This report's geographic focus is on the Houston-The Woodlands-Sugar Land, TX, metropolitan statistical area (Houston MSA),⁸ which corresponds to a sample of roughly 77,000 consumer credit records and 429,000 consumer tradelines in August 2017.

Figure 1 shows the percent of tradelines by month with the natural disaster comment code (NDC) or deferment payment code (DPC) and the percent of consumer credit reports with the natural disaster comment code from May 2017 to April 2018 on at least one account.⁹ The fraction of tradelines with the natural disaster comment code increased from roughly zero percent before August 2017 to five percent in September 2017. In October 2017, the percent of tradelines with the natural disaster comment code increased further to 10.4 percent. The share remained around this level through November 2017 before declining to 1.2 percent in April 2018, which is still higher than the pre-hurricane levels.

Deferred payments increased slightly from August to September 2017 and then fell back to pre-hurricane levels by December 2017. This suggests that creditors that furnished information on disaster assistance during Hurricane Harvey primarily used the natural disaster comment code rather than the deferred payment code. For this reason, the remainder of this report focuses on tradelines with the natural disaster comment code and not those with the deferred payment code.

Figure 1 also shows the share of consumers in the Houston MSA with a natural disaster comment code reported on their credit report with respect to at least one account. Even as reporting increased sharply in the three months after Hurricane Harvey hit, fewer than half of Houston area consumers had one of their accounts include a natural disaster comment code. Reporting at the consumer level peaks at 38.6 percent in November 2017.

⁵ See FEMA Release HQ-17-191 (2017), "FEMA Reflects on Historic Year." Available at www.fema.gov/news-release/2017/12/29/fema-reflects-historic-year.

⁶ See National Hurricane Center (2018), "Costliest U.S. tropical cyclones tables updated." Available at www.nhc.noaa.gov/news/UpdatedCostliest.pdf.

⁷ See Federal Emergency Management Agency, "Texas Hurricane Harvey (DR-4332)." Available at <https://www.fema.gov/disaster/4332>.

⁸ The Office of Management and Budget defines the Houston-The Woodlands-Sugarland, TX MSA to include nine counties: Harris, Fort Bend, Montgomery, Brazoria, Galveston, Liberty, Waller, Chambers, and Austin.

⁹ While the focus of this report is on the natural disaster comment code, many financial institutions mention the use of deferral for natural disaster assistance. Guidelines for this approach are provided by the CDIA.

FIGURE 1: MONTHLY REPORTING FOR HOUSTON MSA, MAY 2017- APRIL 2018

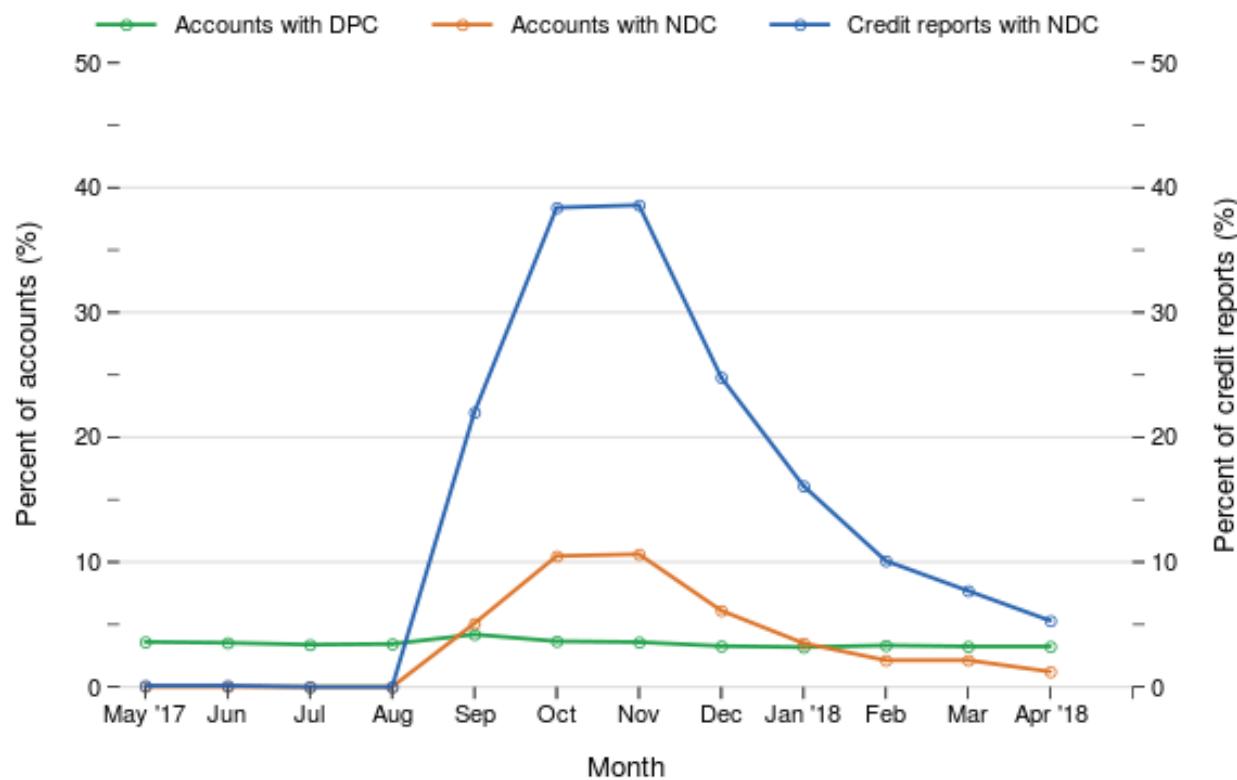


Figure 2 shows the proportion of tradelines that had the natural disaster comment code by county in Texas in October 2017.¹⁰ The proportion was substantially higher in southeast Texas compared to other parts of the state that were less likely to be affected by the hurricane. Areas with higher proportions of tradelines marked with the natural disaster comment code align closely with FEMA-designated disaster areas in Texas for this period.¹¹

¹⁰ The percentages shown in Figure 2 are likely attributable to Hurricane Harvey because very few accounts had natural disaster flags in the months before it hit; more than 90 percent of counties had no accounts with the natural disaster flag.

¹¹ See FEMA Disaster Declaration Map available at fema.gov.

FIGURE 2: GEOGRAPHIC DISTRIBUTION OF NATURAL DISASTER REPORTING FOR TEXAS, OCTOBER 2017

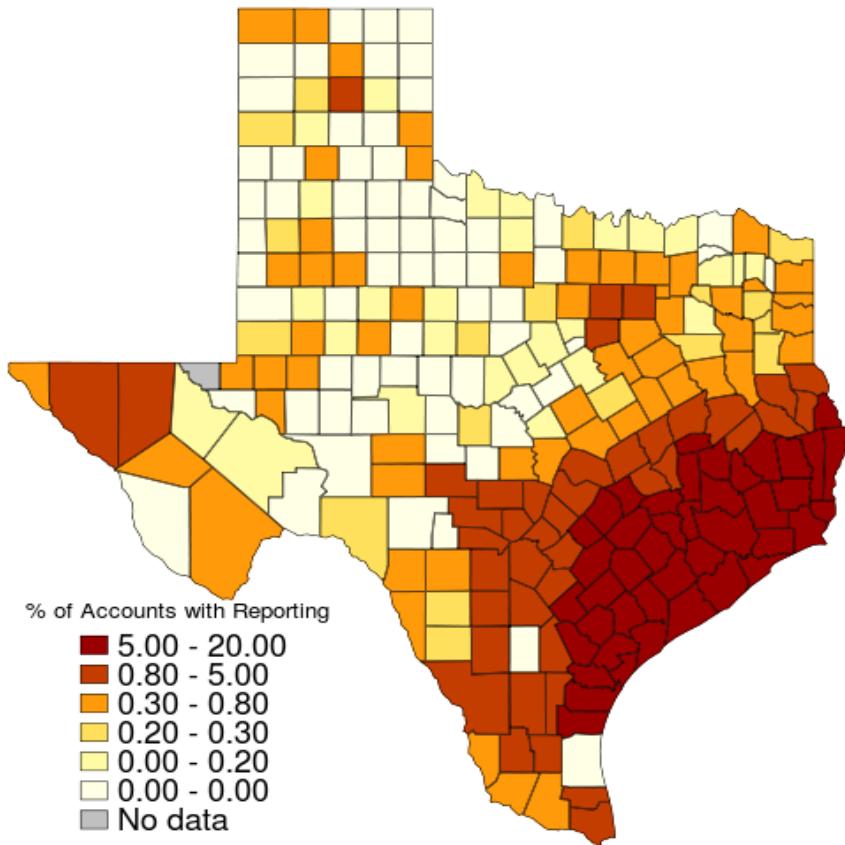


Table 1 provides a breakdown of natural disaster comment code furnishing for auto loans, mortgage loans, student loans, and credit card tradelines in September through November 2017.¹² The columns categorize institutions based on the proportion of the institution's tradelines with the natural disaster comment code. The first row for each industry shows the share of firms that fall into each category, and the second row shows the corresponding market shares. Market shares are defined as the shares of Houston-area tradelines held by the firms in that category. Most firms in each industry did not use the natural disaster comment code at all. For example, 84 percent of firms that report mortgage tradelines and 93.7 percent of firms that report auto loan tradelines did not use the code. At the other extreme, 4.7 percent of firms in the auto loan industry and 10.1 percent of firms in the mortgage industry used the natural disaster comment code on more than half of their tradelines. No student loan furnishers and 2.4 percent of credit-card furnishers flagged more than half their tradelines.

Firms which flagged most of their tradelines are larger, on average, than those that did not use the flag at all, so the market shares for the former group are much larger than their firm share. This is especially

¹² Roughly 96 percent of all accounts are reported as being in active repayment during the period of analysis. This value is smaller for student loan accounts where roughly 65 percent report being in active repayment over the period of analysis.

true for auto and mortgage firms: the market share for auto loan furnishers who reported the natural disaster code on a majority of their tradelines was 18.5 percent, and the corresponding market share for mortgage lenders was just less than 36 percent. While, on average, larger firms reported the natural disaster comment code more often, this relationship is not very strong: for each industry, the average share of firms (the ratio of the market share to the firm share) is largest for firms in the middle category, who reported the code on some but not most tradelines.¹³

TABLE 1: DISTRIBUTION OF SERVICER-LEVEL NATURAL DISASTER REPORTING (% OF TRADELINES) BY INDUSTRY, SEPTEMBER 2017 – NOVEMBER 2017 (PERCENT)

Industry	0%	>0% – 50%	>50%
Auto	Firm Share	93.2	2.0
	Market Share	72.2	9.4
Mortgage	Firm Share	84.0	5.9
	Market Share	42.0	22.1
Student Loan	Firm Share	85.2	14.9
	Market Share	5.3	94.8
Credit Card	Firm Share	94.3	3.3
	Market Share	64.6	31.9

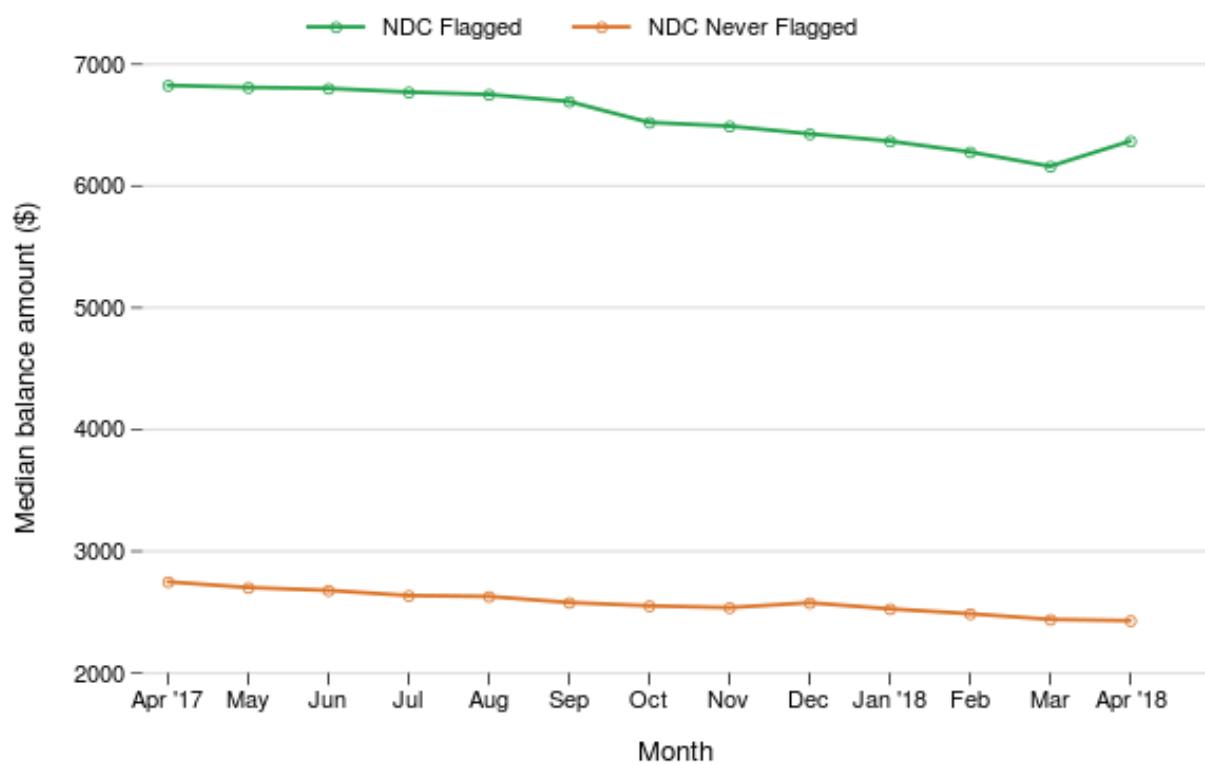
This report next considers the differences in tradelines with and without the natural disaster comment code. The data are broken down into two tradeline-level groups based on the natural disaster comment code status in September 2017 through December 2017. The first group consists of tradelines that shifted from not having to having a natural disaster comment code in the four months following the hurricane (“NDC Flagged”). The second group consists of tradelines that had no natural disaster comment code in any of the four months before and after the hurricane struck (“NDC Never Flagged”).

¹³ Similarly, although the firms that reported the natural disaster flag on most of their tradelines tend to be larger on average, most of them are nonetheless quite small. The median market share for firms who flagged more than 50 percent of their loans was 0.16 percent for auto loans and mortgages, and 0.02 percent for credit cards. The corresponding median market shares for firms that reported no natural disaster codes were 0.005 (auto), 0.007 (mortgages), and 0.001 (credit cards) (not shown).

To assess whether there were differences in tradelines for which natural disaster comment codes were and were not reported, this analysis compares account balances and delinquency rates between the groups. It also shows whether the change in the presence of the natural disaster comment code may or may not be correlated with changes in balances or delinquencies over time.

Figure 3 reports median balances for each group. Median balances differ substantially across the two groups. The NDC Flagged group had a pre-hurricane median balance of around \$6,790, and the NDC Never Flagged group had a pre-period median balance of around \$2,690. Median balances trended downward over time for both groups and changed very little around the time of Hurricane Harvey.

FIGURE 3: MONTHLY MEDIAN BALANCES BY GROUP, APRIL 2017 – APRIL 2018

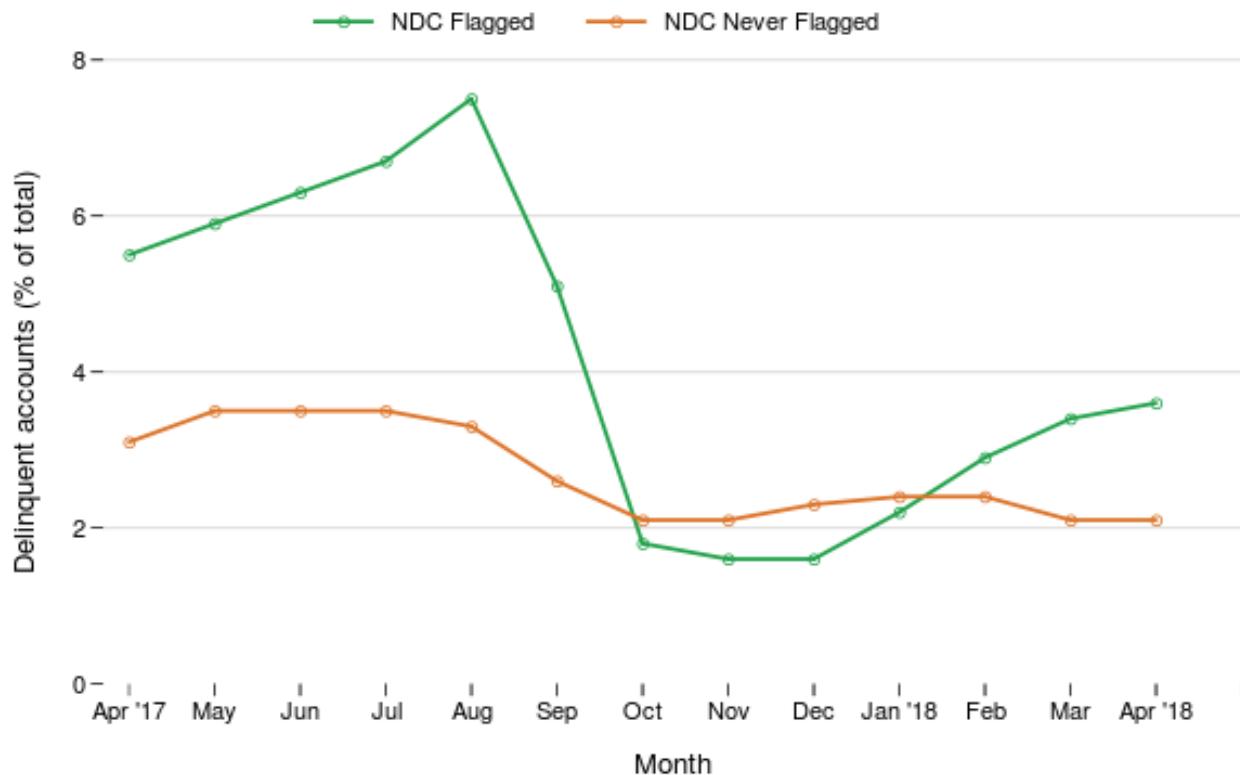


One explanation for the difference in balances is that 21 percent of consumer credit reports in the NDC Flagged group include mortgage tradelines, compared to six percent in the NDC Never Flagged group. Mortgage tradelines are most likely to have the natural disaster comment code in the post-period (see

Table 1) and, typically, have higher balances. Removing mortgage tradelines narrows the difference in pre-hurricane median balances, but the difference remains substantial at roughly \$1,900.¹⁴

Figure 4 reports the share of tradelines that are 30 or more days delinquent by group over time.¹⁵ The NDC Flagged group has much higher rates of delinquency compared with the NDC Never Flagged group in the months before Harvey. In August 2017 prior to the hurricane, 7.5 percent of tradelines for the NDC Flagged group were delinquent compared with 3.3 percent of tradelines in the NDC Never Flagged group.

FIGURE 4: MONTHLY DELINQUENCY RATES BY GROUP, APRIL 2017 – APRIL 2018



In the post-hurricane period, the delinquency rate for the NDC Flagged group decreased considerably, to 1.8 percent in October 2017 and remained roughly constant through December 2017. The delinquency rate for the NDC Flagged groups' tradelines was 3.6 percent in April 2018, eight months

¹⁴ Excluding mortgage tradelines reduces some of the difference in levels for median balances, but trends between April 2017 and April 2018 are similar.

¹⁵ Similar patterns exist if 60+ day and 90+ day delinquencies are used.

after the hurricane. In comparison, the delinquency rate for tradelines in the NDC Never Flagged group trended slightly downward to 2.1 percent by April 2018.

Further analysis (not shown) reveals that much of the decrease in delinquencies occurred due to tradelines that were delinquent in the pre-hurricane period. When the natural disaster comment code was applied, the tradelines no longer appeared as delinquent. As a result, delinquency rates fell immediately after the hurricane, but began to slowly increase starting in December 2017. This pattern occurs for both mortgage and non-mortgage tradelines.

The final portion of this analysis reports differences in credit scores among consumers whose credit reports received a natural disaster comment code on at least one tradeline after Hurricane Harvey. Compared with the monthly tradeline-level analysis of balances and delinquency above, this analysis uses quarterly consumer-level data. “NDC Flagged” includes consumers whose credit reports had at least one tradeline with the natural disaster comment code. “NDC Never Flagged” is defined as consumers whose credit reports had no tradelines with a natural disaster comment code.

Table 2 shows the distribution of credit scores over time for both the NDC Flagged and NDC Never Flagged groups.¹⁶ The median credit score in June 2017 was 689 for the NDC Never Flagged group and 668 for the NDC Flagged group. The median credit score increased slightly for the NDC Never Flagged group, reaching 701 in March 2018. For the NDC Flagged group, the median credit score was roughly constant over time from June 2017 to March 2018. For both NDC Never Flagged and NDC Flagged, the 75th and 95th percentiles were roughly constant over time (not shown).

The distribution falling between the 5th and 25th percentiles shows some change over the period of analysis. The range narrows for the NDC Flagged group between June 2017 and December 2017, indicating that there is a compression of the distribution of credit scores at the bottom. This is largely driven by changes at the 5th percentile of credit scores. The 5th percentile for the NDC Flagged group increased 11 points and 13 points from June to September 2017 and September to December 2017, respectively. For the same time periods, the 5th percentile for the NDC Never Flagged group increased seven points and five points, respectively.

From December 2017 to March 2018, the range of credit scores between the 5th and 25th percentiles once again expanded for the NDC Flagged group. The fifth percentile decreased six points (from 500 to 494) for the NDC Flagged group while the 25th percentile for the group held steady. In contrast, the fifth percentile and 25th percentile increased five points for the NDC Never Flagged group. These patterns align with the observed trend in delinquencies among NDC Flagged tradelines after the hurricane. The

¹⁶ This analysis makes use of a commercially available scoring algorithm to measure consumer credit scores.

range of credit scores between the 5th and 25th percentiles of the distribution among the NDC Never Flagged group was roughly constant over the period of analysis.

TABLE 2. DISTRIBUTION OF CREDIT SCORE BY QUARTER BY GROUP, JUNE 2017 – MARCH 2018

Month	June			September			December			March		
Percentile	50	25	5	50	25	5	50	25	5	50	25	5
NDC Flagged	668	586	476	669	589	487	671	592	500	672	592	494
NDC Never Flagged	689	614	513	691	616	520	693	619	525	701	624	530

This report makes use of Hurricane Harvey, one of the largest natural disasters to occur in recent years, to measure the information furnished about natural disaster assistance in individual credit reports. Although there was an increase in the number of tradelines with the natural disaster comment code following the hurricane, the code nevertheless appears on a minority of tradelines. Less than 40 percent of tradelines in the Houston MSA had the natural disaster comment code in November 2017. Post-hurricane furnishing of natural disaster comment codes also varies by industry, with the mortgage industry having the highest level of furnishing this information, on average.

The data also show differences in the types of tradelines for which financial institutions furnished information using the natural disaster comment code. Specifically, these tradelines tended to have higher median balances and higher rates of delinquency. At the consumer-level, having at least one tradeline with a natural disaster comment code was associated with increases in the distribution of credit scores only at the very bottom of the credit score distribution.

This Quarterly Consumer Credit Trends report serves as a starting point for further research on this topic. More analysis is needed to better understand whether and how the furnishing of information on natural disasters affects consumer credit.