FinRegLab

Debt Management Insights for Distressed Borrowers

Bridging from Emergency Programs to Longer Term Payment Plans

FinRegLab with Stephanie Moulton & Rebecca Xie, The Ohio State University

EMPIRICAL WORKING PAPER 2
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About FinRegLab

FinRegLab is a nonprofit, nonpartisan innovation center that tests new technologies and data to inform public policy and drive the financial sector toward a responsible and inclusive financial marketplace. With our research insights, we facilitate discourse across the financial ecosystem to inform public policy and market practices.

About the National Foundation for Credit Counseling

Dedicated to educating Americans about how to reduce personal or household debt responsibly, the National Foundation for Credit Counseling (NFCC) is a trusted, nationwide resource for education and support in building financial management skills. Through its network of nonprofit agencies and certified counselors, the NFCC offers impactful approaches to debt reduction and improved credit standing, whether consumers are struggling with credit card debt, decisions about housing, or student loans. For more information about the NFCC or to be connected to a certified counselor, please call 800-388-2227 or visit www.nfcc.org.

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1. INTRODUCTION

With roughly 80% of U.S. adults estimated to hold at least one credit card, emergency programs for cardholders who encounter natural disasters, layoffs, or other financial shocks can have significant effects on both individual households and the broader U.S. economy. Credit cards are often the first type of loans that consumers take out when building a credit history and the first credit accounts to go delinquent when borrowers experience financial distress. A record of credit card delinquencies can reduce households' ability to bridge temporary shortfalls and to invest in reliable transportation, homeownership, and small business formation over time. The amount of available credit on credit cards can also affect the broader economy, given that credit limits exceed bank account balances for many households and that consumer spending equals two-thirds of the nation's gross domestic product.[1]

Yet while more consumers obtained short-term payment relief on credit cards during the COVID-19 pandemic than on any other category of credit except student loans—where payments on most loans were paused automatically by federal law—the financial flexibility provided by card forbearances was relatively modest compared to other debt types.[2] This is partially because card forbearances often lasted only a few months and did not pause the accrual of interest, but also because credit card accounts have relatively low minimum payments to begin with. As a result, deferring payments for any one card account may have substantially less effect on monthly household budgets than for mortgage or auto loans.[3]

Longer-term debt management plans (DMPs) that are administered by nonprofit counseling agencies often provide significant interest rate reductions and a structure for paying down balances across multiple credit card lenders. However, as many as half of the consumers who seek credit counseling do not qualify for DMPs because their finances are too damaged, and others may not be aware of their existence.[4]

1 FinRegLab 2022.

2 For purposes of this report, we define "forbearances" as temporary pause on required payments for a particular credit card account, regardless of any changes to interest or fee accrual. This kind of short-term suspension of payments may be called a deferral, skip-a-payment program, or payment holiday in some sectors or by some individual companies.

3 FinRegLab et al. 2023. In the 1990s, most credit card companies reduced their minimum payments from 5% of current balances plus interest and fees to just 1% to 2% plus interest and fees. Tescher & Stone 2022. In contrast, auto and mortgage loans are generally structured to require set monthly amounts that will amortize the loan balance over a fixed term. According to a survey by New York Life, those in credit card debt made an average monthly payment of $430 in 2022. Business Wire, 2022. Mortgage payments were much higher, averaging $1,768 monthly per the Council for Community and Economic Research's Cost of Living Index. Quicken Loans, What is the Average Monthly Mortgage Payment Where You Live?, 2023.

4 FinRegLab 2022.

To probe the need for different emergency programs and processes going forward, FinRegLab and researchers with The Ohio State University (OSU) have analyzed the links between short-term and long-term debt relief programs for consumers who were struggling to manage credit card debt during the pandemic. This study builds on a broader report released in January 2023 by FinRegLab and researchers from OSU and Charles River Associates analyzing data organized by the National Foundation for Credit Counseling (NFCC) and credit records from Experian.[5]

The January report both documented the prevalence of short-term credit card forbearances in the U.S. population during the first 18 months of the pandemic and analyzed credit trends for consumers who sought credit counseling with or without obtaining credit card forbearances. We observed that counseled consumers who obtained card forbearances but did not enroll in a DMP were more likely to experience account delinquencies and charge offs than counseled consumers who both obtained forbearances and enrolled in DMPs after counseling.[6]

These descriptive findings raised questions about the potential benefit of combining short-term emergency relief with longer term DMPs, which is the focus of the present study. Specifically, we address two main sets of questions in our expanded research:

- **To what extent were consumers who obtained short-term credit card forbearances able to resume payments on their credit cards? How much did outcomes differ among particularly vulnerable or distressed borrowers?** To inform these questions, we describe the characteristics and outcomes of consumers who obtained short-term credit card forbearances during COVID, with a particular focus on vulnerable consumer segments. We document the pre-pandemic credit profiles of credit card borrowers who obtained forbearances between April and July of 2020 and track their credit reports for 12 months after those forbearances end, both for a nationally representative sample of U.S. consumers and for a sample of consumers who sought credit counseling during the pandemic era. Because a substantial number of borrowers with relatively large incomes and high credit scores obtained card forbearances, we also assess patterns for particularly vulnerable populations in the national sample as defined by credit score, size of credit card balance, or both factors.
- **Did consumers who entered a DMP during or shortly after a credit card forbearance end up with better payment outcomes on their credit cards than otherwise similar consumers with a credit card forbearance but without a DMP?** This question examines the benefits of combining short-term credit card forbearances with longer term debt restructuring, again with a particular focus on vulnerable and distressed consumers. We analyze the characteristics of consumers who enrolled in DMPs during or within six months after exiting payment forbearance on a credit card as compared to otherwise similar consumers who did not participate in DMPs (and in some cases, credit counseling). Using matched samples to compare consumers with similar baseline credit characteristics, we estimate regression models to analyze the extent to which DMP participants had lower delinquency and charge-off rates in the first 12 months post-forbearance than their matched comparison consumers.

5 FinRegLab et al. 2023. The NFCC is a membership organization representing about two-thirds of the nonprofit credit counseling industry. It worked with both member and non-member agencies to provide data for the broader project, as described in Sections 2 and 3. The January report also analyzed the credit profiles of consumers who sought credit counseling and enrolled in long-term debt programs during the pandemic relative to pre-2020 cohorts.

6 A charge off occurs when the lender records the loan as a loss for accounting purposes. Federal banking guidance directs that this should occur at no more than 120 to 180 days of delinquency depending on the loan type, and nonbanks may use similar timelines particularly when they sell loans to bank investors. Charge offs are generally treated as a significant derogatory event for credit scoring and underwriting purposes, so they can significantly affect the price and availability of credit for consumers over time. FinRegLab 2022 at 10-11.

Overall, we observe that consumers were largely able to resume making payments on their credit cards after short-term payment forbearance ended. In the national sample, only 5.2% of consumers with credit card forbearances went at least 60 days past due on those same accounts within 12 months after the short-term relief expired, and less than 3% had charged off as of 12 months post forbearance. However, there is quite a bit of heterogeneity. Consumers who were more vulnerable going into the COVID pandemic (as measured by having high credit card balances and lower credit scores) were more than twice as likely to experience delinquencies and charge offs on previously forborne credit cards compared to forbearance recipients in the national sample as a whole. Consumers who were more distressed (as evidenced by the fact that they sought credit counseling in addition to short-term forbearances) were up to five times as likely to experience delinquencies and charge offs on previously forborne card accounts as the national sample.

However, consumers who obtained credit counseling and enrolled in DMPs in addition to obtaining credit card forbearances had better outcomes than other vulnerable and distressed populations with credit card forbearances. For instance, forbearance recipients who went on to enroll in DMPs were roughly 35% to 65% less likely than otherwise similar vulnerable and distressed forbearance recipients to default on or charge off their previously forborne account within 12 months after exiting forbearance.

DMP participants were also less likely to experience delinquencies of 60 days or more during the year after exiting forbearance than otherwise similar vulnerable and distressed forbearance recipients who did not enroll in long-term programs, although the benefits were smaller for DMP participants who did not enroll until five to six months after the end of their forbearances. For example, forbearance recipients who enrolled in a DMP within one month after the forbearance ended were 50 percent less likely to experience delinquencies than otherwise similar forbearance recipients who obtained counseling but did not enroll in DMPs, while those who enrolled in a DMP five to six months post-forbearance were 18 percent less likely to experience delinquencies than otherwise similar forbearance recipients who only received counseling. These findings may suggest that there is a relatively short window to transition still-distressed borrowers from short-term forbearances to longer term programs before their finances deteriorate further.

As credit card lenders consider the lessons learned from the pandemic in structuring emergency relief programs going forward, our findings underscore the importance of building early assessment and transition programs to help more severely distressed and vulnerable borrowers migrate from short-term "skip a payment" programs into options that will provide more substantial financial relief or debt restructuring. While not having to make minimum payments can provide some initial breathing room to households, consumers with larger and more expensive card balances are more likely to need longer and more substantial assistance to help stabilize their finances after major shocks.

2. BACKGROUND

The COVID-19 pandemic was unique for both its arrival speed and its severity. From March 8 to May 2, 2020, 33.8 million Americans made an initial unemployment claim, representing an increase of 1,888% over the 1.7 million Americans who filed initial claims over the previous eight-week period. This was the largest increase since weekly data reporting began on January 7, 1967—including the peak of the 2008 financial crisis—and pushed national unemployment to levels that were not seen until two years into the Great Depression.[7] Illnesses and deaths compounded financial shocks for many families, with low-income consumers and households of color more likely to suffer both medical and economic hardships.[8]

Both financial institutions and policymakers moved quickly to aid affected households and businesses, including launching initiatives focused specifically on borrowers. On March 27, 2020, the Coronavirus Aid, Relief and Economic Stability (CARES) Act mandated that nearly all consumers with federal student loans receive automatic forbearances and that consumers with federally backed mortgages who experienced pandemic hardships receive forbearances of up to one year upon request.[9] While the CARES Act did not mandate forbearances for other types of consumer loans, it reduced potential damage to consumers' credit reports and scores by mandating that borrowers be reported to credit bureaus as current (or at the same level of delinquency as prior to the pandemic) for the duration of any pandemic-related credit accommodations. With urging by federal financial regulators, many lenders rushed to establish or expand forbearance and other relief programs in 2020 for non-mandated loan products, and by some estimates ultimately provided about 20% of the financial relief granted through forbearances between March 2020 and May 2021.[10]

The volume and impact of forbearances were most dramatic in the early part of the pandemic as other programs were still being rolled out,[11] although federal officials extended payment relief programs for federally related mortgage loans and most federal student loans for additional time

7 FRED, US Employment and Training Administration, Initial Claims (ICSA); FRED, Unemployment Rate for the United States, 1929-1942. During the Great Depression, unemployment then rose another 10 percentage points over the third year.

8 FinRegLab, 2022, at 50.

9 The CARES Act, 2020. The law's forbearance requirements applied to mortgages that were guaranteed, insured, or securitized by federal agencies and government-sponsored entities.

10 Cherry, Jiang, Matvos, Piskorski, & Seru, 2021.

11 The CARES Act, subsequent federal legislation, and other government initiatives also boosted unemployment insurance benefits, assistance to small businesses and their employees through such programs as the Paycheck Protection Program, foreclosure protections, and various other relief and stimulus payments to households. However, many of those programs took time to implement and to distribute funds. For instance, the federal government distributed about $16.5 billion in financial assistance to renters but not until late 2021 and early 2022. U.S. Treasury Department, 2022; FinRegLab, 2022, § 4.

periods.[12] One study estimated that more than 72 million consumers (28%) obtained at least one loan forbearance through May 2021, allowing them to forgo $86 billion in payments.[13] Among households who obtained such forbearances, a substantial number actually continued to make payments, ranging from 19% on revolving accounts to 25% on mortgages.[14] At the same time, demand for other debt resolution dropped substantially; for example, consumer bankruptcy filings declined by 30% in 2020 relative to 2019, and by another 17% in 2021[15]

Studies that have focused on the effects of lender forbearances and related credit reporting practices on consumers who experienced pandemic-related distress have tended to focus most intensely on mortgage forbearances, in part because of their size and length and the availability of supplemental data sources.[16] Yet while such forbearances provided substantial financial flexibility for consumers who obtained them, about half of lower income consumers and Black and Hispanic households rent their homes.[17] Accordingly, focusing on the use of lender forbearances and debt resolution options for other loan products is instructive to better understand the impacts of the pandemic on populations that tended to be disproportionately impacted by pandemic hardships, as well as to improve short-term and long-term assistance programs going forward.

This study is part of a broader research project to evaluate ways to improve debt resolution options for consumers who are struggling to manage credit card and other general unsecured debts. The research project recognizes the importance of unsecured debt as a component of financial inclusion and household stability, and the need for better strategies to manage unsecured household debt as part of addressing the nation's racial wealth gap and general economic resiliency. Additional background on the project, short-term pandemic relief programs, and long-term debt resolution options such as debt management plans is available in previous project reports, Debt Resolution Options: Market & Policy Analysis (FinRegLab 2022), Debt Management Insights for Distressed Borrowers: Credit Counseling and Lender Forbearances Post-COVID (FinRegLab et al. 2023), and The Countdown Clock for Student Loan Forbearances (FinRegLab 2023).

12 Under the extensions, most mortgage borrowers could obtain pandemic forbearances of up to 18 months, and forbearances on most federal student loans were provided automatically through August 30, 2023. FinRegLab, 2022, § 4; FinRegLab, 2023.

13 Cherry et al., 2021; CFPB, 2021.

14 Cherry et al., 2021, at 157.

15 United States Courts, 2022.

16 E.g., Cherry et al. 2021 and Kim et al. 2022.

17 U.S. Census Bureau, 2022.

3. DATA AND METHODS

3.1 Data

There are three primary sources of data for this analysis. The first source is administrative data collected from consumers at the time of counseling by eight nonprofit credit counseling agencies that contributed data toward the broader research project organized by the NFCC.[18] We focus on consumers counseled after the onset of the COVID-pandemic, between the second quarter of 2020 and the third quarter of 2021. The agency data contains information on counseled consumers' demographic and financial characteristics, the types of services they received and the dates on which they received them, and characteristics of consumers' financial situation. Agencies provided de-identified administrative data to the research team for this analysis. For more information about this segment of the study population and distribution of consumers by agency, see our previous Debt Insights Report (FinRegLab et al. 2023).

The second source of data is consumer credit data from Experian, one of three national credit bureaus in the U.S. Experian's credit data includes approximately 250 million unique consumer records at any given point in time, representing more than 90% of the population in the United States age 18 and older (Brown et al. 2015). To maintain the confidentiality of consumer data, the individual agencies sent a list of their counseled consumers to Experian. About 88% of the consumers in the counseling agency data could be matched to credit bureau records. Experian then appended credit data to the list of clients and removed all personally identifying information (PII) before sending the credit data to the research team. A unique client-agency key was retained to allow for linkages between the credit data and administrative datasets. Credit data is provided as of the end of a given quarter (Q) as follows: Q1 (March 30), Q2 (June 30), Q3 (September 30), and Q4 (December 31). For this study, we use credit data for counseled consumers for the last quarter of 2019, all four quarters of 2020, and for the first three quarters of 2021.

The third source of data is the Ohio State University Consumer Credit Panel (OSU-CCP), which consists of a one percent national random sample of consumers who were in Experian's credit data as of a given quarter from 2015 through 2021. The random sample is generated by including

18 The NFCC is a membership organization representing about two-thirds of the nonprofit credit counseling industry. It has worked with both member and non-member agencies to provide data for analysis. Thirteen agencies contributed data for the first phase of the project, although information from five agencies was not used for purposes of this analysis due to limitations in its scope. The participating agencies include a range of sizes and geographic coverage areas. They are American Financial Solutions, Apprisen, Cambridge Credit Counseling, Consumer Credit Counseling Services of Maryland, Consumer Credit Counseling Services of Rochester, Consumer Education Services (CESI), Credit.org, Debt Management Credit Counseling, DebtWave Credit Counseling, GreenPath, InCharge Debt Solutions, Pioneer Credit Counseling, and Take Charge America. All agencies have permission to use client data for purposes of the research project.

all consumers in the sample with the same last two-digits of a unique, randomly generated eight-digit time-invariant consumer sequence number. This methodology allows researchers to follow the same randomly selected consumers over time and to add new consumers to the sample over time. The process is similar to that used to generate other established credit panels, such as the Federal Reserve Bank of New York's Equifax-sourced Consumer Credit Panel (CCP) (see Lee & Van der Klaauw 2010). For this study, we use credit data for the national random sample for the last quarter of 2019, all four quarters of 2020, and for the first three quarters of 2021. For both the counseled consumers and consumers included in the OSU-CCP, we analyzed both trade (account) level data and attributes provided by Experian.

3.2 Defining Credit Card Forbearances and Sample Construction

3.2.1 Defining Credit Card Forbearances

We identify all credit card accounts held by consumers in our samples that were potentially eligible for short-term relief during the COVID pandemic. Specifically, we identify credit card accounts using the Experian trade (account) level credit panel data for the national and counseled samples of consumers between Q4 2019 and Q3 2021. Credit card accounts include revolving bankcards (major credit cards) and no preset spending limit bankcards, as well as retail revolving trades (e.g., department store credit cards). We exclude charge cards that require the entire payment due in full each month because we understand that reporting practices on those products varied during the pandemic in ways that would make it difficult to identify forbearances consistently. We limit eligible credit card accounts to accounts that are open or closed with a non-zero balance in a given month. Accounts deemed ineligible include those that are derogatory (e.g., accounts with foreclosure, bankruptcy, charge off, or settled for less than full balance), stale (e.g., the balance was not updated by the creditor in the prior three months), and those for which the individual is not financially responsible (e.g., accounts for which the individual is only an authorized user).[19]

Within the sample of eligible credit card accounts, we identify evidence of payment forbearance using the trade level data and construct measures of forbearance spells. As discussed in Section 1 and in our Debt Insights Report (FinRegLab et al. 2023), we use the term credit card forbearance to describe a temporary pause on required payments for a particular credit card account. Some creditors may use other terms for these arrangements, such as deferrals or temporary hardship programs.[20] We did not have information about whether interest accrued during the period in which payments were suspended, but industry surveys suggest that practices on interest accrual varied widely during pandemic-era forbearances.[21] While there is no absolute way to identify forbearance on a credit card trade because creditors are not specifically required to report forbearances to credit bureaus and methods of reporting also vary, we follow COVID-era creditor forbearance reporting guidance to identify credit cards with account patterns or special comment codes that are indicative of a credit card forbearance.[22] It is important to note that creditor reporting practices regarding

19 Some lenders did not offer short-term forbearances to consumers who were already severely delinquent or in bankruptcy prior to the pandemic, although they may have offered other types of relief. Consumer Financial Protection Bureau, 2021, at 115-116.

20 We do not consider other types of customer accommodations, such as changes in credit lines or settlements of debt for less than the full balance owed. Some lenders did offer such assistance to some consumers during the pandemic, however.

21 Consumer Financial Protection Bureau, 2021, at 116-118.

22 FinRegLab, 2020. For other examples using a similar approach, see Cherry et al., 2021, and Brown, Collins, and Moulton, 2022.

required payments were extremely inconsistent prior to the onset of the COVID pandemic, and thus we cannot identify credit card trades with evidence of forbearance prior to April 2020.[23]

The trade level data provides a full snapshot of the status of each account as of the last month of each quarter, as well as monthly information regarding account balances, required payment amounts, and payment status. Using the trade data, we identify months for which the creditor has reported a non-zero balance but no required payment, and for which the payment status does not advance in delinquency from the prior month. We group consecutive months meeting these criteria into potential forbearance spells on a given credit card trade. We exclude from our definition of forbearance a spell lasting only one month that has a zero balance in the prior month, as these trades may simply have no payment due.[24] We also do not count as forbearance a spell lasting more than six months or accounts with more than three distinct spells in an 18-month period, as this may reflect creditor reporting practices or other workout programs rather than COVID-era forbearances.[25] We further exclude from our definition of forbearance accounts that had been open for less than three months prior to the start of a forbearance spell because the lack of required payment could be due to the recent account opening. We also exclude from our definition of forbearance accounts where the balance was below $150 to focus on situations for which a payment forbearance would be substantive. In addition to using monthly trade data to code forbearance, we also code an account as forborne if the creditor furnished a special comment code identifying the account as in forbearance or deferral as of the last month of the quarter.

Based on the above definitions, we identify 148,821 counseled consumers with at least one eligible credit card trade between Q2 2020 and Q3 2021, of whom 43,053 (28.9%) had at least one credit card trade in forbearance at some point between Q2 2020 and Q3 2021. Using the one percent national random sample, we identify 2,019,292 consumers with at least one eligible credit card trade between Q2 2020 and Q3 2021, of whom 208,716 (10.3%) had at least one credit card trade in forbearance at some point between Q2 2020 and Q3 2021.

This sample is described in detail in the Debt Insights Report (FinRegLab et al. 2023), including the overlap between credit card forbearances and other types of debt forbearances.[26] We find that credit card forbearances were the most common type of non-student loan forbearance during the COVID pandemic. For example, in the national sample 7.1% of all consumers and 10.3% of consumers with credit cards had at least one forbearance on at least one card account, compared to 2.2% of all

23 Creditors are not required to report scheduled payment amounts on trades, and prior to the pandemic, creditors were less likely to report scheduled payment amounts for credit card trades compared to installment trades. However, after the onset of the COVID pandemic in March 2020, it became more common for creditors to report scheduled payment amounts on credit card trades. Practices evolved after passage of the CARES Act, with credit bureau guidance advising creditors to report trades in forbearance as having $0 scheduled payment but having a positive balance. Our coding relies on private creditor reporting to identify forbearances. We did not treat accounts with a code reflecting that the consumer had been affected by a natural disaster as forbearances unless they had additional indicia of payment relief. Such codes may be used by creditors as a general indicator of hardship even if a consumer does not receive a forbearance or other accommodation. For additional background on credit reporting practices regarding disaster-related hardships and accommodations, see FinRegLab, 2020.

24 We also exclude from the definition of forbearance credit cards that had a spell lasting only one month and were missing data in the prior month, with a zero balance two months prior.

25 In our data, less than 5% of credit cards with forbearances had spells lasting more than 6 months and less than 1% had more than three periods without required payments. In addition to their infrequency, other patterns in the reported data for these accounts suggested that they might reflect variations in lender reporting practices or other distinctions from typical COVID-era forbearances. For example, about 40% of credit cards with spells lasting more than 6 months did not have a scheduled payment in our data for the entire 18-month pandemic period, despite holding a positive balance. Further, limiting to consumers with no more than three spells lasting six months or less provides us with at least 12 months of data post the forbearance to observe credit card payment performance after forbearance ends, which is a focus of this study.

26 The methodology described here and reflected in the August 2023 update to the Debt Insights Report refines our original approach. The number of forbearances studied in this report is therefore more limited than in the January analysis, although credit card forbearances are still more common than forbearances on other types of credit accounts in both the national and counseled samples.

consumers and 8.5% of consumers with mortgage loans for mortgage forbearances, and 1.8% of all consumers and 5.2% of consumers with auto loans for auto loan forbearances during the same period.

Appendix Table A 1 reproduces Table 10 from that report, summarizing the characteristics of consumers with forbearance-eligible credit card trades as of December 31, 2019, by whether they subsequently have evidence of forbearance on at least one credit card trade. In general, consumers with evidence of credit card forbearances had higher debt-to-income ratios, higher levels of credit card debt, and higher levels of mortgage and other consumer debt compared to consumers with credit cards but without evidence of credit card forbearance. Further, while in the national sample consumers with credit card forbearances had slightly lower credit scores than those with credit cards without forbearance (average of 705 compared with 717), there is also evidence that consumers with credit card forbearance had stronger payment histories as they were less likely to be previously delinquent or charged off on their credit cards as of December 31, 2019, than consumers without credit card forbearance. Consumers in the counseled sample with evidence of credit card forbearance actually had higher credit scores on average than consumers with credit cards without forbearance (635 compared with 600).

3.2.2 Trends in Credit Card Forbearances Over Time

We next plot trends in credit card forbearances by month, beginning in April 2020 through the end of September 2021. We first plot trends at the trade (account) level and then move to the consumer level, as a single consumer may have multiple credit card accounts in forbearance. We plot the timing of when a trade or consumer first entered credit card forbearance (e.g., the first month with evidence of a forbearance spell), as well as the cumulative share of trades or consumers that have evidence of being in a forbearance spell in a given month.

Figure 3.2.1 shows the share of eligible credit card *trades* in the national and counseled samples that *enter* a first forbearance in a given month, beginning in April 2020. Figure 3.2.2 shows the share of eligible credit card *trades* in the national and counseled samples that *are in* forbearance in a given month, beginning in April 2020. Both figures indicate that the majority of COVID-era forbearances on credit card trades occurred during the first few months of the pandemic in 2020—with the highest rate of entering credit card forbearance beginning in April 2020 (Figure 3.2.1), and the highest cumulative share of trades in forbearance occurring in May 2020 (Figure 3.2.2).

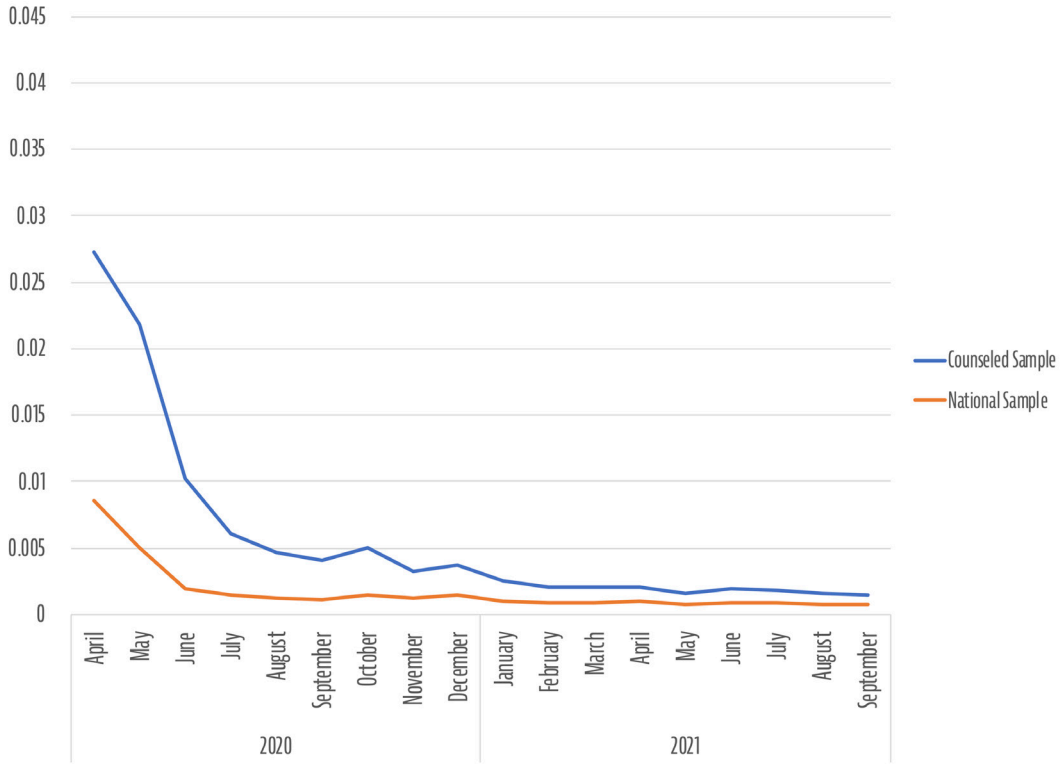
Figure 3.2.3 shows the share of *consumers* with an eligible credit card trade that enters a first forbearance in a given month. Figure 3.2.4 reports the cumulative share of *consumers* with eligible credit card trades who have any credit card in forbearance in a given month. Because most consumers have multiple credit cards and thus can have multiple trades of which only some are in forbearance, the share of consumers entering or in forbearance in a given month is much higher than the share of trades in forbearance. At the peak, 4% of consumers in the national sample and just over 17% of consumers in the counseled sample were in forbearance as of May 2020 (Figure 3.2.4). Similar to the trends in trades, COVID-era forbearances at the consumer level peaked early in 2020, with very few consumers in the national or counseled samples having a credit card enter a first forbearance after July 2020 (Figure 3.2.3).

For the remainder of this report, we focus on consumers with evidence of at least one credit card in forbearance for which the spell began between April and July 2020, and for whom we have at least 12 months of credit data after the end of the first forbearance spell. The counseled sample is further limited to consumers who sought counseling after the onset of the COVID pandemic and within 6 months of exiting forbearance, between March 2020 and June 2021. This not only encompasses the months with the highest number of COVID-era forbearances in the samples, but it also

allows us to have at least 12 months of data post-forbearance to observe consumer outcomes. This restriction results in a sample of 108,908 consumers in the national sample and 15,044 consumers in the counseled sample, as detailed further in Table 3.3.1.

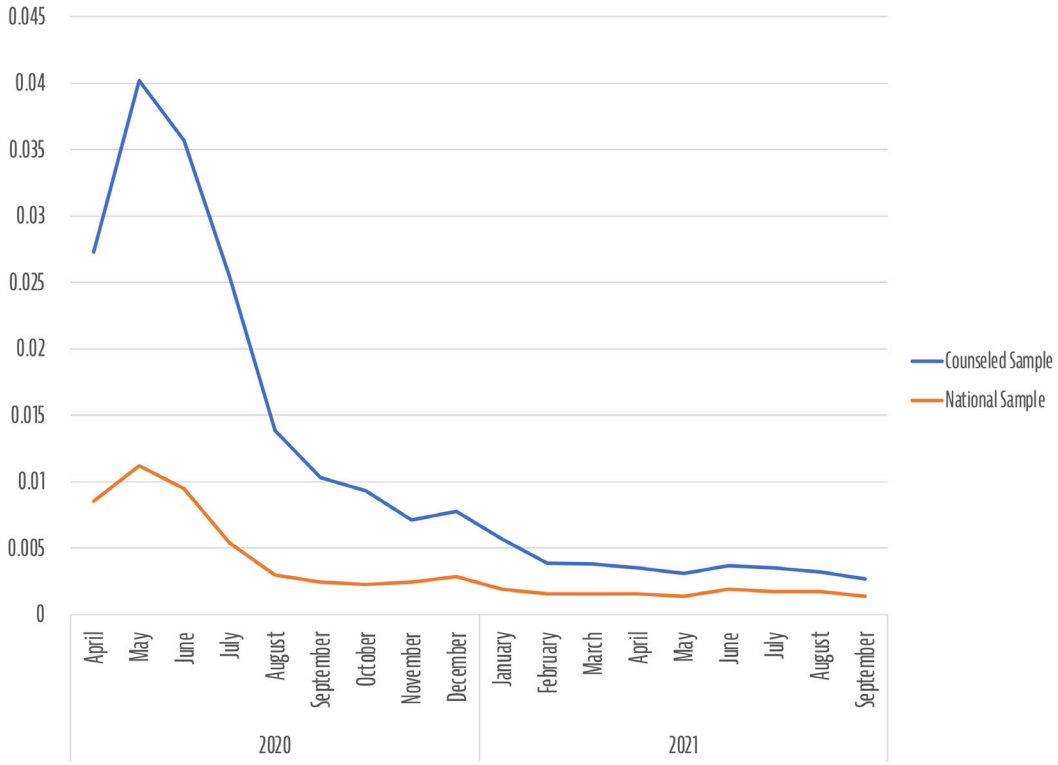
Key Finding: The majority of COVID-era credit card forbearances began immediately after the onset of the COVID pandemic in April 2020, with the volume of new forbearances dropping substantially by July 2020 and even further by January 2021. The cumulative volume of card accounts in forbearance and consumers with card forbearances peaked in May-June and declined somewhat more slowly.

FIGURE 3.2.1 SHARE OF ELIGIBLE CREDIT CARD TRADES ENTERING FIRST FORBEARANCE SPELL



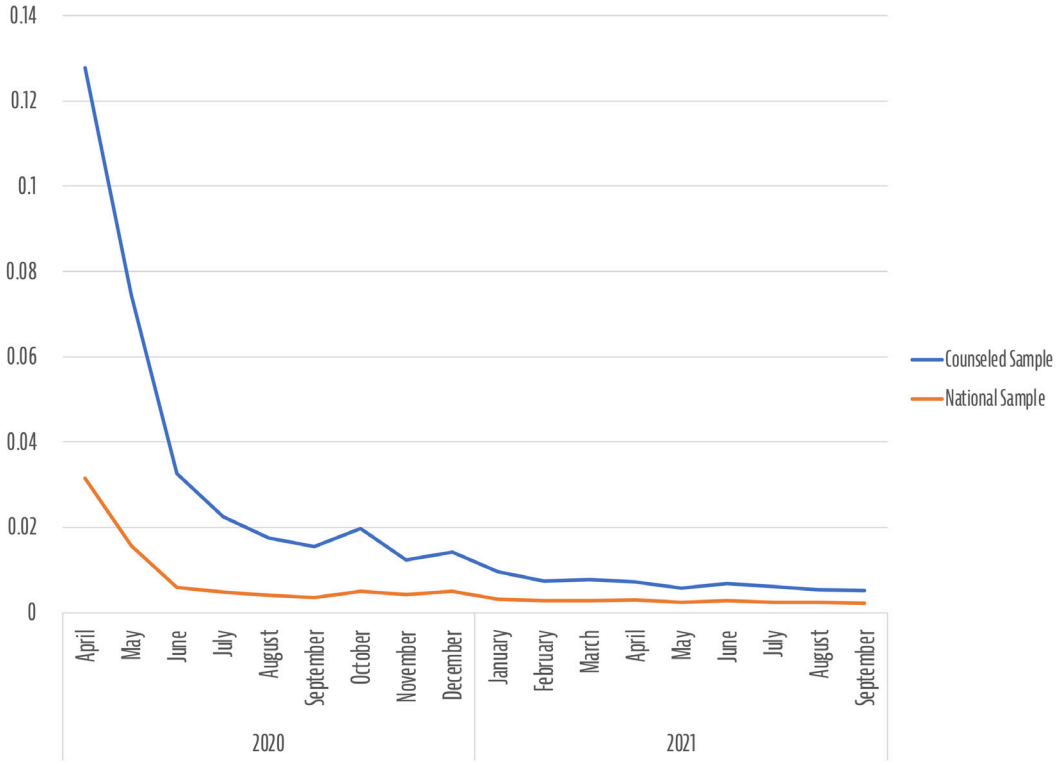
Source: Authors' calculations from Experian credit data for NFCC consumers counseled between Q2 2020 and Q3 2021 and OSU's National Consumer Credit Panel that corresponds to a 1% random sample of US consumers.

FIGURE 3.2.2 SHARE OF ELIGIBLE CREDIT CARD TRADES IN FORBEARANCE



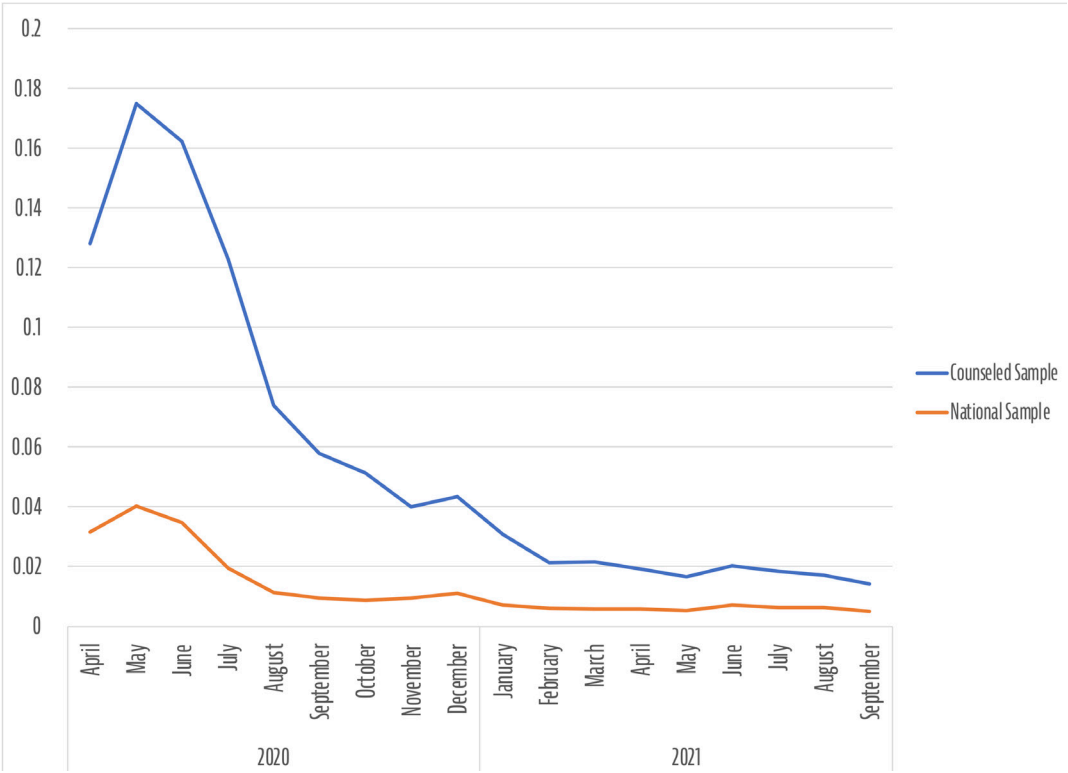
Source: Authors' calculations from Experian credit data for NFCC consumers counseled between Q2 2020 and Q3 2021 and OSU's National Consumer Credit Panel that corresponds to a 1% random sample of US consumers.

FIGURE 3.2.3 SHARE OF CONSUMERS WITH A CREDIT CARD ENTERING FIRST FORBEARANCE



Source: Authors' calculations from Experian credit data for NFCC consumers counseled between Q2 2020 and Q3 2021 and OSU's National Consumer Credit Panel that corresponds to a 1% random sample of US consumers.

FIGURE 3.2.4 SHARE OF CONSUMERS WITH A CREDIT CARD IN FORBEARANCE



Source: Authors' calculations from Experian credit data for NFCC consumers counseled between Q2 2020 and Q3 2021 and OSU's National Consumer Credit Panel that corresponds to a 1% random sample of US consumers.

3.3 DMP Enrollment During or After Credit Card Forbearances

One of the purposes of this report is to explore the extent to which consumers during the COVID-19 pandemic combined short-term debt relief, which we define as one or more credit card forbearances lasting no longer than six months, and long-term debt relief by entering a debt management plan (DMP). Short-term credit card forbearance and long-term debt restructuring through a DMP are very different options to deal with credit card distress. While credit card forbearance allows for a temporary pause on payments, it is often very short-term (one to three months) and interest often continues to accrue during that period. Thus, while a short-term pause on payments may prevent immediate delinquencies, it does not ultimately assist the borrower in resolving debt loads that they can no longer sustain and in fact may add marginally to those debt loads to the extent that interest continues to accrue. For some consumers, longer term debt restructuring may therefore be critical to recovering from a substantial or prolonged income or expense shock. This analysis is designed to examine these links by comparing downstream trends in credit metrics for consumers who obtained both forms of relief as compared to those who only obtained forbearances.

As described in detail in our October 2022 Debt Options Report (FinRegLab 2022), DMPs are typically administered by nonprofit credit counseling organizations and are structured to repay full loan balances over no more than 60 months, often with substantial interest rate reductions. Unlike bilateral workout options with a single creditor, DMPs offer a structured payment plan to repay credit card debt across multiple creditors—and thus may be beneficial for consumers with multiple credit cards with relatively high balances. By lowering interest rates, DMPs reduce average monthly

payments by 10% to 15% and reduce the total cost of repayment by 20% to 40% according to some estimates (Washington Center for Equitable Growth 2017).

Still, not all consumers are aware of DMPs, and not all consumers qualify for enrollment because they lack sufficient residual income to afford the monthly DMP payments. Different lenders have different policies on DMP participation and concession structures, which can sometimes result in differences as to whether otherwise similar consumers qualify for enrollment and in how many of a DMP participant's credit accounts are included in the plans. Similarly, counseling agencies and counselors may differ in the extent to which they recommend DMPs, particularly for consumers on the margin of qualifying for a DMP. And, even if referred to a DMP at the time of counseling, consumers may opt to not participate. Prior research indicates that roughly half of counseled consumers do not qualify for DMPs and that roughly 25% to 30% of consumers who seek credit counseling for their credit card debt ultimately end up enrolling in a DMP.[27] The self-selection of consumers into a DMP makes it challenging to isolate the causal effect of a DMP on outcomes. We detail our approach to address observed characteristics that may be associated with selection in Section 3.5.2. However, we recognize that there are likely still unobserved factors that reduce our ability to identify the causal effects of enrolling in a DMP on outcomes.

For this analysis, we identify consumers who have evidence of forbearance on credit card debt during the first months of the COVID pandemic—April to July 2020—who also enrolled in a DMP immediately prior to, during, or after the forbearance spell in both our national and counseled samples. In the national sample, we use the trade level data to identify evidence of enrollment in a DMP. Creditors may voluntarily indicate credit cards that are enrolled in a DMP using a special comment code on the credit file. Our prior research estimates that about 80% of consumers enrolled in a DMP have at least one creditor reporting the trade as being included in a DMP.[28] We flag a consumer in the national sample as being enrolled in a DMP if at least one creditor began reporting a credit card as enrolled in the same quarter that the consumer had evidence of entering a forbearance spell or within two quarters after the credit card forbearance spell ended. In the counseled sample, counseling agencies indicate which consumers entered a DMP and the date of enrollment. These dates allow us to more precisely identify when a counseled consumer entered a DMP relative to the forbearance spell. We separate counseled consumers who entered a DMP *during* the forbearance spell (one month prior to the start of the spell, during the spell, or one month after the spell ends) from consumers who entered a DMP two to six months *after* a forbearance spell ends.

Table 3.3.1 summarizes the samples used for this analysis overall and by enrollment in a DMP. In the national sample, a very small minority of consumers with credit card forbearances between April and July 2020 also enrolled in a DMP between April 2020 and June 2021 (345 consumers, or 0.32%). Given this is a one percent random sample, this suggests that only about 34,500 consumers nationwide combined credit card forbearance during the first months of the pandemic with DMPs. Because of the small number of consumers with evidence of a DMP in the national random sample, we do not report on their characteristics or follow them for the remainder of the report.

In the counseled sample, we observe 6,478 consumers who received counseling immediately prior to or during a credit card forbearance between April and July 2020—of whom 1,778 enrolled

27 FinRegLab 2022; FinRegLab et al. 2023. Some consumers work instead with for-profit debt settlement companies to seek settlements for less than the full amount they owe on their accounts from multiple lenders over time. While payments to lenders are reduced in such settlements, fees can amount to roughly 25% of settled balances and consumers may experience substantial balance increases and credit score declines soon after enrollment. For discussion of these and other debt resolution options see FinRegLab 2022 at 17-39.

28 DiTommaso and Moulton 2022.

in a DMP during the forbearance.[29] We observe 8,566 consumers who received counseling within two to six months after the credit card forbearance spell ended, of whom 2,541 enrolled in a DMP.[30]

TABLE 3.3.1

NATIONAL SAMPLE WITH FORBEARANCE, APRIL TO JULY 2020	108,908
NATIONAL SAMPLE, NO DMP	108,563 (~10,865,300)
NATIONAL SAMPLE, DMP DURING OR 2 QUARTERS POST FORBEARANCE	345 (~34,500)
COUNSELED 1 MONTH BEFORE, DURING, OR 1 MONTH AFTER FORBEARANCE ENDED	6,478
NO DMP	4,700
ENROLLED IN A DMP	1,778
COUNSELED 2-6 MONTHS AFTER FORBEARANCE ENDED	8,566
NO DMP	6,025
ENROLLED IN A DMP	2,541

Key Finding: Only a small number (and share) of consumers combined short-term forbearance at the start of the pandemic with longer term DMPs. To the extent that combining temporary credit card debt relief with longer term debt restructuring is beneficial for particular consumer segments—as explored in the balance of this report--new on-ramps and approaches to identify and enroll consumers may be needed.

3.4 Differentiating Vulnerable and Distressed Consumers

All of the consumers with credit card forbearances in this report affirmatively sought help with their credit card debt during the pandemic through one or more channels, signaling that they had experienced some kind of financial shock or hardship.[31] However, gauging both the extent and duration of those shocks and individual borrowers' capacity to absorb changes in income and expenses is difficult to do based solely on credit report records because those records do not directly and fully document actual employment, income, or assets. One of our primary motivations in following up on the analysis presented in the January report was to better understand the experiences of more distressed and vulnerable populations after obtaining short-term payment relief during the pandemic.

Consumers with credit card forbearances in the counseled sample are a self-identified distressed group of consumers. The fact that consumers sought out credit counseling in addition to short-term forbearances suggests that their households were relatively distressed and concerned about their longer term finances. Our analysis in the January report combined information collected by counseling agencies with credit bureau records to better understand distress levels among counseled

29 Our Debt Insights Report (FinRegLab et al. 2023) indicates that the share of counseled consumers who enrolled in a DMP declined from 30% in the pre-pandemic era to 25% by the first three quarters of 2021. There are multiple reasons why counseled consumers may not enroll in a DMP, including not qualifying for a DMP or choosing to manage debt on their own. Also, as noted above, consumers with similar financial profiles may or may not qualify for DMPs depending on the policies of their individual lenders.

30 In our analysis sample, more than 80% of DMP consumers enrolled in a DMP in the same month of the counseling session, 90% enrolled within one month after the initial counseling session, and 95% enrolled within 2 months after the initial counseling session.

31 Large credit card lenders reported that they generally required borrowers to attest that they had experienced a pandemic-related hardship but did not require documentation or other evidence. CFPB, 2021, at 116. The logistical challenges in obtaining relief during the initial lockdown, the nature of credit card forbearances relative to other types of pandemic relief programs, and the fact that about 20% of borrowers kept making payments on revolving accounts even after obtaining forbearances suggest that strategic behavior was likely limited.

populations during the pandemic relative to consumers who obtained counseling and enrolled in DMPs from 2017 to 2019. The full sample of consumers seeking counseling during the pandemic were demonstrably distressed on a variety of dimensions, with more than one-third reporting unemployment or loss of income as their motivation for seeking counseling, up more than ten percentage points from early 2019.

However, in the national sample we cannot identify those who sought counseling except to the very limited extent that they were reported to have entered into a DMP. Nor can we assume that all consumers in the national sample who obtained forbearance were distressed given evidence that a substantial numbers of borrowers with relatively strong credit records sought credit card forbearances during the pandemic.[32] We therefore define and analyze a subgroup of national sample consumers who obtained credit card forbearances between April and July 2020 and who were likely to be more vulnerable to financial shocks due to their preexisting credit records.

As reflected in Section 4, we considered a variety of vulnerable subgroups based on credit score, credit card balance, and a combination of the two factors as of the baseline period prior to the pandemic Q4 2019, as measured on December 31, 2019. Consumers with VantageScores below 660 likely have some pattern of difficulty making payments or credit distress and have limited access to low-cost borrowing alternatives. Credit card debt amounts of $8,000 or more correspond to a substantial minimum monthly payment—typically $200 or more. We define the vulnerable sample using both risk factors. While higher wealth and income consumers may also carry high credit card balances that they pay in full each month, consumers with credit scores below 660 who also carry high credit card debt amounts are more likely to be particularly distressed. People with low levels of credit card debt (regardless of credit score) are less similar to DMP participants who generally carry substantial balances.[33] There are 14,274 consumers in the vulnerable national population subsample.

TABLE 3.4.1

NATIONAL SAMPLE WITH FORBEARANCE, APRIL TO JULY 2020	108,908
NATIONAL SAMPLE, BELOW 660 CREDIT SCORE	33,220
NATIONAL SAMPLE, ABOVE $8,000 CREDIT CARD DEBT	42,834
NATIONAL SAMPLE, VULNERABLE POPULATION	14,274

3.5 Analysis Approach

3.5.1 Describing Credit Card Forbearance Outcomes by Consumer Segments

Our first set of research questions as detailed in Section 4 aim to better understand the characteristics and outcomes of short-term credit card forbearances during COVID with a focus on the heterogeneity of vulnerable and distressed consumer segments. We report summary statistics that describe differences in the duration of forbearance spells and the size of forborne balances by consumer segment (Section 4.1), differences in consumer characteristics at baseline by consumer

32 Cherry et al., 2021; FinRegLab et al., 2023. The COVID-19 pandemic led to more white collar job losses than previous recessions, which may partly explain why so many consumers with strong credit histories applied for credit card forbearances. It should be noted that blue collar workers still experienced greater losses than white collar workers. Cassella, 2020.

33 In our prior research (FinRegLab et al. 2023), we found that consumers who sought counseling for distress on credit card debt during the COVID pandemic had an average credit card balance of $8,330 and an average credit score of 603—with those also receiving COVID era credit card forbearances having slightly higher balances and higher credit scores on average.

segment (Section 4.2), and differences in credit card outcomes within the first 12 months following the end of the first forbearance spell (which we call the focal forbearance) by consumer segment (Section 4.3). Outcomes for all forbearance spells are reported in Appendix B. Appendix C describes the credit profiles as of the baseline period for consumers who became delinquent or charged off on their focal forborne credit card as of 12 months after the end of the focal forbearance spell.

For this first set of analyses, our sample includes all consumers in the national and counseled samples who have evidence of entering a credit card forbearance between April 2020 and July 2020 and for whom we have at least 12 months of data after the end of their first spell of credit card forbearance. We split the national sample by credit score, credit card balance, and vulnerable status as described in Section 3.4. We split the counseled sample by whether they were counseled during or after entering a credit card forbearance and by DMP enrollment status.

3.5.2 Exploring the Benefit Added of Debt Management Plans through Matched Sample Analysis

Our second set of research questions as detailed in Section 5 explore the benefit added of enrolling in a DMP during or within six months after exiting payment forbearance on a credit card. To what extent does combining short term credit card payment forbearance with longer-term debt restructuring associate with better credit card outcomes, and for whom? To explore the benefit added of DMPs, we construct matched samples of consumers who were otherwise similar prior to forbearance (at baseline) on an array of credit characteristics. Matching allows us to identify groups of consumers who are similar in observed credit distress, income, and debt amounts at baseline and are thus starting from a similar financial position prior to forbearance. We can then better explore differences in outcomes that might be attributed to enrollment in a DMP rather than differences in consumer characteristics that lead consumers to enroll in a DMP.

For this set of analyses, we construct matched samples both for the national sample and the counseled sample of consumers who have evidence of entering forbearance on a credit card trade between April 2020 and July 2020, and for whom we have at least 12 months of data after the end of the first forbearance spell on a credit card (which we refer to as the focal forbearance). We use a combination of coarsened exact matching and propensity score matching, described in detail in Section 5.1 and Appendix D. The treated group for both matched samples is comprised of counseled consumers with a credit card forbearance who enrolled in a DMP during or after the end of the forbearance spell. The comparison group for the national sample is comprised of consumers with credit card forbearance without evidence of enrolling in a DMP during or within six months of exiting forbearance. The comparison group for the counseled sample is comprised of consumers who were counseled at a similar point in time relative to their forbearance spell (during or after the forbearance spell) but who did not enroll in a DMP.

After matching, we first describe differences in outcomes for consumers with only short-term credit card forbearance compared to otherwise similar consumers with credit card forbearance who enroll in a DMP (Section 5.2). We then estimate simple linear probability regression models, predicting default or charge off on credit card trades as of 12 months post the end of the first forbearance spell (Section 5.3 and Appendix E). The regression models allow us to control for additional baseline covariates and to explore heterogeneous effects of enrolling in a DMP for different consumer groups.

We also performed supplemental analyses to probe for selection issues, given that despite the matching process there may still be unobserved characteristics that both lead a consumer to enroll in a DMP and affect their post-forbearance outcomes. Specifically, we estimate separate regressions that compare post-forbearance outcomes for DMP participants matched to financially similar consumers counseled consumers for whom available agency data indicates that they were

not referred for DMPs. Given that their income and debt levels match to consumers who qualify for DMPs, it is likely that this group of consumers just missed the eligibility criteria for a DMP or that other exogenous factors prevented them from being referred to a DMP (such as lender differences in DMP participation or differences in counseling agency practices that affect referral to a DMP but not subsequent default outcomes). We compare the estimates from this sub-sample to regression results from a second sub-sample where DMP participants are matched to counseled consumers for whom agency data indicates that they *were referred for* DMPs, but the consumers self-selected to not enroll in a DMP. As discussed in Section 5, the regression results for both sub-samples are similar to the main regression results, helping to reduce concerns that self-selection is driving the overall results. Nonetheless, our estimates of the benefit added of a DMP are exploratory and should not be interpreted as causal.

4. DESCRIPTIVE CHARACTERISTICS BEFORE AND AFTER CREDIT CARD FORBEARANCE

4.1 Credit Card Forbearance Duration and Intensity by Consumer Segment

We first explore the characteristics of credit card forbearances and how they differed for the vulnerable and counseled consumer segments. Table 4.1.1 reports the average characteristics of forborne credit cards overall and by consumer segment for consumers in the national sample with at least one credit card forbearance between April and July 2020, and Table 4.1.2 reports the average characteristics of forborne credit cards for the counseled sample. Table 4.1.2 statistics are further broken out by segment based on the timing of counseling or DMP enrollment relative to the forbearance spell and on DMP enrollment status. For the consumers in the relevant segments, we report statistics about all credit card trades, all forborne trades, and the first (focal) forborne trade. We also report the distribution of the amount of credit card debt forborne (Figure 4.1.1), the number of credit cards forborne (Figure 4.1.2), and the longest forbearance spell (Figure 4.1.3) by consumer segment.

All consumers in our sample had at least one credit card enter forbearance between April and July 2020 (the first of which we refer to as the "focal" forborne credit card); however, they may have had additional cards enter forbearance after the first account. We separately report the average total credit card balance across all forborne credit card trades (2020-2021), measured as each of the relevant accounts entered forbearance, and the average total credit card balance on the first (focal) forborne card for a consumer.[34] In the national sample, the average total credit card debt forborne is $5,501, compared with an average total amount of $9,157 to $11,764 among different subgroups within the counseled sample. Vulnerable consumers in the national sample with credit scores below 660 and credit card debt levels above $8,000 as of the baseline period also have a higher amount of credit card debt forborne, with an average amount of $10,230. Figure 4.1.1 shows the distribution of consumers in particular segments with different amounts of credit card debt forborne. Nearly 30% of consumers in the national sample have less than $1,000 in credit card debt forborne, compared with only 8% of vulnerable consumers in the national sample and 12% of counseled consumers. By contrast, more than one-third of consumers in the vulnerable segment and in the counseled sample had more than $10,000 credit card debt forborne, compared with only 17% of consumers in the national sample overall.

34 We do not double count credit cards that enter forbearance multiple times (e.g., cards with multiple spells), but instead take balances as of the start of the first spell of forbearance on a credit card.

Key Finding: There was considerable heterogeneity in the intensity of forbearance during the COVID pandemic for different consumer segments. Nearly a third of consumers in the national sample overall had less than $1,000 in credit card debt forborne, which is likely associated with relatively small minimum payments. By contrast, only 8% of vulnerable consumers had less than $1,000 in credit card debt forborne and more than a third of vulnerable consumers had $10,000 or more of credit card debt enter forbearance during the COVID pandemic.

TABLE 4.1.1 DURATION AND INTENSITY OF CREDIT CARD FORBEARANCES FOR NATIONAL SAMPLE MEMBERS

	NATIONAL SAMPLE					
		CREDIT SCORE		DEBT LEVEL		VULNERABLE
	OVERALL	BELOW 660	ABOVE 660	ABOVE $8,000	BELOW $8,000	<660, >$8,000
ALL TRADES						
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $150	3.3	4.8	2.7	4.9	2.3	6.8
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $1000	2.1	2.9	1.8	3.8	1.1	5.0
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $2000	1.5	1.9	1.3	2.9	0.6	3.6
ALL FORBORNE TRADES						
AVG. BALANCE FORBORNE (2020-2021)	$5,501	$5,598	$5,463	$10,509	$2,255	$10,230
AVG. LENGTH OF LONGEST FORBEARANCE	2.3	2.2	2.3	2.4	2.2	2.4
AVG. # OF CREDIT CARD TRADES FORBORNE PER CONSUMER	1.3	1.6	1.2	1.6	1.2	1.9
MAXIMUM # OF FORBEARANCE SPELLS ON A GIVEN TRADE	1.2	1.2	1.2	1.2	1.2	1.2
% OF TRADES FORBORNE	34%	31%	36%	28%	39%	25%
% OF TOTAL DEBT FORBORNE AT START OF FORBEARANCE	59%	47%	65%	47%	67%	38%
FOCAL FORBORNE TRADES						
AVG. BALANCE FORBORNE ON FOCAL TRADE	$4,406	$3,943	$4,613	$8,092	$2,017	$6,839
AVG. LENGTH OF FORBEARANCE ON FOCAL TRADE	2.2	2.1	2.3	2.3	2.1	2.3
MAXIMUM # OF FORBEARANCE SPELLS ON FOCAL TRADE	1.2	1.2	1.2	1.2	1.2	1.2
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	4.7%	12.9%	1.1%	4.5%	4.8%	11.1%
% 60+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	1.8%	5.4%	0.2%	1.8%	1.7%	5.0%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	1.0%	3.0%	0.1%	1.0%	0.9%	2.9%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	97.6%	93.5%	99.4%	97.4%	97.7%	93.7%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.3%	3.3%	0.5%	1.3%	1.3%	2.9%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.1%	3.2%	0.1%	1.2%	0.9%	3.4%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	0.7%	2.1%	0.1%	0.8%	0.6%	2.2%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
N	108,908	33,220	75,617	42,834	66,074	14,274

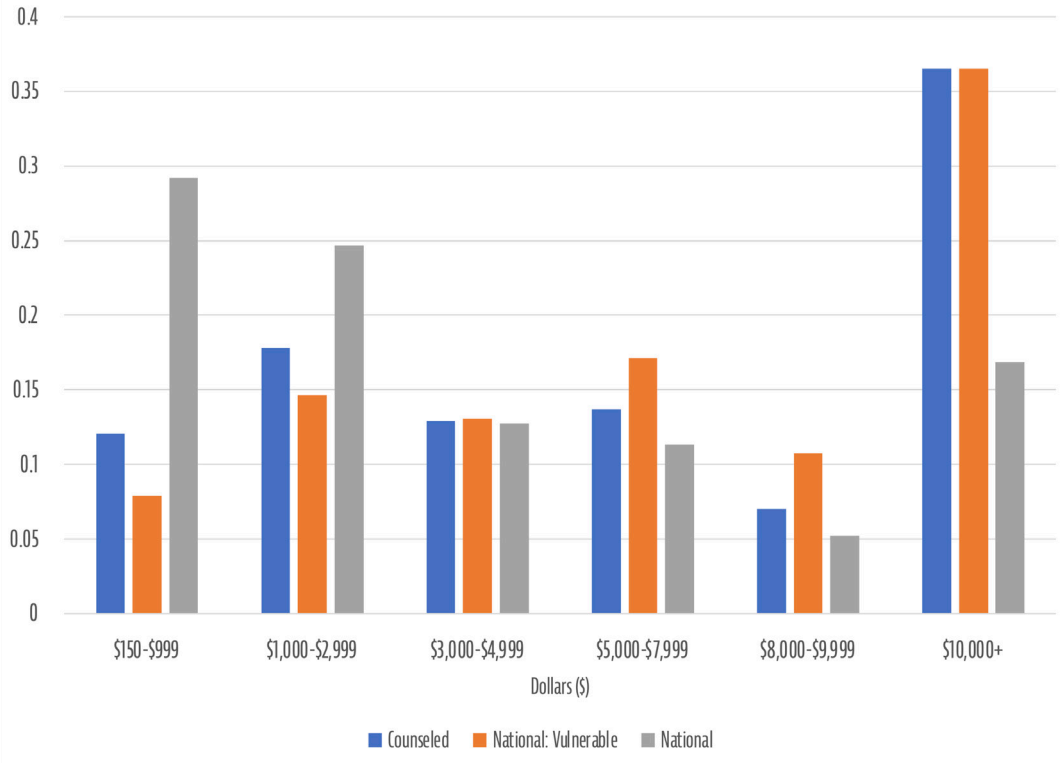
Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE 4.1.2 DURATION AND INTENSITY OF CREDIT CARD FORBEARANCES FOR COUNSELED SAMPLE MEMBERS

	COUNSELED SAMPLE			
	ENROLLED DURING		ENROLLED AFTER	
	DMP	COUNSEL ONLY	DMP	COUNSEL ONLY
ALL TRADES				
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $150	6.0	5.5	5.7	5.5
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $1000	4.1	3.7	3.9	3.7
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $2000	2.9	2.7	2.8	2.7
ALL FORBORNE TRADES				
AVG. BALANCE FORBORNE (2020-2021)	$9,157	$10,258	$11,259	$11,764
AVG. LENGTH OF LONGEST FORBEARANCE	2.4	2.6	2.5	2.5
AVG. # OF CREDIT CARD TRADES FORBORNE PER CONSUMER	1.8	2.0	2.2	2.3
MAXIMUM # OF FORBEARANCE SPELLS ON A GIVEN TRADE	1.1	1.2	1.2	1.3
% OF TRADES FORBORNE	25%	28%	30%	31%
% OF TOTAL DEBT FORBORNE AT START OF FORBEARANCE	36%	41%	39%	42%
FOCAL FORBORNE TRADES				
AVG. BALANCE FORBORNE ON FOCAL TRADE	$6,111	$6,158	$6,388	$6,334
AVG. LENGTH OF FORBEARANCE ON FOCAL TRADE	2.2	2.5	2.3	2.3
MAXIMUM # OF FORBEARANCE SPELLS ON FOCAL TRADE	1.1	1.1	1.2	1.2
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	11.6%	11.6%	9.8%	9.6%
% 60+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	5.7%	5.0%	4.0%	4.0%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	2.8%	3.0%	1.8%	2.0%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	92.5%	92.6%	94.4%	94.7%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	3.5%	4.0%	3.0%	2.8%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	4.0%	3.4%	2.6%	2.4%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	2.1%	2.2%	1.3%	1.3%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.0%	0.0%
N	1,778	4,700	2,541	6,025

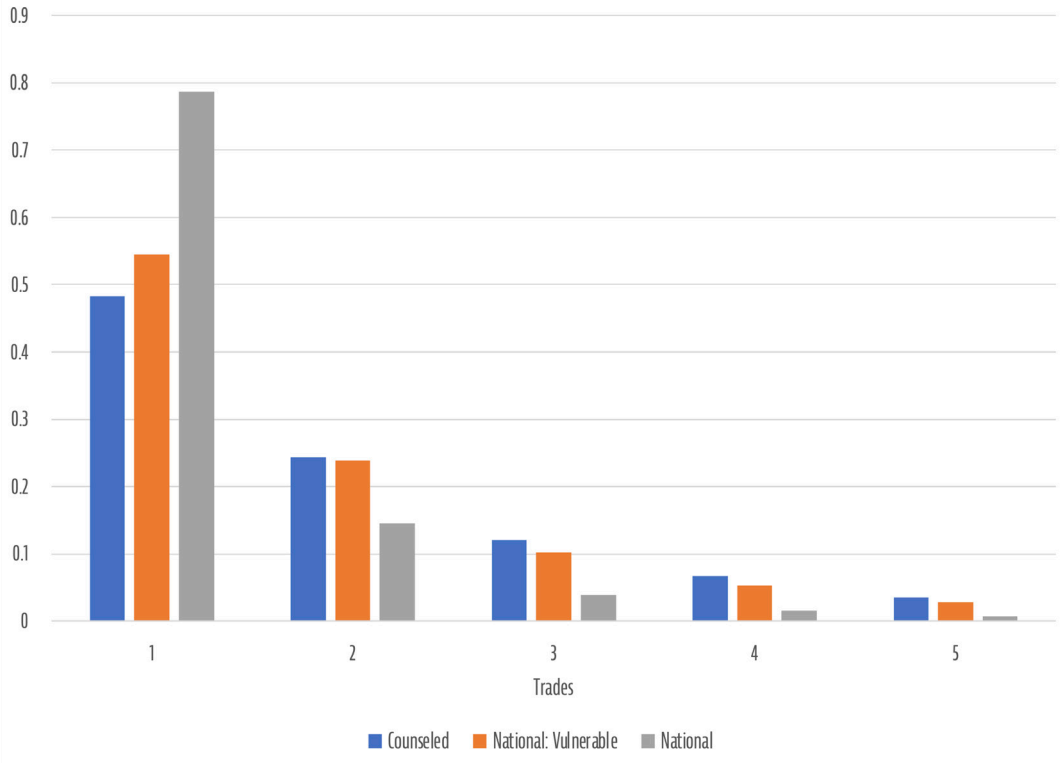
Note: Sample limited to consumers counseled between Q1 2020-Q3 2021 with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

FIGURE 4.1.1 DISTRIBUTION OF TOTAL CREDIT CARD DEBT FORBORNE, BY CONSUMER SEGMENT



The number of credit cards forborne per consumer represents the total number of unique credit card accounts held by a consumer that ever entered forbearance between April 2020 and October 2021, provided that at least one account entered into forbearance by July 2020. In the national sample, the average consumer had 1.3 credit cards enter forbearance, compared with an average of 1.9 credit cards in the national vulnerable consumer segment and 1.8 to 2.3 credit cards in the counseled consumer segments. Figure 4.1.2 shows the distribution of the number of credit cards forborne by consumer segment. Vulnerable and counseled consumers were more likely to have two or more credit cards enter forbearance than consumers overall in the national sample. While 79% of consumers in the national sample overall had only one trade forborne, 55% of vulnerable consumers in the national sample and 48% of counseled consumers had only one trade forborne.

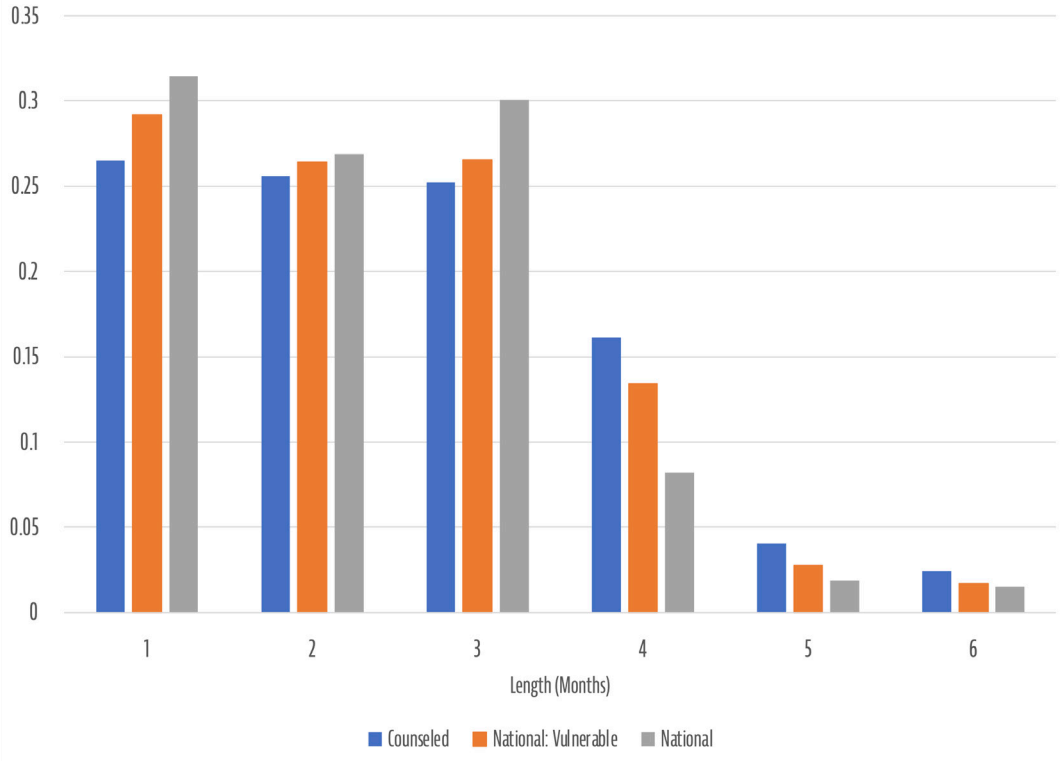
FIGURE 4.1.2 DISTRIBUTION OF NUMBER OF CREDIT CARDS FORBORNE, BY CONSUMER SEGMENT



However, while vulnerable and counseled consumers tended to have larger balances forborne and more credit cards in forbearance than forbearance recipients in the general national sample, it is also important to note that they had substantially more credit cards with higher balances to begin with. Table 4.1.1 and Table 4.1.2 report the average number of credit cards with a $150 balance or more held by consumers at baseline, as well as the share of total credit cards at baseline that end up with evidence of forbearance and the percent of total credit card debt that ended up in forbearance. Consumers in the vulnerable consumer segment and in the counseled samples on average held a much larger number of credit cards with $150 or larger balances at baseline (6.8 and 5.5-6.0 respectively) than consumers in the national sample overall (average of 3.3 such credit card accounts). Likely in part because of this difference, vulnerable and counseled consumers had a slightly smaller share of their credit cards ever in forbearance during COVID (average of 25% and 25%-31%, respectively) compared to an average of 34% in the national sample overall. Differences in the percent of total debt forborne as of the first month a consumer entered forbearance were even more severe, averaging 59% in the national sample overall but only 38% and 36%-42% among vulnerable and counseled consumers, respectively.

We next summarize the longest forbearance spell across any forborne credit card held by a particular consumer. In the national sample, the average longest spell length was 2.3 months, compared with 2.4 months in the vulnerable national sample and 2.4-2.6 months in the counseled sample. Figure 4.1.3 shows the distribution of the length in forbearance spells by consumer segment. Approximately 31% of consumers in the national sample overall had a credit card forbearance spell lasting only one month, compared with 29% of vulnerable consumers and 27% of counseled consumers.

FIGURE 4.1.3 DISTRIBUTION OF LONGEST FORBEARANCE SPELLS, BY CONSUMER SEGMENT



Key Finding: Credit card forbearances during the COVID pandemic were very short in duration, with most forbearances lasting only one to three months and very few lasting five or six months.

It is also informative to examine the payment status on forborne credit cards prior to the consumer entering forbearance on a given card. We do both by analyzing the percent of consumers who experienced various levels of delinquency in the 6 months prior to forbearance and the percent of consumers with a given account status in the month prior to that account entering forbearance. If a consumer has more than one credit card forbearance, we analyze the payment status on the credit card that first entered forbearance between April and July 2020 (the focal trade). In rare cases where a consumer entered initial forbearances on multiple credit cards in the same month, we follow the performance on the credit card with the longest forbearance spell (e.g. that exited forbearance last). We report payment status across *all* forborne credit card trades held by a consumer in Appendix B; the results are not substantially different.

In the national sample overall, 98% of consumers were current on their first forborne credit card as of the month prior to the start of forbearance on the card, compared with only 94% of vulnerable consumers in the national sample and 93% to 95% of consumers in the counseled sample. In the 6 months prior to entering forbearance, only 1% of consumers in the national sample overall were ever 90 or more days delinquent on the "to be forborne" credit card, compared with 3% of consumers in the national vulnerable sample and 2% to 3% of consumers in the counseled sample.

Key Finding: While most consumers (98%) were current on their forborne credit cards prior to entering forbearance, 6% of vulnerable consumers (with credit scores < 660 and credit card debt of $8,000 or more) were past due on their credit card payments prior to entering forbearance—and 3% were three months or more past due prior to entering forbearance. Consumers seeking credit counseling were also less likely to be current on their credit card payments prior to entering forbearance than consumers in the national sample overall.

4.2 Characteristics of Consumers with Credit Card Forbearances by Consumer Segments

We next summarize the credit characteristics as of the baseline period (Q4 2019), prior to the onset of the COVID pandemic, of consumers who obtained credit card forbearances during the early months of the pandemic. Table 4.2.1 summarizes baseline characteristics of the national sample by consumer segment, and Table 4.2.2 summarizes baseline characteristics of the counseled sample by timing of counseling and DMP enrollment status.

Overall, consumers in the national sample with evidence of credit card forbearance during the early months of the COVID pandemic had relatively strong credit profiles as of the baseline period, with an average credit score of 709 and low rates of prior delinquency across all types of loan accounts in the 12 months prior to the baseline period (Table 4.2.1). However, stark differences emerge when comparing consumers in the national sample with credit scores above and below 660 as of the baseline period—and especially when looking at the particularly vulnerable consumer segment with both credit scores below 660 and credit card debt levels above $8,000. This vulnerable group of consumers is much more likely to have experienced credit distress previously, with one in four (25%) being ever 60+ days late on a loan trade in the 12 months prior to the baseline period compared to only 10% of consumers in the national sample overall. The vulnerable group also has much higher levels of credit card debt at baseline—with $22,561 in credit card debt on average, compared with only $10,242 in the national sample overall.

Consumers in the counseled sample with evidence of credit card forbearances during the COVID pandemic also had much weaker credit profiles than consumers overall in the national sample, with average credit scores of 631 to 638 (among subsamples divided based on the timing of counseling relative to the forbearance and DMP status), compared with an average credit score of 709 for forborne consumers in the national sample. Counseled consumers were also more likely to have experienced delinquencies on debt payments—with 16% to 18% being ever 60+ days late on a debt payment on any type of tradeline in the prior 12 months. They also held a relatively large amount of credit card debt at baseline—an average of about $18,000 to $19,000. Counseled consumers with credit card forbearances were much more similar to forborne consumers in the vulnerable national sample segment at baseline than to the overall population of consumers with credit card forbearances, although the counseled consumers had somewhat lower balances and less evidence of prior major delinquencies.

Notably, within the counseled sample, differences between forborne counseled consumers who did and did not enroll in a DMP are less stark than might be expected. Our prior research finds that, in other time periods (and among consumers who did not obtain credit card forbearances during the pandemic), counseled consumers who enroll in a DMP tend to have much stronger credit profiles at baseline than counseled consumers who do not enroll in a DMP—with higher credit scores and lower rates of delinquency on debt payments prior to seeking counseling (FinRegLab et al. 2023). However, in this study population that limits the sample to counseled consumers with evidence of credit card forbearance, the differences in baseline characteristics between consumers enrolling and

not enrolling in a DMP are much smaller. This is likely in part due to the fact that some credit card lenders did not provide forbearances to consumers who were already seriously delinquent prior to the pandemic.[35] Thus, when we limit the counseled sample for this study to counseled consumers with credit card forbearances, we are focusing on a slightly less distressed segment of the counseled population who qualifies for both forbearance and DMPs. However, this segment of consumers is still clearly distressed relative to the national sample of consumers with credit card forbearances.

Key Finding: A small but meaningful segment of vulnerable consumers within the national sample of credit card borrowers who obtained credit card forbearances during the COVID pandemic (14,274, which corresponds to 1.4 million consumers nationwide) was substantially more likely to have evidence of payment distress across their portfolio of trades within the year prior to entering credit card forbearance and held a large amount of credit card debt (more than $20,000 on average) as compared to the broader national sample of consumers with forbearances. Counseled consumers who obtained forbearances were clearly distressed relative to the national sample, although within the counseled group differences between consumers who enrolled in DMPs and those who did not were relatively modest compared to non-pandemic periods.

35 CFPB, 2021, at 115-116. Those lenders may have offered other forms of relief.

TABLE 4.2.1 BASELINE CHARACTERISTICS OF FORBORNE CONSUMERS IN THE NATIONAL SAMPLE

		NATIONAL SAMPLE ACCOMMODATIONS		COUNSELED SAMPLE DMP		COUNSELED SAMPLE NO DMP	
		YES	NO	YES	NO	YES	NO
DEMOGRAPHICS	AGE	49	43	51	49	48	46
	SHARE FEMALE	49%	52%	47%	48%	49%	51%
	HOUSEHOLD INCOME	102.8	65.2	119.4	116.2	94.2	86.2
	DEBT-TO-INCOME RATIO	18.6	23.4	16.5	24.7	14.7	29.0
CREDIT PERFORMANCE	*VANTAGE SCORE*						
	SHARE WITH A VANTAGE SCORE	99.9%	100.0%	100.0%	100.0%	99.9%	100.0%
	AVERAGE VANTAGE SCORE	709	603	755	694	718	614
	DELINQUENT AND DEROGATORY						
	% WITH A CHARGE OFF	2.9%	8.9%	0.3%	2.3%	3.3%	6.3%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	10.2%	29.1%	1.9%	9.7%	10.5%	24.8%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	4.8%	14.5%	0.6%	5.2%	4.6%	14.0%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	7.6%	22.2%	1.2%	6.9%	8.1%	18.0%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	3.4%	10.3%	0.3%	3.5%	3.3%	9.7%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$365	$1,029	$74	$293	$412	$740
	% WITH TRADES PRESENTLY DEROGATORY	7.7%	21.2%	1.7%	5.1%	9.4%	12.2%
	AVG. OF TRADES PRESENTLY DEROGATORY	$544	$1,535	$110	$426	$621	$1,071
	% WITH TRADES IN COLLECTIONS	14.9%	35.3%	6.0%	10.9%	17.5%	22.1%
	AVG. BALANCE ON COLLECTIONS	$245	$649	$67	$145	$309	$331
DEBT LEVELS	*PRESENCE OF DEBT*						
	SHARE WITH A MORTGAGE	42.4%	24.3%	50.4%	53.3%	35.3%	35.8%
	SHARE WITH A STUDENT LOAN	21.2%	31.1%	16.9%	24.6%	19.0%	31.8%
	SHARE WITH AN AUTO LOAN	53.1%	55.7%	51.9%	61.6%	47.5%	61.4%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	7.3%	15.0%	3.9%	8.9%	6.2%	15.5%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)						
	AVERAGE MORTGAGE DEBT	$86,116	$45,878	$103,874	$118,694	$64,997	$74,441
	AVERAGE STUDENT LOAN DEBT	$8,665	$14,317	$6,190	$11,382	$6,904	$17,148
	AVERAGE AUTO LOAN DEBT	$11,491	$12,501	$11,058	$14,545	$9,511	$15,064
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$519	$921	$342	$774	$353	$1,168
	AVERAGE CREDIT CARD DEBT	$10,242	$11,364	$9,759	$21,722	$2,800	$22,561
CREDIT ACCESS	*EXISTING ACCESS*						
	% WITH AN OPEN CREDIT CARD	97.2%	94.5%	98.5%	99.8%	95.6%	99.5%
	AVG. AVAILABLE CREDIT	$16,176	$3,307	$21,845	$17,842	$15,096	$5,938
	% WITH AVAILABLE CREDIT	90%	75%	97%	93%	89%	81%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	23.8%	19.4%	25.8%	28.1%	21.0%	25.8%
	NEW ACCESS						
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	10.5%	12.5%	9.6%	11.3%	9.9%	12.4%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	19.1%	27.3%	15.6%	20.5%	18.2%	25.7%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	3.5%	1.9%	4.2%	3.8%	3.3%	2.6%
N		108,908	33,220	75,617	42,834	66,074	14,274

Note: Sample is limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE 4.2.2 BASELINE CHARACTERISTICS OF FORBORNE CONSUMERS IN THE COUNSELED SAMPLE

		COUNSELED SAMPLE			
		ENROLLED DURING		ENROLLED AFTER	
		DMP	COUNSEL ONLY	DMP	COUNSEL ONLY
DEMOGRAPHICS	AGE	45	45	43	45
	SHARE FEMALE	63%	63%	64%	65%
	HOUSEHOLD INCOME	73.7	76.3	73.8	74.7
	DEBT-TO-INCOME RATIO	30.6	28.8	29.8	28.3
CREDIT PERFORMANCE	*VANTAGE SCORE*				
	SHARE WITH A VANTAGE SCORE	99.9%	99.9%	99.9%	99.9%
	AVERAGE VANTAGE SCORE	631	638	634	638
	DELINQUENT AND DEROGATORY				
	% WITH A CHARGE OFF	4.9%	5.4%	3.8%	4.7%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	17.7%	18.1%	16.3%	17.8%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	8.5%	9.3%	8.3%	9.1%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	12.4%	13.3%	11.4%	13.0%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	5.3%	6.4%	5.3%	6.3%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$470	$615	$385	$512
	% WITH TRADES PRESENTLY DEROGATORY	11.1%	11.8%	8.8%	11.6%
	AVG. OF TRADES PRESENTLY DEROGATORY	$675	$806	$528	$761
	% WITH TRADES IN COLLECTIONS	16.5%	19.7%	18.2%	20.5%
	AVG. BALANCE ON COLLECTIONS	$246	$326	$246	$337
DEBT LEVELS	*PRESENCE OF DEBT*				
	SHARE WITH A MORTGAGE	34.2%	33.0%	32.5%	31.0%
	SHARE WITH A STUDENT LOAN	36.1%	30.7%	37.1%	32.9%
	SHARE WITH AN AUTO LOAN	61.2%	58.0%	61.7%	58.1%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	19.5%	16.2%	18.3%	15.7%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)				
	AVERAGE MORTGAGE DEBT	$64,857	$64,382	$63,135	$61,464
	AVERAGE STUDENT LOAN DEBT	$18,712	$14,247	$17,752	$15,534
	AVERAGE AUTO LOAN DEBT	$12,550	$11,680	$12,844	$11,638
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$1,481	$1,322	$1,402	$1,137
	AVERAGE CREDIT CARD DEBT	$18,973	$18,133	$17,822	$18,001
CREDIT ACCESS	*EXISTING ACCESS*				
	% WITH AN OPEN CREDIT CARD	98.3%	97.5%	98.4%	97.7%
	AVG. AVAILABLE CREDIT	$7,077	$9,179	$7,165	$8,832
	% WITH AVAILABLE CREDIT	83%	84%	84%	85%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	19.4%	19.4%	20.9%	20.0%
	NEW ACCESS				
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	12.9%	12.1%	12.4%	11.5%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	33.1%	31.1%	30.1%	30.7%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	3.3%	2.5%	2.8%	2.5%
N		1,778	4,700	2,541	6,025

Note: Sample limited to consumers counseled between Q1 2020-Q3 2021 with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

4.3 Descriptive Outcomes After Credit Card Forbearance by Consumer Segments

In this section, we describe credit card outcomes within the 12 months following the end of a consumer's first credit card forbearance spell. These are unconditional outcomes, not controlling for any differences between consumers that may lead them to sort into a particular group. The point of this section is simply to describe outcomes following forbearance for different consumer segments. For each consumer, we define their first credit card forbearance spell as the first spell on the first credit card that entered forbearance between April and July 2020 (the focal trade). If a consumer had multiple forborne cards that entered forbearance at the same time, we follow the performance on the card that had the longest forbearance spell. We construct a series of performance indicators that take the value of "1" if a consumer was ever 30 days, 60+ days delinquent, 90+ days delinquent, or charged off on their first forborne card *within 12 months* following the end of the forbearance spell.[36] We also create an indicator for multiple forbearance spells that is coded "1" if the credit card re-entered forbearance anytime during the 12-month period.[37]

Next, we construct a series of monthly panel variables that code the status of a consumer's first forborne credit card as of *each month* for 6 months prior to the start of the forbearance spell and 12 months after the end of the forbearance spell. In addition to graphing trends over time (Figures 4.3.1 and 4.3.2), we construct variables that measure the status on the forborne card as of exactly 12 months after exiting forbearance (30 days delinquent, 60+ days delinquent, 90+ days delinquent, or charged off). These variables differ from the prior set of "ever delinquent" measures because they focus on account status at a specific point in time and thus do not include consumers who cured delinquencies before the 12-month anniversary of exiting forbearance.

Finally, we construct a series of variables that measure payment performance across all credit cards held by a consumer (regardless of whether or not they were forborne) within the 12 months following the end of the first forbearance spell. Similar to our first set of measures for forborne credit cards, the variables here are coded "1" if the consumer was ever 60+ days delinquent, 90+ days delinquent, or charged off on any of their credit cards within the 12-month period after exiting forbearance.

Table 4.3.1 summarizes the outcomes post forbearance for consumers in the national sample. Overall, consumers in the national sample were able to resume making payments on their forborne credit cards after the forbearance spell ended. Only 5.2% of consumers were ever 60 days late on the forborne card in the 12-month period after the forbearance spell ended, and only 2.7% had charged off on the forborne card as of the 12th month post forbearance. Looking across all credit cards held by consumers in the national sample, 11.6% of consumers were ever 60 days or more delinquent and 5.3% had charged off on at least one credit card after forbearance ended. The vulnerable consumer segment with forborne credit cards did not fare as well, with 12.5% being ever 60+ days late on the forborne card in the 12-month period after the forbearance spell ended, and 6.9% being charged off on the forborne card as of the 12th month post forbearance. Across their portfolio of credit cards, 27.7% of the vulnerable sample were ever 60 or more days late and 15.8% had charged off on at least one credit card by 12 months after forbearance ended. Thus, while the vast majority of consumers with credit card forbearances were able to resume making payments, a subset of consumers experienced distress to the point of charge off on the forborne card or other credit cards in their portfolios.

36 We do not see evidence of credit cards being settled for less than full balance after charge off as of 12 months post forbearance.

37 We code a card as re-entering forbearance if the creditor reports no scheduled monthly payment with a positive balance after at least two scheduled non-zero monthly payments in a row. This is a proxy for re-entering forbearance as we cannot measure forbearance directly. There may be other reasons for this pattern in the creditor reporting data.)

Table 4.3.2 summarizes the outcomes post forbearance for consumers in the counseled sample. Here, there is a clear difference in outcomes depending on whether the counseled consumer enrolled in a DMP, where those consumers enrolling in a DMP have much better payment performance on their forborne credit card trade and on their portfolio of credit card trades after forbearance ends compared to counseled consumers not enrolling in a DMP. For example, only 5.7% of consumers enrolling in a DMP during the forbearance period on their credit card payments were charged off on their forborne trade as of 12 months after the forbearance ended, compared with 15.8% of consumers who were counseled during their forbearance period who did not enroll in a DMP.[38] For consumers who enrolled in a DMP or entered counseling two to six months after the forbearance ended, the share charged off on their forborne card increased to 5.8% of those with a DMP and 17% of those without a DMP. Recall that there were very small to no differences in payment performance on the forborne trades prior to entering forbearance for those counseled with and without a DMP (Table 4.1.2); this suggests that these differences were not simply pre-existing differences in performance on the forborne trade.

It is important to highlight that the DMP definition here includes all consumers who enrolled in a DMP, regardless of whether or not they remained on a DMP as of 12 months post the end of the forbearance spell. Industry estimates suggest that between 59% and 75% of consumers who begin a DMP complete all payments on the DMP.[39] If a consumer stopped making DMP payments, they could proceed to delinquency and charge off on their credit card in a similar manner to consumers not enrolled in a DMP.

Key Finding: The majority of consumers in the national sample who received short-term forbearance on their credit card payments during the COVID pandemic resumed making payments after the forbearance spell ended. However, our estimates suggest that about 350,000 consumers nationwide ended up charging off on their forborne card after forbearance ended, and an additional 230,000 experienced a charge off on another card account.

38 It is also notable that those consumers enrolling in a DMP more quickly were less likely to experience multiple forbearances on the same credit card than those enrolling in a DMP later—only 8.8% of consumers who enrolled in a DMP during the forbearance had multiple spells, compared with 13.5% of consumers who enrolled in a DMP two to six months after the forbearance ended.

39 DeNicola 2023.

TABLE 4.3.1 POST-FORBEARANCE OUTCOMES OF CONSUMERS IN THE NATIONAL SAMPLE

	NATIONAL SAMPLE ACCOMMODATIONS					
		CREDIT SCORE		DEBT LEVEL		VULNERABLE
	OVERALL	BELOW 660	ABOVE 660	ABOVE $8,000	BELOW $8,000	<660, >$8,000
ANY ELIGIBLE CREDIT CARD TRADE						
EVER 30 DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	16.2%	35.1%	7.8%	17.6%	15.3%	33.2%
EVER 60+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	11.6%	30.2%	3.4%	12.3%	11.2%	27.7%
EVER 90+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	10.6%	28.0%	3.0%	11.2%	10.2%	25.5%
EVER CHARGED OFF ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	9.2%	24.7%	2.3%	9.8%	8.7%	22.7%
WORST STATUS ON ANY ELIGIBLE CREDIT CARD AS OF 12 MONTHS POST FORBEARANCE: 30 DAYS DELINQUENT	1.3%	2.6%	0.6%	1.3%	1.2%	2.4%
ANY TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	7.2%	18.5%	2.3%	8.8%	6.2%	19.7%
ANY TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	6.6%	17.1%	2.0%	8.2%	5.6%	18.5%
ANY TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	5.3%	14.1%	1.4%	6.8%	4.3%	15.8%
FOCAL FORBORNE TRADES						
EVER MULTIPLE FORBEARANCE SPELLS ON FOCAL TRADES	16.1%	15.2%	16.4%	14.6%	17.0%	13.6%
EVER 30 DAYS DELINQUENT ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	7.6%	17.8%	3.0%	7.8%	7.4%	15.9%
EVER 60+ DAYS DELINQUENT ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	5.2%	13.0%	1.7%	5.8%	4.8%	12.5%
EVER 90+ DAYS DELINQUENT ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	4.2%	10.5%	1.4%	4.9%	3.7%	10.4%
EVER CHARGED OFF ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	2.7%	6.9%	0.9%	3.2%	2.3%	6.9%
FOCAL TRADE 30 DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	0.7%	1.5%	0.3%	0.6%	0.7%	1.3%
FOCAL TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	4.0%	10.0%	1.4%	4.7%	3.6%	10.0%
FOCAL TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	3.6%	9.1%	1.3%	4.3%	3.2%	9.2%
FOCAL TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	2.7%	6.9%	0.9%	3.2%	2.3%	6.9%
N	108,908	33,220	75,617	42,834	66,074	14,274

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE 4.3.2 POST-FORBEARANCE OUTCOMES OF CONSUMERS IN THE COUNSELED SAMPLE

	COUNSELED SAMPLE			
	ENROLLED DURING		ENROLLED AFTER	
	DMP	COUNSEL ONLY	DMP	COUNSEL ONLY
ANY ELIGIBLE CREDIT CARD TRADE				
EVER 30 DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	40.9%	45.0%	55.6%	54.5%
EVER 60+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	27.2%	38.7%	31.6%	44.5%
EVER 90+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	22.6%	36.1%	25.5%	40.8%
EVER CHARGED OFF ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	18.3%	31.7%	19.6%	33.9%
WORST STATUS ON ANY ELIGIBLE CREDIT CARD AS OF 12 MONTHS POST FORBEARANCE: 30 DAYS DELINQUENT	3.9%	2.8%	6.0%	3.2%
ANY TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	18.0%	30.7%	21.3%	36.7%
ANY TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	16.2%	29.3%	19.4%	34.7%
ANY TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	13.9%	25.4%	15.9%	28.3%
FOCAL FORBORNE TRADES				
EVER MULTIPLE FORBEARANCE SPELLS ON FOCAL TRADES	8.8%	11.3%	13.5%	15.8%
EVER 30 DAYS DELINQUENT ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	16.8%	28.1%	30.1%	36.4%
EVER 60+ DAYS DELINQUENT ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	12.0%	24.3%	18.5%	30.2%
EVER 90+ DAYS DELINQUENT ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	9.4%	21.3%	13.1%	25.7%
EVER CHARGED OFF ON FOCAL TRADES WITHIN 12 MONTHS POST FORBEARANCE	5.7%	15.8%	5.8%	16.6%
FOCAL TRADE 30 DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	1.6%	1.2%	3.2%	2.3%
FOCAL TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	8.4%	20.3%	9.0%	24.3%
FOCAL TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	7.4%	19.3%	8.3%	22.6%
FOCAL TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	5.7%	15.8%	5.8%	16.6%
N	1,778	4,700	2,541	6,025

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

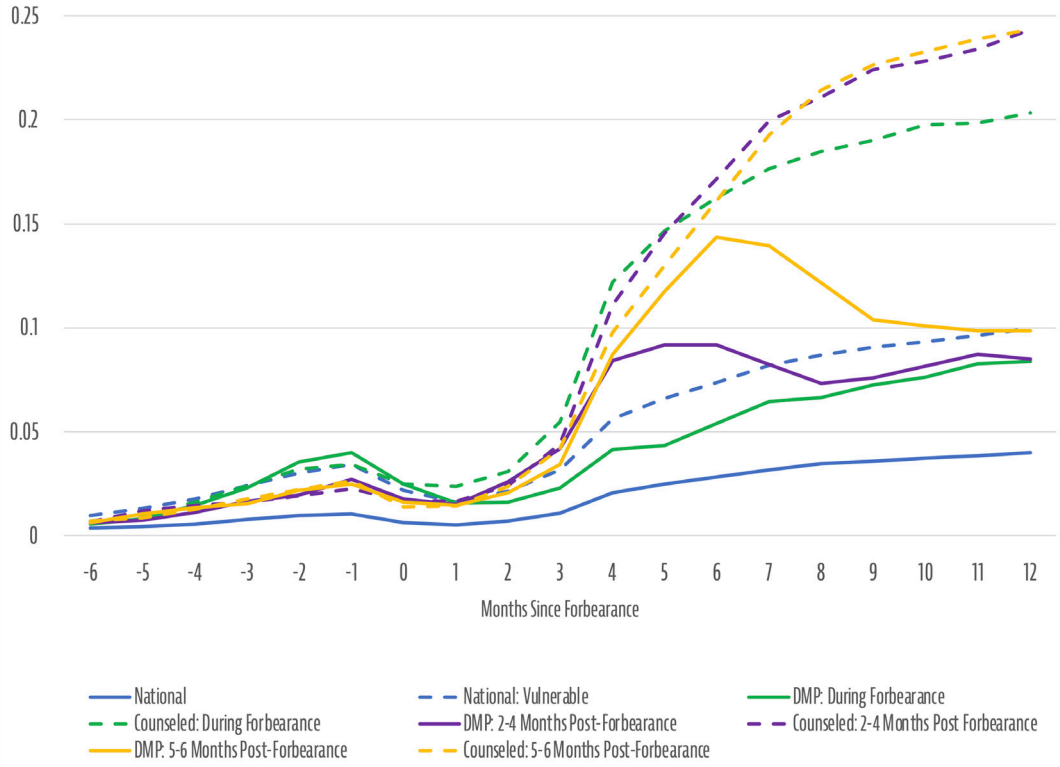
We plot the monthly status on the forborne credit card by consumer segment, indicating the percent of consumers who were 60 or more days delinquent (Figure 4.3.1) and the percent charged off (Figure 4.3.2) for the 6 months prior to the forbearance spell beginning and the 12 months after the forbearance spell ends. (Note that the 0 period may represent multiple months for forbearance spells lasting more than one month.) Per COVID-era guidance, creditors generally were not permitted to advance the delinquency on a credit card while it was in forbearance, and thus the card remained at the delinquency status it was in as of the month prior to starting the forbearance unless the consumer failed to comply with the terms of the accommodation. The solid lines in the figures represent trends for consumers who were in the overall national sample (blue) or who were counseled and enrolled in a DMP during (green) or after (purple and yellow) the forbearance spell. The dashed lines in the figures represent consumers who were in the vulnerable segment of the national sample (blue) or who were counseled during (green) or after (purple and yellow) the forbearance spell and did not enroll in a DMP.

Figure 4.3.1 shows that consumers who fall 60 or more days behind on their forborne trade did so relatively quickly after the forbearance spell ends—with marked increase between the 3rd and 4th months after the end of the forbearance spell. In the national sample, the share falling behind flattens out slightly but continues to increase steadily in subsequent months. Charge offs on the

forborne trade (Figure 4.3.2) show the biggest increase between the 6th and 9th month after the end of the forbearance spell, after which they flatten out slightly.[40]

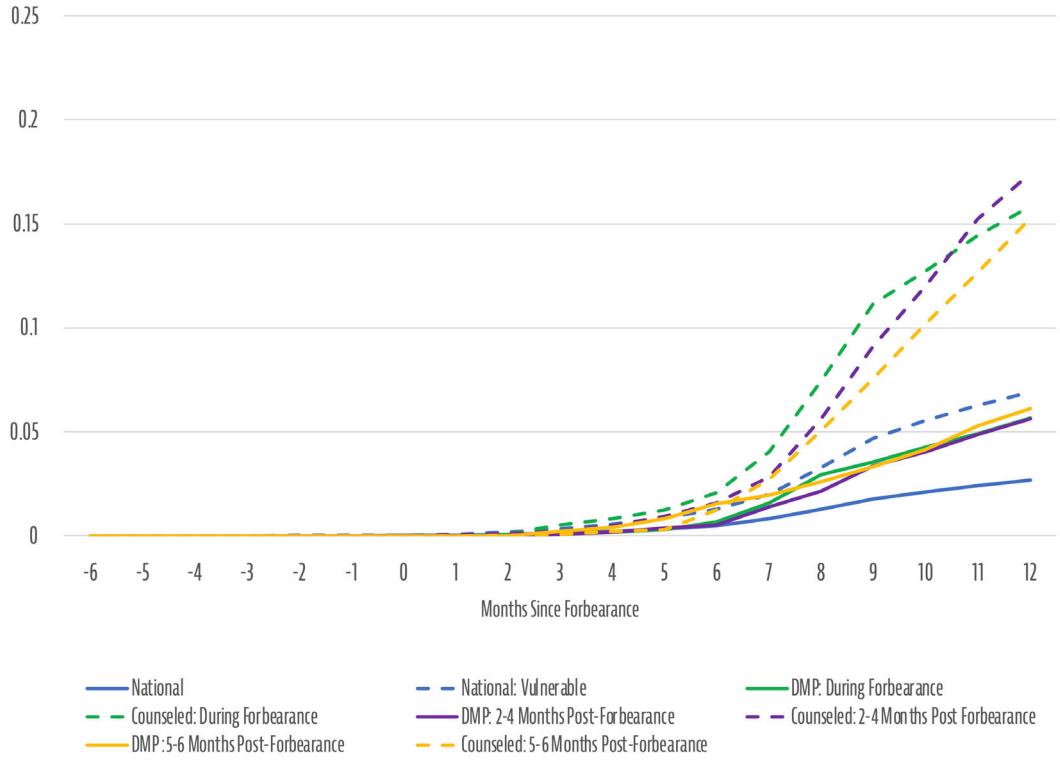
Key Finding: Consumers exiting payment forbearance on their credit cards who ended up in trouble did so relatively quickly after the payment forbearance ended—and those enrolling in DMPs during or shortly after forbearance were less likely to experience delinquencies on their forborne accounts than those who enrolled in DMPs 5-6 months post forbearance.

FIGURE 4.3.1 SHARE OF CONSUMERS 60+ DAYS DELINQUENT ON FOCAL TRADE, BY MONTH SINCE FORBEARANCE



40 Charge offs must occur after no more than 180 days' delinquency on open-end credit accounts under banking guidance. FinRegLab 2022 at 10-11.

FIGURE 4.3.2 SHARE OF CONSUMERS CHARGED OFF ON FOCAL TRADE, BY MONTH SINCE FORBEARANCE



5. MATCHED SAMPLE ANALYSIS:

Exploring the Added Benefit of a DMP

5.1 Constructing the Matched Samples and Baseline Characteristics

Section 4.3 describes the post-forbearance outcomes of consumers who combined short-term credit card forbearance with enrollment in a longer-term DMP. However, we cannot identify the added benefit of a DMP from these descriptive results. Section 4.2 demonstrates that forborne consumers who are counseled and enroll in a DMP are more distressed at baseline than forborne consumers in the national sample—for example, they have lower credit scores, higher rates of delinquency on their debt payments, and higher credit card debt amounts *prior* to forbearance than forborne consumers in the national population. Even in the counseled sample, we observe small differences at baseline between forborne consumers who do and do not enroll in a DMP. We thus cannot directly compare outcomes *after* forbearance between groups without taking differences at baseline into account.

To account for these differences, we construct matched samples of comparison consumers in the national and counseled samples using a combination of propensity score and exact matching as described further in Appendix D, including the complete list of credit variables used for matching and balance tests of the comparison and treated samples.[41] We match on credit characteristics as of the baseline period prior to forbearance and ensure that the treated (DMP) and comparison (no DMP) groups are similar after matching. The treated group for both matched samples is comprised of counseled consumers with a credit card forbearance who enrolled in a DMP during or after the end of the forbearance spell. The comparison group for the national sample is comprised of credit card forbearance recipients *without* evidence of enrolling in a DMP. The comparison group for the counseled sample is comprised of consumers who were counseled at a similar point in time relative to their forbearance spell (during or after the forbearance spell) but who did not enroll in a DMP. We use the nearest neighbor approach to find a 1:1 match for each DMP treated observation and each comparison observation in the national sample, and a 1:1 match for each DMP treated observation and each comparison observation in the counseled sample.

41 We included having a mortgage loan as an exact matching variable and incorporated balance on student loans in our propensity score match, in part because of the possibility that the ability to obtain up to 18 months of forbearance on most mortgage loans and automatic forbearances on nearly all student loans could have made a substantial difference in consumers' financial situations during the pandemic. As reflected in Appendix E, the regression results for the presence or absence of mortgage loan forbearances were not generally statistically significant, but the balance on student loans had a relatively small (and statistically significant) negative association with the likelihood of delinquency, default, and charge off.

We are able to find a match for 3,454 (about 80%) of the DMP observations in the counseled population when matching to the national comparison sample, including 1,440 DMP participants who are matched to consumers in the vulnerable sample (credit score < 660 and credit card balance > $8,000). We are able to find a match for 3,497 (about 81%) of the DMP observations when matching to the counseled comparison sample.

Importantly, balance tests indicate no or minimal significant differences between the treated and comparison observations in either sample. This indicates that the matching process worked as intended, balancing the groups on credit variables used for matching prior to the time of forbearance. In addition to ensuring that the matched samples are balanced (treated and comparison consumers who match are similar), it is informative to compare the characteristics of the DMP consumers who were able to find a match to the comparison samples and the full DMP sample. This provides insights about the generalizability of the matched sample to the overall DMP sample with a credit card forbearance during our study period. We report these comparisons in Appendix D.

For the national sample, the DMP consumers who were able to be matched are largely similar to the full DMP sample but are slightly less distressed, as indicated by a slightly higher credit score and lower rates of prior delinquency as of the baseline period. This is to be expected, as the national sample is generally better off than the DMP sample, and thus those DMP consumers who find a match to the national sample tend to be a bit better off as well. However, given the large size of the comparison sample relative to the DMP sample, the resulting matched DMP group is only slightly better off than the full DMP sample. For the counseled sample, the DMP consumers who are able to find a match are somewhat better off than the DMP consumers who are unable to find a match. This is likely driven by the exact matching criteria and smaller starting sample size in the counseled group, which made it less likely for those who were delinquent to find a match.

While we rely on the balance tests in Appendix D to determine the overall quality of the match, we also report summary statistics for the resulting matched samples on our broader set of variables used for this study. Table 5.1.1 reports the duration and intensity of forbearances obtained by consumers in the matched national sample, and Table 5.1.2 reports the same information for consumers in the matched counseled sample. Table 5.1.3 reports the baseline characteristics of consumers in the matched national sample, and Table 5.1.4 reports the baseline characteristics of consumers in the matched counseled sample. We report summary statistics for the national sample matched groups overall, and for the vulnerable consumers in the national sample and their matched DMP counterparts. For the counseled consumers, we report the summary statistics overall and by the time of counseling or enrollment in a DMP relative to the forbearance (which was an exact variable used for matching).

With regard to forbearance duration and intensity (Table 5.1.1 and Table 5.1.2), consumers in both the national matched sample and the counseled matched sample have very similar performance on the forborne trade prior to the forbearance spell—with 95% of the consumers in both samples being current prior to the start of forbearance. Even 94% of consumers in the vulnerable consumer segment of the national sample were current on their credit card prior to forbearance. These are thus by and large consumers who were not behind on their credit card payments prior to signaling the need for help by requesting and obtaining credit card payment forbearance. The average credit card balance forborne was roughly $9900 to $10,300 in the matched national and counseled samples, with a longest forbearance spell duration of just over 2 months and an average of about 2 credit cards forborne. Consumers in the national vulnerable matched sample had more forborne credit card debt (average of about $12,500).

Turning to baseline consumer characteristics (Table 5.1.3 and Table 5.1.4), consumers in both matched samples had average credit scores of around 637. The counseled matched sample (5.1.4) actually had slightly stronger payment performance at baseline than the national matched sample (5.1.3) with fewer delinquencies and defaults on credit cards and other trade in the periods prior to forbearance.

TABLE 5.1.1 FORBEARANCE DURATION AND INTENSITY IN THE NATIONAL MATCHED SAMPLE

	FULL MATCHED SAMPLE			VULNERABLE MATCHED	
	NATIONAL	COUNSELED: DMP	DIFF	NATIONAL: VULNERABLE	COUNSELED: DMP
ALL TRADES					
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $150	6.04	5.56	0.48***	8.09	7.05
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $1000	4.06	3.77	0.29***	5.82	5.29
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $2000	2.83	2.69	0.14*	4.17	3.92
ALL FORBORNE TRADES					
AVG. BALANCE FORBORNE (2020-2021)	$9,938	$9,853	84.78	$12,548	$12,196
AVG. LENGTH OF LONGEST FORBEARANCE	2.36	2.35	0.00	2.47	2.45
AVG. # OF CREDIT CARD TRADES FORBORNE PER CONSUMER	1.99	1.99	-0.00	2.37	2.35
MAXIMUM # OF FORBEARANCE SPELLS ON A GIVEN TRADE	1.24	1.20	0.04***	1.24	1.21
% OF TRADES FORBORNE	28.4%	28.0%	0.00	25.7%	27.3%
% OF TOTAL DEBT FORBORNE AT START OF FORBEARANCE	42.8%	38.2%	0.05***	35.6%	33.0%
FOCAL FORBORNE TRADES					
AVG. BALANCE FORBORNE ON FOCAL TRADE	$6,400	$6,064	336.21*	$7,261	$6,967
AVG. LENGTH OF FORBEARANCE ON FOCAL TRADE	2.21	2.21	0.00	2.26	2.26
MAXIMUM # OF FORBEARANCE SPELLS ON FOCAL TRADE	1.18	1.13	0.04***	1.16	1.13
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	9.3%	9.1%	0.00	10.9%	11.0%
% 60+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	3.1%	3.2%	-0.00	4.0%	4.4%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	1.9%	1.5%	0.00	2.6%	2.2%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	94.9%	95.0%	-0.00	93.8%	94.0%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	3.4%	3.2%	0.00	3.8%	3.5%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.7%	1.7%	0.00	2.4%	2.4%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.2%	0.9%	0.00	1.8%	1.3%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.00	0.0%	0.0%
N	3,454	3,454		1,440	1,440

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

TABLE 5.1.2 FORBEARANCE DURATION AND INTENSITY IN THE COUNSELED MATCHED SAMPLE

	FULL MATCHED SAMPLE			DMP DURING FORBEARANCE		DMP AFTER FORBEARANCE	
	DMP	COUNSEL-ONLY	DIFF	DMP DURING	COUNSELED DURING	DMP AFTER	COUNSELED AFTER
ALL TRADES							
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $150	5.8	5.4	-0.32***	6.0	5.3	5.6	5.6
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $1000	3.9	3.7	-0.26***	4.0	3.6	3.8	3.7
AVG. # OF CREDIT CARD TRADES AT BASELINE WITH A BALANCE GREATER THAN $2000	2.8	2.7	-0.15**	2.9	2.6	2.7	2.7
ALL FORBORNE TRADES							
AVG. BALANCE FORBORNE (2020-2021)	$10,061	$10,298	236.33	$8,997	$9,388	$10,829	$10,953
AVG. LENGTH OF LONGEST FORBEARANCE	2.4	2.4	0.03	2.3	2.4	2.4	2.4
AVG. # OF CREDIT CARD TRADES FORBORNE PER CONSUMER	2.0	2.1	0.05	1.8	1.8	2.2	2.2
MAXIMUM # OF FORBEARANCE SPELLS ON A GIVEN TRADE	1.2	1.2	0.05***	1.1	1.2	1.2	1.3
% OF TRADES FORBORNE	27.6%	29.1%	0.02**	24.7%	26.9%	29.7%	30.7%
% OF TOTAL DEBT FORBORNE AT START OF FORBEARANCE	37.8%	39.9%	0.02**	35.4%	39.4%	39.5%	40.4%
FOCAL FORBORNE TRADES							
AVG. BALANCE FORBORNE ON FOCAL TRADE	$6,128	$6,016	-111.99	$6,011	$5,952	$6,212	$6,062
AVG. LENGTH OF FORBEARANCE ON FOCAL TRADE	2.2	2.2	0.00	2.2	2.2	2.2	2.2
MAXIMUM # OF FORBEARANCE SPELLS ON FOCAL TRADE	1.1	1.2	0.03**	1.1	1.1	1.2	1.2
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	9.0%	9.3%	0.00	10.2%	11.6%	8.1%	7.6%
% 60+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	2.7%	2.7%	0.00	3.9%	3.5%	1.9%	2.2%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO THE START OF FORBEARANCE	1.2%	1.5%	0.00	1.7%	2.1%	0.8%	1.1%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	95.1%	94.9%	-0.00	93.9%	93.1%	95.9%	96.2%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	3.5%	3.7%	0.00	3.9%	4.7%	3.3%	3.0%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.4%	1.4%	0.00	2.2%	2.2%	0.8%	0.8%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	0.8%	1.1%	0.00	1.2%	1.8%	0.5%	0.5%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.00	0.0%	0.0%	0.0%	0.0%
N	3,497	3,497		1,465	1,465	2,032	2,032

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

TABLE 5.1.3 BASELINE CHARACTERISTICS OF FORBORNE CONSUMERS IN THE NATIONAL MATCHED SAMPLE

		FULL MATCHED SAMPLE			VULNERABLE MATCHED	
		NATIONAL	COUNSELED: DMP	DIFF	NATIONAL: VULNERABLE	COUNSELED: DMP
DEMOGRAPHICS	AGE	46	44	2.82***	47	43
	SHARE FEMALE	64%	64%	0.00	62%	62%
	HOUSEHOLD INCOME	77.3	76.1	1.28	82.2	80.1
	DEBT-TO-INCOME RATIO	26.8	26.4	0.51	31.4	31.2
CREDIT PERFORMANCE	*VANTAGE SCORE*					
	SHARE WITH A VANTAGE SCORE	100.0%	100.0%	0.00	100.0%	100.0%
	AVERAGE VANTAGE SCORE	637	635	2.54	615	612
	DELINQUENT AND DEROGATORY					
	% WITH A CHARGE OFF	3.6%	3.6%	0.00	3.1%	3.1%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	15.3%	15.3%	0.00	18.2%	18.2%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	7.6%	7.6%	0.00	9.7%	9.9%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	11.1%	10.7%	0.01	12.3%	12.4%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	5.0%	4.9%	0.00	6.0%	6.4%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$352	$366	-16.55	$289	$303
	% WITH TRADES PRESENTLY DEROGATORY	9.9%	9.6%	0.00	8.5%	7.2%
	AVG. OF TRADES PRESENTLY DEROGATORY	$466	$504	-32.36	$414	$448
	% WITH TRADES IN COLLECTIONS	23.0%	18.0%	0.05***	19.9%	15.8%
	AVG. BALANCE ON COLLECTIONS	$315	$237	84.80***	$233	$166
DEBT LEVELS	*PRESENCE OF DEBT*					
	SHARE WITH A MORTGAGE	31.2%	31.2%	0.00	32.8%	32.8%
	SHARE WITH A STUDENT LOAN	32.6%	36.1%	-0.04***	33.9%	39.5%
	SHARE WITH AN AUTO LOAN	60.7%	61.7%	-0.00	61.9%	63.1%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	14.9%	17.8%	-0.03***	16.5%	19.9%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)					
	AVERAGE MORTGAGE DEBT	$59,728	$61,326	-1847.00	$65,812	$67,400
	AVERAGE STUDENT LOAN DEBT	$16,698	$17,293	-1030.08	$19,596	$21,893
	AVERAGE AUTO LOAN DEBT	$13,416	$12,751	827.20*	$14,798	$14,045
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$1,041	$1,351	-308.76**	$1,291	$1,624
	AVERAGE CREDIT CARD DEBT	$18,597	$17,204	1315.21**	$26,023	$23,881
CREDIT ACCESS	*EXISTING ACCESS*					
	% WITH AN OPEN CREDIT CARD	98.4%	98.4%	0.00	99.8%	99.2%
	AVG. AVAILABLE CREDIT	$7,891	$7,195	607.43*	$6,350	$5,707
	% WITH AVAILABLE CREDIT	85.6%	84.0%	0.02	83.1%	81.6%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	23.1%	20.1%	0.03**	25.1%	22.6%
	NEW ACCESS					
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	12.1%	12.8%	-0.01	11.4%	13.7%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	28.0%	31.7%	-0.03**	29.1%	31.5%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	2.5%	3.0%	-0.01	2.2%	3.1%
N		3,454	3,454		1,440	1,440

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

TABLE 5.1.4 BASELINE CHARACTERISTICS OF FORBORNE CONSUMERS IN THE COUNSELED MATCHED SAMPLE

		FULL MATCHED SAMPLE			DMP DURING FORBEARANCE		DMP AFTER FORBEARANCE	
		NATIONAL	COUNSELED: DMP	DIFF	DMP	COUNSEL-ONLY	DMP	COUNSEL-ONLY
DEMOGRAPHICS	AGE	44	44	-0.14	44	44	43	43
	SHARE FEMALE	65.1%	65.1%	0.00	63.8%	63.8%	65.9%	65.9%
	HOUSEHOLD INCOME	72.2	75.5	3.22**	72.8	76.7	71.8	74.5
	DEBT-TO-INCOME RATIO	29.3	28.8	-0.49	29.7	28.7	29.1	29.0
CREDIT PERFORMANCE	*VANTAGE SCORE*							
	SHARE WITH A VANTAGE SCORE	100.0%	100.0%	0.00	100.0%	100.0%	100.0%	100.0%
	AVERAGE VANTAGE SCORE	636	637	0.86	635	638	637	637
	DELINQUENT AND DEROGATORY							
	% WITH A CHARGE OFF	2.5%	2.5%	0.00	3.0%	3.0%	2.1%	2.1%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	12.8%	12.8%	0.00	14.0%	14.0%	12.0%	12.0%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	6.3%	6.3%	-0.00	6.7%	6.7%	6.1%	6.0%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	8.5%	9.3%	0.01	9.5%	10.1%	7.8%	8.7%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	3.7%	4.5%	0.01	4.0%	4.9%	3.5%	4.2%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$309	$332	22.61	$353	$356	$278	$315
	% WITH TRADES PRESENTLY DEROGATORY	8.1%	9.2%	0.01	9.4%	8.9%	7.2%	9.4%
	AVG. OF TRADES PRESENTLY DEROGATORY	$409	$423	13.77	$496	$442	$347	$410
	% WITH TRADES IN COLLECTIONS	16.8%	19.0%	0.02*	15.7%	18.1%	17.7%	19.7%
	AVG. BALANCE ON COLLECTIONS	$225	$271	46.80*	$228	$273	$222	$270
DEBT LEVELS	*PRESENCE OF DEBT*							
	SHARE WITH A MORTGAGE	31.2%	31.2%	0.00	32.0%	32.0%	30.6%	30.6%
	SHARE WITH A STUDENT LOAN	36.0%	35.3%	-0.01	35.4%	35.8%	36.4%	34.9%
	SHARE WITH AN AUTO LOAN	61.1%	62.1%	0.01	60.9%	63.0%	61.3%	61.4%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	17.8%	17.5%	-0.00	18.7%	17.9%	17.2%	17.2%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)							
	AVERAGE MORTGAGE DEBT	$59,533	$60,146	612.80	$60,050	$60,608	$59,160	$59,812
	AVERAGE STUDENT LOAN DEBT	$16,771	$17,313	541.38	$17,570	$16,994	$16,195	$17,542
	AVERAGE AUTO LOAN DEBT	$12,285	$13,019	733.80	$12,202	$13,372	$12,345	$12,764
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$1,271	$1,361	90.43	$1,339	$1,450	$1,221	$1,297
	AVERAGE CREDIT CARD DEBT	$18,059	$17,666	-393.22	$19,106	$17,857	$17,304	$17,528
CREDIT ACCESS	*EXISTING ACCESS*							
	% WITH AN OPEN CREDIT CARD	98.7%	98.3%	-0.00	98.6%	98.1%	98.8%	98.4%
	AVG. AVAILABLE CREDIT	$7,304	$7,227	-76.59	$7,280	$7,402	$7,320	$7,100
	% WITH AVAILABLE CREDIT	84.6%	85.0%	0.00	84.4%	84.2%	84.7%	85.6%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	19.8%	20.9%	0.01	18.8%	19.2%	20.6%	22.2%
	NEW ACCESS							
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	12.7%	13.0%	0.00	13.0%	14.3%	12.5%	12.1%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	32.1%	32.6%	0.00	34.3%	32.0%	30.6%	33.0%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	2.9%	2.7%	-0.00	3.1%	3.1%	2.8%	2.5%
N		3,497	3,497		1,465	1,465	2,032	2,032

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

As noted in Section 3.5.2, the matching methodology cannot account fully for the possibility that consumers who seek out credit counseling and choose to enroll in DMPs are different from those who do not in ways that are not observed in available data. In the national matched sample, such unobserved factors may bias our DMP estimates downwards (i.e. to find less of an effect of a DMP), as consumers who seek out credit counseling (and enroll in a DMP) may be experiencing other income or expense shocks that we cannot observe in credit data, but that may also lead to worse outcomes after forbearance. In the counseled matched sample, unobserved factors (even beyond the financial factors that we are accounting for in the matching process) could bias our estimates upwards (i.e. to find more of an effect of a DMP) if they cause consumers who select into a DMP to be more likely to repay their debt as compared to the broader counseled population.

With sufficient data, one way to account for self-selection in the counseled sample would be to restrict the comparison group to counseled individuals who were just ineligible to enroll in a DMP compared to counseled consumers who were just eligible to enroll in a DMP. For example, if eligibility were based strictly on debt-to-income ratios, we could limit DMP consumers to those who were just above the cutoff and limit comparison consumers to those who were just below the cutoff. While we do not have complete data on the criteria used for qualification, the matching process described above ensures that each DMP participant is matched to a counseled consumer who does not enroll in a DMP but has similar debt, income, and other credit characteristics that may be used in eligibility determinations. We also have information for a subset of consumers with regard to whether they were referred by counselors for a DMP, allowing us to differentiate between those who were likely just below the cutoff for eligibility and those who simply chose not to enroll. Section 5.4 reports the results of supplemental analyses of these two additional matched sub-samples of counseled consumers.

5.2 Descriptive Differences in Outcomes

We first compare differences in outcomes between matched groups. Table 5.2.1 compares outcomes within 12 months after the end of the forbearance spell on the focal credit card for consumers in the national matched sample, and Table 5.2.2 compares outcomes for consumers in the counseled matched sample. Outcomes for all forborne trades are reported in Appendix B; the results are not substantially different.

We find a difference in patterns between the likelihood of experiencing short-term delinquencies on the forborne trade at some point within 12 months of exiting forbearance and the account status at the 12-month anniversary of forbearance exit in the national matched sample (Table 5.2.1). Consumers in the DMP treated group were more likely to have experienced delinquencies of 60+ days on the forborne trade within 12 months post forbearance as compared to matched consumers in the national sample. However, at the 12-month anniversary of forbearance exit, the rate of 60+ day delinquencies was higher among the matched consumers than the DMP group on the forborne trade. The likelihood of account charge offs on the forborne trade was also higher among the matched consumers in the national group throughout the 12-month period after forbearance exit. This may signal that, even with matching, the DMP consumers are more distressed than the general national population on characteristics we cannot observe (such as loss of a job) that may lead to an increase in short term delinquency. Our prior research indicates increases in delinquency around the time that a consumer receives counseling or begins a DMP are relatively common (FinRegLab et al. 2023; DiTommaso and Moulton 2022). However, after enrollment, the DMP structure may help consumers stabilize their finances and reduce the likelihood that delinquencies progress to the point of charge off.

When we focus on DMP participants who are matched to vulnerable consumers in the national sample, we observe better outcomes for DMP-treated consumers for both short-term delinquency and longer-term default. The differences are modest but statistically significant with regard to the percentage of consumers who experience 60+ day delinquencies on the forborne trade at some point within 12 months after forbearance exit (15.4% of the matched sample vs. 14.8% of the DMP treatment group), but larger at the end of the 12-month period after forbearance. For instance, 12.6% of the matched vulnerable consumers were in 60+ delinquency status and 8.4% had charged off the forborne credit card trade at the 12 month mark, compared with 8.0% and 5.6%, respectively, of consumers in the DMP treated group.

Figure 5.2.1 provides a visualization over time by plotting the share of consumers in the matched national sample who were 60+ days late on their forborne trade from 6 months before to 12 months after the end of the forbearance spell. (Note that the point marked 0 on the figure represents the duration of the forbearance, which may be more than one month for some consumers.). While the percentage of consumers with delinquencies increase for all groups after forbearance ends, the DMP-treated consumers peak at about 6 months post forbearance and then level off, while the percentage of consumers with delinquencies continues to rise among the matched consumers in both the national sample as a whole and among vulnerable consumers.

In the counseled matched sample (Table 5.2.2), consumers in the DMP-treated group were significantly less likely to be delinquent or default within 12 months and were much less likely to be in default or charge off status on the forborne trade as of 12 months post forbearance. Specifically, the charge-off rate for DMP treated consumers was 5.7% on the forborne card and 14.5% on any credit card, compared with charge off rates of 14.6% and 24.7% for the matched comparison consumers without a DMP. The DMP advantage appears both among consumers who enrolled in a DMP during forbearance and among consumers who enrolled in a DMP after the forbearance ended—although there was more evidence of short-term delinquencies within 12 months for those who enrolled in a DMP after forbearance ended.

Figure 5.2.2 plots the share of consumers in the matched counseled sample who were 60+ days late on their forborne trade from 6 months before to 12 months after the end of the forbearance spell. After the forbearance spell ends, there is a clear demarcation in delinquency rates for consumers in the DMP-treated groups and their matched non-DMP comparison consumers—with those in the DMP-treated groups being much less likely to experience delinquencies once they begin the DMP. Moreover, consumers who waited until 5 to 6 months after exiting forbearances build up substantial delinquencies during that period before their delinquency rates revert to levels more similar to those experienced by consumers who enrolled in DMPs more quickly after forbearance exit.

TABLE 5.2.1 POST-FORBEARANCE OUTCOMES OF MATCHED DMP-NATIONAL SAMPLE CONSUMERS

	FULL MATCHED SAMPLE			VULNERABLE MATCHED	
	NATIONAL	COUNSELED: DMP	DIFF	NATIONAL: VULNERABLE	COUNSELED: DMP
ALL CREDIT CARD TRADES					
EVER 30 DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	34.3%	49.3%	-0.15***	38.8%	53.1%
EVER 60+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	26.8%	28.8%	-0.02	30.4%	29.5%
EVER 90+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	24.6%	23.3%	0.01	27.8%	24.0%
EVER CHARGED OFF ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	21.0%	18.6%	0.02*	24.2%	19.4%
WORST STATUS AS OF 12 MONTHS POST FORBEARANCE: 30 DAYS DELINQUENT	2.4%	5.2%	-0.03***	3.3%	5.3%
ANY TRADE 60+ DAYS DELINQUENT AS OF 12 MO. POST-FORBEARANCE	18.5%	19.6%	-0.01	22.6%	21.1%
ANY TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	16.9%	17.6%	-0.01	20.8%	19.5%
ANY TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	13.5%	14.8%	-0.01	17.6%	16.5%
FOCAL FORBORNE TRADES					
EVER MULTIPLE FORBEARANCE SPELLS	14.2%	11.6%	0.03**	12.8%	10.6%
EVER 30 DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	17.5%	24.6%	-0.07***	19.9%	24.4%
EVER 60+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	13.4%	15.4%	-0.02*	15.4%	14.8%
EVER 90+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	10.9%	11.2%	-0.00	13.1%	10.8%
EVER CHARGED OFF WITHIN 12 MONTHS POST FORBEARANCE	6.8%	5.7%	0.01	8.4%	5.6%
FOCAL TRADE 30 DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	1.2%	2.5%	-0.01***	1.7%	2.6%
FOCAL TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	10.5%	8.5%	0.02**	12.6%	8.0%
FOCAL TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	9.5%	7.6%	0.02**	11.5%	7.3%
FOCAL TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	6.8%	5.7%	0.01	8.4%	5.6%
N	3,454	3,454		1,440	1,440

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

TABLE 5.2.2 POST-FORBEARANCE OUTCOMES OF MATCHED DMP-COUNSELED SAMPLE CONSUMERS

	FULL MATCHED SAMPLE			DMP DURING FORBEARANCE		DMP AFTER FORBEARANCE	
	DMP	COUNSEL-ONLY	DIFF	DMP DURING	COUNSELED DURING	DMP AFTER	COUNSELED AFTER
ALL CREDIT CARD TRADES							
EVER 30 DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	49.3%	48.6%	-0.01	40.5%	42.2%	55.7%	53.2%
EVER 60+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	28.4%	39.8%	0.11***	25.9%	35.4%	30.1%	43.0%
EVER 90+ DAYS DELINQUENT ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	23.0%	36.2%	0.13***	21.4%	32.6%	24.2%	38.8%
EVER CHARGED OFF ON ANY CREDIT CARDS WITHIN 12 MONTHS POST FORBEARANCE	17.9%	30.2%	0.12***	17.0%	28.4%	18.6%	31.5%
WORST STATUS AS OF 12 MONTHS POST FORBEARANCE: 30 DAYS DELINQUENT	5.3%	3.3%	-0.02***	3.9%	3.0%	6.4%	3.5%
ANY TRADE 60+ DAYS DELINQUENT AS OF 12 MO. POST-FORBEARANCE	19.2%	31.9%	0.13***	17.7%	27.9%	20.3%	34.8%
ANY TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	17.3%	30.1%	0.13***	15.7%	26.4%	18.4%	32.8%
ANY TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	14.5%	24.7%	0.10***	13.5%	22.7%	15.3%	26.2%
FOCAL FORBORNE TRADES							
EVER MULTIPLE FORBEARANCE SPELLS	11.4%	14.2%	0.03***	8.5%	11.1%	13.5%	16.4%
EVER 30 DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	24.9%	31.8%	0.07***	17.1%	27.1%	30.5%	35.2%
EVER 60+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	15.4%	25.5%	0.10***	11.9%	21.8%	17.9%	28.2%
EVER 90+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	11.2%	21.8%	0.11***	9.2%	19.2%	12.5%	23.7%
EVER CHARGED OFF WITHIN 12 MONTHS POST FORBEARANCE	5.7%	14.6%	0.09***	5.9%	14.1%	5.5%	15.1%
FOCAL TRADE 30 DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	2.5%	1.9%	-0.01	1.4%	1.1%	3.3%	2.4%
FOCAL TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	8.6%	20.7%	0.12***	8.6%	18.3%	8.5%	22.5%
FOCAL TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	7.5%	19.0%	0.11***	7.4%	17.3%	7.7%	20.3%
FOCAL TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	5.7%	14.6%	0.09***	5.9%	14.1%	5.5%	15.1%
N	3,497	3,497		1,465	1,465	2,032	2,032

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

FIGURE 5.2.1 SHARE OF CONSUMERS 60+ DAYS DELINQUENT ON FOCAL TRADES, BY MONTHS SINCE FORBEARANCE (NATIONAL MATCHED SAMPLE)

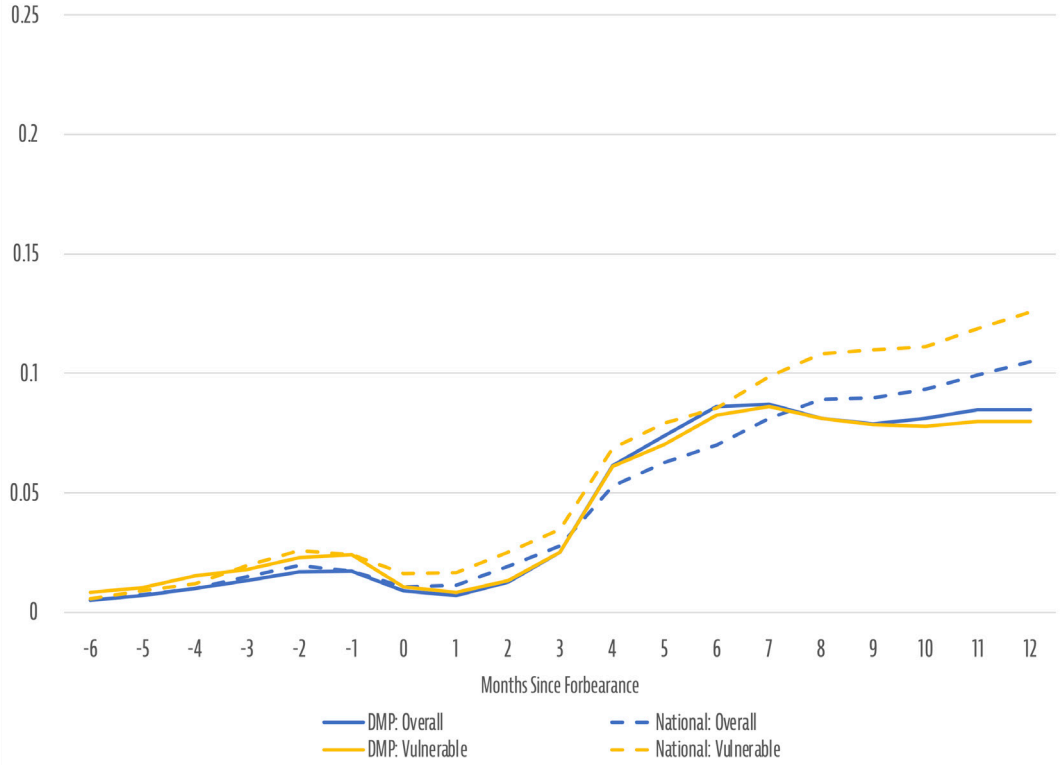
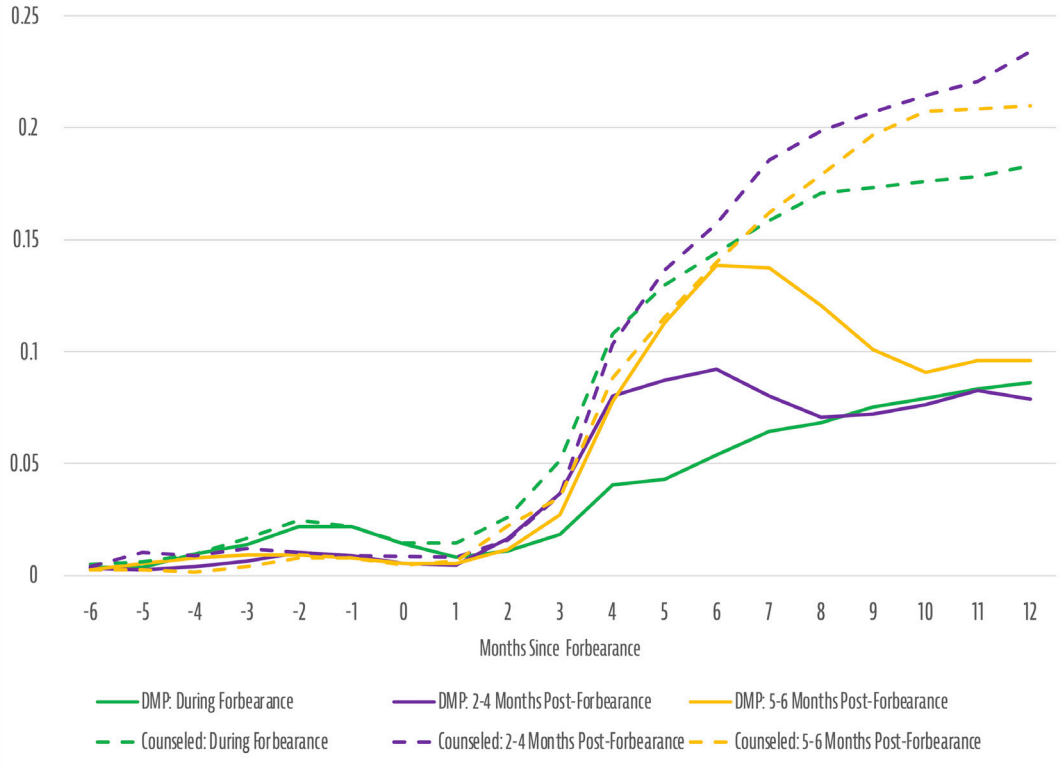


FIGURE 5.2.2 SHARE OF CONSUMERS 60+ DAYS DELINQUENT ON FOCAL TRADES, BY MONTHS SINCE FORBEARANCE (COUNSELED MATCHED SAMPLE)



5.3 Regression Results

As a final step, we run a series of linear probability regression models using the matched samples, predicting the probability that a consumer is (1) ever 60 or more days late on the forborne credit card within 12 months post forbearance, (2) in default 90+ days on the forborne card as of 12 months post forbearance, or (3) charged off on the forborne card as of 12 months post forbearance. The first outcome is a measure of short-term delinquency, while the latter two outcomes measure the terminal, longer-term status on the forborne credit card. Regression results for the probability that the consumer is charged off on any credit card trade as of 12 months post forbearance (not limited to the forborne card) are reported in the supplemental online appendix.

For each outcome and sample (national matched sample and counseled matched sample), we estimate three separate models. Our first model (model 1) measures the added benefit of participating in a DMP, where the key coefficient of interest in the regression models is the DMP indicator. Our second set of models (model 2) include an interaction between being in the vulnerable consumer segment and being treated with a DMP—as we expect that the vulnerable consumer segment is more likely to benefit from long-term debt restructuring relative to consumers in the national sample who have stronger credit scores and less debt. Our third set of models (model 3) splits the DMP indicator into three groups based on the timing of entering the DMP relative to the forbearance (specifically, during or within one month of forbearance, 2-4 months after, and 5-6 months after), as we expect that entering a DMP while in payment forbearance or short after exiting forbearance may reduce the likelihood of delinquencies and result in better credit outcomes for consumers.

Appendix E reports the full regression results for our models, including coefficients for all model variables. Table 5.3.1, Table 5.3.2, and Table 5.3.3 summarize the key results from the three regression models for each outcome and sample (national and counseled matched samples). We report the regression adjusted probability of the outcomes for our key groups (e.g., DMP vs. no-DMP) using marginal effects from the linear probability models. We also report the percent change in the outcome associated with being in the DMP treated group relative to the matched comparison group without a DMP. Finally, we report the coefficient from the regression model, which can be interpreted as the percentage point change in the outcome associated with being in the DMP treated group relative to the no DMP matched comparison group. For the vulnerable consumer segment (model 2), the percentage point change in the probability is calculated as the sum of the coefficients for the relevant interaction variables.[42]

Table 5.3.1 reports the results for regression models predicting being 60+ days delinquent on the forborne credit card within 12 months after exiting forbearance. In the national matched sample overall (Model 1), DMP treated consumers are 8% more likely to experience delinquencies than the non-DMP treated comparison group although the results are not statistically significant. However, we observe significant heterogeneous effects for vulnerable consumers (with credit scores below 660 and credit card debt more than $8000 at baseline) compared to consumers who were not vulnerable (Model 2). Specifically, enrollment in a DMP is associated with a 7.9% reduction in the probability of being delinquent when the DMP treatment consumers are compared to matched vulnerable consumers. However, enrollment in a DMP is associated with a 26% increase in the probability of being delinquent when compared to consumers in the national sample who were not vulnerable at baseline. Again, this latter result likely reflects unobserved differences in DMP treated consumers that

42 Specifically, for consumers who are not vulnerable, the percentage point change in a given outcome associated with enrolling in a DMP is equal to the coefficient for DMP in model 2. For vulnerable consumers, the percentage point change in a given outcome associated with enrolling in a DMP is calculated as the sum of the coefficient for DMP and the coefficient for the interaction between enrolling in a DMP and being vulnerable in model 2.

make them more at risk of short-term delinquency than their matched counterparts in the national sample overall. These results are similar to the patterns observed in Table 5.2.1.

Within the more distressed group of matched consumers who sought counseling (Table 5.3.1), we observe a significant reduction in the probability of being 60 or more days delinquent within 12 months post-forbearance of about 40% for consumers who enroll in a DMP (Model 1). This effect is slightly larger when DMP-treated consumers are compared to vulnerable consumers (Model 2) in the counseled matched sample.

Table 5.3.1 also shows evidence of significant differences in outcomes by timing of enrollment in a DMP relative to the timing of forbearance (Model 3). Specifically, consumers who wait to enroll in a DMP until 5-6 months after the end of the forbearance are much more likely to experience 60+ day delinquency on their forborne trade than consumers who enroll in a DMP during the forbearance or shortly (2-4 months) after. Compared to matched counseled consumers not enrolling in a DMP, the likelihood of being 60+ days delinquent on the forborne card decreases by 50% for consumers who enroll in a DMP during a forbearance, by about 40% for consumers who enroll in a DMP 2-4 months after exiting forbearance, and by 17.5% for consumers who enroll in a DMP 5-6 months after exiting forbearance.

Key Finding: Our matched sample results indicate that enrolling in a DMP is associated with a significant reduction in the probability of delinquency on the forborne credit card trade after exiting forbearance for vulnerable and distressed consumers, with the largest reduction for consumers who enrolled in a DMP during or shortly after exiting forbearance. The results suggest that transitioning still-distressed borrowers to longer term programs quickly as forbearances end can reduce further deterioration in their financial situations.

Table 5.3.2 reports the results for regression models predicting being in default (90+ days) on the forborne credit card as of 12 months after exiting forbearance, and Table 5.3.3 reports results for being charged off on the forborne trade as of 12 months after exiting forbearance. As would be expected, the results are substantively similar between the two tables. While the probability of being in 90+ days default is slightly higher than the probability of being charged off, the percent change associated with enrollment in a DMP is similar for the two outcomes. Beginning with the national matched sample, enrollment in a DMP is associated with a 20% to 23% reduction in being in default or charged off on the forborne card as of 12 months post forbearance (Model 1). This effect is larger for vulnerable consumers (Model 2), where vulnerable consumers with a DMP are 33% to 36% less likely to default or charge off on their forborne trade compared to vulnerable consumers without a DMP in the matched national sample.

Turning to the counseled matched sample, being in a DMP is associated with an overall reduction of nearly 60% in the probability of 90+ day default (Table 5.3.2 Model 1) and a 61% reduction in the probability of being charged off (Table 5.3.3 Model 1) as of 12 months post forbearance. These effects are slightly larger for vulnerable consumers in the counseled sample (Model 2), with a reduction of default and charge off of 64% and 67%, respectively.

The timing of entering a DMP relative to the forbearance (Model 3) is not as important for predicting default or charge off as it was for delinquency (Table 5.3.1). Specifically, the effect sizes for reduction in default or charge off are similar for all DMP participants, regardless of when they enroll. This suggests that while enrolling in a DMP early may help prevent damage to consumers' credit reports by reducing the likelihood of short-term delinquency enrolling in a DMP anytime

within 6 months of forbearance exit is associated with better long-term outcomes than not enrolling in a DMP.

Key Finding: Enrollment in a DMP is associated with a significant reduction in the probability of default or charge off on a forborne credit card within 12 months of forbearance in the matched national and matched counseled sample, even for consumers who do not enroll until 5 to 6 months after exiting forbearance.

TABLE 5.3.1 SELECT REGRESSION RESULTS FOR DELINQUENCY ON FORBORNE TRADE WITHIN 12 MONTHS POST FORBEARANCE (EVER 60+ DAYS LATE ON FOCAL CREDIT CARD WITHIN 12 MONTHS POST FORBEARANCE)

	NATIONAL MATCHED SAMPLE				COUNSELED MATCHED SAMPLE			
	REGRESSION-ADJUSTED PROBABILITY	% CHANGE	COEF (PPT CHANGE)		REGRESSION-ADJUSTED PROBABILITY	% CHANGE	COEF (PPT CHANGE)	
MODEL (1) OVERALL								
NO DMP	0.1386				0.2536			
DMP	0.1497	8.0%	0.011		0.1553	-38.8%	-0.098	***
MODEL (2) VULNERABLE CONSUMER INTERACTIONS								
NOT VULNERABLE								
NO DMP & NOT VULNERABLE	0.1166				0.2207			
DMP & NOT VULNERABLE	0.1469	26.0%	0.030	**	0.1521	-31.1%	-0.069	***
VULNERABLE								
NO DMP & VULNERABLE	0.1681				0.301			
DMP & VULNERABLE	0.1549	-7.9%	-0.013	**	0.1604	-46.7%	-0.141	***
MODEL (3) BY TIMING OF DMP								
NO DMP	0.1385				0.2536			
DMP DURING FORBEARANCE	0.12	-13.4%	-0.019	*	0.1279	-49.6%	-0.126	***
DMP 2-4 MOS. POST FORBEARANCE	0.1436	3.7%	0.005		0.1541	-39.2%	-0.100	***
DMP 5-6 MOS. POST-FORBEARANCE	0.2128	53.6%	0.074	**	0.2091	-17.5%	-0.045	**
N	6908				6994			

Notes: Regression adjusted probabilities are estimated from marginal effects following linear probability model regressions which include a vector of control variables. Complete regression results are reported in Appendix E. Statistical difference reported for coefficients; *p<0.05; **p<0.01; ***p<0.001

TABLE 5.3.2 SELECT REGRESSION RESULTS FOR DEFAULT ON FORBORNE TRADE AS OF 12 MONTHS POST FORBEARANCE (90+ DAYS LATE ON FOCAL CREDIT CARD AS OF 12 MONTHS POST FORBEARANCE)

	NATIONAL MATCHED SAMPLE				COUNSELED MATCHED SAMPLE			
	REGRESSION-ADJUSTED PROBABILITY	% CHANGE	COEF (PPT CHANGE)		REGRESSION-ADJUSTED PROBABILITY	% CHANGE	COEF (PPT CHANGE)	
MODEL (1) OVERALL								
NO DMP	0.0967				0.1896			
DMP	0.0741	-23.4%	-0.023	***	0.0763	-59.8%	-0.113	***
MODEL (2) VULNERABLE CONSUMER INTERACTIONS								
NOT VULNERABLE								
NO DMP & NOT VULNERABLE	0.0774				0.1583			
DMP & NOT VULNERABLE	0.0713	-7.9%	-0.006	**	0.0704	-55.5%	-0.088	***
VULNERABLE								
NO DMP & VULNERABLE	0.123				0.2346			
DMP & VULNERABLE	0.0788	-35.9%	-0.044	**	0.0852	-63.7%	-0.149	***
MODEL (3) BY TIMING OF DMP								
NO DMP	0.0967				0.1896			
DMP DURING FORBEARANCE	0.0757	-21.7%	-0.021	*	0.0803	-57.6%	-0.109	***
DMP 2-4 MOS. POST FORBEARANCE	0.068	-29.7%	-0.029	**	0.0666	-64.9%	-0.123	***
DMP 5-6 MOS. POST-FORBEARANCE	0.0808	-16.4%	-0.016		0.0848	-55.3%	-0.105	***
N	6908				6994			

Notes: Regression adjusted probabilities are estimated from marginal effects following linear probability model regressions which include a vector of control variables. Complete regression results are reported in Appendix E. Statistical difference reported for coefficients; *p<0.05; **p<0.01; ***p<0.001

TABLE 5.3.3 SELECT REGRESSION RESULTS FOR FORBORNE TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE (CHARGED OFF ON FOCAL CREDIT CARD AS OF 12 MONTHS POST FORBEARANCE)

	NATIONAL MATCHED SAMPLE				COUNSELED MATCHED SAMPLE			
	REGRESSION-ADJUSTED PROBABILITY	% CHANGE	COEF (PPT CHANGE)		REGRESSION-ADJUSTED PROBABILITY	% CHANGE	COEF (PPT CHANGE)	
MODEL (1) OVERALL								
NO DMP	0.0693				0.1461			
DMP	0.0552	-20.3%	-0.014	***	0.0569	-61.1%	-0.089	***
MODEL (2) VULNERABLE CONSUMER INTERACTIONS								
NOT VULNERABLE								
NO DMP & NOT VULNERABLE	0.0527				0.1217			
DMP & NOT VULNERABLE	0.051	-3.2%	-0.002		0.0549	-54.9%	-0.067	***
VULNERABLE								
NO DMP & VULNERABLE	0.092				0.1813			
DMP & VULNERABLE	0.0617	-32.9%	-0.030	*	0.0602	-66.8%	-0.121	***
MODEL (3) BY TIMING OF DMP								
NO DMP	0.0693				0.1461			
DMP DURING FORBEARANCE	0.0614	-11.4%	-0.008		0.0634	-56.6%	-0.083	***
DMP 2-4 MOS. POST FORBEARANCE	0.0471	-32.0%	-0.022	**	0.0472	-67.7%	-0.099	***
DMP 5-6 MOS. POST-FORBEARANCE	0.0568	-18.0%	-0.013		0.0605	-58.6%	-0.086	***
N	6908				6994			

Notes: Regression adjusted probabilities are estimated from marginal effects following linear probability model regressions which include a vector of control variables. Complete regression results are reported in Appendix E. Statistical difference reported for coefficients; *p<0.05; **p<0.01; ***p<0.001

5.4 Supplemental Analyses

We conduct a series of supplemental analyses to probe the extent to which self-selection could be driving some of the DMP effects. Specifically, we split the counseled matched sample into two separate sub-samples where we had data indicating whether the matched comparison consumers were referred to a DMP. The first sub-sample focuses on DMP participants who were matched to counseled consumers who were not referred to a DMP, but who were otherwise similar to the DMP participants. The second sub-sample includes DMP participants who were matched to counseled consumers who were referred to a DMP, but who opted to not enroll. Self-selection is fully driving the decision to participate in a DMP for consumers who were referred to a DMP but who choose to not enroll. By contrast, consumers who were not referred to a DMP were likely determined to be ineligible to enroll by the agency. By matching on characteristics that are used to determine eligibility (debt and income levels), our matched comparison group of consumers who are not referred to a DMP are observationally "close" to the eligibility threshold but could not enroll in DMP because they were not referred by the agency.

We do not have data on whether consumers were referred to a DMP from all agencies, and thus the sub-samples for this analysis exclude some consumers from agencies not reporting this information. Among consumers counseled by agencies reporting referral information, 812 comparison consumers in the matched sample were not referred to a DMP, for a total sample of 1,624 DMP and non-DMP matched consumers in the first sub-sample. By contrast, 1,353 matched comparison

consumers were referred to a DMP but selected to not enroll, for a total matched sample of 2,706 consumers in the second sub-sample.

We re-estimate the regression models described in Section 5.3 for the two sub-samples separately. The supplemental online appendix summarizes the characteristics of consumers in these two matched sub-samples as well as regression results for all outcomes for the subsample regressions. The estimated DMP effects are statistically and substantively similar to those reported in the main results. For example, in the first matched sub-sample limited to counseled comparison consumers not referred to a DMP, the probability of charge off at 12 months post forbearance is 60 percent lower ($p<0.01$) for those enrolling in a DMP. For the second matched sub-sample limited to counseled comparison consumers who were referred to a DMP but self-selected to not participate, DMP is associated with a 65 percent reduction in the probability of charge off at 12 months post forbearance is ($p<0.01$). The DMP effects are also similar between the two sub-samples for 60+ day delinquency and 90-day default. The similarity in DMP effects for the two sub-samples suggests that selection effects are not likely driving the main results for the counseled matched sample. Nonetheless, our estimates of the benefit added of a DMP are exploratory and should not be interpreted as causal.[43]

43 We estimate results for any credit card for all three outcomes (available from the authors upon request) but report the results for charge off on any credit card trade as of 12 months post forbearance, given that charge off is a terminal outcome. The size of the DMP effects for any credit card tend to be smaller than the DMP effects limited to the forborne credit card; however, the overall finding that DMP enrollment is associated with reduced probability of charge off for the most vulnerable and distressed consumers is similar to the main results for the forborne card.

6. DISCUSSION AND CONCLUSIONS

The COVID-19 pandemic merits study as the most widespread use of short-term credit card forbearances in history, but it is also important to caution that the results here are observed during an unprecedented time due not only to the breadth and depth of financial shocks but also to the generosity of financial supports provided to assist borrowers. These included not only payment relief across multiple types of loans, but also stimulus payments, enhanced unemployment benefits, and protections from eviction and utility cutoffs.

Absent such programs, the incidence of severe delinquencies and charge offs would have been substantially higher among vulnerable and distressed borrowers, as evidenced in our January report comparing credit trends for consumers who entered counseling during the pandemic relative to prior time periods. To the extent that such programs were particularly beneficial to vulnerable and distressed consumers who exited short-term forbearances without enrolling in longer term repayment plans, our findings may represent a lower bound. However, support programs also benefitted DMP participants. Thus, additional research would be helpful to understand whether other types of financial shocks in the absence of such widespread relief initiatives produce somewhat different patterns as to the scale or timing effects of DMP enrollments.

A second consideration that substantially complicates our analysis is the possibility that consumers who seek out credit counseling and choose to enroll in DMPs are different from those who do not in ways that are not observed in available data, and that there may be unobserved differences among consumers who seek DMPs at different times. The existence of such differences seems particularly likely when comparing forbearance recipients in the general national sample to forbearance recipients who also sought credit counseling, given that the act of seeking counseling may signal that a consumer has experienced an additional financial shock or hardship that we cannot observe immediately in credit data. We expect that unobserved selection in the national random sample biases our DMP estimates downwards (i.e., to find less of an effect from DMP enrollment. In the counseled sample, it is possible that selection may work in the other direction, if consumers who are better able to make debt payments on unobserved characteristics are more likely to enroll in a DMP. As described above, these concerns are somewhat reduced because we were able to match DMP participants with non-participants based on DMP eligibility criteria like income, credit card, and debt balances, as well as trends in prior debt payment history. We also match on when consumers sought counseling relative to their forbearances. Our supplemental analyses that use data on agency referrals to a DMP suggest that self-selection is not driving the differences in the likelihood of delinquency, default, and charge off post forbearances. Nonetheless, the estimates here should be interpreted as exploratory and not causal.

While additional research to continue probing these issues would be helpful, our findings suggest the potential value of building early assessment and transition programs to help more severely distressed and vulnerable borrowers migrate relatively quickly from short-term "skip a payment" programs into options that will provide more substantial financial relief and/or debt restructuring. Although not having to make minimum payments can provide some initial breathing room to households, it makes intuitive sense that consumers with larger and more expensive card balances are more likely to need longer and more substantial assistance to help stabilize their finances after major shocks.

Specifically, our findings have three primary implications for program design:

- Consumers who enter lenders' temporary payment hardship programs are not all the same, and households that are already vulnerable or experiencing distress prior to a financial shock are more likely to need more help. We find that consumers with large credit card balances (where balances are constructed across multiple accounts) and with marginal credit scores (less than 660) prior to obtaining temporary payment relief were substantially more likely to struggle with post-forbearance delinquencies and defaults, even in an era of unprecedented borrower support programs.
- Evaluating particularly vulnerable and distressed consumers to determine whether long-term relief would be appropriate may be beneficial as soon as borrowers' personal circumstances permit. For instance, lender referral programs to counseling agencies and other types of early intervention programs could potentially help consumers understand their long-term options and reduce the risk of disruptions and gaps as initial payment relief programs end. Consumers who did not enroll in DMPs until 5 to 6 months after forbearances ended experienced greater short-term delinquencies than those who transitioned more quickly.
- Product innovation and alternative debt resolution strategies could be helpful to ensure that consumers who need longer term support are able to find an option that fits their circumstances. While DMP participants experienced more favorable outcomes after temporary forbearances than vulnerable and distressed forbearance recipients who did not enroll, roughly 50% of counseled consumers cannot qualify for DMPs and substantial numbers of consumers who qualify choose not to participate. These patterns highlight the importance of developing additional long-term options to help already vulnerable and distressed borrowers stabilize their finances after experiencing substantial financial shocks

In future research we plan to integrate more detailed administrative data on income and credit shocks that may serve as early warning signs for consumers at risk of credit card default and help identify the consumers who are more likely to benefit from particular debt relief options. We also expect to probe the potential benefits of early referral programs, the use of alternative longer term repayment structures for consumers who do not qualify for DMPs, and the use of data and technology to facilitate providing more tailored solutions to meet consumers' individual circumstances. The goal is to take a broad-based look at potential innovations to support more rapid and inclusive recoveries from personal and broader economic crises such as COVID-19.

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APPENDIX A

Characteristics of Consumers with Credit Card Forbearances

TABLE A 1 BASELINE (Q4 2019) CHARACTERISTICS OF CONSUMERS WITH CREDIT CARD DEBT DURING COVID

		NATIONAL SAMPLE ACCOMMODATIONS		COUNSELED SAMPLE ACCOMMODATIONS DMP		COUNSELED SAMPLE ACCOMMODATIONS NO DMP	
		YES	NO	YES	NO	YES	NO
DEMOGRAPHICS	AGE	49	50	44	43	45	41
	SHARE FEMALE	50%	51%	65%	67%	64%	65%
	HOUSEHOLD INCOME	96.9	100.1	70.5	60.8	71.6	57.6
	DEBT-TO-INCOME RATIO	18.5	12.4	27.6	22.3	26.3	19.2
CREDIT PERFORMANCE	*VANTAGE SCORE*						
	SHARE WITH A VANTAGE SCORE	99.9%	99.5%	99.9%	99.5%	99.6%	98.3%
	AVERAGE VANTAGE SCORE	705	717	633	610	635	600
	DELINQUENT AND DEROGATORY						
	% WITH A CHARGE OFF	3.3%	5.1%	4.6%	13.4%	6.1%	17.2%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	11.0%	12.1%	17.3%	31.6%	19.4%	36.3%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	5.2%	6.3%	8.6%	18.3%	10.1%	20.7%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	8.3%	10.1%	12.6%	26.4%	14.6%	31.5%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	3.7%	5.2%	5.6%	14.8%	7.1%	17.4%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$500	$737	$531	$1,364	$832	$2,065
	% WITH TRADES PRESENTLY DEROGATORY	9.0%	13.3%	11.2%	27.7%	14.4%	37.3%
	AVG. OF TRADES PRESENTLY DEROGATORY	$797	$1,179	$801	$2,169	$1,241	$3,288
	% WITH TRADES IN COLLECTIONS	16.7%	18.5%	20.0%	35.8%	23.7%	46.2%
	AVG. BALANCE ON COLLECTIONS	$313	$445	$330	$851	$473	$1,337
DEBT LEVELS	*PRESENCE OF DEBT*						
	SHARE WITH A MORTGAGE	40.9%	32.7%	30.1%	22.5%	29.3%	18.7%
	SHARE WITH A STUDENT LOAN	21.4%	16.9%	35.8%	35.5%	32.3%	32.8%
	SHARE WITH AN AUTO LOAN	52.6%	38.0%	59.8%	53.9%	57.0%	47.0%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	7.7%	4.4%	18.8%	17.2%	15.8%	13.8%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)						
	AVERAGE MORTGAGE DEBT	$76,962	$60,885	$53,513	$36,613	$54,024	$30,957
	AVERAGE STUDENT LOAN DEBT	$8,511	$6,175	$16,638	$15,810	$14,618	$13,690
	AVERAGE AUTO LOAN DEBT	$11,116	$7,096	$11,905	$9,798	$11,312	$8,281
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$501	$262	$1,289	$1,077	$1,073	$767
	AVERAGE CREDIT CARD DEBT	$8,663	$3,701	$14,515	$8,058	$14,128	$5,446
CREDIT ACCESS	*EXISTING ACCESS*						
	% WITH AN OPEN CREDIT CARD	94.9%	81.0%	97.2%	81.3%	94.9%	68.0%
	AVG. AVAILABLE CREDIT	$14,760	$14,014	$6,971	$4,475	$8,427	$4,339
	% WITH AVAILABLE CREDIT	88.3%	76.7%	82.8%	64.3%	81.9%	52.9%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	23%	25%	19%	15%	19%	13%
	NEW ACCESS						
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	10.4%	7.1%	12.6%	11.2%	12.3%	9.7%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	20.5%	13.4%	33.8%	26.7%	32.1%	21.6%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	3.5%	2.6%	3.1%	2.1%	2.7%	1.5%
N		207,827	1,779,549	12,792	21,825	30,261	83,943

Note: This sample is limited to consumers with credit cards between Q2 2020 and Q3 2021. Counseled consumers are further limited to those counseled between Q2 2020 and Q3 2021. All statistics are observed as of the baseline period, Q4 2019 and thus the sample is further limited to consumers with credit data as of Q4 2019. This reduces the size of the National sample slightly compared to Table 9.

APPENDIX B

Statistics on All Forborne Trades

This appendix reports statistics on all forborne trades, both for the full national and counseled samples discussed in Section 4 and for the matched samples discussed in Section 5. For additional detail on the matching process, see Section 5.1 and Appendix D.

TABLE B 1.1 FORBEARANCE DURATION AND INTENSITY, NATIONAL SAMPLE CONSUMERS

	NATIONAL SAMPLE ACCOMMODATIONS					
		CREDIT SCORE		DEBT LEVEL		VULNERABLE
	OVERALL	BELOW 660	ABOVE 660	ABOVE $8,000	BELOW $8,000	<660, >$8,000
FORBORNE TRADES						
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	5.9%	15.7%	1.6%	6.4%	5.5%	15.1%
% 60 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	2.2%	6.7%	0.3%	2.6%	2.0%	6.9%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	1.2%	3.7%	0.1%	1.5%	1.1%	4.0%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	96.9%	91.7%	99.1%	96.2%	97.3%	91.0%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.7%	4.2%	0.7%	2.0%	1.6%	4.3%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.4%	4.1%	0.2%	1.8%	1.1%	4.7%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	0.9%	2.6%	0.1%	1.1%	0.7%	3.0%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%
N	108,908	33,220	75,617	42,834	66,074	14,274

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 1.2 FORBEARANCE DURATION AND INTENSITY, COUNSELED SAMPLE CONSUMERS

	COUNSELED SAMPLE			
	ENROLLED DURING		ENROLLED AFTER	
	DMP	COUNSEL ONLY	DMP	COUNSEL ONLY
FORBORNE TRADES				
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	17.8%	16.7%	18.0%	16.0%
% 60 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	9.0%	7.6%	7.6%	7.0%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	4.9%	4.5%	3.9%	3.6%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	87.7%	88.8%	88.1%	90.0%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	5.7%	5.7%	6.2%	5.2%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	6.6%	5.6%	5.7%	4.8%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	3.5%	3.3%	2.9%	2.7%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.0%	0.0%
N	1,778	4,700	2,541	6,025

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 2.1 POST FORBEARANCE OUTCOMES OF NATIONAL SAMPLE CONSUMERS

	NATIONAL SAMPLE					
		CREDIT SCORE		DEBT LEVEL		VULNERABLE
	OVERALL	BELOW 660	ABOVE 660	ABOVE $8,000	BELOW $8,000	<660, >$8,000
FORBORNE TRADES						
EVER MULTIPLE FORBEARANCE SPELLS ON A GIVEN TRADE	18.1%	18.5%	18.0%	18.3%	18.1%	19.0%
EVER 30 DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	8.6%	20.3%	3.5%	9.5%	8.0%	19.5%
EVER 60+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	6.0%	14.8%	2.0%	7.0%	5.3%	15.0%
EVER 90+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	4.8%	12.0%	1.6%	5.9%	4.1%	12.6%
EVER CHARGED OFF WITHIN 12 MONTHS POST FORBEARANCE	3.2%	8.2%	1.0%	4.1%	2.6%	8.8%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: 30 DAYS DELINQUENT	0.7%	1.7%	0.3%	0.8%	0.7%	1.6%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: 60+ DAYS DELINQUENT	4.5%	11.1%	1.5%	5.4%	3.8%	11.5%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: 90+ DAYS DELINQUENT	4.0%	10.1%	1.4%	5.0%	3.4%	10.6%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: CHARGED OFF	3.0%	7.6%	1.0%	3.7%	2.5%	8.0%
N	108,908	33,220	75,617	42,834	66,074	14,274

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 2.2 POST FORBEARANCE OUTCOMES OF COUNSELED SAMPLE CONSUMERS

	COUNSELED SAMPLE			
	ENROLLED DURING		ENROLLED AFTER	
	DMP	COUNSEL ONLY	DMP	COUNSEL ONLY
FORBORNE TRADES				
EVER MULTIPLE FORBEARANCE SPELLS ON A GIVEN TRADE	11.8%	17.3%	21.7%	25.1%
EVER 30 DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	20.0%	32.4%	38.3%	42.8%
EVER 60+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	14.1%	27.7%	24.0%	35.7%
EVER 90+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	11.3%	24.3%	16.6%	31.0%
EVER CHARGED OFF WITHIN 12 MONTHS POST FORBEARANCE	7.6%	18.7%	8.2%	22.0%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: 30 DAYS DELINQUENT	0.4%	1.4%	0.6%	2.1%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: 60+ DAYS DELINQUENT	1.8%	1.6%	4.2%	2.5%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: 90+ DAYS DELINQUENT	9.9%	22.5%	11.7%	28.3%
WORST STATUS ON THE FIRST FORBORNE CREDIT CARD TRADE AS OF 12 MONTHS POST FORBEARANCE: CHARGED OFF	8.8%	21.2%	10.4%	26.3%
N	1,778	4,700	2,541	6,025

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 3.1 FORBEARANCE DURATION AND INTENSITY, NATIONAL MATCHED SAMPLE

	FULL MATCHED SAMPLE			VULNERABLE MATCHED	
	NATIONAL	COUNSELED: DMP	DIFF	NATIONAL: VULNERABLE	COUNSELED: DMP
FORBORNE TRADES					
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	14.0%	16.0%	-0.02*	17.6%	21.0%
% 60+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	4.7%	6.6%	-0.02***	6.4%	9.6%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	2.8%	3.2%	-0.00	4.0%	4.8%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	91.6%	89.8%	0.02**	89.4%	86.3%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	5.4%	5.6%	-0.00	6.4%	6.9%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	3.0%	4.6%	-0.02***	4.2%	6.8%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1.9%	2.3%	-0.00	2.7%	3.2%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.00	0.0%	0.0%
N	3,454	3,454		1,440	1,440

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 3.2 FORBEARANCE DURATION AND INTENSITY, COUNSELED MATCHED SAMPLE

	FULL MATCHED SAMPLE			DMP DURING FORBEARANCE		DMP AFTER	
	DMP	COUNSEL ONLY	DIFF	DMP DURING	COUNSELED DURING	DMP AFTER	COUNSELED AFTER
FORBORNE TRADES							
% 30 DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	16.2%	15.0%	-0.01	16.3%	16.4%	16.1%	14.1%
% 60+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	6.2%	5.7%	-0.00	7.1%	5.9%	5.6%	5.6%
% 90+ DAYS DELINQUENT WITHIN 6 MONTHS PRIOR TO FORBEARANCE	3.0%	3.2%	0.00	3.6%	3.3%	2.5%	3.1%
% CURRENT ONE MONTH PRIOR TO FORBEARANCE	89.6%	90.5%	0.01	89.2%	89.6%	89.9%	91.1%
% 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	6.2%	5.7%	-0.01	6.1%	6.3%	6.3%	5.3%
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	4.1%	3.8%	-0.00	4.6%	4.2%	3.8%	3.6%
% 90+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	2.1%	2.5%	0.00	2.4%	2.7%	1.9%	2.4%
% CHARGED OFF ONE MONTH PRIOR TO FORBEARANCE	0.0%	0.0%	0.00	0.0%	0.0%	0.0%	0.0%
N	3,497	3,497		1,465	1,465	2,032	2,032

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 4.1 POST FORBEARANCE OUTCOMES OF NATIONAL MATCHED SAMPLE CONSUMERS

	FULL MATCHED SAMPLE			VULNERABLE MATCHED	
	NATIONAL	COUNSELED: DMP	DIFF	NATIONAL: VULNERABLE	COUNSELED: DMP
FORBORNE TRADES					
EVER MULTIPLE FORBEARANCE SPELLS	19.9%	17.4%	0.03**	20.8%	18.1%
EVER 30 DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	21.0%	30.6%	-0.10***	24.9%	32.1%
EVER 60+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	15.3%	18.7%	-0.03***	17.7%	19.2%
EVER 90+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	13.3%	13.7%	-0.00	16.2%	13.7%
EVER CHARGED OFF WITHIN 12 MONTHS POST FORBEARANCE	8.6%	7.7%	0.01	11.0%	8.0%
FORBORNE TRADE 30 DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	1.3%	2.9%	-0.02***	1.9%	3.0%
FORBORNE TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	12.0%	10.7%	-0.00	14.3%	10.6%
FORBORNE TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	10.9%	9.4%	0.01*	13.1%	9.5%
FORBORNE TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	7.7%	7.1%	0.01	9.5%	7.4%
N	3,454	3,454		1,440	1,440

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

TABLE B 4.2 POST FORBEARANCE OUTCOMES OF COUNSELED MATCHED SAMPLE CONSUMERS

	FULL MATCHED SAMPLE			DMP DURING FORBEARANCE		DMP AFTER	
	DMP	COUNSEL ONLY	DIFF	DMP DURING	COUNSELED DURING	DMP AFTER	COUNSELED AFTER
FORBORNE TRADES							
EVER MULTIPLE FORBEARANCE SPELLS	17.0%	21.6%	0.05***	11.1%	16.2%	21.2%	25.5%
EVER 30 DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	30.8%	36.7%	0.06***	20.1%	30.4%	38.6%	41.2%
EVER 60+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	19.1%	28.9%	0.10***	13.4%	23.5%	23.1%	32.8%
EVER 90+ DAYS DELINQUENT WITHIN 12 MONTHS POST FORBEARANCE	14.0%	25.6%	0.12***	11.0%	21.4%	16.1%	28.5%
EVER CHARGED OFF WITHIN 12 MONTHS POST FORBEARANCE	7.9%	18.4%	0.11***	7.6%	16.3%	8.0%	19.9%
FORBORNE TRADE 30 DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	3.2%	2.3%	-0.01*	1.6%	1.6%	4.2%	2.8%
FORBORNE TRADE 60+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	10.6%	23.4%	0.00	9.8%	19.8%	11.3%	26.0%
FORBORNE TRADE 90+ DAYS DELINQUENT AS OF 12 MONTHS POST FORBEARANCE	9.3%	21.6%	0.12***	8.5%	18.5%	9.9%	23.8%
FORBORNE TRADE CHARGED OFF AS OF 12 MONTHS POST FORBEARANCE	7.1%	16.8%	0.10***	7.0%	15.2%	7.2%	18.0%
N	3,497	3,497		1,465	1,465	2,032	2,032

Note: Sample limited to consumers with a forbearance that began April 2020-July 2020 and with 12 months of data post-forbearance.

APPENDIX C

Credit Profiles of Consumers Whose Accounts Go Delinquent or Charge Off After Exiting Forbearance on Focal Trades

In this appendix, we provide descriptions of the characteristics of consumers who received credit card forbearance during the COVID pandemic, but for whom the forbearance was not enough to address their financial hardship—as evidenced by ending up in delinquency or charging off on their focal credit card trade.

Below, Table C 1.1 includes characteristics as of the baseline period (Q4 2019, prior to the pandemic) of consumers who were 60+ days delinquent as of the twelfth month after forbearance ended, separately for those in the national sample and those counseled without a DMP. Similarly, Table C 1.2 provides baseline characteristics for those who were charged-off on their forborne focal trade as of 12 months post-forbearance for the same groups. In both tables, a difference column shows significant differences between groups using t-tests. Broadly, individuals 60+ days delinquent and charged off as of 12 months after the end of forbearance demonstrated similar baseline characteristics across all groups.

National sample consumers who went delinquent or charged off were significantly more likely to be younger, have lower household income, higher debt-to-income ratios, and much lower credit scores than those not delinquent or charged off on their forborne credit card. Results show that a history of delinquency was strongly correlated with future delinquencies. For example, consumers in the national sample who went 60+ days delinquent on their focal trades were more than 3 times as likely to have previously been 60+ and 90+ days late on any trade within the previous 12 months and more than 4 times as likely to have previously been 60+ and 90+ days late on credit card trades than their comparison group. The same differences appear among those who had charged off at 12 months post-forbearance as compared to those who had not. National sample consumers who went delinquent or charged off were also significantly less likely to have a mortgage, an open credit card, or available credit. Furthermore, they were significantly more likely to have a personal installment loan and to seek new credit cards.

Within the counseled-only sample, the differences in the credit profiles between those who experienced 60+ days delinquencies and charge offs post forbearance and those who did not tend to be smaller than in the national sample. This is logical given that the entire sample is relatively distressed. In contrast to the national sample, counseled-only consumers who went delinquent or charged off after forbearance were slightly older on average than those who were not. They had somewhat lower estimated incomes and debt-to-income ratios, although the latter differences were not statistically significant. While credit scores were relatively low across all counseled-only consumers, average scores were 18 points lower for those who experienced delinquencies 12 months post forbearance. Similarly, both counseled-only groups had experienced relatively high rates

of delinquency in the 12 months prior to baseline, but those who went on to become 60+ days delinquent or charged off on their forborne trade were a few percentage points higher with regard to historical delinquencies. Consistent with their lower credit scores, counseled-only consumers who experienced post-forbearance delinquencies and charge offs were also less likely to have mortgage debt, student loan debt, and auto debt. They also tended to have slightly smaller balances for most loan types, but higher credit card balances and less available credit on card accounts. They were also more likely to have opened credit card accounts in the past 6 months than counseled-only consumers who did not experience 60+ days delinquencies or charge offs on their previously forborne accounts at 12 months post forbearance.

TABLE C 1.1 BASELINE CHARACTERISTICS OF CONSUMERS WITH A FORBORNE TRADE 60+ DAYS DELINQUENT 12 MONTHS POST- FORBEARANCE

		60+ DAYS DELINQUENT ON FOCAL TRADE POST-FORBEARANCE					
		NATIONAL			COUNSEL-ONLY		
		YES	NO	DIFF	YES	NO	DIFF
DEMOGRAPHICS	AGE	46	49	2.84***	46	45	-1.71***
	SHARE FEMALE	49%	49%	-0.00	61%	65%	0.04***
	HOUSEHOLD INCOME	66.5	104.2	37.75***	73.1	75.7	2.63*
	DEBT-TO-INCOME RATIO	23.0	18.5	-4.56***	28.2	28.6	0.39
CREDIT PERFORMANCE	*VANTAGE SCORE*						
	SHARE WITH A VANTAGE SCORE	99.9%	99.9%	0.00	99.8%	99.9%	0.00
	AVERAGE VANTAGE SCORE	608	713	104.69***	624	642	17.52***
	DELINQUENT AND DEROGATORY						
	% WITH A CHARGE OFF	9.8%	2.7%	-0.07***	5.7%	4.9%	-0.01
	% WITH TRADES EVER 60+ DAYS DELINQUENT	30.8%	9.4%	-0.21***	19.6%	17.4%	-0.02*
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	18.7%	4.3%	-0.14***	11.0%	8.6%	-0.02***
	% WITH TRADES EVER 90+ DAYS DEROGATORY	23.5%	7.0%	-0.17***	14.1%	12.9%	-0.01
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	13.0%	3.0%	-0.10***	7.8%	5.9%	-0.02**
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$1,005	$341	-663.78***	$498	$581	83.40
	% WITH TRADES PRESENTLY DEROGATORY	20.4%	7.2%	-0.13***	11.3%	11.9%	0.01
	AVG. OF TRADES PRESENTLY DEROGATORY	$1,460	$510	-950.71***	$723	$808	85.32
	% WITH TRADES IN COLLECTIONS	32.7%	14.2%	-0.18***	20.8%	20.2%	-0.01
	AVG. BALANCE ON COLLECTIONS	$619	$231	-388.06***	$331	$337	6.52
DEBT LEVELS	*PRESENCE OF DEBT*						
	SHARE WITH A MORTGAGE	22.2%	43.1%	0.21***	28.2%	32.9%	0.05***
	SHARE WITH A STUDENT LOAN	22.1%	21.2%	-0.01	26.6%	33.3%	0.07***
	SHARE WITH AN AUTO LOAN	51.5%	53.1%	0.02*	52.6%	59.6%	0.07***
	SHARE WITH A PERSONAL INSTALLMENT LOAN	14.3%	7.0%	-0.07***	16.7%	15.7%	-0.01
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)						
	AVERAGE MORTGAGE DEBT	$41,484	$87,802	46317.97***	$52,657	$65,296	12639.17***
	AVERAGE STUDENT LOAN DEBT	$8,693	$8,664	-28.95	$10,832	$15,985	5152.61***
	AVERAGE AUTO LOAN DEBT	$11,172	$11,503	330.85	$10,618	$11,942	1324.54***
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$865	$506	-359.49***	$1,275	$1,191	-84.84
	AVERAGE CREDIT CARD DEBT	$12,930	$10,141	-2789.48***	$19,780	$17,480	-2299.87***
CREDIT ACCESS	*EXISTING ACCESS*						
	% WITH AN OPEN CREDIT CARD	92.9%	97.4%	0.04***	97.1%	97.7%	0.01
	AVG. AVAILABLE CREDIT	$5,113	$16,594	11480.90***	$8,084	$9,208	1123.73***
	% WITH AVAILABLE CREDIT	72%	91%	0.19***	82%	85%	0.03***
	% WITH OPENED AUTHORIZED USER ACCOUNTS	17.8%	24.0%	0.06***	18.1%	20.2%	0.02*
	NEW ACCESS						
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	10.6%	10.5%	-0.00	10.3%	12.3%	0.02**
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	29.2%	18.7%	-0.10***	35.8%	29.7%	-0.06***
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	1.8%	3.6%	0.02***	2.1%	2.6%	0.01
N		3,963	104,945		2,237	8,251	

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

TABLE C 1.2 BASELINE CHARACTERISTICS OF CONSUMERS WITH A FORBORNE TRADE CHARGED OFF 12 MONTHS POST-FORBEARANCE

		CHARGED OFF ON FOCAL TRADE POST-FORBEARANCE					
		NATIONAL			COUNSEL-ONLY		
		YES	NO	DIFF	YES	NO	DIFF
DEMOGRAPHICS	AGE	46	49	2.65***	46	45	-1.71***
	SHARE FEMALE	49%	49%	-0.00	61%	65%	0.04**
	HOUSEHOLD INCOME	65.8	103.9	38.05***	72.2	75.7	3.46**
	DEBT-TO-INCOME RATIO	22.9	18.5	-4.40***	28.6	28.5	-0.13
CREDIT PERFORMANCE	*VANTAGE SCORE*						
	SHARE WITH A VANTAGE SCORE	99.9%	99.9%	0.00	99.8%	99.9%	0.00
	AVERAGE VANTAGE SCORE	604	712	107.26***	622	641	18.61***
	DELINQUENT AND DEROGATORY						
	% WITH A CHARGE OFF	10.3%	2.7%	-0.08***	6.0%	4.8%	-0.01
	% WITH TRADES EVER 60+ DAYS DELINQUENT	31.8%	9.6%	-0.22***	20.8%	17.3%	-0.03**
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	19.4%	4.4%	-0.15***	11.8%	8.6%	-0.03***
	% WITH TRADES EVER 90+ DAYS DEROGATORY	24.6%	7.1%	-0.17***	14.7%	12.8%	-0.02*
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	13.6%	3.1%	-0.11***	8.3%	5.9%	-0.02***
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$1,089	$345	-743.63***	$545	$567	22.52
	% WITH TRADES PRESENTLY DEROGATORY	21.5%	7.3%	-0.14***	12.1%	11.7%	-0.00
	AVG. OF TRADES PRESENTLY DEROGATORY	$1,603	$515	-1088.16***	$771	$793	21.93
	% WITH TRADES IN COLLECTIONS	33.9%	14.4%	-0.19***	21.3%	20.1%	-0.01
	AVG. BALANCE ON COLLECTIONS	$669	$233	-436.29***	$333	$337	3.99
DEBT LEVELS	*PRESENCE OF DEBT*						
	SHARE WITH A MORTGAGE	21.3%	43.0%	0.22***	28.2%	32.6%	0.04***
	SHARE WITH A STUDENT LOAN	21.6%	21.2%	-0.00	26.6%	32.9%	0.06***
	SHARE WITH AN AUTO LOAN	50.2%	53.1%	0.03**	52.9%	59.1%	0.06***
	SHARE WITH A PERSONAL INSTALLMENT LOAN	14.0%	7.1%	-0.07***	17.2%	15.6%	-0.02
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)						
	AVERAGE MORTGAGE DEBT	$40,016	$87,390	47374.28***	$51,808	$64,724	12916.82***
	AVERAGE STUDENT LOAN DEBT	$8,388	$8,673	284.97	$10,663	$15,717	5053.92***
	AVERAGE AUTO LOAN DEBT	$10,893	$11,508	614.96*	$10,606	$11,867	1260.96**
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$811	$511	-300.28***	$1,393	$1,172	-220.90
	AVERAGE CREDIT CARD DEBT	$13,108	$10,163	-2944.36***	$20,114	$17,548	-2565.70***
CREDIT ACCESS	*EXISTING ACCESS*						
	% WITH AN OPEN CREDIT CARD	91.8%	97.4%	0.06***	97.0%	97.7%	0.01
	AVG. AVAILABLE CREDIT	$4,928	$16,487	11558.58***	$7,835	$9,191	1355.93***
	% WITH AVAILABLE CREDIT	70%	91%	0.21***	81%	85%	0.04***
	% WITH OPENED AUTHORIZED USER ACCOUNTS	17.6%	24.0%	0.06***	18.2%	20.1%	0.02
	NEW ACCESS						
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	10.5%	10.5%	-0.00	10.4%	12.1%	0.02*
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	29.1%	18.9%	-0.10***	35.5%	30.1%	-0.05***
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	1.5%	3.5%	0.02***	2.0%	2.6%	0.01
N		2,928	105,980		1,725	8,763	

Note: ="T-tests for statistical differences; *p<0.05; **p<0.01; ***p<0.001"

APPENDIX D

Constructing the Matched Samples

We construct two matched comparison groups separately, first matching DMP counseled forborne consumers to forborne consumers in the national sample, and second matching DMP counseled consumers to forborne consumers in the counseled sample. For both comparison groups, we start with the full samples of consumers from Section 3 without DMPs but with forborne credit cards between April and July 2020, comprised of 108,563 consumers in the national sample and 10,004 consumers in the counseled sample. The matching requires no missing data for any of the variables used for matching, and thus the size of the samples drops slightly prior to matching, to 102,496 for the national sample and 9,432 for the counseled comparison sample. For both comparison groups, the treated sample is comprised of the counseled consumers with a DMP and a forborne credit card from Section 3 (n=4,419). After dropping consumers with any missing data, there were 4,006 consumers in the DMP treated sample.

We use a combination of propensity score matching and coarsened exact matching to construct our matched samples. First, we estimate the propensity for a consumer to be in the DMP counseled sample following the approach recommended by Imbens and Rubin (2015). We use STATA's "psestimate" command to identify second order covariates among our specified list of first order covariates (see Table D 1.1 and Table D 1.2). We modify the list of covariates slightly for the national sample (Table D 1.1) and the counseled sample (Table D 1.2), given that we have some additional information collected by agencies (such as actual monthly income rather than estimated income) at the time of counseling for the counseled sample. The coefficients are estimated through logistic regression using maximum likelihood. The psestimate algorithm uses a step-wise approach to add interactions and higher order terms one at a time to the base model. If the added covariate contributes a significant amount of explanatory power to the model (as indicated by the likelihood ratio test), the covariate is included in the model. The psestimate algorithm continues this process iteratively until no remaining likelihood ratio tests are statistically significant. After identifying the set of covariates to include in the probability model, the propensity score is estimated (separately for each sample), resulting in a new variable indicating the predicted probability of being in the DMP sample corresponding to each comparison consumer.

To enable exact matching on particular covariates, we create a new group indicator that numerically assigns a value greater than 1 to each unique combination of consumers on our specified set of variables for exact matching (see Table D 1.1 and Table D 1.2). Binary variables (such as gender and indicators for the payment status on the forborne trade at baseline) group together all consumers with 0 or 1 on the given combination of indicators. We coarsen some of the continuous variables into categories, rather than exact matching on each continuous value. Specifically, we coarsen the following variables using the specified categories for exact matching: number of credit card trades with a balance greater than $1,000 at baseline (0, 1, 2-3, 4+); and length of forbearance (1, 2, 3, 4+ months).

We then add together the new group numeric indicator (value greater than 1) with the estimated propensity score (value less than 1) and use nearest neighbor matching without replacement to select the consumers in the comparison samples who are most similar to each DMP (treated) consumer. This results in a 1:1 match for each DMP and comparison observation (separately for the national and counseled samples). We set a conservative caliper of 0.035, where only those DMP consumers with a comparison observation's propensity score within 0.035 of the DMP observation's propensity score are included in the final sample. We select this caliper based on diagnostic testing of the match that minimizes differences in the means of the matching variables. Below we report the results of balance testing on the covariates used for matching, as well as a comparison of the consumers in each group who were matched relative to those who were unable to find a match.

TABLE D 1.1 VARIABLES USED FOR MATCHING IN THE MATCHED NATIONAL/DMP SAMPLE

EXACT MATCH	PROPENSITY SCORE MATCH
Gender	Household Income
Current or 30 days delinquent on focal credit card trade one month prior to forbearance	Debt-to-income ratio
60+ days delinquent on focal credit card trade one month prior to forbearance	Credit Score
Any charge off in the last 12 months	Change in credit score
Any trades 60+ days delinquent in the last 12 months	Balance on student loan debt
Duration of forbearance on focal credit card trade	Balance on credit card debt
Number of forborne credit card trades	Debt forborne on focal trade at start of forbearance
Number of credit card trades with a balance greater than $1,000	Balance on derogatory debt
Below 660 credit score	Available credit
Above $8000 total credit card debt	
Any mortgage	

Note: Change in credit score is calculated by taking the difference in credit score from Q4 2019 to Q2 2020. The number of credit card trades with a balance greater than $1,000 were bucketed into 4 categories: 0, 1, 2-3, and 4+ trades with a balance greater than $1,000. The number of forborne credit card trades we bucketed into 3 different categories: 1, 2-3, and 4+ credit card trades forborne.

TABLE D 1.2 VARIABLES USED FOR MATCHING IN THE MATCHED DMP/COUNSELED SAMPLE

EXACT MATCH	PROPENSITY SCORE MATCH
Female	Monthly Income
Current or 30 days delinquent on focal credit card trade one month prior to forbearance	Debt-to-income ratio
60+ days delinquent on focal credit card trade one month prior to forbearance	Credit Score
Any charge off in the last 12 months	Change in credit score
Any trades 60+ days delinquent in the last 12 months	Balance on student loan debt
Any mortgage	Balance on credit card debt
Duration of forbearance on focal credit card trade	Debt forborne on focal trade at start of forbearance
Number of forborne credit card trades	Balance on derogatory debt
Enrolled (DMP/Counseling) during forbearance	Available credit
Enrolled (DMP/Counseling) 2-4 months post-forbearance	
Enrolled (DMP/Counseling) 5-6 months post-forbearance	

Note: Change in credit score is calculated by taking the difference in credit score from Q4 2019 to Q2 2020. Monthly income was acquired at the time of counseling. The number of forborne credit card trades we bucketed into 3 different categories: 1, 2-3, and 4+ credit card trades forborne.

In order to assess the accuracy of the matching process, we compare the means of each matching variable at baseline between the DMP and comparison groups. Ideally, the resulting samples will be completely balanced, with little to no difference in baseline characteristics between groups. These results are reported in Table D 2.1 (national sample) and Table D 2.2 (counseled sample). To test for significant differences, we calculate the standardized differences of matching variables, which are a function of the differences in the means between the groups divided by the total standard deviation of the combined sample (Austin, 2009). Per the Institute of Education Sciences (2014) best practices, any variable with a standardized difference below the absolute value of 0.05 between groups is considered to be well-balanced.

The standardized differences for the matching variables range between 0.00 and 0.05 for all variables used for matching in the national sample except share with trades in collections (.12) and average balance on credit card trades (.08) (Table D 2.1). In the counseled sample, the standardized differences do not exceed .05 except for household income at the time of counseling (.07) and % with trades in collections (0.06). We control for these unbalanced variables (in addition to other covariates) in the regression models. Further, t-tests indicate that the difference in means for household income in the counseled sample is not statistically significant at $p<0.05$. While the share of consumers with trades in collections has standardized difference of .11 in the national sample and 0.06 in the counseled sample, derogatory debt is controlled for in the regression directly.

TABLE D 2.1 BASELINE BALANCE TEST ON MATCHING VARIABLES FOR THE NATIONAL MATCHED SAMPLE

	NATIONAL		COUNSELED: DMP			
	MEAN	STD. DEV.	MEAN	STD. DEV.	MEAN DIFFERENCE	STANDARDIZED DIFFERENCE
% FEMALE	64%	48%	64%	48%	0%	0.00
ESTIMATED HOUSEHOLD INCOME	77.39	45.96	76.11	48.00	1.28	0.03
ESTIMATED DEBT-TO-INCOME RATIO	26.9	14.8	26.4	14.7	0.5	0.03
AVG. VANTAGE SCORE	637	59	635	62	3	0.04
CHANGE IN CREDIT SCORE	-5.8	47.0	-7.1	48.6	1.3	0.03
% WITH A MORTGAGE	31%	46%	31%	46%	0%	0.00
AVG. $ ON STUDENT LOAN TRADES	$16,263	$38,569	$17,293	$39,562	-$1,030	-0.03
AVG. $ ON CREDIT CARD TRADES	$18,519	$18,626	$17,204	$16,133	$1,315	0.08
AVG. AVAILABLE CREDIT	$7,802	$13,117	$7,195	$11,652	$607	0.05
% WITH TRADES EVER 60+ DAYS DELINQUENT	15%	36%	15%	36%	0%	0.00
AVG. $ PRESENTLY DEROGATORY (INCLUDING COLLECTIONS)	$946	$3,727	$904	$3,855	$41	0.01
% WITH TRADES IN COLLECTIONS	23%	42%	18%	38%	5%	0.12
% WITH A CHARGE OFF	4%	19%	4%	19%	0%	0.00
% WITH 0 CREDIT CARD TRADES WITH A $ GREATER THAN $1,000	6%	23%	6%	23%	0%	0.00
% WITH 1 CREDIT CARD TRADE WITH A $ GREATER THAN $1,000	13%	34%	13%	34%	0%	0.00
% WITH 2-3 CREDIT CARD TRADES WITH A $ GREATER THAN $1,000	35%	48%	35%	48%	0%	0.00
% WITH 4+ CREDIT CARD TRADES WITH A $ GREATER THAN $1,000	46%	50%	46%	50%	0%	0.00
% WITH CREDIT SCORE BELOW 660	68%	47%	68%	47%	0%	0.00
% WITH TOTAL CREDIT CARD $ GREATER THAN $8,000	65%	48%	65%	48%	0%	0.00
AVG. DEBT FORBORNE ON FOCAL TRADE AT START OF FORBEARANCE	$6,400	$7,621	$6,064	$6,569	$336	0.05
AVG. LENGTH OF FORBEARANCE ON FOCAL TRADE	2.2	1.2	2.2	1.2	0.0	0.00
AVG. # OF CREDIT CARD TRADES AT BASELINE FORBORNE	2.0	1.5	2.0	1.4	0.0	0.00
% CURRENT OR 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	98%	13%	98%	13%	0%	0.00
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	2%	13%	2%	13%	0%	0.00
N	3,454		3,454			

TABLE D 2.2 BASELINE BALANCE TEST ON MATCHING VARIABLES FOR THE COUNSELED MATCHED SAMPLE

	COUNSELED: DMP		COUNSELED: NO DMP			
	MEAN	STD. DEV.	MEAN	STD. DEV.	MEAN DIFFERENCE	STANDARDIZED DIFFERENCE
% FEMALE	65%	48%	65%	48%	0%	0.00
ESTIMATED HOUSEHOLD INCOME	$3,411	$2,235	$3,568	$2,308	-$157	-0.07
ESTIMATED DEBT-TO-INCOME RATIO	29.3	19.5	28.8	19.5	0.5	0.03
AVG. VANTAGE SCORE	636	60	637	60	-1	-0.01
AVG. CHANGE IN CREDIT SCORE	-9.7	49.6	-11.8	49.2	2.1	0.04
% WITH A MORTGAGE	31%	46%	31%	46%	0%	0.00
AVG. $ ON STUDENT LOAN TRADES	$16,771	$38,491	$17,313	$40,316	-$541	-0.01
AVG. $ ON CREDIT CARD TRADES	$18,059	$16,773	$17,666	$16,909	$393	0.02
AVG. AVAILABLE CREDIT	$7,304	$11,557	$7,227	$11,328	$77	0.01
% WITH TRADES EVER 60+ DAYS DELINQUENT	13%	33%	13%	33%	0%	0.00
AVG. $ PRESENTLY DEROGATORY (INCLUDING COLLECTIONS)	$757	$3,420	$807	$3,250	-$50.43	-0.02
% WITH TRADES IN COLLECTIONS	17%	37%	19%	39%	-2%	-0.06
% WITH A CHARGE OFF	2%	15%	2%	15%	0%	0.00
AVG. DEBT FORBORNE ON FOCAL TRADE AT START OF FORBEARANCE	$6,128	$6,570	$6,016	$6,686	$112	0.02
AVG. LENGTH OF FORBEARANCE ON FOCAL TRADE	2.2	1.2	2.2	1.2	0.0	0.00
AVG. # OF CREDIT CARD TRADES AT BASELINE FORBORNE	2.0	1.5	2.1	1.6	-0.1	-0.03
% CURRENT OR 30 DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	99%	12%	99%	12%	0%	0.00
% 60+ DAYS DELINQUENT ONE MONTH PRIOR TO FORBEARANCE	1%	12%	1%	12%	0%	0.00
% ENROLLED (DMP/COUNSELING) DURING FORBEARANCE	42%	49%	42%	49%	0%	0.00
% ENROLLED (DMP/COUNSELING) 2-4 MONTHS POST-FORBEARANCE	36%	48%	36%	48%	0%	0.00
% ENROLLED (DMP/COUNSELING) 5-6 MONTHS POST-FORBEARANCE	22%	41%	22%	41%	0%	0.00
N	3,497		3,497			

While ensuring balance in the matched sample is essential for drawing inferences that compare the treated (DMP) and matched comparison consumers, it is also informative to consider the selectivity of the matched sample. Not all DMP consumers were able to find a match in the national or counseled samples, and to the extent that those who were unmatched are substantively different from those DMP consumers who were matched, the generalizability of the results to the full DMP population is limited. Rather, the results are generalizable to the types of DMP consumers who were able to be matched to the national sample, or separately, to the counseled sample. To better understand this selectivity, Table D.3.1 compares the baseline characteristics of matched and full sample of DMP consumers and matched and full sample of comparison consumers in the national sample, and Table D 3.2 compares the baseline characteristics of matched and full sample DMP consumers and matched and full sample comparison consumers in the counseled sample. Here, we compare the suite of baseline variables reported elsewhere in the report, not limited to those used for matching.

DMP consumers who were able to find a match to the national sample comparison consumers (Table D 3.1) had slightly stronger credit profiles than the full DMP treated sample. For example, the average credit score among those matched in the national sample was 635, compared to 633 in the full DMP treated sample. Similarly, the share with trades ever 60 or more days delinquent in the prior 12 months was slightly lower for the DMP consumers matched in the national sample

compared to the full sample of DMP consumers. The differences are relatively small in magnitude, which reduces concerns but should still be considered when discussing the generalizability of the results to the general population of DMP consumers with a credit card forbearance. By contrast, the consumers in the national sample who find a match to DMP consumers are considerably more distressed than the full national sample—with an average credit score of 637 compared to 711, and higher rates of delinquency. This is to be expected given the profile of consumers who enroll in DMPs and justifies our approach to use a matched group and not simply compare outcomes for all DMP participants to the full national sample.

DMP consumers who were able to find a match to other counseled forborne consumers (Table D 3.2) had slightly stronger credit profiles than the full DMP treated sample—with an average credit score of 636 compared to 633 in the full DMP treated sample. Those DMP consumers finding a match were less likely to be delinquent or charged off on debt in the 6 months prior to baseline than the full DMP treated sample. This is likely because of the relatively small sample size of the counseled comparison sample and the strictness of our exact matching criteria for the status on the forborne trade, making it more difficult to find a match for consumers with some evidence of distress given the small sample size. While our matching criteria ensures that the consumers are similar on their forborne trades at baseline, it does cream-skim the sample of counseled and DMP consumers who are able to find a match to some extent. This cream skimming should not bias the estimates because it occurs for both the comparison and treated groups; however, it does somewhat reduce the generalizability of the results to the fuller DMP population.

TABLE D 3.1 BASELINE CHARACTERISTICS OF MATCHED AND FULL SAMPLE CONSUMERS IN THE NATIONAL SAMPLE

		COUNSELED: DMP		NATIONAL	
		FULL SAMPLE	MATCHED	FULL SAMPLE	MATCHED
DEMOGRAPHICS	AGE	44	44	49	46
	SHARE FEMALE	64%	64%	49%	64%
	HOUSEHOLD INCOME	73.5	76.1	104.5	77.4
	DEBT-TO-INCOME RATIO	30.1	26.4	18.7	26.9
CREDIT PERFORMANCE	*VANTAGE SCORE*				
	SHARE WITH A VANTAGE SCORE	100.0%	100.0%	100.0%	100.0%
	AVERAGE VANTAGE SCORE	633	635	711	637
	DELINQUENT AND DEROGATORY				
	% WITH A CHARGE OFF	4.4%	3.6%	2.8%	3.6%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	17.0%	15.3%	10.0%	15.3%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	8.6%	7.6%	4.7%	7.9%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	12.0%	10.7%	7.4%	11.2%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	5.4%	4.9%	3.3%	5.3%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$508	$467	$511	$466
	% WITH TRADES PRESENTLY DEROGATORY	9.9%	9.6%	7.5%	9.7%
	AVG. OF TRADES PRESENTLY DEROGATORY	$1,155	$1,195	$957	$664
	% WITH TRADES IN COLLECTIONS	17.5%	18.0%	14.7%	22.8%
	AVG. BALANCE ON COLLECTIONS	$271	$275	$298	$370
DEBT LEVELS	*PRESENCE OF DEBT*				
	SHARE WITH A MORTGAGE	33.2%	31.2%	43.7%	31.2%
	SHARE WITH A STUDENT LOAN	36.6%	36.1%	21.1%	32.0%
	SHARE WITH AN AUTO LOAN	61.3%	61.7%	53.5%	61.6%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	18.4%	17.8%	7.3%	14.7%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)				
	AVERAGE MORTGAGE DEBT	$65,301	$63,873	$94,814	$60,676
	AVERAGE STUDENT LOAN DEBT	$19,115	$18,137	$9,043	$16,971
	AVERAGE AUTO LOAN DEBT	$12,698	$12,905	$11,940	$13,912
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$1,510	$1,506	$607	$1,153
	AVERAGE CREDIT CARD DEBT	$18,812	$17,482	$10,417	$19,037
CREDIT ACCESS	*EXISTING ACCESS*				
	% WITH AN OPEN CREDIT CARD	98.5%	98.4%	97.6%	98.4%
	AVG. AVAILABLE CREDIT	$7,289	$7,547	$17,694	$8,389
	% WITH AVAILABLE CREDIT	83%	84%	91%	86%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	20.3%	20.1%	24.2%	23.0%
	NEW ACCESS				
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	12.5%	12.8%	10.6%	12.2%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	30.9%	31.7%	18.9%	28.5%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	3.0%	3.0%	3.6%	2.5%
N		4,006	3,454	102,496	3,454

TABLE D 3.2 BASELINE CHARACTERISTICS OF MATCHED AND FULL SAMPLE CONSUMERS IN THE COUNSELED SAMPLE

		COUNSELED: DMP		COUNSEL-ONLY	
		FULL SAMPLE	MATCHED	FULL SAMPLE	MATCHED
DEMOGRAPHICS	AGE	44	44	45	44
	SHARE FEMALE	64%	65%	64%	65%
	HOUSEHOLD INCOME	73.5	72.2	75.3	75.5
	DEBT-TO-INCOME RATIO	30.1	29.3	28.4	28.8
CREDIT PERFORMANCE	*VANTAGE SCORE*				
	SHARE WITH A VANTAGE SCORE	100.0%	100.0%	100.0%	100.0%
	AVERAGE VANTAGE SCORE	633	636	638	637
	DELINQUENT AND DEROGATORY				
	% WITH A CHARGE OFF	4.4%	2.5%	5.0%	2.5%
	% WITH TRADES EVER 60+ DAYS DELINQUENT	17.0%	12.8%	18.2%	12.8%
	% WITH CREDIT CARD TRADES EVER 60+ DAYS DELINQUENT	8.6%	6.3%	9.4%	6.3%
	% WITH TRADES EVER 90+ DAYS DEROGATORY	12.0%	8.5%	13.2%	9.3%
	% WITH CREDIT CARD TRADES EVER 90+ DAYS DEROGATORY	5.4%	3.7%	6.4%	4.5%
	AVG. BALANCE ON PRESENTLY UNSATISFIED CHARGE OFFS	$508	$395	$707	$406
	% WITH TRADES PRESENTLY DEROGATORY	9.9%	8.1%	11.6%	9.2%
	AVG. OF TRADES PRESENTLY DEROGATORY	$1,155	$642	$1,093	$533
	% WITH TRADES IN COLLECTIONS	17.5%	16.8%	20.0%	19.0%
	AVG. BALANCE ON COLLECTIONS	$271	$259	$384	$312
DEBT LEVELS	*PRESENCE OF DEBT*				
	SHARE WITH A MORTGAGE	33.2%	31.2%	32.0%	31.2%
	SHARE WITH A STUDENT LOAN	36.6%	36.0%	32.3%	35.3%
	SHARE WITH AN AUTO LOAN	61.3%	61.1%	57.9%	62.1%
	SHARE WITH A PERSONAL INSTALLMENT LOAN	18.4%	17.8%	15.6%	17.5%
	DEBT BALANCES AMONG ALL CONSUMERS (INCLUDING ZEROES)				
	AVERAGE MORTGAGE DEBT	$65,301	$61,201	$65,488	$62,300
	AVERAGE STUDENT LOAN DEBT	$19,115	$17,537	$15,813	$18,108
	AVERAGE AUTO LOAN DEBT	$12,698	$12,457	$11,652	$13,300
	AVERAGE PERSONAL INSTALLMENT LOAN DEBT	$1,510	$1,396	$1,329	$1,505
	AVERAGE CREDIT CARD DEBT	$18,812	$18,243	$18,592	$17,931
CREDIT ACCESS	*EXISTING ACCESS*				
	% WITH AN OPEN CREDIT CARD	98.5%	98.7%	97.9%	98.3%
	AVG. AVAILABLE CREDIT	$7,289	$7,565	$9,406	$7,435
	% WITH AVAILABLE CREDIT	83%	85%	85%	85%
	% WITH OPENED AUTHORIZED USER ACCOUNTS	20.3%	19.8%	20.0%	20.9%
	NEW ACCESS				
	% WITH AUTO LOANS OPENED IN THE LAST 6 MONTHS	12.5%	12.7%	11.6%	13.0%
	% WITH CREDIT CARDS OPENED IN THE LAST 6 MONTHS	30.9%	32.1%	30.9%	32.6%
	% WITH MORTGAGES OPENED IN THE LAST 6 MONTHS	3.0%	2.9%	2.5%	2.7%
N		4,006	3,497	9,432	3,497

APPENDIX E

Matched Sample Regression Results

TABLE E 1.1 LINEAR PROBABILITY MODEL RESULTS FOR 60+ DAYS DELINQUENT ON THE FOCAL CREDIT CARD TRADE WITHIN 12 MONTHS POST-FORBEARANCE, MATCHED NATIONAL SAMPLE

	FOCAL CARD 60+ DAYS LATE		
	(1)	(2)	(3)
DMP VARIABLES			
DMP	0.011	0.030**	
VULNERABLE (>$8K CREDIT CARD DEBT & <660 CREDIT SCORE)		0.051***	
DMP X VULNERABLE		-0.043**	
DMP DURING FORBEARANCE			-0.019*
DMP 2-4 MONTHS AFTER FORBEARANCE			0.005
DMP 5-6 MONTHS AFTER FORBEARANCE			0.074***
BASELINE CONTROL VARIABLES			
CREDIT SCORE	-0.149***		-0.149***
CHANGE IN CREDIT SCORE FROM Q4 2019 TO Q2 2020	-0.213***	-0.176***	-0.211***
EVER 60 DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.086*	0.131**	0.085*
EVER 90+ DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.264***	0.309***	0.263***
ANY TRADE 60+ DAYS DELINQUENT IN THE LAST 12 MONTHS	0.015	0.097***	0.016
MORTGAGE WITH A COVID-RELATED MORTGAGE FORBEARANCE	0.02	-0.008	0.019
MORTGAGE NEVER IN FORBEARANCE	0.019	-0.023	0.019
BALANCE ON STUDENT LOANS ($10K)	-0.003***	-0.001	-0.003***
BALANCE ON CREDIT CARD TRADES ($10K)	0.012***	0.010**	0.013***
NUMBER OF CREDIT CARD TRADES WITH A BALANCE GREATER THAN $1K	-0.009***	-0.007***	-0.009***
BALANCE ON AUTO DEBT ($10K)	0.001	0.002	0.001
AVAILABLE CREDIT	0.006**	-0.008***	0.006**
PREDICTED INCOME	-0.003*	-0.005***	-0.003*
PREDICTED DEBT-TO-INCOME RATIO	0	0	0
FEMALE	-0.014	-0.013	-0.015
AGE	0	0	0
N	6908	6908	6908
YMEAN	0.144	0.144	0.144
R2	0.134	0.101	0.139
*p<0.05; **p<0.01; ***p<0.001			

Note: Results are coefficients from a linear probability model (LPM), with robust standard errors

TABLE E 1.2 LINEAR PROBABILITY MODEL RESULTS FOR 60+ DAYS DELINQUENT ON THE FOCAL CREDIT CARD TRADE WITHIN 12 MONTHS POST-FORBEARANCE, MATCHED COUNSELED SAMPLE

	FOCAL CARD 60+ DAYS LATE		
	(1)	(2)	(3)
DMP VARIABLES			
DMP	-0.098***	-0.069***	
VULNERABLE (>$8K CREDIT CARD DEBT & <660 CREDIT SCORE)		0.080***	
DMP X VULNERABLE		-0.072***	
DMP DURING FORBEARANCE			-0.126***
DMP 2-4 MONTHS AFTER FORBEARANCE			-0.099***
DMP 5-6 MONTHS AFTER FORBEARANCE			-0.045**
BASELINE CONTROL VARIABLES			
CREDIT SCORE	-0.140***		-0.140***
CHANGE IN CREDIT SCORE FROM Q4 2019 TO Q2 2020	-0.213***	-0.181***	-0.212***
EVER 60 DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.076	0.111***	0.077
EVER 90+ DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.242***	0.277***	0.243***
ANY TRADE 60+ DAYS DELINQUENT IN THE LAST 12 MONTHS	0.032	0.114***	0.035*
MORTGAGE WITH A COVID-RELATED MORTGAGE FORBEARANCE	0.022	-0.001	0.021
MORTGAGE NEVER IN FORBEARANCE	-0.002	-0.038***	-0.001
BALANCE ON STUDENT LOANS ($10K)	-0.002*	0.001	-0.002*
BALANCE ON CREDIT CARD TRADES ($10K)	0.014***	0.008*	0.015***
NUMBER OF CREDIT CARD TRADES WITH A BALANCE GREATER THAN $1K	-0.005*	-0.002	-0.004*
BALANCE ON AUTO DEBT ($10K)	0.008**	0.009***	0.007**
AVAILABLE CREDIT	0.005	-0.012***	0.006
MONTHLY INCOME AT TIME OF COUNSELING	-0.016***	-0.017***	-0.016***
PREDICTED DEBT-TO-INCOME RATIO	0	0	0
FEMALE	-0.023*	-0.023*	-0.025*
AGE	0	0	0
N	6994	6994	6994
YMEAN	0.204	0.245	0.204
R2	0.127	0.129	0.13
*p<0.05; **p<0.01; ***p<0.001			

Note: Results are coefficients from a linear probability model (LPM), with robust standard errors

TABLE E 2.1 LINEAR PROBABILITY MODEL RESULTS FOR 90+ DAYS DELINQUENT ON THE FOCAL CREDIT CARD TRADE AS OF 12 MONTHS POST-FORBEARANCE, MATCHED NATIONAL SAMPLE

	FOCAL CARD 90+ DAYS LATE		
	(1)	(2)	(3)
DMP VARIABLES			
DMP	-0.023***	-0.006	
VULNERABLE (>$8K CREDIT CARD DEBT & <660 CREDIT SCORE)		0.046***	
DMP X VULNERABLE		-0.038**	
DMP DURING FORBEARANCE			-0.021**
DMP 2-4 MONTHS AFTER FORBEARANCE			-0.029**
DMP 5-6 MONTHS AFTER FORBEARANCE			-0.016
BASELINE CONTROL VARIABLES			
CREDIT SCORE	-0.111***		-0.111***
CHANGE IN CREDIT SCORE FROM Q4 2019 TO Q2 2020	-0.141***	-0.114***	-0.142***
EVER 60 DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.011	0.044	0.01
EVER 90+ DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.089*	0.122***	0.089*
ANY TRADE 60+ DAYS DELINQUENT IN THE LAST 12 MONTHS	-0.008	0.053***	-0.007
MORTGAGE WITH A COVID-RELATED MORTGAGE FORBEARANCE	0.005	-0.015	0.005
MORTGAGE NEVER IN FORBEARANCE	0	-0.031**	0
BALANCE ON STUDENT LOANS ($10K)	-0.003***	-0.001*	-0.003***
BALANCE ON CREDIT CARD TRADES ($10K)	0.010***	0.008**	0.010***
NUMBER OF CREDIT CARD TRADES WITH A BALANCE GREATER THAN $1K	-0.005***	-0.004**	-0.005***
BALANCE ON AUTO DEBT ($10K)	-0.002	-0.001	-0.002
AVAILABLE CREDIT	0.009***	-0.002	0.009***
PREDICTED INCOME	-0.002	-0.004***	-0.002
PREDICTED DEBT-TO-INCOME RATIO	0	0	0
FEMALE	-0.013	-0.011	-0.013
AGE	0	0	0
N	6908	6908	6908
YMEAN	0.085	0.085	0.085
R2	0.086	0.059	0.086
*p<0.05; **p<0.01; ***p<0.001			

Note: Results are coefficients from a linear probability model (LPM), with robust standard errors

TABLE E 2.2 LINEAR PROBABILITY MODEL RESULTS FOR 90+ DAYS DELINQUENT ON THE FOCAL CREDIT CARD TRADE AS OF 12 MONTHS POST-FORBEARANCE, MATCHED COUNSELED SAMPLE

	FOCAL CARD 90+ DAYS LATE		
	(1)	(2)	(3)
DMP VARIABLES			
DMP	-0.113***	-0.088***	
VULNERABLE (>$8K CREDIT CARD DEBT & <660 CREDIT SCORE)		0.076***	
DMP X VULNERABLE		-0.062***	
DMP DURING FORBEARANCE			-0.109***
DMP 2-4 MONTHS AFTER FORBEARANCE			-0.123***
DMP 5-6 MONTHS AFTER FORBEARANCE			-0.105***
BASELINE CONTROL VARIABLES			
CREDIT SCORE	-0.110***		-0.110***
CHANGE IN CREDIT SCORE FROM Q4 2019 TO Q2 2020	-0.144***	-0.120***	-0.145***
EVER 60 DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.014	0.039	0.013
EVER 90+ DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.111**	0.136***	0.110**
ANY TRADE 60+ DAYS DELINQUENT IN THE LAST 12 MONTHS	-0.01	0.054***	-0.009
MORTGAGE WITH A COVID-RELATED MORTGAGE FORBEARANCE	0.025	0.008	0.026
MORTGAGE NEVER IN FORBEARANCE	-0.013	-0.040***	-0.013
BALANCE ON STUDENT LOANS ($10K)	-0.002**	-0.001	-0.002**
BALANCE ON CREDIT CARD TRADES ($10K)	0.010***	0.005	0.010***
NUMBER OF CREDIT CARD TRADES WITH A BALANCE GREATER THAN $1K	-0.002	-0.001	-0.002
BALANCE ON AUTO DEBT ($10K)	0.002	0.003	0.002
AVAILABLE CREDIT	0.009**	-0.004	0.009**
MONTHLY INCOME AT TIME OF COUNSELING	-0.011***	-0.011***	-0.011***
PREDICTED DEBT-TO-INCOME RATIO	0	0	0
FEMALE	-0.020*	-0.019*	-0.020*
AGE	0	0	0
N	6994	6994	6994
YMEAN	0.133	0.133	0.133
R2	0.099	0.083	0.099
*p<0.05; **p<0.01; ***p<0.001			

Note: Results are coefficients from a linear probability model (LPM), with robust standard errors

Additional Note on Tables E 2.3 and 2.4: Tables E 2.3 and E 2.4 in the August 2023 version of this report have been moved to the supplemental online appendix and appear at Tables S 1.2 and S 1.3.

TABLE E 3.1 LINEAR PROBABILITY MODEL RESULTS FOR CHARGED OFF ON THE FOCAL CREDIT CARD TRADE AS OF 12 MONTHS POST-FORBEARANCE, MATCHED NATIONAL SAMPLE

	FOCAL CARD CHARGED OFF		
	(1)	(2)	(3)
DMP VARIABLES			
DMP	-0.014*	-0.002	
VULNERABLE (>$8K CREDIT CARD DEBT & <660 CREDIT SCORE)		0.039***	
DMP X VULNERABLE		-0.029*	
DMP DURING FORBEARANCE			-0.008
DMP 2-4 MONTHS AFTER FORBEARANCE			-0.022**
DMP 5-6 MONTHS AFTER FORBEARANCE			-0.013
BASELINE CONTROL VARIABLES			
CREDIT SCORE	-0.087***		-0.087***
CHANGE IN CREDIT SCORE FROM Q4 2019 TO Q2 2020	-0.117***	-0.097***	-0.118***
EVER 60 DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.031	0.056	0.03
EVER 90+ DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.102**	0.128***	0.102**
ANY TRADE 60+ DAYS DELINQUENT IN THE LAST 12 MONTHS	-0.006	0.042***	-0.006
MORTGAGE WITH A COVID-RELATED MORTGAGE FORBEARANCE	0.013	-0.002	0.013
MORTGAGE NEVER IN FORBEARANCE	0.005	-0.019*	0.005
BALANCE ON STUDENT LOANS ($10K)	-0.002***	-0.001*	-0.002***
BALANCE ON CREDIT CARD TRADES ($10K)	0.009***	0.007**	0.009***
NUMBER OF CREDIT CARD TRADES WITH A BALANCE GREATER THAN $1K	-0.004***	-0.004**	-0.004***
BALANCE ON AUTO DEBT ($10K)	-0.001	0	-0.001
AVAILABLE CREDIT	0.007***	-0.001	0.007***
PREDICTED INCOME	-0.002*	-0.003***	-0.002*
PREDICTED DEBT-TO-INCOME RATIO	0	0	0
FEMALE	-0.01	-0.009	-0.01
AGE	0	0	0
N	6908	6908	6908
YMEAN	0.062	0.062	0.062
R2	0.08	0.058	0.08
*p<0.05; **p<0.01; ***p<0.001			

Note: Results are coefficients from a linear probability model (LPM), with robust standard errors

TABLE E 3.2 LINEAR PROBABILITY MODEL RESULTS FOR CHARGED OFF ON THE FOCAL CREDIT CARD TRADE AS OF 12 MONTHS POST-FORBEARANCE, MATCHED COUNSELED SAMPLE

	FOCAL CARD CHARGED OFF		
	(1)	(2)	(3)
DMP VARIABLES			
DMP	-0.089***	-0.067***	
VULNERABLE (>$8K CREDIT CARD DEBT & <660 CREDIT SCORE)		0.060***	
DMP X VULNERABLE		-0.054***	
DMP DURING FORBEARANCE			-0.083***
DMP 2-4 MONTHS AFTER FORBEARANCE			-0.099***
DMP 5-6 MONTHS AFTER FORBEARANCE			-0.086***
BASELINE CONTROL VARIABLES			
CREDIT SCORE	-0.089***		-0.089***
CHANGE IN CREDIT SCORE FROM Q4 2019 TO Q2 2020	-0.119***	-0.100***	-0.120***
EVER 60 DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.02	0.042	0.02
EVER 90+ DAYS DELINQUENT ON FORBORNE CARD ONE MO PRIOR TO FORBEARANCE	0.109**	0.130***	0.108**
ANY TRADE 60+ DAYS DELINQUENT IN THE LAST 12 MONTHS	-0.003	0.049***	-0.003
MORTGAGE WITH A COVID-RELATED MORTGAGE FORBEARANCE	0.028*	0.014	0.028*
MORTGAGE NEVER IN FORBEARANCE	0	-0.022*	0
BALANCE ON STUDENT LOANS ($10K)	-0.002***	-0.002*	-0.002***
BALANCE ON CREDIT CARD TRADES ($10K)	0.009**	0.005	0.009**
NUMBER OF CREDIT CARD TRADES WITH A BALANCE GREATER THAN $1K	0	0.001	0
BALANCE ON AUTO DEBT ($10K)	-0.001	0	-0.001
AVAILABLE CREDIT	0.008**	-0.003	0.008**
MONTHLY INCOME AT TIME OF COUNSELING	-0.009***	-0.010***	-0.009***
PREDICTED DEBT-TO-INCOME RATIO	0	0	0
FEMALE	-0.019*	-0.018*	-0.019*
AGE	0	0	0
N	6994	6994	6994
YMEAN	0.102	0.102	0.102
R2	0.084	0.071	0.084
*p<0.05; **p<0.01; ***p<0.001			

Note: Results are coefficients from a linear probability model (LPM), with robust standard errors

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