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Effects of Income Payment Timing on Financial Shortfalls for Retirees and People with Disabilities

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Abstract

A key question that this study aims to explore is whether Social Security income payment timing affects financial shortfalls. We would expect that pay cycle would not affect likelihood of financial shortfall. However, this study finds that as beneficiaries progress through the pay cycle, they are more likely to experience a financial shortfall. Social Security beneficiaries' probability of experiencing a financial shortfall, that is when they do not have enough liquidity to cover expenditures, increases over the pay cycle. The effect of income payment timing on financial shortfalls is driven by a general increase in consumption over the pay cycle and decline in liquidity. Beneficiaries appear to have difficulty managing their cash flow particularly at the end of the pay cycle where declines in liquidity and increases in consumption are relatively large.

Keywords: disability, retirement, payment timing, life-cycle hypothesis, personal finance
JEL: D14, E21, H55

1 Introduction

People with disabilities and retirees face significant barriers to securing financial health. Many households have little savings, making it difficult to make ends meet. About a third of people with a health limitation or disability and about 10 percent of retirees report that they would not be able to cover all of their monthly bills (Federal Reserve System, 2021). Limited income and liquidity, as well as volatility, make it particularly difficult to manage finances. About two-thirds of adults with disabilities do not hold any precautionary savings (Goodman and Morris, 2017). In this study, I examined the role of income payment timing on financial shortfalls for retirees and people with disabilities. Short-term financial volatility related to the timing of cash inflows and outflows may have adverse effects on financial health. Financial shortfalls serve as indicators for short-term financial well-being and they may contribute to long term declines in financial well-being, as missing payments or overdrawing accounts is costly. This study examined the impact of income payment timing on the financial health of people with disabilities and retirees.

Social Security programs insure against old age and disability risk protecting older adults and people with disabilities against income loss and drawing down savings for expenses related to illness, injury, or old age. Social Security benefits are an important income source for the retired and people with disabilities. Social Security benefits represent about 30 percent of the income of older adults (Dushi and Trenkamp, 2021) and they are especially important for the bottom half of the income distribution. Social Security lifts many adults and children out of poverty. About half of the aged population live in households receiving at least 50 percent of their family income from Social Security benefits and about one-quarter live in households receiving at least 90 percent of their family income from Social Security (Dushi et al., 2017).

Recent work reveals that social insurance programs, such as unemployment insurance, disability programs, and health insurance, protect workers from financial distresses including bankruptcy, mortgage default, and collections debt (Deshpande et al., 2019; Hsu et al., 2018; Gallagher et al., 2019; Dobbie et al., 2017). While these studies offer evidence on the role of social insurance in preventing extreme events of financial strain, they do not explore routine household finance fluctuations.

A related literature finds that timing of income and expenditures affects financial health. An early study finds that the probability of an expenditure and amount increases following Social Security benefit receipt, especially food and entertainment expenditures, counter to what would be predicted by the lifecycle hypothesis (Stephens Jr, 2003). Others examine the effect of SNAP benefit timing on spending and point to short-run impatience as an explanation. These studies find that food expenditures are concentrated around the date of SNAP benefit receipt (Shapiro, 2005; Hastings and Washington, 2010; Goldin et al., 2022). When studying the effect of bill receipt timing, researchers find that those who receive an electricity bill early in the month have lower probability of late payment and service disconnection, especially high-poverty neighborhood residents (Barrage et al., 2019). Baugh et al. (2018) find that Social Security income timing affects daily financial shortfalls in large part due to mismatch

in income-expenditure timing and longer time between income payments. Timing of income and payments is often arbitrary, whether for government benefit receipt or bill timing. A recent study finds that household spending on bill and debt payments spiked in the week after receipt of 2020 economic stimulus payments (Baker et al., 2020). Gross et al. (2022) find that when Social Security checks are distributed, prescription fills increase by 6-12 percent.

A key question that this study aimed to explore is: does the pay cycle affects financial shortfalls? We would expect that the pay cycle would not affect likelihood of financial shortfall. Households would optimize timing of income and expenditures to ensure that they would not fall short of financial obligations. If individuals are not perfectly aligning income and expenditures over their pay cycle as predicted by economic theory, we would expect that financial shortfall would be more likely as recurring bills happen or big unexpected expenses are made. We may also expect that a financial shortfall is more likely later in the month as individuals spend down their income and have less resources available to buffer against a financial shortfall.

2 Data

This study used longitudinal survey and transaction-level data collected from the 2016-2019 Federal Reserve Bank of Atlanta's Survey of Consumer Payment Choice (SCPC) and Diary of Consumer Payment Choice (DCPC). The SCPC and DCPC data are collected from a nationally representative sample of over 3,300 US adults. Respondents complete both the survey and diary instruments in each wave. The Federal Reserve Bank of Atlanta conducts these studies in partnership with the University of Southern California's Understanding America Study (UAS). The SCPC is an annual survey that collects information about consumer payments, household finances, and demographic characteristics. The DCPC is an annual three-day diary companion study that collects information about income, expenditures, and financial account balances. The data are collected at the transaction-level with detailed information on transaction date and time, type, amount, and payment method, among other characteristics. Respondents are randomly assigned to a three-day diary period between September 29th and November 2nd in each wave.

In addition to survey and diary data, this project used monthly payment schedule data from publicly available calendars published on the Social Security Administration website to identify the timing of payments. Figure 1 includes the benefits payment schedule from 2019 used for this study. The Federal Reserve of Atlanta constructs a Social Security payment group variable based on respondents' birth date day and Social Security payment schedule for this study, which is not included in the publicly available data. The DCPC includes details on income payment timing which I used to construct a variable that measures the days elapsed since income payment was received. Figure 2 displays an example case of how days since paid was constructed.

The three key outcome variables for this study are liquidity, consumption, and financial shortfall. Liquidity was a variable constructed by summing self-reported savings, checking, and cash balances. Consumption was a variable constructed by summing self-reported spend-

ing in all categories, including food and health. Finally, financial shortfall was an indicator variable constructed that equals 1 if consumption exceeds liquidity and 0 if consumption is equal to or less than liquidity. Observations with liquidity at or above 99th percentile, that is, liquidity greater than \$100,000 are excluded.

Table 1 displays descriptive statistics for the analysis sample overall as well as broken out by status as retiree or person with a disability. People with disabilities were more likely to be women and older, were less likely to be married, held lower levels of educational attainment, had lower income, were more likely to receive Social Security and government assistance, and were less likely to be employed than the overall sample. Retirees tended to be older, had slightly lower income, were more likely to receive Social Security, and were less likely to be employed than the overall sample.

Table 1: Means by Social Security Receipt

| | Overall | Receive SS |
|----------------------------------|----------|------------|
| Female | 0.56 | 0.51 |
| Age | 52.89 | 68.54 |
| Married | 0.60 | 0.66 |
| High School Diploma or Less | 0.25 | 0.25 |
| Some College | 0.37 | 0.40 |
| Bachelor's Degree | 0.22 | 0.17 |
| Graduate or Professional Degree | 0.16 | 0.18 |
| White | 0.88 | 0.94 |
| Black | 0.10 | 0.05 |
| Asian | 0.03 | 0.01 |
| Other Race | 0.01 | 0.00 |
| Hispanic/Latino | 0.07 | 0.02 |
| Household Size | 2.68 | 2.04 |
| Employment status: Employed | 0.57 | 0.19 |
| Employment status: Retired | 0.25 | 0.72 |
| Employment status: Disabled | 0.11 | 0.14 |
| Household Income (in \$) | 73304.29 | 63712.76 |
| Receive Social Security Benefits | 0.30 | 1.00 |
| Checking Account Balance (in \$) | 4476.43 | 3817.84 |
| Savings Account Balance (in \$) | 15280.05 | 15300.80 |
| End-of-day cash balance (in \$) | 73.40 | 74.05 |
| Observations | 2991 | 496 |

data are 2019 Diary of Consumer Payment Choice.

3 Methods

In this study, I aimed to identify the effect of payment timing on liquidity, consumption, and financial shortfalls. Identification came from random assignment to the day that individual reported diary and income payment date. Each respondent was randomly assigned by the Federal Reserve Bank of Atlanta to a three-day diary recording period in DCPC. Social Security assigns payment date based on birthday for OASDI beneficiaries who enroll after May 1997. I constructed a treatment variable, days since paid, which was the difference between diary date and payment date. Comparing account balances and financial shortfalls for those at different points in the payment cycle allowed me to identify and estimate effect of payment timing on financial shortfall. The differences that I measured should represent the effect of payment timing and not reflect systematic differences between individuals.

The approach for this study builds on early work by Stephens Jr (2003) where identification came from some respondents receiving Social Security during the time that they were surveyed about expenses while others were not. When they were surveyed was randomly determined, which allowed for identification of effect on consumption of payment receipt. Recent studies examined the effects of payment and expenditure timing on prescription consumption and financial behavior exploiting quasi-random variation in Social Security payments based on birthday and pay period length as well as large administrative datasets (Gross et al., 2022; Baugh et al., 2018). I also drew on methods used to examine the effect of SNAP pay cycle on academic achievement (Gassman-Pines and Bellows, 2018).

Income payment timing was quasi-random for Social Security recipients whose payments were largely determined by birth date with some differences depending on benefit type and when beneficiary entered the program. Each respondent in the DCPC was randomly assigned to a three-day diary window where they reported liquidity, income, and expenses. Those who were at the end of their payment cycle should have been the same as those at beginning of their payment cycle, that is, there should not have been demographic differences by point in the pay cycle that they were observed. Days elapsed since payment receipt should have affected key outcome variables and differences would reflect effects of payment timing rather than demographic differences. I employed a two-way fixed effects approach to estimate the effect of payment timing on financial shortfall. I also examined the effects of payment timing on liquidity and expenditures to determine what drove financial shortfalls. The following econometric specification was used to estimate the effects of payment timing:

$$Y_{it} = \alpha + \beta_1 \text{Days Since Paid}_{it} + \lambda_t + \gamma_i + \epsilon_{it} \quad (1)$$

Y_{it} is a set of outcome variables, including an indicator for financial shortfall, consumption in dollars, and liquidity in dollars, for individual, i , on day, t . $\text{Days Since Paid}_{it}$ is a continuous measure of days since the Social Security payment was received. β_1 is the coefficient of interest which measures the effect of an additional day in pay cycle. λ_t is a set of time-fixed effects for day of month, day of week, and month. γ_i is an individual fixed effect to control for time-invariant individual characteristics, that is, characteristics that do not vary over a

three day diary period. ϵ_{it} is the error term. Standard errors are calculated using two-way clustering.

4 Results

This study aimed to estimate the effect of Social Security payment timing on financial shortfalls. Table 2 displays estimates of payment timing on financial shortfall using a two-way fixed effects approach. The two-way fixed effects approach accounted for observation of individuals over three consecutive days by including individual and time fixed effects. Columns 1 and 2 detail estimates of the effect of payment timing on experiencing a financial shortfall. Columns 3 and 4 detail estimates of the effect of payment timing on net liquidity, which measured the magnitude of a financial shortfall. Columns 2 and 4 include two-way clustered standard errors to account for data generating process in calculation of standard errors (Cameron et al., 2011). Column 1 shows that an additional day in pay cycle increased probability of financial shortfall by two percentage points (pp). When two-way clustered standard errors are calculated in Column 2, the effect of payment timing remains statistically significant. Column 3 shows that an additional day in pay cycle reduced net liquidity by 21.8 percent. Results remain significant using more conservative standard error calculation that includes two-way clustering detailed in Column 4. These estimates revealed that pay cycle affects probability of experiencing a financial shortfall as well as the size of the shortfall. Social Security beneficiaries were overall more likely to experience a financial shortfall with each day that passed since their assigned payment date.

Table 2: Effects of Payment Timing on Financial Shortfall and Net Liquidity

| | (1) | (2) | (3) | (4) |
|----------------------------|---------------------|---------------------|---------------------|---------------------|
| | Financial Shortfall | Financial Shortfall | Net Liquidity | Net Liquidity |
| Days Since Payment Receipt | 0.020*** (0.007) | 0.020*** (0.006) | -0.218** (0.104) | -0.218** (0.103) |
| Time FE | Yes | Yes | Yes | Yes |
| Individual FE | Yes | Yes | Yes | Yes |
| Two-Way Clustered SE | No | Yes | No | Yes |
| Mean | 0.095 | 0.095 | 6.571 | 6.571 |
| SD | 0.293 | 0.293 | 4.457 | 4.457 |
| Individuals | 479 | 479 | 479 | 479 |
| Person-Day Observations | 1421 | 1421 | 1421 | 1421 |

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Data are 2019 Diary of Consumer Payment Choice. Standard errors in parentheses. Columns 1 and 3 include standard errors clustered at individual-level and columns 2 and 4 include two-way clustered standard errors clustered at individual-day level.

Figure 1 Panel A displays the event study estimates where first day in pay cycle serves as the reference period. This figure allows us to understand the effect of each day in the

pay cycle on probability of financial shortfall while controlling for time-invariant individual characteristics both observed and unobserved, day of week fixed effect, and day of month fixed effect. While recipients experienced periods in the pay cycle where they were less likely to experience a financial shortfall, most days in the pay period had a positive effect on financial shortfall. In the final two days of the pay cycle, beneficiaries were especially more likely to experience a financial shortfall. There was likely noise and seasonality, as evidenced by weekly pattern in estimates that explains departures from the overall pattern of increasing probability of financial shortfall as the pay period progressed. This pattern of increasing probability of financial shortfall over pay cycle is consistent with related work using high frequency administrative data (Baugh et al., 2018). Table 5 shows estimates of additional day in pay cycle on financial shortfall, which includes indicators for each day in the pay cycle rather than continuous measure of days since payment receipt.

Table 3: Effects of Payment Timing on Consumption and Liquidity

| | (1) | (2) |
|----------------------------|------------------|-------------------|
| | Consumption | Liquidity |
| Days Since Payment Receipt | 0.080 (0.047) | -0.034 (0.034) |
| Time FE | Yes | Yes |
| Individual FE | Yes | Yes |
| Two-Way Clustered SE | Yes | Yes |
| Mean | 2.788 | 7.501 |
| SD | 2.676 | 2.566 |
| Individuals | 479 | 479 |
| Person-Day Observations | 1421 | 1421 |

Standard errors in parentheses. Outcomes are inverse-hyperbolic sine transformed.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

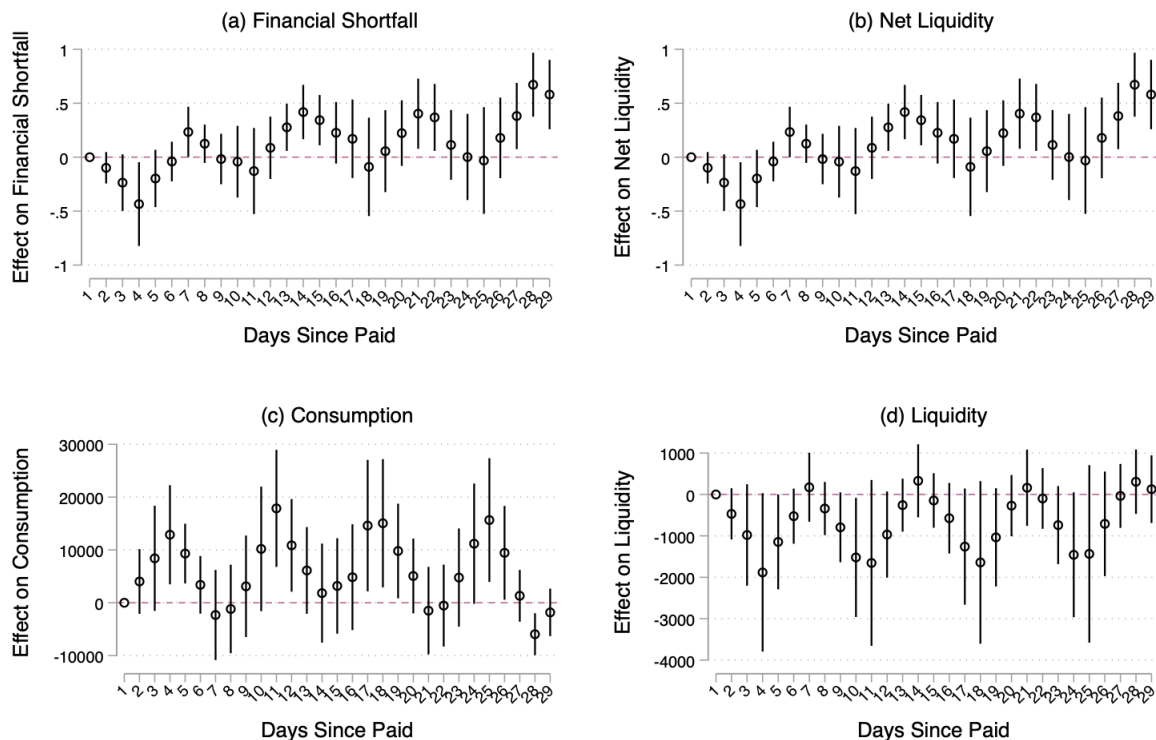
Data are 2019 Diary of Consumer Payment Choice.

Table 3 presents estimates of payment timing effect on net liquidity, continuous measure of financial shortfall in dollars, and component parts of financial shortfall measure, consumption, and liquidity. I examined payment timing effects on each to better understand the mechanism underlying the main effects on incidence of financial shortfall presented earlier. I was interested in understanding whether financial shortfalls were driven by rising consumption over pay cycle, declining liquidity, or a combination of changes in consumption and liquidity. Column 1 shows the effect of an additional day in the pay cycle on consumption. An additional day in the pay cycle increased consumption. Beneficiaries spend 8 percent more with each additional day in the pay cycle. Column 2 shows the effect of payment timing on liquidity. An additional day in the pay cycle decreased liquidity. Beneficiaries exhausted liquidity by 3.4 percent with each additional day in the pay period. It appears that shortfalls were driven by both increases in consumption and declines in liquidity as a

recipient progressed through their pay cycle, however, the estimates were imprecise. Past work found that consumption responded to payment timing and declines over the pay cycle.

Figure 1 Panels B, C, and D display the dynamic effects of pay cycle on net liquidity, consumption, and liquidity in dollars with estimates measured relative to first day of pay period, respectively. Panel B shows that net liquidity fluctuated systematically over the pay cycle with spikes and dips in a weekly pattern. Panel C reveals weekly volatility in consumption, an inverse pattern relative to that for net liquidity. Consumption declines were accompanied by increases in net liquidity while spikes were accompanied by declines in net liquidity as would be predicted. Panel D reveals a weekly pattern of spikes and dips in liquidity. Spikes in liquidity were generally followed by increases in consumption. When there were increases in liquidity, beneficiaries consumed more. The general pattern of decline in liquidity over the pay cycle was reflected in effects on experiencing a financial shortfall—as liquidity declined, probability of financial shortfall rose. Liquidity generally declined over the pay cycle. Social Security beneficiaries may experience difficulty covering expenditures as the pay cycle progresses, as resources decline as they move further from payment date and they must spend out of less liquidity.

Figure 1: Timing Effect of Payment Receipt on Outcomes



Data are 2019 Diary of Consumer Payment Choice. This figure displays the estimated effect of receiving Social Security payment on probability of financial shortfall, net liquidity, consumption, and liquidity. Panel a estimates interpreted in percentage points. Panels b, c, and d estimates interpreted in dollars.

Table 4 displays estimates of payment timing effect on different spending categories. Additional days in the pay cycle were associated with an increase in consumption as detailed above. When we look at different categories of spending, we find that spending on groceries, transportation, utilities, and food away from home increased over the pay cycle. Spending on mortgage and credit card payments declined as well as spending on merchandise over the pay cycle. While beneficiaries may be able to move around spending on grocery, transportation, food away from home, and merchandise, they will be less able to change the expenditure timing of utilities and mortgage and credit card payments.

Table 4: Effects of Payment Timing on Spending Categories

| | (1) | (2) | (3) | (4) | (5) | (6) |
|----------------------------|------------------|------------------|------------------|---------------------|----------------------|-------------------|
| | Grocery | Transportation | Utilities | Food Away from Home | Mortgage/Credit Card | Merchandise |
| Days Since Payment Receipt | 0.196 (0.276) | 0.226 (0.217) | 0.080 (0.147) | 0.281 (0.239) | -10.113 (12.381) | -0.098 (0.449) |
| Mean | 9.360 | 3.176 | 8.991 | 4.010 | 72.232 | 8.554 |
| SD | 33.144 | 10.528 | 45.408 | 11.920 | 512.256 | 33.570 |
| Individuals | 479 | 479 | 479 | 479 | 479 | 479 |
| Person-Day Observations | 1421 | 1421 | 1421 | 1421 | 1421 | 1421 |

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Data are 2019 Diary of Consumer Payment Choice.

5 Discussion

In this study, I found that financial shortfalls, that is, when consumption exceeds liquidity, were responsive to Social Security income payment timing. Beneficiaries were more likely to experience a financial shortfall as the pay cycle progressed, with each additional day following payment receipt increasing the probability of experiencing a financial shortfall by 2 pp. These financial shortfalls resulted from a decline in liquidity and a rise in consumption over the pay cycle; beneficiaries had difficulty covering expenditures as beneficiaries had less financial resources to draw on over time.

Financial shortfalls are an important area of study as they may signal downstream negative financial outcomes. They may lead to missed payments, which have a variety of consequences ranging in severity from less severe like overdraft fees, bounced check fees, and penalty interest rates, to severe like, foreclosure, wage garnishment, repossession, cut-off from future credit access, and bankruptcy (Lanning et al., 2020). Individuals may turn to expensive borrowing, like payday loans, to mitigate declines in overall spending and nondurable goods spending (Dobridge, 2018). Carter et al. (ming) find that more time to repay payday loans does not reduce the need for costly rollovers; it only shifts rollover further out in time. Skiba and Tobacman (2019) find that payday loans increase personal bankruptcy.

Along with the financial consequences of financial shortfalls, exhausting income from government benefit programs is related to reduction in caloric intake and food insecurity, and anxiety and bill receipt timing may result in disconnected utilities like electricity (Wilde

and Ranney, 2000; Shapiro, 2005; Barrage et al., 2019). Beneficiaries may experience poorer health and declines in other measures of well-being as a result. Future research should study the connection between experiencing a financial shortfall and downstream financial outcomes, health, and well-being.

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Appendix

Table 5: Payment Timing Effects on Financial Shortfall, Consumption, and Liquidity

| | (1) | (2) | (3) | (4) |
|--------------------------------|---------------------|---------------------------|-------------------------|---------------------------|
| | Financial Shortfall | Net Liquidity | Consumption | Liquidity |
| Days Since Payment Receipt=2 | -0.098 (0.086) | 4026.306 (3611.279) | -468.806 (364.382) | 3557.500 (3686.032) |
| Days Since Payment Receipt=3 | -0.236 (0.154) | 8411.122 (5865.772) | -978.598 (721.445) | 7432.523 (6114.345) |
| Days Since Payment Receipt=4 | -0.435* (0.229) | 12877.286** (5530.982) | -1882.722 (1127.210) | 10994.564* (6011.476) |
| Days Since Payment Receipt=5 | -0.198 (0.156) | 9310.566*** (3331.334) | -1145.849 (675.358) | 8164.716** (3475.394) |
| Days Since Payment Receipt=6 | -0.040 (0.108) | 3391.844 (3215.117) | -523.979 (392.256) | 2867.865 (3174.785) |
| Days Since Payment Receipt=7 | 0.233 (0.138) | -2320.665 (5029.011) | 173.857 (490.496) | -2146.807 (5075.669) |
| Days Since Payment Receipt=8 | 0.125 (0.104) | -1178.917 (4934.014) | -340.117 (378.747) | -1519.034 (4951.795) |
| Days Since Payment Receipt=9 | -0.017 (0.138) | 3110.618 (5660.962) | -793.187 (497.270) | 2317.430 (5719.694) |
| Days Since Payment Receipt=10 | -0.042 (0.196) | 10194.615 (6946.631) | -1520.303* (848.019) | 8674.313 (7217.660) |
| Days Since Payment Receipt=11 | -0.129 (0.235) | 17870.366** (6528.865) | -1653.284 (1179.874) | 16217.082** (6974.234) |
| Days Since Payment Receipt=12 | 0.087 (0.170) | 10866.971** (5171.689) | -967.818 (612.608) | 9899.154* (5245.267) |
| Days Since Payment Receipt=13 | 0.277** (0.128) | 6118.292 (4834.566) | -257.889 (377.195) | 5860.403 (4791.611) |
| Days Since Payment Receipt=14 | 0.418*** (0.148) | 1824.141 (5526.035) | 330.231 (519.421) | 2154.372 (5538.993) |
| Days Since Payment Receipt=15 | 0.343** (0.137) | 3179.322 (5325.452) | -144.961 (387.940) | 3034.361 (5261.076) |
| Days Since Payment Receipt=16 | 0.226 (0.168) | 4836.862 (5901.740) | -573.925 (502.059) | 4262.937 (5902.344) |
| Days Since Payment Receipt=17 | 0.170 (0.215) | 14605.940* (7335.029) | -1259.000 (826.745) | 13346.940* (7531.756) |
| Days Since Payment Receipt=18 | -0.090 (0.269) | 15048.765** (7153.397) | -1641.715 (1156.767) | 13407.050* (7463.061) |
| Days Since Payment Receipt=19 | 0.056 (0.224) | 9797.844* (5277.622) | -1036.216 (699.173) | 8761.628 (5439.735) |
| Days Since Payment Receipt=20 | 0.223 (0.179) | 5068.130 (4174.713) | -270.179 (436.150) | 4797.951 (4109.882) |
| Days Since Payment Receipt=21 | 0.403** (0.192) | -1495.174 (4882.377) | 162.423 (542.711) | -1332.750 (4853.681) |
| Days Since Payment Receipt=22 | 0.369* (0.183) | -539.917 (4572.858) | -96.553 (432.120) | -636.470 (4506.619) |
| Days Since Payment Receipt=23 | 0.114 (0.191) | 4776.362 (5477.079) | -740.150 (555.515) | 4036.212 (5530.608) |
| Days Since Payment Receipt=24 | 0.002 (0.235) | 11181.956 (6711.110) | -1457.240 (888.681) | 9724.716 (6957.659) |
| Days Since Payment Receipt=25 | -0.031 (0.291) | 15660.145** (6899.333) | -1434.269 (1263.265) | 14225.876* (7406.028) |
| Days Since Payment Receipt=26 | 0.179 (0.220) | 9452.374* (5234.133) | -709.424 (744.032) | 8742.951 (5369.239) |
| Days Since Payment Receipt=27 | 0.382** (0.181) | 1315.421 (2889.713) | -35.171 (455.123) | 1280.250 (2863.980) |
| Days Since Payment Receipt=28 | 0.672*** (0.175) | -5958.980** (2342.057) | 307.827 (458.053) | -5651.153** (2463.204) |
| tDays Since Payment Receipt=29 | 0.580*** (0.189) | -1826.318 (2650.978) | 127.287 (481.115) | -1699.032 (2538.582) |
| Individuals | 479 | 479 | 479 | 479 |
| Person-Day Observations | 1421 | 1421 | 1421 | 1421 |

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

data are 2019 Diary of Consumer Payment Choice.



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