DOES ACCESS TO BANK ACCOUNTS AS A MINOR IMPROVE FINANCIAL CAPABILITY? EVIDENCE FROM MINOR BANK ACCOUNT LAWS

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Abstract

Banking the unbanked is a common policy goal, but should this include access to bank accounts for minors? This study estimates how teenager's access bank accounts affects their financial development. Using variation in state laws, we show policies that permit access to independently-owned accounts increase account ownership at age 16 through age 19, although by age 24 those young adults are banked at similar rates to teens who grew up in states that do not allow minors to own accounts independently. Teens who had access to independently-owned accounts use fewer high-cost alternative financial services (like payday loans) through age 20, that also fades by age 24. Using credit records, we show that access to accounts has no effects on credit scores, loan delinquency rates, or when young people enter the credit market. While these state laws promote financial inclusion for teenagers, they do not appear to impact longer-run financial behaviors.

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1. INTRODUCTION

"I just recently got a job and I obviously need some type of savings or checking account but I want it completely out of my parents' reach."

--Posting on Reddit.com Personal Finance Forum, September 8, 2018[2]

Financial inclusion is a goal for many policies across the world, with intent to engage more people in the formal economy (Shah, Mullainathan, and Shafir 2012; Dupas et al. 2018). A lack of access to basic banking services and the inability to save and borrow at low-costs may compound people's financial problems (Bertrand, Mullainathan, and Shafir 2004). Financial inclusion policies aim to expand the market for banking services to currently un- or under-banked consumers (Célérier and Matray 2019; Demirgüç-Kunt and Klapper 2013). Even within well-developed economies, there are some consumers who remain un- or under-banked for much of their lives (Rhine, Greene, and Toussaint-Comeau 2006). For adults in the US, banking access is common. But for teenagers, there are legal restrictions on owning a bank account before the age of 18. While they are able to work and earn income, in many states teens are only allowed to have accounts held jointly with a parent. This study examines the effects of including teenagers in financial inclusion policies more broadly.

Why would access to an independently-owned bank account as a teenager benefit young adults? First, young people can use a bank account to manage cash flows, transfer funds and to store savings. Without an independently-owned account, teenagers who have income may not be as able to smooth consumption or keep their earnings safe, including from parents or guardians. Second, a non-custodial minor-owned account puts the onus on the individual, as opposed to his or her parent, to manage money, creating opportunities for young people to learn financial capability on their own. For example, after experiencing a penalty or fee, the minor may learn the importance of monitoring account balances and paying bills on time. Minor-owned accounts create a more direct relationship between the youth and the account provider than a custodial account, where that relationship is mediated by an adult. Potentially these experiences influence how young people make choices and form preferences (Alan and Ertac 2018). Third, to the extent that minors have a positive first experience with the formal banking sector, these consumers of financial services may have stronger preferences for using formal financial institutions in the future (Brown, Cookson, and Heimer 2019). Early life experiences could have lasting effects on how people develop attitudes about financial services (Malmendier, Tate, and Yan 2011). A direct relationship with financial services institutions at a young age may help young adults to develop relationships with financial services providers that persist into adulthood.

Low-balance accounts for younger, first-time banking customers have their costs, however, for both financial institutions and consumers (Porteous 2015). Some regulators and banking institutions may see the risks and costs of bank accounts in the hands of immature consumers as being too great. The potential benefits of earlier access to bank accounts may outweigh these potential costs, but the benefits of youth account access have not been well documented in prior studies. It is important that policymakers, bankers, and bank regulators understand what access to accounts can accomplish.

[2]Source: *https://www.reddit.com/r/personalfinance/comments/9e9yfm/im_a_teen_17_who_wants_to_open_up_a_bank_account/*

Determining the causal effect of account ownership is challenging because there is selection by teenagers into bank account ownership. For example, minors with more affluent or more motivated parents may be more likely to both have bank accounts and have better financial outcomes later in life. Bank account use is likely correlated with unobserved characteristics, such as parental motivation, generating omitted variable bias in any estimates of how owning an account is associated with other outcomes. This study overcomes the identification challenges by using changes in state laws that permit *access* to non-custodial bank accounts for people under age 18 in order to estimate how access to accounts is related to financial behaviors in young adulthood.

Federal policies in the US only allow individuals age 18 or older to own bank accounts. Minors only have access to a custodial account if their parent or guardian is a co-owner until they turn 18. However, some banks are chartered under state laws rather than federal charters, and some states have changed their laws allowing state-chartered banks to permit minors to have bank accounts in their own name as young as at age 15. Our research design uses variation in these state minor bank account regulations among state-chartered banks to estimate changes in access to accounts for minors, and subsequently, study the impacts of access to accounts as a youth on financial behaviors later in life. Using these state laws in a difference-in-difference framework, we use two datasets—the Survey of Income and Program Participation (SIPP) and the Federal Deposit Insurance Corporation (FDIC) National Survey of Unbanked and Underbanked Households—to estimate the effect of teenagers having access to an account on their having a checking or savings account, as well as using alternative financial services, as a young adult. We also use this strategy to examine credit behaviors using the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP).

This study provides the first estimates of the causal effect of minor account access on financial behaviors to answer several research questions. First, do state laws allowing minor-owned accounts increase the likelihood that teenagers are banked, defined as owning their own checking or savings account? Second, how long does access to bank accounts at young ages result in greater financial inclusion later in life? Finally, does access to independently-owned accounts impact later-in-life financial behavior?

These findings contribute to three strands within the broader literature on banking access and household finance. First, we inform research examining the effects of access to banking while young on downstream financial behaviors. The most related paper is by Brown and colleagues. They studied the effects of growing up on American Indian reservations with banking services (compared to those without) on credit use in adulthood (Brown, Cookson, and Heimer 2019). Their findings show that access to banking institutions while young accelerates the take up of credit and improves credit scores. We expand upon this work by studying a different policy, state minor account laws, and a broader population of young people.

Second, we build on the literature on access to banking and the take up of accounts.[3] Much of the existing research on bank access has focused on the location of branches. Célérier and Matray, for

[3] There has been additional research regarding banking regulation in different contexts. Sun and Yannelis (2016) find that banking deregulation increases college-going due to credit constraints. Popov and Zaharia (2019) show that intrastate banking deregulation increased female labor force participation. Further, Gerardi, Rosen, and Willen (2010) and Hacamo (2020) discuss deregulation in the mortgage market.

example show that deregulation that increases the number of bank branches in low-income counties increases the likelihood individuals are banked and also increases their wealth later in life (Célérier and Matray 2019). Further, Nguyen show that bank closings decrease small business lending, with the effect most concentrated within six miles of the closed branch (Nguyen 2019). To the best of our knowledge, we are the first study to determine the effects of account access, unrelated to firm location, on a targeted cohort of account holders.

Third, we broadly contribute to the literature determining the effects of banking regulations on bank account access. For example, Washington finds that when states require banks offer low-cost bank account options, the proportion of low-income minority households who are unbanked decreases (Washington 2006). If minors have unmet demand for independently-owned accounts, we expect an increase in bank account ownership among young adults after states pass minor bank account laws. Bank access potentially improves the welfare of previously underbanked consumers, while also having positive externalities for communities and financial services providers by expanding the market (Barr 2004).

Our findings show that state laws allowing minor account ownership increase the likelihood that an individual is banked before age 18. While the effect of early access to independent accounts persists until individuals are age 20, the effect dissipates with age. One potentially promising finding is that youth age 18 to 20 who had access to minor accounts were less likely to use alternative financial services, such as payday loans. These effects also fade with age, and we also show that access to minor-owned bank accounts has no effect on young adult's credit behavior.

While our focus is on how young people use bank accounts, we can also rule out that state minor account laws are associated with shifts in the structure of financial services markets. We find no evidence to suggest that the policy substantively changes the supply of state or federal banks in an area.

In the next section we provide more details about banking regulations that create the variation we use to identify the effects of bank account access. We then describe the data and methods used to estimate the effects of access to minor banking laws, as well as a series of robustness exercises. We conclude with an overall discussion of these estimates and the implications of this study for policy.

2. BACKGROUND

Understanding how youth access to bank accounts improves financial outcomes is an important piece of evidence to better design policies, regulations and financial products that benefit firms and consumers.

2.1 Laws Regulating Account Access Before Age 18

Financial institutions in the US are generally chartered at the national or state level. Each state is left to implement regulations for state-chartered institutions, including whether or not teenagers under 18 years of age can own an account without an adult co-owner. The result is that financial institutions operating in the same market may have different regulators and have to adhere to different rules (VanHoose 2017). In the absence of state legislation, state-chartered firms adhere to the federal policy for nationally-chartered institutions, which only allow accounts for minors using a joint account with a parent or guardian (a custodial account). Joint accounts operate like a minor-

owned account, where the young person can make deposits and withdrawals, but they are not independent owners and the co-owner can also make deposits, withdrawals, or approve or not approve certain account actions. Custodial accounts are set up by an adult to be used for the benefit of a minor, but an adult owns the account at least until the child is age 18. The experiences of a young person in interacting with financial services are not likely to be as significant with these types of accounts.[4]

We collected data on minor account laws for this study (see Appendix A, Table A.1). Panel A of Exhibit 1 maps the states where teenagers are allowed to have independent accounts at state-chartered banks, as well as the first year in which this was legally permitted. These laws begin in the early 1900s. By 1985, 19 states had laws allowing minors ages 15 and older to have their own checking or savings accounts, and this number grew to 29 states by 1999 and 45 states by 2017. We rely on variation over time in state minor banking law polices across states from 2000 to estimates the effects of state laws in this study.

Since these policies only apply to state-chartered banks, it is important to see that state-chartered banks exist uniformly across states. In Panel B of Exhibit 1, we map every ZIP code where there is at least one state-chartered bank based on bank-level data from the FDIC from 2017. This map suggests that indeed, state-chartered banks exist in nearly all populated areas.[5]

Our thought experiment is as follows: a 16-year-old wants to open a checking account and wants the money to be hers and hers alone. Depending on the state and year, she is either able, or not able, to open the account on her own. That difference allows us to identify the effects of access to accounts.

2.2 Costs and Benefits of Minor Accounts

There are several potential benefits and costs of having an independent account before turning 18.

First, access to accounts may help minors learn to save, bank, and manage cash flow. Young adults are among the most likely to report they could not come up with $2,000 in the event of a financial emergency within the next month and are more likely to use high cost non-bank borrowing, including payday loans, auto title loans, rent-to-own stores, and pawn shops (FINRA Investor Education Foundation 2016). At the same time, young adults are the most likely age group to be unbanked, defined as not having checking, savings, or similar accounts used to deposit funds, store cash and make payments (Hayashi, Minhas, and others 2019; Addo 2014).[6] Checking and savings accounts are important for a young person in terms of day-to-day financial management, where having an account allows a young person to deposit paychecks, transfer funds, and smooth consumption.

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[4] There are several additional legal issues related to accounts for minors. For example, there are regulations to protect minors from having their assets abused by an adult, as well as to protect them from their own potentially uninformed decisions (Rhine, Greene, and Toussaint-Comeau 2006; Office of the Office of the Comptroller of the Currency 2017).

[5] FDIC Statistics on Depository Institutions Report as of September 2018 shows 1,159 total nationally-chartered institutions with depository insurance, and 4,318 state-chartered institutions. Nationally-chartered firms have about twice the assets of state-chartered firms, however. At the same time, NCUA reports 5,480 credit unions; of these 3,608 have national charters, with both types of charters holding roughly equal assets.

[6] These types of transaction-based accounts are distinct from college savings or child savings accounts used to save for a specific, restricted purpose. See (Sherraden et al. 2013) for a discussion.

Previous research shows living around financial institutions as a young adult may improve credit later in life (Brown, Cookson, and Heimer 2019).[7] Those findings underscore the potential for account access to influence financial decisions, though in the unique context of Native American reservations. In a different market that studies young adults, Debbaut, Kudlyak, and Ghent (2014) find that before the CARD Act, which limited credit card access to those under 21, those who first had credit cards at early ages had lower default rates and higher credit scores down the road.

Second, for young people who are afraid that their parents or guardians will meddle in their finances, the prospect of having a custodial joint account may be especially problematic. These youth may have more to gain from being able to open independent bank accounts allowed under minor bank account laws. While there is scant research on the incidence of parents abusing their minor's financial accounts, one review is suggestive that, at least for some teenagers, the ability to have an account separate from their parents would be valuable (Postmus et al. 2020).[8]

Third, minor accounts may also fill in gaps with financial literacy early in life. Two out of three young adults lack basic financial literacy, which could contribute to financial problems and mistakes (Lusardi, Mitchell, and Curto 2010; Lusardi and Mitchell 2014). The process of how people acquire financial knowledge is complex, ranging from peer norms and parental influences to formal education and learning by doing (Lusardi and Mitchell 2014). Cross-sectional data from the Programme for International Student Assessment (PISA) study by the Organisation for Economic Co-operation and Development show that youth who report having a bank accounts also show higher levels of measured financial literacy (Federal Deposit Insurance Corporation 2014; Jappelli 2010).[9]

Prior studies offer some indications that account ownership could facilitate financial learning. Jamison, Karlan, and Zinman (2014) conducted an experiment randomizing financial education only, financial education and account access, and account access only. They find that financial account access has some positive effects independent of other interventions, although there is stronger evidence that bank accounts and financial education are complements.

Youth accounts may be an attractive financial product for firms to offer mainly from the broader perspective of engaging and retaining multiple generations of account holders (Lewis and Bingham

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[7] While these are promising findings in terms of the effects of bank access, the setting of that study is specific to Native American areas, which are unusual financial markets that are not readily generalizable to the estimated outcomes of young people's access to minor-owned accounts overall.

[8] For example, one post in 2018 included the following statement: "I just recently got a job and I obviously need some type of savings and/or checking account but I want it completely out of my parents' reach. They've borrowed money from my siblings...not paying [it] back."
https://www.reddit.com/r/personalfinance/comments/9e9yfm/im_a_teen_17_who_wants_to_open_up_a_bank_account/

[9] Students in many states already receive formal financial education in high school. Prior studies generally find positive effects of recent financial education graduation requirements on credit and other financial behaviors (Urban et al. 2020; M. Brown et al. 2016; Stoddard and Urban 2020; Harvey 2019). However, these courses do not always provide experience. Accounts may combine experience with formal learning in a complementary way to lead to greater financial capability and economic self-sufficiency.

1991; Lewis 1982). Indeed, studies of the demand for youth accounts shows parents and children often have accounts at the same institution.[10]

A negative first experience with financial services could result in a long-lasting impact on people's preferences and beliefs (Christelis, Dobrescu, and Motta 2020). For example, it is possible that a young person who overdrafts or poorly manages the account may end up with more of a distaste for the formal banking sector. In some cases, the minor may have had a better learning experience with their parent using a joint or custodial account. Teens in states that do not permit minors to have accounts may benefit from these mediated accounts.

3. EMPIRICAL STRATEGY

We use a difference-in-difference strategy to identify the effect of minor account laws on account ownership. Our main dependent variable (Y) will equal one if the individual has a bank account (checking or saving) and zero otherwise. We will use variations of the below specification, though we use different datasets to understand different populations. We estimate forms of Equation (1) using a linear probability model (LPM).

$$Y_{\{isyt\}} = \alpha_0 + \alpha_1 MBL_{\{sy\}} + \alpha_2 X_i + \alpha_3 u_{\{sy\}} + \alpha_4 CULaw_{\{sy\}} + \beta_t + \gamma_s + \delta_y + \epsilon_{\{isyt\}} \quad (1)$$

The main coefficient of interest in Equation (1) is the difference-in-difference parameter, α_1, which captures the causal effect of MBL (minor bank law) on whether or not individual *i* in state *s* born in year *y* and responding in survey year *t* is banked. We control for two individual-level demographic characteristics X_i that are unlikely to be affected by the policy: race/ethnicity and household type (married couple, unmarried female head, unmarried male head, female individual, male individual, other).[11] The model further includes the state unemployment rate at the time the individual was 15, whether or not the individual was exposed to a credit union minor account law,[12] survey year fixed effects, state fixed effects, and birth year fixed effects. $\epsilon_{\{isyt\}}$ is the error term, and we provide robust standard errors clustered at the state level to account for both heteroskedastic standard errors and the fact that policies are set at the state-level. We do not find evidence to suggest that there are economic forces driving the passage of minor bank account laws in states.[13]

Difference-in-difference (DD) specifications require that the treatment and control groups are parallel in the pre-policy period and the treatment group would have trended similarly to the control group in the absence of the policy. Exhibit 4 shows suggestive evidence for the validity of the parallel trends assumption by comparing the trends in the pre-period across the treatment and control group for those 18-20 and 18-24. We show these event studies for each of the downstream

[10] See the review in Tank and Tyler (2005.)

[11] If we do not control for household type and/or race/ethnicity, our results do not change.

[12] While we technically control for the existence of a law allowing minors to have independent accounts at credit unions, only three states changed their laws since 2000—Michigan (2004), Iowa (2007), and Illinois (2012). Thirty-three states already had minor account laws for credit unions before 1999. Since we use state-level fixed effects, this means the control will only be included in specifications when we study downstream outcomes.

[13] See Appendix Table A.2 The only variable that is statistically different from zero at the 0.10 level is state gross product, where an additional $1 billion increases the likelihood of passing the policy by 0.1 percentage points. This marginal effect is quite small.

outcomes: whether or not the individual has an account (Panel A) and whether or not the individual has used AFS (Panel B). In none of the four graphs is there evidence of a trend prior to the start of the policy.

Recent developments in the DD model, particularly with staggered rollout of policies, suggests that using states that are always treated as a counterfactual could be problematic (Goodman-Bacon 2018). Thus, we provide robustness exercises in Appendix Table A.3. showing that the results are robust to dropping individuals in states where policies were always in effect.

4. DATA

To estimate the effects of MBLs on account ownership and downstream behaviors, we rely upon three main datasets. First, we use the Survey of Income and Program Participation (SIPP) to gauge the first stage: do these laws increase account ownership among those eligible? Second, we determine how long the bump in account ownership lasts using the FDIC Un(der)-Banked Survey. The FDIC data also let us examine how the policy affects use of alternative financial services (AFS). Third, we examine how MBLs affect downstream credit outcomes using data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP).

4.1 SIPP Data

We begin with data from the SIPP to estimate the effect of increased access to minor-only accounts on account ownership for minors. While the SIPP is a short-panel, we use the data as a repeated cross-section of two survey waves: 2014 and 2018. Within these waves, there are observation periods from 2013, 2014, 2015, 2016, and 2017. While there are additional earlier waves, availability of bank account information began with the 2014 wave of data. We build a cross-sectional sample of 16-year-olds to maximize our sample size and not consider the same people at different ages.[14] This strategy relies upon changes in Georgia (2017), Kansas (2015), Massachusetts (2014), New Hampshire (2015), and Oregon (2015).

$$Y_{\{ist\}} = \alpha_0 + \alpha_1 MBL_{\{sy\}} + \alpha_2 X_i + \beta_t + \gamma_s + \epsilon_{\{ist\}} \quad (2)$$

In Equation (2), our main coefficient of interest is α_1, but we also include birth year fixed effects (β_t), state fixed effects (γ_s), and demographic characteristics for whether or not the individual identifies as non-Hispanic white and a dummy for gender.

4.2 FDIC Survey Data

To determine how MBLs affect downstream account ownership and use of high-cost alternative financial services (AFS), we use data from the FDIC's Un(der)-Banked Survey (henceforth, FDIC data).[15] These data are collected every two years, as a supplement to the Current Population Survey, beginning with 2009. We use the data from 2009, 2011, 2013, 2015, and 2017 in this study.

[14] In the SIPP, some observations experience a change in year-of-birth across the panel. To be consistent, we take the first observation (the first time it is asked) and drop observations when year of birth is 2 or more years from the first year reported.

[15] For more on these data, see https://www.fdic.gov/analysis/household-survey/.

Important to the FDIC data is that across all waves, the survey asks about account ownership (checking and savings accounts) and alternative financial service use for each member of the household. We consider only those observations for whom the primary respondent in the household is 18- to 24-years-old.

The survey further asks why individuals are unbanked (if they are). In the 2015 and 2017 data, where the question is asked identically, there are three main causes among those under 25: "I do not have enough money to keep in an account" (35%), "Account fees are too high" (11%), and "I do not trust banks" (10%). The percentages are only slightly different for those of older ages.

Again, our main focus for this study is to understand how account ownership at early ages affects downstream financial outcomes. To do this, the FDIC data help us to understand whether or not those in states where account ownership increases see a continued increase in having an account once they reach adulthood. We also investigate whether or not they use alternative financial services. (See Appendix A for visual tabulations of bank and under-banked status.)

We are missing data on AFS use for 28 percent of the sample, who report that they do not know if they did or did not use AFS in the last year. This could be because they either do not want to admit to using it or because they have never used it and are unsure exactly what it means. In either case, we expect this to be uncorrelated with the policy and thus contribute to classical measurement error.

4.3 CCP Data

In order to understand how MBLs affect downstream financial outcomes, such as starting one's financial independence earlier, credit scores, and delinquency rates, we turn to data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP). These data represent a 5 percent random anonymized sample of credit reports across the country, and also include any other household members of those who were selected for the random sample. Since the data are pulled from credit reports, we can observe only outcomes that would appear on a credit report, such as a measure of credit score, credit and debt accounts, and whether or not the individual is behind on an account. This means we cannot observe any demographic characteristics outside of age, such as marital status, gender, race/ethnicity, and education. We also cannot observe any activity on the market for payday loans or other forms of AFS, commonly referred to as "alternative credit reporting."[16] The data we use are from the fourth quarter of each year spanning from 2009-2017.

Since the CCP are administrative data they provide a different perspective than the FDIC data. In addition to reducing measurement error based on self-reports, account ownership and AFS use are in a way, extreme outcomes. Since so many young adults are banked, account ownership may not fully reflect learning from early-life account access. Instead, learning through an independent account as a minor may allow those just starting their financial independence to make smarter financial decisions across the board. This may result in having a credit report relatively earlier, having a higher credit score, and being less likely to be behind on accounts. The CCP data allow us to explore this.

4.4 Additional Data

[16] Others have referred to these agencies as "specialty consumer reporting companies."

In addition to our three primary datasets, in Appendix B we investigate supply-side responses to the minor account laws using data from the FDIC on the number of state-chartered and federally chartered banks by state and year. Also, data from the Bureau of Labor Statistics on state-level unemployment rate is included as a control in several estimates.

5. RESULTS

Do minor account laws affect bank account ownership among minors? Does access to an account impact young adult banking and credit behavior? This section discusses the results of our estimates and provides evidence on the downstream outcomes after minors become young adults, including account ownership, alternative financial services use, credit scores, and loan delinquency.

5.1 Minor account laws increase account ownership

In Exhibit 2, data from the SIPP show that among 16-year-olds, state policies allowing minors to own independent bank accounts increase the likelihood that those eligible have accounts. MBL increases the likelihood that 16-year-olds have a checking or savings account by 8.1 percentage points (Column 1), which is about a 29 percent as a marginal effect relative to the mean rate of 28 percent banked. Column (2) further shows that MBL increases the likelihood of having over $100 saved in a checking or savings account by about 8.8 points.[17] The $100 threshold suggests that the individual did not simply open the account with a minimum balance and not use it. Column (3) shows that the MBL policy increases the likelihood of having an independently-owned "solo" account. Specifically, the MBL shows a 5.4 percentage point increase in solo-owned accounts, which is 41 percent of the mean rate of 13 percent.[18] Column (4) shows that the MBL policy may shift minors away from joint accounts, though the magnitude is small (0.2 percentage points) and not statistically different from zero. We take this as evidence that the policy generates an overall increase in account ownership among minors, especially solo minor-owned accounts.

The findings from the SIPP data provide evidence that there is a first stage effect of MBL: minor account laws increase account ownership among minors.[19] To validate this even further, we investigate the effect of the MBL on having a checking or savings account among 18 and 19-year-olds in the FDIC data, as displayed in Exhibit 3. Restricting the sample to the ages where an individual reaches adulthood (age 18) provides additional evidence of a first stage from the prior estimates. Indeed, we find that the MBL policy increases the likelihood of having an account by 8 percentage points in Column (1) among 18 to 19-year-olds. While this seems on par with the magnitude in the SIPP, the mean account ownership is much higher among 18 and 19-year-olds (90 percent compared to 28 percent). Thus, the effect is economically and statistically significant, though smaller size than for 16-year-olds, at only 9 percent of the mean. All of these results are robust to dropping states that were always treated (as shown in Appendix A, Table A.3). We further show the

[17] Mean savings among those with a checking or savings account is $418.

[18] The reason that average is not zero before the start of the policy is because nearly all states allow state-chartered credit unions to offer independent accounts to minors.

[19] It could be that MBLs affect youth employment by making it easier to have one's own money. We check this in Table A.4, and though the effects are positive, they are not statistically different from zero.

two-way decomposition of the has account results in Table A.7, where all of the average estimates for each treatment and comparison group are positive and economically significant (Goodman-Bacon 2018).

5.2 Minor account laws and downstream financial behavior

We have documented an increase in account ownership after MBL policies allow minors to have independent accounts. We next seek to understand if this early-life access to accounts provides an experiential learning opportunity such that they make stronger financial decisions in the longer-run.

One important question is: do those early accounts result in higher rates of account ownership at older ages? Using the FDIC data, when we expand our sample to those 18 through 24 years of age. In Exhibit 3 Column (2), the effect of the policy for 18 to 20-year-olds is one-quarter the size of the effect for 18 and 19-year-olds and is no longer statistically different from zero. Further, Column (3) shows that changing the ages for the sample to 21 through 24 flips the sign of the estimate, although it is not statistically different from zero. These findings suggest that others who did not experience increases in account ownership due to the minor account allowance caught up once they reached adulthood. The finding is perhaps not surprising, since account ownership is extremely common even among 18 to 20-year-olds (89 percent). It could even suggest that those who held accounts jointly with parents started off stronger financially as young adults. A supplemental analysis in the Appendix (Figure A.2) plots coefficients and 95% confidence intervals for the effect of minor account laws on whether or not an individual is banked by each age group through age 29. These estimates confirm that the estimated effect falls to zero by age 22 and becomes a more precisely estimated null at later ages.

Though we see no change in the likelihood of having an account as individuals age into their early 20s, it could still be that there is some learning from early accounts that shifts them away from making financial decisions that are potentially costly. In Columns (4) and (5) of Exhibit 3, we seek to understand how the MBLs affect use of alternative financial services, which arguably are a substitute for being banked. When focusing on 18 through 20-year-olds in Column (4), we find that the MBLs decrease the use of AFS in the last twelve months by 7.7 percentage points, or 16 percent relative to the mean rate of AFS use of 46 percent. This suggests that early in life account access can actually shift young adults away from high cost borrowing. However, the final column shows that this effect is no longer statistically different from zero when we consider those 21 through 24 years of age. Thus, the effects dissipate relatively quickly.

Supplementary estimates show that these results are robust to dropping states that were always treated (Appendix Table A.5) and adding state-specific linear trends (Appendix Table A.6). The decomposition for the banked outcome (Appendix Table A.7) indicates that the bulk of the average estimates are positive for 18-20 year olds and negative for 21-24 year olds. The substantive comparison comes from treated states versus always treated states and treated states versus never treated states (Goodman-Bacon 2018).

To test whether or not individuals are indeed improving their financial situations as they develop their financial independence, we examine the effects of the MBLs on credit and debt behaviors using the CCP data.

In the first column of Exhibit 5, we see if MBLs change the age at which one has their first credit report. For this specification, we create a cross section of over 3.7 million observations that were ages 18-37 in 2017, indicating at what age each had their first credit report. Since having a credit report suggests that the individual had a large enough credit file, this measure reflects early experience with credit and debt. This finding suggests that the MBL decreases the age at which one had a credit file, though the magnitude is small (0.19 years) relative to the mean of 20.6 years for the first incidence of credit.

If experience with a bank account while a minor is a valuable financial experience, we may expect financial decisions to be reflected in higher credit risk scores (where higher scores predict lower risk). The Columns (2) and (3) of Exhibit 5 explore this for the 18-20 and 21-24-year-old populations, respectively. We find the effects are very small in magnitude in the case of 18 to 20 year olds, and not statistically different from zero. Among 21-24 year olds, the estimates are statistically significant and negative, although only 2.8 points relative to a mean of 633. MBLs do not appear to drive financial decisions that lead to an improvement in credit scores. This is further supported by the fact that we also see either no effect or even small increases in delinquency rates due to the MBL in the final two columns of Exhibit 5 (Columns (4) and (5)).

In comparing our effects on AFS use from the FDIC and on credit scores from the CCP data, we note a few caveats. First, the CCP data do not include information on alternative credit agencies. Thus, AFS use would not be directly incorporated into a credit score. However, high-interest debt is likely to affect one's participation with the formal financial sector and could indirectly affect credit scores. Second, the FDIC data do not include young adults who still live with their parents, since we only observe cases where the primary respondent in the household is 18- to 24-years-old. Hence, these results only reflect a subset of young adults in the United States. Finally, the FDIC data are self-reports, and as discussed earlier, 28% of the FDIC sample report they are unsure of whether or not they have used AFS in the last year.

6. CONCLUSIONS

State laws allowing minors to own their own bank accounts increases account ownership among 16-year-olds by 8 percentage points (or 29 percent as a marginal effect). This is consistent with increased financial inclusion for this targeted population. However, this increase fades out by age 24, when compared to others in the same state who did not have early account access and across other states whose early-life account access did not change. We find some evidence of decreased reliance on alternative financial service use, which can be a very high cost way of borrowing early in life. However, this effect is also not sustained through age 24. Early account access due to minor banking laws does not change credit scores or delinquencies, however.

The fact that minor bank laws accelerates the use of accounts by young people, and reduces some forms of high-cost borrowing, is encouraging, but it should not be surprising that overall credit behavior is unchanged. Bank accounts are not a major factor in how consumers access credit, especially for young people who face credit constraints. These policies do not a negative effect, however. There is not strong evidence that state or even federal rules should exclude young people age 16 and 17 from owning their own bank accounts.

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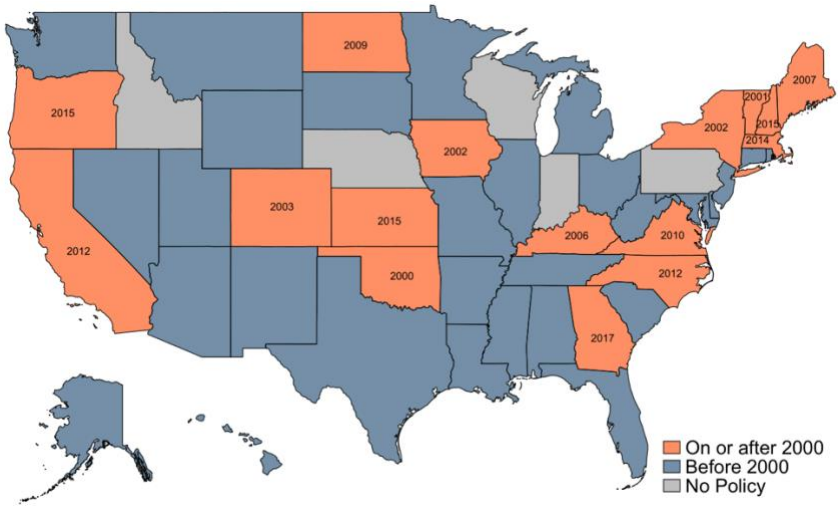
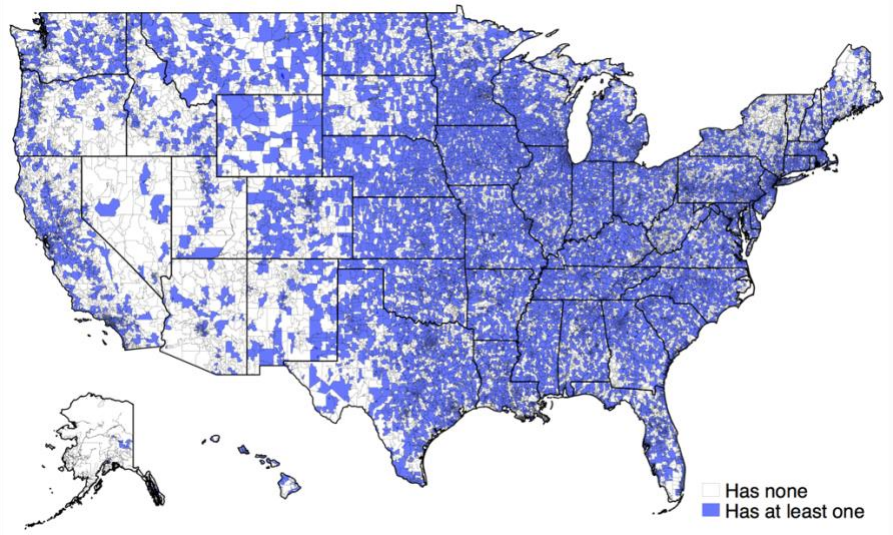
Tables and Figures

Exhibit 1, Figure: Maps of State Policies and Presence of State-chartered Bank

Panel A: State policies



Panel B: ZIP Codes that have state-chartered banks



Notes: Panel A maps the year in which states allowed minors to have independent accounts in state-chartered banks. There are five states with no allowances. These data are also in Appendix Table A.1. Panel B depicts the ZIP codes in which at least one state-chartered bank operates. With the exceptions of Alaska, Arizona, Hawaii, Nevada, and Utah, nearly all ZIP codes have at least one state-chartered bank.

Exhibit 2: Table of Overall Effects of Minor Account Laws on Account Use for 16-Year-Olds

	Has Account	Over $100 Saved	Has Solo Account	Has Joint Account
	(1)	(2)	(3)	(4)
Minor Banking Law	0.0811*	0.0883**	0.0536*	-0.0019
	(0.0480)	(0.0384)	(0.0317)	(0.0420)
Mean DV	0.2779	0.0852	0.1329	0.1548
N	3,417	3,417	3,417	3,417

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1). The data include 16-year-olds only. Data from the 2014 and 2018 waves of the SIPP.

Exhibit 3: Table of Downstream Effects of Minor Account Laws on Account Ownership and AFS use

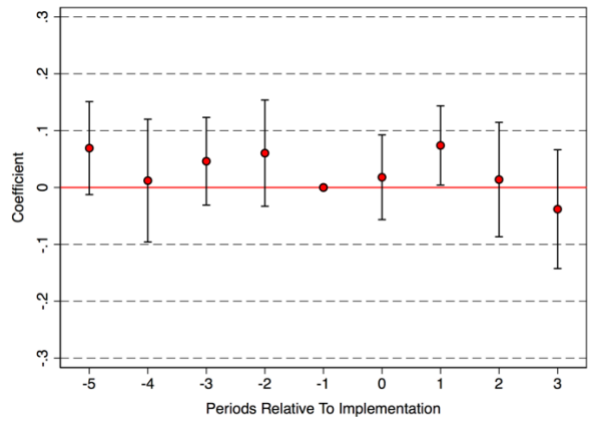
	Has Account			Use AFS	
	(1)	(2)	(3)	(4)	(5)
Minor Banking Law	0.0811**	0.0233	-0.0214	-0.0773**	-0.0225
	(0.0325)	(0.0236)	(0.0144)	(0.0393)	(0.0355)
Mean DV	0.896	0.892	0.903	0.463	0.444
N	1,202	2,463	8,896	1,646	6,494
Ages	18-19	18-20	21-24	18-20	21-24

Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1). Data from the FDIC Un(der) Banked Survey. "Has Account" equals one if the individual has a checking or savings account and zero otherwise. "Use AFS" equals one if the individual has ever used alternative financial services and zero otherwise.

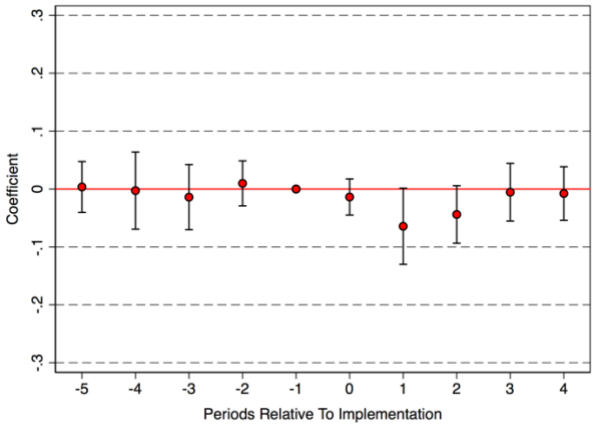
Exhibit 4, Figure: Event Studies

Panel A: Has Account

Ages 18-20

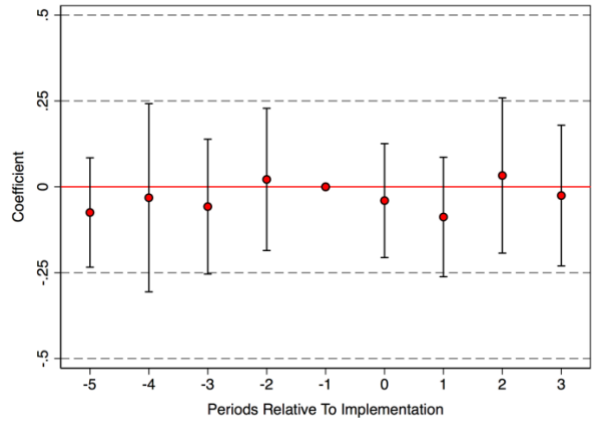


Ages 21-24

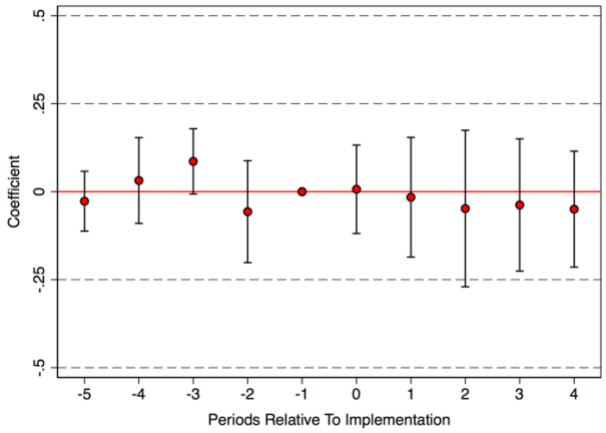


Panel B: Use AFS

Ages 18-20



Ages 21-24



Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1). Data from the FDIC Un(der) Banked Survey. Has account equals one if the individual has a checking or savings account and zero otherwise. Use AFS equals one if the individual has ever used alternative financial services and zero otherwise. Panel A is for the dependent variable "Has Account," and Panel B changes the dependent variable to "Use AFS."

Exhibit 5: Table of Downstream Effects of Minor Account Laws on Credit Outcomes

	Early Credit	Equifax Risk Score		Past Due	
	(1)	(2)	(3)	(4)	(5)
Minor Banking Law	-0.188*	-0.470	-2.801***	-0.00011	0.0085**
	(0.112)	(0.917)	(0.953)	(0.0013)	(0.0035)
Mean DV	20.64	642.29	633.30	0.068	0.169
N	3,756,628	2,017,077	5,568,291	2,284,659	6,146,305
Ages	18-37	18-20	21-24	18-20	21-24
Years	2017	2009-2017	2009-2017	2009-2017	2009-2017

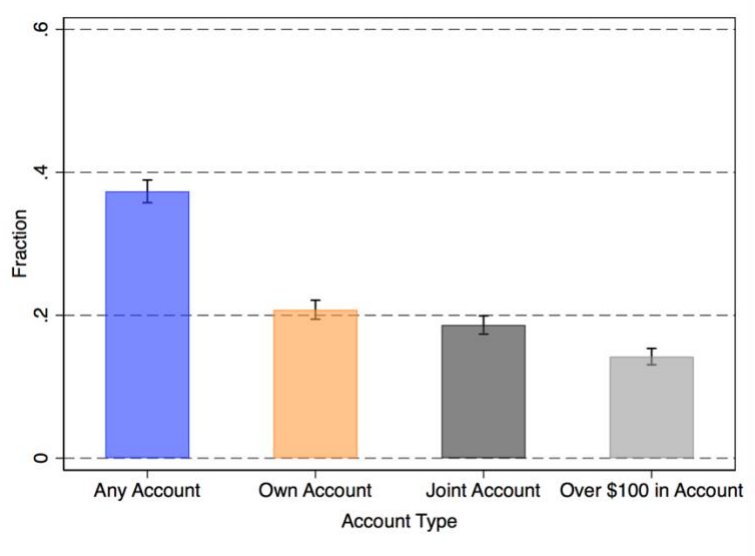
*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Robust standard errors clustered at the state level in parentheses. All models estimate Equation (1) with data from the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP). Early Credit is the first year the individual shows up in the credit file. For this specification, we use a large age range in one point of time (2017). Risk Score is the CCP's measure for credit scores and ranges from 280 to 850. Past due equals one if the individual is behind on any account and zero otherwise. We estimate linear probability models for that variable.

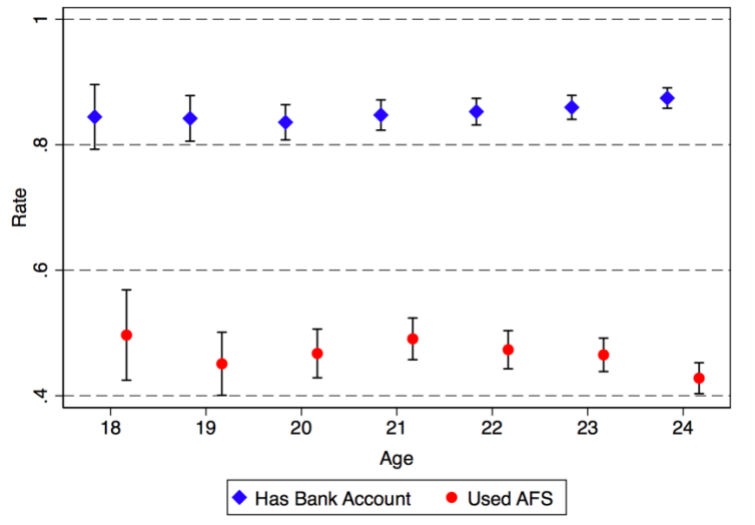
Appendix A:

Figure A.1. Summary Statistics of Minor Accounts

Panel A: Average Account Ownership by Account Type (Age 16)



Panel B: Average Account Ownership and AFS Use by Age (18-24)



Notes: The data in Panel A are drawn from the SIPP 2014 and 2018 waves for a sample of 16 year-olds. Any Account equals one if the individual reported having a checking or savings account; Own Account equals one if the individual has an independent account; Joint Account equals one if the individual has an account with another person; Over $100 in Account equals one if the individual has over $100 in a checking or savings account. The data in Panel B are drawn from the FDIC (2009, 2011, 2013, 2015, 2017). Has Bank Account equals one for individuals if they have a checking or savings account from a bank or credit union. Used AFS equals one if the individual reported using alternative financial services in the last year and zero otherwise.

Table A.1: State Policies

State	MBL Policy Year	State	MBL Policy Year
AK	1993	MT	1977
AL	1980	NC	2012
AR	1997	ND	2009
AZ	1973	NE	No policy
CA	2012	NH	2015
CO	2003	NJ	1948
CT	1995	NM	1963
DC	No policy	NV	1999
DE	1953	NY	2002
FL	1997	OH	1997
GA	2017	OK	2000
HI	1993	OR	2015
IA	2002	PA	No policy
ID	No policy	RI	1995
IL	1965	SC	1985
IN	No policy	SD	1969
KS	2015	TN	1969
KY	2006	TX	1997
LA	1985	UT	1996
MA	2014	VA	2010
MD	1980	VT	2001
ME	2007	WA	1981
MI	1909	WI	No policy
MN	1985	WV	1969
MO	1967	WY	1977
MS	1942		

Notes: This table shows the first year in which minors (15, 16, and 17 year olds) were allowed to have their own independent bank accounts through state chartered banks in the given state.

Table A.2: Predicting State Implementation of Laws Allowing Minor-owned Bank Accounts

	Coefficient (Standard Error)
Governor is Democrat	-0.0339
	(0.032)
Unemployment Rate	0.0038
	(0.020)
State-chartered credit union members per capita	0.5043
	(0.687)
Federally-chartered credit union members per capita	0.3776
	(0.647)
Number of banks per 100,000 people	-0.0002
	(0.000)
Medicaid beneficiaries per 100,000 people	-0.0119
	(0.007)
SSI beneficiaries per 100,000 people	-0.225
	(0.174)
Gross state product (100 millions)	0.00011*
	(0.0005)
Food Stamp beneficiaries per 100,000 people	0.0012
	(0.011)
Poverty Rate	0.00146
	(0.006)
Population (in millions)	0.0296
	(0.067)
Financial education high school requirement	-0.0032
	(0.059)
N	1,030

Notes: Robust standard errors clustered at the state-level in parentheses. Coefficients are estimated from two-way fixed effects linear probability models that account for state and year. The dependent variable equals one if the state passed a MBL in the given year and state and zero otherwise. Data come from the National Credit Union Foundation, the FDIC, and the University of Kentucky's Poverty Center. Financial education graduation requirements can be found out www.carlyurban.com/home/financial-education. All data span 1980-2015.

Table A.3. Effects of Minor Account Laws on Account use for 16 Year Olds, Omitting Always Treated States

	Has Account	Over $100 Saved	Has Solo Account	Has Joint Account
	(1)	(2)	(3)	(4)
Minor Banking Law	0.110*	0.0725**	0.0529	0.0264
	(0.0535)	(0.0400)	(0.0317)	(0.0497)
Mean DV	0.304	0.105	0.154	0.165
N	976	976	976	976

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1), dropping states with policies before 2012. The data include 16-year-olds only. Data from the 2014 and 2018 waves of the SIPP.

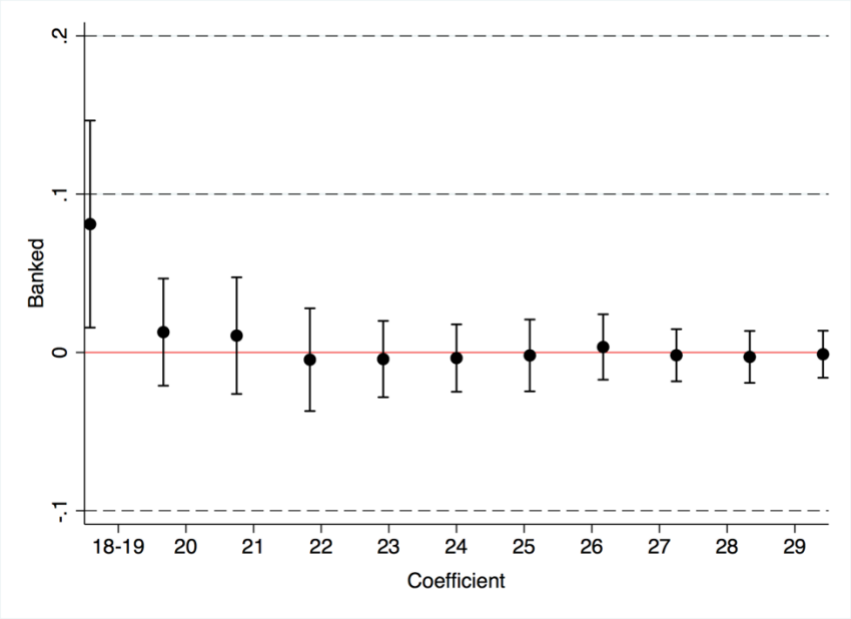
Table A.4. Effects of Minor Account Laws on Youth Employment for 16 Year Olds

	DV=1 if respondent worked at all		
	(1)	(2)	(3)
Minor Banking Law	0.0802	0.0796	0.0736
	(0.0619)	(0.0632)	(0.0594)
Mean DV	0.147	0.147	0.151
N	3,417	3,417	976

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1), dropping states with policies before 2012. The data include 16-year-olds only. Data from the 2014 and 2018 waves of the SIPP.

Figure A.2. Effects of Minor Account Laws on Account Ownership by Age



Notes: The data are drawn from the FDIC (2009, 2011, 2013, 2015, 2017). Each point is an estimate in Equation 1, restricting the sample to the age on the x-axis for the regression. We pool 18 and 19 year olds due to a smaller sample of 18 year olds. Banked equals one for individuals if they have a checking or savings account from a bank or credit union.

Table A.5. Effects of Minor Account Laws on Account Ownership and AFS use, Omitting Always Treated States

	Has Account			Use AFS	
	(1)	(2)	(3)	(4)	(5)
Minor Banking Law	0.109**	0.0524*	-0.0759	-0.0987*	0.0101
	(0.0319)	(0.0295)	(0.0267)	(0.0393)	(0.0547)
Mean DV	0.917	0.919	0.910	0.458	0.424
N	391	810	2,985	542	2,195
Ages	18-19	18-20	21-24	18-20	21-24

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1), but they drop states where policies came into effect 2007 and earlier. Data from the FDIC Un(der) Banked Survey (2009, 2011, 2013, 2015, 2017). Has account equals one if the individual has a checking or savings account and zero otherwise. Use AFS equals one if the individual has used alternative financial services in the last 12 months and zero otherwise.

Table A.6. Effects of Minor Account Laws on Account Ownership and AFS use, with State-specific Linear Trends

	Has Account			Use AFS	
	(1)	(2)	(3)	(4)	(5)
Minor Banking Law	0.110	0.0520	-0.0300	-0.108***	-0.0274
	(0.0875)	(0.0355)	(0.0271)	(0.0524)	(0.0612)
Mean DV	0.896	0.892	0.904	0.463	0.444
N	1,202	2,463	8,896	1,646	6,494
Ages	18-19	18-20	21-24	18-20	21-24

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Robust standard errors clustered at the state level in parentheses. Linear probability models estimated. All models estimate Equation (1), but they include state-specific linear trends. Data from the FDIC Un(der) Banked Survey (2009, 2011, 2013, 2015, 2017). Has account equals one if the individual has a checking or savings account and zero otherwise. Use AFS equals one if the individual has used alternative financial services in the last 12 months and zero otherwise.

Table A.7. Decompositions for Banked Status Outcomes

	Weight	Average Estimate
DD Comparison		
SIPP		
Earlier Treatment vs. Later Control	0.013	0.074
Later Treatment vs. Earlier Control	0.008	0.263
Treatment vs. Never Treated	0.107	0.023
Treatment vs. Already Treated	0.871	0.094
FDIC (18-20)		
Earlier Treatment vs. Later Control	0.099	-0.018
Later Treatment vs. Earlier Control	0.066	0.005
Treatment vs. Never Treated	0.208	0.001
Treatment vs. Already Treated	0.627	0.009
FDIC (21-24)		
Earlier Treatment vs. Later Control	0.034	0.005
Later Treatment vs. Earlier Control	0.044	-0.039
Treatment vs. Never Treated	0.320	-0.030
Treatment vs. Already Treated	0.603	-0.012

Notes: This table shows the decomposition (Goodman-Bacon 2018) for the models that correspond to the "has account" variable in the SIPP and FDIC. The models do not include controls. Average estimate is the average DD estimate for the DD comparisons labeled.

Appendix B: Supply Side Effects of MBLs

While our focus is on how young people use bank accounts, we can also rule out that state minor account laws are associated with shifts in the structure of financial services markets. Since only state-chartered firms can offer minor accounts, we use the same difference-in-difference model in an event study specification to determine if the passage of minor account laws change the presence of state-chartered banks and nationally-chartered banks per capita at the zip code level.

There is no clear response by banks to the minor account laws. We use data from the FDIC on state and nationally-chartered bank locations by state from 1994-2018 to determine how minor account laws affect the presence of state and federal banks. We then use these data and an event-study style difference-in-difference specification to determine whether or not the policies affect entry or exit of state-chartered banks per capita in the market.

Specifically, we estimate Equation (2), omitting the year just before the policy takes effect (t-1) and clustering standard errors at the state level. We include state- and year-level fixed effects. $Y_{\{s,t\}}$ is the number of state (and alternatively federal) banks in a given zip code *z* in year *y* within state *s*. We continue to control for the presence of a state credit union minor account law. α_{-5} and α_5 contain all preceding periods and periods post, respectively. For reference, the average state and federal banks per capita are 17.6 and 16.4 banks per 100,000 people. As in Equation (2), we omit states that were always treated the entire period (those with laws passing in 1994 or earlier).

$$Y_{\{s,t\}} = \alpha_0 + \sum_{\{i=-5, i\neq -1,-2\}}^{5} \alpha_i MBL_{\{s,t\}} + \gamma_1 CULaw_{\{s,t\}} + \beta_t + \delta_s + \epsilon_{\{s,t\}} \qquad (2)$$

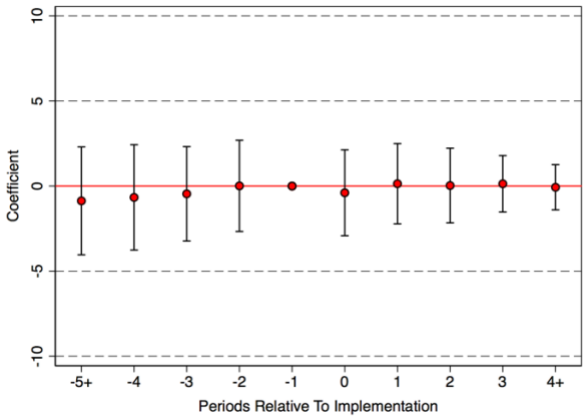
The two panels of Figure B.1 display the event study figures for state and federal banks per 100,000 people with 95% confidence intervals. There are no visible changes in state-chartered or nationally-chartered banks in the long-run, there are no statistical differences at the 95% level pre- or post-period estimates. There is no clear supply-side response by firms to changes in state laws.

Our findings so far suggest that early access to independent accounts increases the likelihood of being fully banked through most of young adults' 20s but is not sustained in the long-run. In addition, there does not appear to be an increase in state chartered banks due to the policy. While we suspect that youth induced into owning bank accounts in their own name due to the policy change are unlikely to have substantial assets to save in their teenage years, it could still be in banks' best interests to offer minor accounts if the policies increase assets in state chartered banks in the long-run or if the policies have spillover effects for other individuals with more assets (e.g., siblings or parents). We test whether or not state and federal bank assets change due to the policy in the same event study style specification as in Equation (2). These asset data from the FDIC are at the state level from 1994-2018. Figure B.2 shows that there are no changes in state-chartered bank assets after the policy in the short- or long- run. For reference, the means are 0.248 and 4.32, interpreted as $2,480 and $43,200 per person in assets at state and federally-chartered banks, respectively.

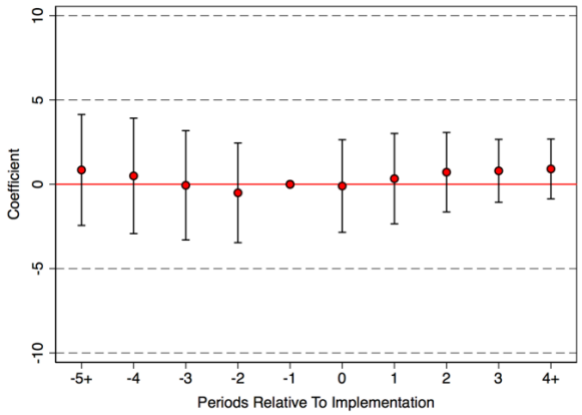
We find no evidence to suggest that the policy substantively changes the supply of state or federal banks in an area. Minor-owned bank accounts are a small portion of the overall market, with low account balances. States with minor bank account laws are not engaging in a broader pattern of promoting banking services that could be an alternative explanation for these findings.

Figure B.1. Event study of minor banking laws on the number of state and federal banks

State-chartered banks



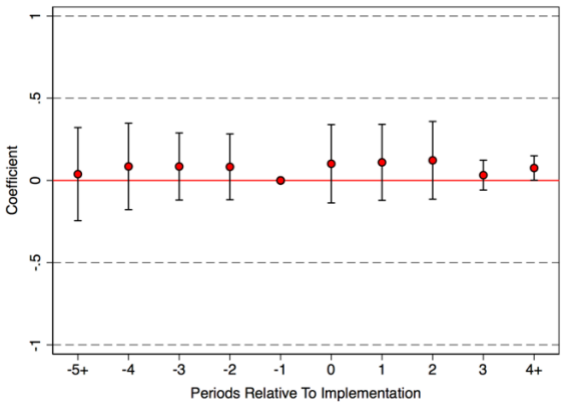
Federally-chartered banks



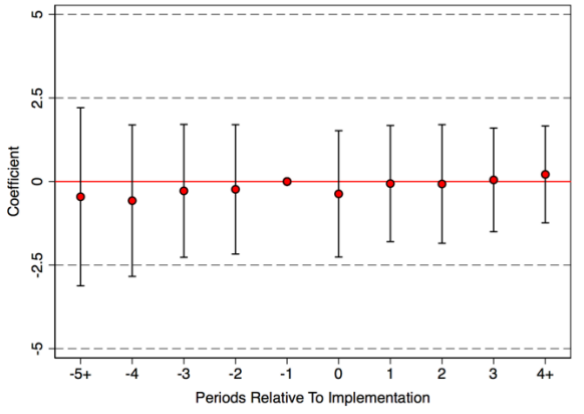
Notes: Each point represents an estimate and 95% confidence interval of α_i from Equation (2), where i represents each period pre and post policy change. The excluded group is the year before passage i=-1. 5+ years prior includes years over five years before the passage of MBL, and 4+ years post includes over 4 years after the passage of MBL. The outcome variables are the number of state and federal banks per 100,000 residents, respectively. Data are from the FDIC from 1994-2018.

Figure B.2. Event study of minor banking laws on the assets in state and federal banks

State-chartered banks



Federally-chartered banks



Notes: Each point represents an estimate and 95% confidence interval of α_i from Equation (2), where i represents each period pre and post policy change. The excluded group is the year before passage i=-1. 5+ years prior includes years over five years before the passage of MBL, and 4+ years post includes over 4 years after the passage of MBL. The outcome variables are the number of state and federal bank assets per capita in ten thousands, respectively. Data are from the FDIC from 1994-2018.