Turning Citizens into Investors: Promoting Savings with Liberty Bonds During World War I

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Increasing savings rates among households of modest incomes would strengthen their balance sheets and reduce wealth inequality. This paper analyzes one of the largest and most successful efforts to increase the savings of ordinary households in American history. The Liberty Bond drives of World War I persuaded tens of millions of Americans to buy government bonds, which were sold in denominations as low as $50, and could be purchased in installment plans. Using newly collected data on the sales of Liberty Bonds at the county level, we analyze the factors that influenced the degree to which the bond drives were successful. The results highlight the importance of the participation of civil society organizations and local banks in marketing the bonds. We discuss the implications of these findings for the design of modern programs to increase savings.

Keywords: saving, Liberty Bonds, savings bonds, wealth inequality, civil society, financial institutions

Approximately 40 percent of the American population resides in households whose net worth is zero or negative. Among the reasons for the precarious state of the finances of so many American families is their low savings rates (Garon 2012; Wilcox 2008). Fewer than half of all households of median income or below save any money at all in a typical year.[1] In addition, according to Emmanuel Saez and Gabriel Zucman, inequality in savings rates has increased over recent decades, which has contributed to the growth of wealth inequality (2016). Since the early 1980s, the savings rates of households near the top of the wealth distribution have remained fairly steady, but those of middle-class households have declined dramatically. Reversing this trend would strengthen the balance sheets of many American families and reduce the concentration of wealth. In recognition of these facts, in recent years scholars and policymakers have proposed a number of experimental programs and initiatives intended to induce households of modest incomes to save more.

The financial history of the United States offers valuable insights for the design of such initiatives. Especially in wartime, the federal government has sought to encourage ordinary households to save more and purchase government debt securities, with varying degrees of

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1. Authors' calculations from 2013 Survey of Consumer Finances (Board of Governors 2016).

success. In this paper, we analyze one of the largest and most successful efforts to induce ordinary people to purchase financial assets in American history. The Liberty Bond drives of World War I persuaded tens of millions of American households to buy government bonds, which were sold in denominations as low as $50, and could be purchased in installment plans. The publicity divisions of the Federal Reserve's Liberty Loan committees blanketed the country with materials promoting bond purchases, appealing to a variety of motives to induce the widest possible participation (see figure 1).[2] State and local Liberty Loan committees organized a voluntary sales force that numbered in the hundreds of thousands, enlisting every manner of civic and economic organization in "patriotic partnerships" (Skocpol et al. 2002) as a way to exhort their fellow citizens to do their share. Surveys conducted by the Bureau of Labor Statistics in 1918 and 1919 indicate that around 67 percent of urban, working-class households purchased Liberty Bonds in those years.[3]

Using newly collected data on the sales of Liberty Bonds at the county level, we analyze the factors that influenced the degree to which the bond drives were successful. Our results highlight the importance of the participation of civil society organizations in the bond drives. Conditional on measures of local incomes and wealth, counties with stronger civil society institutions had higher subscription rates. Our analysis also highlights the role of local banks in the promotion of Liberty Bonds and the potential importance of face-to-face contacts in their marketing. Although American society has evolved considerably since World War I, we believe these findings have important implications for to the design of modern programs to increase savings, and we discuss the implications of our findings in the conclusion.

We also discuss subsequent efforts by the federal government to market debt securities to ordinary households. During World War II, a special savings bond, the Series E Defense Bond, was introduced. The promotion of these bonds was guided by the same principles as the promotion of Liberty Bonds, and the sales of Series E bonds were quite successful. In a Gallup Poll conducted in the fall of 1943, fully 80 percent of those surveyed indicated they owned war bonds. In contrast, in December 2001, two months following the terrorist attacks of September 11 of that year, the Treasury Department renamed its Series EE savings bond (the modern successor to the Series E bond) Patriot Bonds. However, no significant campaign was undertaken to promote these bonds, and in particular, no civil society institutions or local banks were enlisted to market the bonds, and no appeals were made (beyond the name change) to individuals' patriotism. The Patriot Bond did not have much success or change household savings rates.

Historians have written extensively about the sales of Liberty Bonds (Kang and Rockoff 2015; Sutch 2015), and have speculated that they contributed to the rapid growth of households' participation in financial markets over subsequent decades (Means 1930; Mitchell 2007; O'Sullivan 2007; Ott 2011; Warshow 1924). This paper presents the first documentation of the rates at which American households purchased Liberty Bonds across a large number of counties. Using new data from archival sources, we present a quantitative analysis of the determinants of Liberty Bond participation across U.S. counties and discuss the results in light of modern initiatives to increase savings.

Before proceeding with our analysis of Liberty Bond sales, we briefly discuss barriers to saving among modern households, which illustrates some of the factors that any program to increase saving would need to overcome.

BARRIERS TO SAVING

For families with very low incomes, saving is difficult. But even households around the median level of income or just above that save at relatively low rates. Many Americans choose to save little or nothing and, as a result, build net worth and accumulate assets very slowly if at all. Only 45 percent of American households have set aside an emergency fund to cover

2. Liberty Bond posters are public domain. Digital copies are available at the Library of Congress.

3. Authors' calculations from BLS survey data published in Olney 1995.

Figure 1. Liberty Bond Posters

Source: Library of Congress.

three months of expenses in case of a loss of income, and nearly one-third could not deal with such a disruption even through borrowing from family or selling assets. Equally as alarming, one-quarter of nonretired households headed by someone age forty-five or older have no retirement savings and no pension (Board of Governors 2015).

It is possible that this is optimal behavior: people weigh the trade-offs associated with saving and rationally choose not to do much of it. However, evaluating the costs and benefits saving, and choosing how to allocate savings among different financial assets, can be quite difficult. Research by economists shows that behavioral factors may interfere with an individual's ability to make those choices well. Economists argue that people often display time-inconsistent behavior, in that they apply too much weight to current consumption when posed with intertemporal choices (Laibson 1997; O'Donoghue and Rabin 1991). Essentially, savings requires self-control, which many may lack even though they desire to save. More than 80 percent of respondents in a recent national survey reported worrying about not having enough in savings (Pew Charitable Trusts 2015). Even those with savings in retirement accounts reveal that they regard their own savings rates as too low (Choi et al. 2004).

Additional economic explanations for why some people save more than others emphasize other sources of individual-level heterogeneity such as cognitive skills or financially relevant beliefs (for reviews, see Guiso and Sodini 2013; Karlan, Ratan, and Zinman 2014; De Nardi 2015). These individual differences are correlated with underlying demographic traits such as income, race, education, and age, thereby contributing to group-level stratification in wealth. For example, among the poor, the exigencies of everyday living deplete cognitive capacity, making it more difficult to plan for the future (Mani, Mullainathan, Shafir, and Zhao 2013). Minorities, women, and young people score lower on tests of financial literacy, a type of cognitive resource that is linked to savings behavior and other financial decision making, such as investing in stocks (Lusardi and Mitchell 2014).

Regardless of levels of financial sophistication, people may choose to forgo savings in banking institutions because they lack trust in such financial intermediaries (Karlan, Ratan, and Zinman 2014) or because they harbor doubts about the trustworthiness of people whom they do not know (Guiso, Sapienza, and Zingales 2004). According to a Pew Research Center poll in 2015, Americans who believe that banks have a negative influence on the country outnumber those who think the opposite. And in the most recent General Social Survey, only 15 percent of the public reported having a lot of confidence in banks, but more than 40 percent had hardly any. Furthermore, in the same survey, almost two-thirds of the respondents told the interviewers they do not trust most people. The latter belief is demographically patterned in ways that reinforce group-based stratification (Brehm and Rahn 1997), and social mistrust has been linked to lower levels of participation in financial markets, particularly stock ownership (Guiso, Sapienza, and Zingales 2008).

Other explanations for America's low saving rate focus on transaction costs or other supply-side factors that limit people's access to finance. For low- and moderate-income (LMI) individuals, the costs associated with having a checking or savings account can be significant barriers to using mainstream financial services (Tufano and Schneider 2005; Barr and Blank 2011). Bank accounts often come with fees, require minimum balances, and in other ways discourage people of limited means from using them. As a consequence, many simply "don't do banks" (O'Brien 2012, 3). According to the FDIC's 2013 Survey of Unbanked and Underbanked Households, around 30 percent of Americans do not have a savings account, and about 7 percent own neither a checking nor a savings account and are considered unbanked. Roughly 20 percent of U.S. households have a conventional banking account but also rely on alternative financial services (AFS), such as payday lenders, pawn shops, and check cashing services. The FDIC considers such households to be "underbanked" (Burhouse et al. 2014). According to the 2013 FDIC survey, lack of trust in banks is one of the most important reasons unbanked households offer for avoiding mainstream financial institutions.[4]

According to a 2011 FDIC survey of 567 banks, profitability is a major obstacle to developing affordable products for the financially underserved (Rhine and Robbins 2012). Thus banks themselves are reluctant to pursue LMI customers, despite the competition of the rapidly growing AFS sector, by one estimate now a $100 billion business (Wolkoitz and Schmall 2015).

This discussion has a number of important implications. First, many households may be making choices likely contrary to their long-term interests, suggesting a role for intervention by the government or nongovernmental organizations. Second, the banking and financial systems of the United States, as sophisticated as they are, are not meeting the needs of ordinary households very well, and have relatively little incentive to encourage households of modest income levels to save more by offering them attractive savings vehicles. Third, the banking and financial systems are not trusted by ordinary Americans, meaning that an intervention to increase savings may be made more effective by distancing itself from those institutions.

We next turn to the Liberty Bond campaigns of World War I, which we believe offer valuable insights into the design of such an intervention.

LIBERTY BONDS

The scale of the expenditures resulting from the American participation in World War I was unprecedented. For each of the years 1913 through 1916, total expenditures of the federal government were less than $750 million. By 1919, expenditures grew to $18.5 billion, a nearly twenty-five-fold increase (Carter et al. 2006, table Ea584-87).

In the months leading up to America's involvement in the war, vigorous debates raged outside and inside Congress about whether, and how much, to rely on increased taxation rather than debt to finance the war effort. Higher taxes, the alternative favored by most economists of the day, organized labor, and Progressive politicians such as Senator Bob La-Follette, were resisted by banks, businesses, and the wealthy. Initially, Secretary of the Treasury William Gibbs McAdoo called for half of war financing to be provided by increased taxes of various kinds, and the other half to be raised by issuing debt. Persuaded by those who argued that high taxes would reduce support for the war by the wealthy, alarmed by revised estimates of the cost of the war, and equipped with contemporary British and German examples of government efforts to market their war debt to ordinary citizens, McAdoo eventually settled on a one-third to two-thirds split between taxes and borrowing. In the end, taxes financed about one-quarter of the cost of the war (Kang and Rockoff 2015; Gilbert 1970; Sutch 2015).

In addition to relieving the burdens imposed by taxation, financing the war through borrowing offered a number of other advantages. It was hoped that selling bonds to American households would induce them to reduce their consumption and thereby reduce inflationary pressures during wartime. Owning war bonds was also seen as giving American households a financial stake in the war effort and increasing support for the war. McAdoo believed that people who were unable to support the country by fighting would welcome a chance to do their share in the "financial trenches" at home (1931).

Borrowing on such an enormous scale required extraordinary efforts to market bonds to institutions and households that had never previously purchased government debt. The usual underwriting and distribution networks for government bonds did not have the capacity to handle that level of borrowing on anything close to reasonable terms. For suggestions about how to organize an effort to market war bonds on a mass scale, McAdoo looked to the experience of the Civil War. As one method

4. This finding is underscored by the experience of Lisa Sevron, a New School public policy professor who worked as a teller at a check cashing establishment in the South Bronx. She reports that many of the store's regular customers developed a personal connection with her or the other tellers, trusting them more than the bankers who were just down the street (2013).

Table 1. Liberty Loan Subscriptions, by Loan

	First 1917	Second 1917	Third 1918	Fourth 1918	Victory 1919
Subscriptions ($billions)	2.000	3.809	4.177	6.959	4.500
Number of subscribers (millions)	4.0	9.4	18.4	22.8	11.8
Average subscription amount ($)	759	491	227	306	445

Source: Authors' compilation based on U.S. Department of the Treasury 1917, 1918, 1919.

of raising revenue, then Treasury Secretary Salmon Chase tapped the financier Jay Cooke to try his hand at selling government debt directly to ordinary Americans. Cooke did so by organizing a sales force paid on commission. Motivating sales agents through financial self-interest, McAdoo believed, was a "fundamental error. . . . Chase did not capitalize the emotion of the people, yet it was there and he might have put it to work" (1931, 374). McAdoo put the emotion of the American people to work by organizing four Liberty Loan drives conducted during the war. Rather than the continuous sale of bonds, the loans were marketed in a series of campaigns, each with a specific opening and closing date and sales goal, in order to keep engagement levels high. A final Victory Loan drive was conducted after the Armistice.

Table 1 presents summary data on each of the individual loan drives. The bonds were sold in denominations as low as $50, and subscriptions could be fulfilled through installment plans, both of which made the bonds accessible to a broad range of American households.[5] For example, a $50 Liberty Bond could be purchased by a payment of $4 up front, and then twenty-three weekly payments of $2. All told, the five bond drives raised around $24 billion. As a constant share of gross domestic product, this would be equivalent to more than $5 trillion today (calculation based on Williamson 2015). Sales of the fourth Liberty Loan alone totaled nearly $7 billion: nearly twenty-three million people, more than 20 percent of the U.S. population, bought bonds. During the third and fourth loan drives, more than two million people volunteered as foot soldiers for McAdoo's "financial front" (U.S. Treasury 1918).

Civil Society and the Liberty Loan Drives

The broad participation of the American public in the financing of the war was the result of a massive mobilization effort that left no corner of civil society untouched. The actual task of organizing McAdoo's financial army fell to the Federal Reserve System, which had been created by legislation passed in 1913. The Federal Reserve formed central Liberty Loan committees that in turn created state Liberty Loan committees. The state committees then arranged for local committees in counties and in urban areas. The federated nature of the Liberty Loan committees resembled the structure of U.S. civil society organizations at the time (Skocpol et al. 2002). Members of the committees were often drawn from the ranks of community notables: bankers, leaders of civic and business organizations, and newspaper publishers and editors.

Many of the reserve banks, through the publicity divisions of their central committees, circulated material about the bond selling efforts. The issues of the Minneapolis Fed's newsletter, *The Liberty Bell*, for example, contained inspirational stories, bond selling tips based on successful experiences in various locales, and an official Ninth District Song. The Chicago Fed distributed the *War Loan Reveille* to 3,600 local newspapers and the state's bankers, and specific appeals were written for inclusion in major trade journals and fraternal publications such as *Hoard's Dairyman*, the *Michigan Druggist*, *Modern Woodmen*, and *the Wisconsin Medical Journal* (McCutheon 1918).

5. Adjusting for inflation, $50 in 1919 is equivalent to $673 today. This is not an insignificant sum but an amount similar in magnitude to the cost of many common household appliances.

Civic and religious organizations were recruited by Liberty Loan committees to assist in bond sales. At the suggestion of the New York Fed, the Treasury Department recommended to President Wilson that the aid of the Boy Scouts of America be sought; in May 1917, Wilson officially called upon their service. Over the five loan drives, the Scouts secured tens of millions in subscriptions (Murray 1937). Also in that month, a separate women's-only organization, the National Women's Liberty Loan Committee, was created and chaired by Secretary McAdoo's wife Eleanor (who was also the daughter of President Wilson). The Women's Committee worked primarily through existing women's groups and fraternal organizations: the Ancient Order of the Hiberians Ladies' Auxiliary, the Daughters of the American Revolution, the National Grange, the Woman's Christian Temperance Union, the Women's Suffrage Association, the Young Women's Christian Association, and countless others. Under the aegis of the committee, the women of America became a formidable salesforce numbering in the hundreds of thousands, and they were frequently able to outraise their male counterparts (National Women's Liberty Loan Committee 1920). On Liberty Loan Sundays, America's clergy took their pulpits to preach the virtues of bond buying, and model sermons were distributed widely. For example, the Speaker's Bureau of the Seventh Federal Reserve published its own handbook, *Suggestions for Liberty Loan Sermons*, and the Chicago Fed sent more than a thousand copies of "The Legions of Christ" to Protestant and Catholic ministers in Cook County (McCutheon 1918).

The Committee on Public Information (CPI), created by executive order a few days after Congress made America's participation in the Great War official, was another important part of the bond drives. The person tapped to lead it, George Creel, was a muckraking journalist and vocal Wilson supporter. The Creel Committee, as the CPI was more commonly known, was a "gargantuan advertising agency the like of which the country had never known" (Mock and Larson 1939, 4). Through its News Division, it generated copy used by a largely cooperative press to inform the public of war goings-on. Its advertising division persuaded publishers to donate space for CPI propaganda; and its Division of Work with the Foreign Born had the all-important task of inspiring patriotism among the millions of people on American soil whose birthplace was someplace else. As a way to demonstrate their loyalty, members of some nationality groups, especially German Americans, were encouraged to buy Liberty Bonds. Failure to do so put them at risk of harassment or worse by zealous patriots (Breen 1984; Luebke 1974). Even the film industry was enlisted. Hollywood, for its part, understood that participating in the war effort was an opportunity that could further the industry's long-term interests, a sort of "practical patriotism" that married allegiance with prosperity (DeBauche 1997). Major stars such as Charlie Chaplin and America's sweetheart, Mary Pickford, helped promote Liberty Bonds through appearances at rallies and in patriotic films.

In addition to producing and distributing literature in multiple languages, creating news reels, recruiting American artists to design posters and billboards, and hosting war exhibitions in major cities, the CPI organized a volunteer speakers bureau known as the Four Minute Men (FMM), "the most unique and one of the most effective agencies developed during the war for the stimulation of public opinion and the promotion of unity" (Committee on Public Information 1920, 21). Supplied with material by the CPI, the volunteers wrote their own speeches and presented them during intermission at movie theaters. The speeches were calibrated to last no longer than the time it took the projectionist to change reels during a movie, and speakers were instructed to deliver them without notes (Axelrod 2009). Soon the work of the FMM expanded to include forums at churches, fraternal lodges, labor unions, and other gathering places. The FMM were issued talking points for each of the four Liberty Loan drives by the CPI. In addition to reminding their audiences of the principles for which the allies were fighting, the FMM were asked to provide information on the particulars of the issue, explain basic principles of investing, and exhort the virtues of savings and thrift.[6] According to Creel, seventy-five thousand volunteered for service as FMM across more than five thousand communities giving more than seven million speeches (1928).

Four Minute Men were found on 153 college campuses, and a junior division was created to sell War Savings Stamps (Committee on Public Information 1920). Marketed to households of modest means and to children, the stamps were distinct from Liberty Bonds and came in denominations as low as twenty-five cents. War Savings Stamps were designed to inculcate habits of thrift among the nation's schoolchildren and the general population (U.S. Treasury, National War-Savings Committee 1917),[7] and some of their features were later incorporated into the design of government savings bonds. The War-Savings Committee of the Treasury Department encouraged local communities to form war savings societies, small groups of ten or more individuals that were to "lay the foundations of thrift and economy throughout the United States" (1917, 6). By June 1918, more than seventy thousand such societies existed across the country (U.S. Treasury, National War-Savings Committee 1918a, 1918b). However, as a source of finance for the war, savings stamps were far less important than Liberty Bonds.

Commercial and Financial Institutions and Liberty Bonds

Financial institutions were critical to the success of the Liberty Loan drives. Banks that were members of the Federal Reserve System were given a powerful incentive to hold Liberty Bonds in that they could use them as collateral for loans from the Fed itself. But in addition to purchasing Liberty Bonds for their own accounts, banks and other financial institutions facilitated the payment of Liberty Loan subscriptions and extended credit to customers holding Liberty Bonds as collateral, effectively enabling individuals to purchase Liberty Bonds on credit.[8] Banks were also encouraged to offer to their customers a free place to keep their bonds (Leon 1918).

The Liberty Loan committees of the Federal Reserve districts actively monitored the subscriptions obtained through individual banks, and in some cases published bank-level subscription data for the financial community and the general public to scrutinize. For example, the Liberty Loan Committee of the Sixth Federal Reserve District published a series of pamphlets on the banks within each state in the district, with titles such as "What the Banks of Georgia Did in the Third Liberty Loan—Did Your Bank Do Its Part?" In that district, each bank was allocated a quota for subscriptions, and the pamphlets listed those quotas and the amount of actual subscriptions received for every bank.

Outside banking, American commercial enterprises were called on in a variety of ways to market the loans to their employees and their customers and to provide help with advertising and publicity. Department stores were turned into points of sale, and their store windows were given over to displays designed to inspire Liberty Loan purchases (*New York Times* 1918). Clerks were told to push Liberty Bonds in addition to merchandise, and in some stores, customers could use Liberty Bonds as credit against which to make purchases (Clifford 1917; *New York Times* 1917). Railroads, packing houses, and other large employers offered their employees an opportunity to buy bonds through payroll deductions. President Wilson

6. "For saving is the essence of these bond issues. The demand is that we, all of us, save out of our current earnings. We must save every week, every day from the money we get. . . . The appeal to save also involves this: Every man who saves (even if only a few dollars) becomes thereby a capitalist. . . . Fifty or a hundred dollars saved up instead of used hand to mouth means capital; and capital, even on the smallest scale, means freedom from the next day's worry, means independence, means power" (Committee on Public Information 1918).

7. "Thrift is conservation. Thrift is discrimination. Thrift is self-discipline, self-control, self-respect. Thrift is a foundation stone of character. Thrift is practical patriotism" (U.S. Treasury, National War-Savings Committee 1918a or b, 3)

8. Banks were instructed by the Federal Reserve to limit the rate of interest charged on loans with Liberty Bonds as collateral to the coupon rate of the bonds themselves.

Table 2. Liberty Bond Purchase Rates in Historical Perspective

1918–1919 Households		2013 Households	
1918–1919 Income	Liberty Bond Purchased in 1918–1919, Percent	Equivalent 2013 Income	Stock Ownership Rate, Direct or Indirect
Less than $1,020	36.7	Less than $13,800	11.4
$1,020 to $2,110	69.7	$13,800 to $28,399	26.4
$2,110 to $3,470	86.1	$28,400 to $46,699	49.7

Source: Authors' calculations from data collected in Olney 1995 and Board of Governors 2016.

designated April 26, 1918, as Liberty Day, and urged that every employee be released from service at noon to participate in Liberty Loan festivities (Whitney 1923).

Labor unions were also enlisted. The American Alliance for Labor and Democracy, headed by Samuel Gompers of the American Federation of Labor, was created to reach out to organized labor. Nominally independent, in fact the organization was a front for the CPI. The alliance established 150 branch offices across the country and orchestrated two hundred mass rallies (Axelrod 2009).

Subscriptions by Households of Modest Incomes

Some perspective on the success of the Liberty Bond drives in inducing ordinary households to make purchases can be found in data collected by the Bureau of Labor Statistics (BLS) in 1918 and 1919. In those years, the BLS conducted one of the first surveys of American households' incomes and expenditures. The survey was not intended to be nationally representative but instead focused on families in the middle of the earnings distribution headed by married couples and residing in urban areas.[9] The survey's comprehensive questions regarding the uses of households' funds revealed any purchases of Liberty Bonds.

Table 2 presents data on the rate at which the surveyed households had purchased Liberty Bonds within the previous year. This rate ranged from nearly 37 percent to more than 86 percent for the higher-income households in the survey.[10] Perhaps the best way to put these rates into perspective is to compare them with modern rates of ownership of financial assets. The most widely held financial asset today, besides a checking account, is common stock. Table 2 also presents data from the 2013 Survey of Consumer Finances on the rate at which households of different income levels owned stock, either directly or indirectly through mutual funds or retirement accounts. The income groups are the 2013 equivalent amounts of the incomes of the 1919 data—that is, the 1919 incomes adjusted for inflation into 2013 dollars. Comparing the data in the two panels shows that modern households own stock at far lower rates than 1919 households of equivalent income owned Liberty Bonds. The modern data also count all stock ownership, which presumably includes amounts purchased in earlier years, whereas the Liberty Bond data includes only purchases during the current year.[11] The Liberty Bond drives induced households to become owners of financial assets at extraordinary rates.

Further detail regarding the purchases of

9. The BLS surveyed 12,817 families residing in ninety-nine cities, mostly during late 1918 and 1919 (see Olney 1995).

10. The survey did not include any high-income households; these are the higher-income households among those actually sampled. James Feigenbaum (2015) documents the relationship between the incomes of surveyed households and the income of all households.

11. On the other hand, the BLS households may not have been representative of all households in their income groups, in that they were all married and living in urban areas.

Table 3. Liberty Bond Purchases

	(Families Making Liberty Bond Purchases)	
1919 Income	Median Value, Purchases	Median Percentage of Income
Less than $1,020	40	4.7
$1,020 to $2,110	60	4.4
$2,110 to $3,470	140	5.5

Source: Authors' calculations from data BLS Survey data collected in Olney 1995.

Liberty Bonds by ordinary households is presented in table 3, which shows the median value of the amount purchased, among those households that made purchases in the BLS survey. The smallest denomination Liberty Bond was $50, so the amounts in the table indicate that many households purchased Liberty Bonds in installment plans, and had not yet fully completed their purchases (the amounts in the table reflect actual expenditures on the bonds, rather than the amounts subscribed.) The data in the table indicate that households that purchased Liberty Bonds typically spent between 4.5 and 5.5 percent of their gross income on their purchases, a substantial amount for an asset that had not existed just two years before the survey was taken.

EMPIRICAL ANALYSIS OF VARIATION IN LIBERTY LOAN PARTICIPATION RATES

McAdoo succeeded in creating a popular financial movement. In doing so, he induced millions of ordinary Americans to save by investing in Liberty Bonds and introduced most of those households to the ownership of bonds for the first time. The movement, however, proved to be more popular and successful in some places than in others. For example, in the fourth, and largest, Liberty Loan drive, around 22 percent of the American population subscribed. But the success rates of McAdoo's financial troops varied widely, from 6.2 percent in North Carolina to 38.7 percent in Wyoming. In general, midwestern and western states had relatively high subscription rates, southern states had very low ones, and mid-Atlantic and New England states fell somewhere in between.

The success of the Liberty Bond drives in different places was clearly related to the level of wealth in general and banking resources in particular. However, the existence of strong civil society institutions and social capital likely also aided the campaign's success. In some places, citizens showed high civic engagement and established a broad and vibrant set of institutions that formed the backbone of local Liberty Bond sales efforts. In other places, fewer such institutions existed and the loan campaigns were not as well organized or staffed. Differences in the quality of institutions were therefore likely to have contributed to the variation in Liberty Loan subscription rates.

Data

No disaggregated data on Liberty Loan sales were ever published by the Federal Reserve or the Treasury. The annual Treasury reports include figures for sales and subscription rates at the state level and for larger cities, but those data conceal most of the geographical variation in Liberty Bond sales. For this paper, we assembled a new dataset of Liberty Bond subscriptions at the county level for several Federal Reserve districts from documents found in a number of different archives. These documents were published by the Federal Reserve Liberty Loan committees or by state-level Liberty Loan committees. The Minneapolis Federal Reserve, for example, published county tallies for the Ninth District in one of its *Liberty Bell* newsletters that we uncovered at the South Dakota Historical Society. Other reports turned up at the National Archives, in Princeton University's Liberty Loan Archive, the Library of Congress, and in books that individual states published on their World War I involvement.

Table 4. County Characteristics

Variable	Mean	Min	Max	SD	Observations
Liberty Bond subscription rate, fourth loan	0.14	0.00	0.57	0.10	1,378
Farm values per capita, 1920	$463.76	$0.08	$2,677	$414	1,378
Tax returns per capita, 1920	0.03	0.00	0.24	0.03	1,371
Log population, 1920	7.04	4.17	13.83	0.77	1,378
Percent urban, 1920	0.15	0.00	1.00	0.21	1,378
Sharecroppers as pct. of all farm tenants	0.49	0.00	1.00	0.21	1,378
Percent illiterate, 1910	0.09	0.00	0.57	0.08	1,378
Percent Catholic, 1910	0.07	0.00	0.85	0.10	1,378
Percent foreign born, 1910	0.09	0.00	0.49	0.10	1,378
Log banks per sq. mile, 1920 (000s)	7.37	0.00	4.23	6.01	1,366
Log banks per capita, 1920 (000s)	0.52	0.00	1.82	0.38	1,366
Boy Scouts per capita, 1917 (000s)	2.11	0.05	6.00	0.99	28
Women's clubs per capita, 1914 (000s)	0.08	0.01	0.19	0.05	28

Source: Authors' calculations from data collected in Haines 2010, U.S. Congressional Serial Set 1918, and Winslow 1914.

All told, we have data for Liberty Bond subscription rates for 1,378 counties, located within six of the twelve Federal Reserve districts.[12]

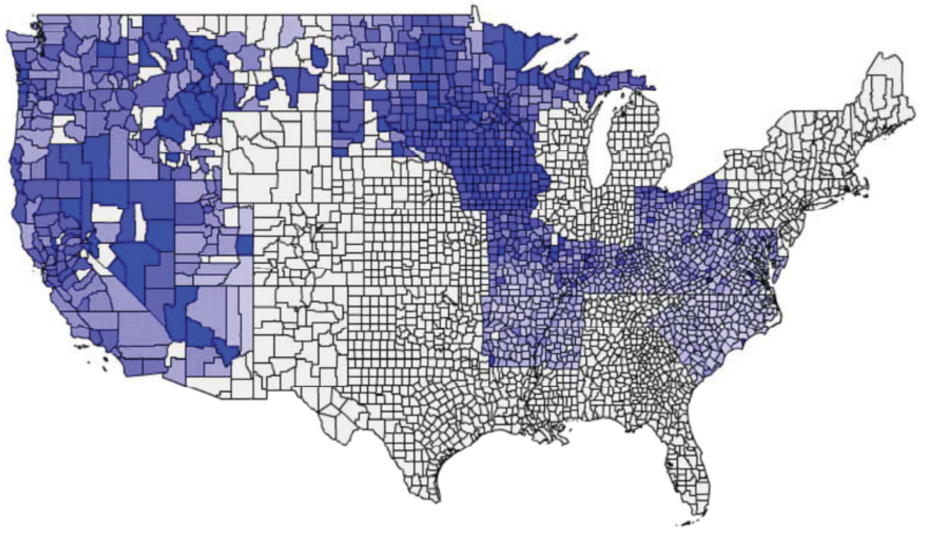
For the empirical analysis, we use the subscription rate for the largest (fourth) Liberty Loan, but in cases where we only have data for other loans, we substitute the subscription rate for the fifth loan, or for the third loan, where available. (In our empirical models, we include fixed effects for the different loans.) Our analysis focuses on the variation in this data across counties and in particular investigates whether measures of the strength of local civil society organizations or the presence of banks—both of which were enlisted in the loan drives to promote bond sales—were correlated with higher subscription rates, conditional on measures of wealth and other social characteristics. We therefore match these subscription data to contemporaneous data on local populations, wealth, and demographics from the federal census (Haines 2010). These data include measures of urbanization, illiteracy, farm values per capita, the share of farm tenants who were sharecroppers, and the prevalence of Catholics and the foreign born. No income data are available for the period, but we include the best available proxy, the number of tax returns filed as a percentage of a county's population, obtained from the U.S. Treasury.[13] We also include data we have collected on membership in civil society organizations. This produces a county-level dataset we can use to analyze the variation in Liberty Bond subscription rates.

Table 4 provides summary information on the variables in our analysis. Note the enormous variation across counties in subscription rates, from virtually zero to nearly 60 percent of a county's population. The counties included in the sample also varied quite significantly in their levels of wealth and social composition. On average, only 3 percent of the sample counties' populations filed income tax returns, and 49 percent of their farm tenants were share-

12. We have data for at least one Liberty Loan for all the counties in the Fourth (Cleveland), Fifth (Richmond), Eighth (Kansas City), Ninth (Minneapolis), and Twelfth (San Francisco) Federal Reserve districts, along with Iowa, located in the Seventh (Chicago) District. The publications of the Liberty Loan committees of the remaining Federal Reserve Districts do not appear to have included county-level data on subscription rates for any of the Liberty Loans.

13. For the 1920 tax year, a tax return was required only of individuals with a net income of $1,000, and married couples with a net income of $2,000. We thank Price Fishback and Paul Rhode for these data, which are drawn from a 1923 U.S. Treasury Department report.

Figure 2. Liberty Bond Participation, Sample Counties



Source: Authors' calculations from data collected for the Fourth, Fifth, Eighth, Ninth, and Twelfth Federal Reserve Districts, and for the State of Iowa.

croppers. The mean values of the proportions illiterate, Catholic, and foreign born among the sample counties were 9, 7, and 9 percent, respectively. And the sample counties had on average 0.52 (log) banks per capita.

Before proceeding with the analysis, an illustration of the counties included in the sample, and the variation in Liberty Bond subscription rates across those counties, is presented in figure 2. In the figure, subscription rates are indicated by the darkness of the shading of the counties; counties for which we have no data are white. The figure clearly illustrates the higher subscription rates in the upper Midwest and West relative to the South. Subscription rates were particularly high in Iowa and Minnesota counties, places with both strong civil society institutions and large numbers of banks.

Findings

Table 5 presents estimates of cross-sectional regression models in which the economic and social determinants of Liberty Bond subscription rates are analyzed at the county level. The first column presents results of a simple specification in which only the available measures of wealth and income from the era are included—farm values per capita, which give the capitalized value of profits from farming, and the proportion of the population filing tax returns. Wealthier counties would obviously have had greater resources to commit to Liberty Bonds, and would likely also have had a greater capacity to participate in volunteer efforts to promote Liberty Bond purchases. Unsurprisingly, these variables are both very strongly correlated with Liberty Bond subscription rates and together explain just over 50 percent of the variation across counties. Richer counties clearly subscribed to Liberty Bonds at much higher rates.

We next add a number of variables related to economic and social characteristics of the counties. Both a county's population and its level of urbanization may have influenced the ease with which the bonds could be marketed. In particular, more densely populated communities may have made household canvassing much more efficient at a time when most families were without cars or telephones. The numerous promotional materials circulated about the bonds required that the targets of these appeals be able to read for the appeals to be effective, and thus bonds may have sold better among more literate populations. Literacy was

Table 5. Determinants of Liberty Bond Subscription Rates

	(1)	(2)	(3)	(4)
Farm values per capita (000s)	0.111***	0.077***	0.050**	0.045**
	(0.015)	(0.013)	(0.014)	(0.015)
Tax returns per capita	1.070**	0.486**	0.450*	0.439**
	(0.269)	(0.141)	(0.169)	(0.152)
Log population		−0.008	−0.011	−0.008
		(0.005)	(0.006)	(0.005)
Percent urban		0.070**	0.079**	0.071**
		(0.005)	(0.021)	(0.021)
Sharecroppers as percentage of tenants		−0.065**	−0.071**	−0.070**
		(0.020)	(0.021)	(0.019)
Percent illiterate		−0.235***	−0.224***	−0.174**
		(0.050)	(0.053)	(0.050)
Percent Catholic		0.114***	0.102***	0.100***
		(0.023)	(0.022)	(0.020)
Percent foreign born		0.190**	0.141	0.158**
		(0.068)	(0.088)	(0.054)
Log banks per square mile			1.027	0.730
			(0.608)	(0.503)
Log banks per capita			42.793**	41.688**
			(14.55)	(13.236)
Boy Scouts per capita (000s)				11.330*
				(5.000)
Women's clubs per capita (000s)				8.8032
				(105.319)
Constant	0.166*	0.175**	0.195**	0.131*
	(0.071)	(0.055)	(0.064)	(0.058)
Observations	1,367	1,367	1,358	1,358
R^2	0.510	0.675	0.671	0.701
Loan FE	Y	Y	Y	Y

Source: Authors' calculations.
Note: Robust standard errors in parentheses.
$^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$

also related to human capital and educational attainment, and therefore may also have reflected the income level of a county. To the extent that literacy rates reflected the quality and availability of local schools, these rates may also have indicated the degree to which public goods were provided in a county, and perhaps also the quality of institutions generally in that county.

We also include a measure of economic inequality: whether farm tenants were sharecroppers, as opposed to paying their rent with cash. Agricultural labor markets in early twentieth-century America were hierarchical: land owners at the top, cash tenants next, and sharecroppers and farm laborers at the bottom (Depew, Fishback, and Rhode 2013). Inequality hinders the production of public goods (Anderson, Mellor, and Milyo 2008), and thus we expect that participation in the Liberty Loan drives will be lower in more unequal counties. As noted, the foreign born were particular targets of CPI mobilization, and thus we include a measure of the proportion born abroad. Catholic organizations such as the Knights of Columbus and the National Catholic War Council promoted participation in the war effort, including buying Liberty Bonds. We therefore incorporate the Catholic percentage of the population in our specification.

The results, reported in the second column of the table, are strongly consistent with our expectations. More urbanized counties had higher subscription rates. Economic inequality reduced participation in the Liberty Loan drives. Literacy, on the other hand, appears to have been strongly correlated with Liberty Bond ownership. Counties with more Catholics and with larger foreign-born populations had higher subscription rates as well. These latter results provide at least suggestive evidence of the effects of the Liberty Bond sales campaigns. The presence of large numbers of Catholics was likely correlated with Catholic organizations that were enlisted in the sales effort. And the foreign born were specifically targeted in the campaigns. For these groups, Liberty Loans may also have had a compensatory effect, in that they had lower social status than Protestants and the native born.

In the third column of table 5 we add our data on banks: not total banking resources, which would be very closely related to income and wealth, but the total number of banks, scaled by both population and by county size in square miles (Rajan and Ramcharan 2015). These variables capture the reach of the banking system in the population; greater bank density should have facilitated more bond subscriptions, through more frequent and convenient contacts between local bankers and the surrounding population. Apparently, it did. The subscription rates in counties with above-average bank density were substantially higher than in other counties with no bank access. Conditional on income and wealth, and on a number of different social characteristics, counties with greater numbers of banks, which were actively involved in selling Liberty Bonds, had higher subscription rates.

Finally, in the last column, we add two indicators of social capital, both measured at the state level on a per capita basis: membership in the Boy Scouts and the number of women's clubs.[14] As noted, each of these groups played a significant role in marketing the bonds. Therefore, we expect that in states where these organizations had a greater presence, more people would have bought Liberty Bonds. Both coefficients on our civil society variables are positive; however, only that of the Boy Scouts is statistically significant.

The most important insight that emerges from these regressions is that Liberty Bond subscriptions were not simply a matter of income and wealth, although both were quite important. Given the very strong correlation between financial asset ownership and income in modern household surveys, one might be tempted to believe that Liberty Bonds would have been purchased mainly in wealthy areas. Yet even conditional on measures of income and wealth, the local strength of the Liberty Loan campaigns clearly mattered. We cannot directly measure the size or structure of local Liberty Loan committees, but the regression estimates indicate that the presence of greater numbers of organizations that were enlisted in the campaigns was correlated with higher subscription rates. Moreover, the presence of greater numbers of individuals who were specifically targeted by the campaigns, such as the foreign born, was also correlated with higher levels of participation. Social conditions mattered as well; more urbanized counties, counties with lower rates of illiteracy, and counties with lower levels of inequality also had higher subscription rates. These measures likely indicate the extent to which counties were amenable to the efforts of the campaigns to promote participation in the Liberty Bond drives.

Taken together, these results suggest that the massive campaigns to market Liberty Bonds were effective. They also demonstrate that, at least in principle, it is possible to raise the savings of ordinary households by enlisting financial institutions and civil society organizations in efforts to promote savings vehicles. To be sure, the conditions that prevailed during World War I were unusual in many respects. We believe, however, that these results offer valuable lessons for the design of modern initiatives to promote savings. We discuss the specific implications of these findings in the con-

14. We collected data on Boy Scout membership from the *8th Annual Report of the Boy Scouts of America* (U.S. Congressional Serial Set 1918) and on women's clubs from the *Annual Directory* (Winslow 1914).

clusion; in the next section, we describe efforts to promote government bonds during and after World War II.

SERIES E BOND SALES DURING WORLD WAR II

In the decades following World War I, the federal government continued to market its bonds to ordinary households, with varying degrees of success. The most important of these efforts were the Series E bond sales undertaken during World War II.

In 1935, the Roosevelt administration created savings bonds. Unlike Liberty Bonds, these were not marketable securities—they could not be traded, and their value could not fluctuate. They were offered in denominations as small as $25 (purchase price, $18.75), and had a schedule of fixed redemption values, which amounted to the purchase price plus accumulated interest. These instruments were offered to provide a source of financing to the federal government but also to create an attractive savings vehicle to ordinary households. They proved quite popular.

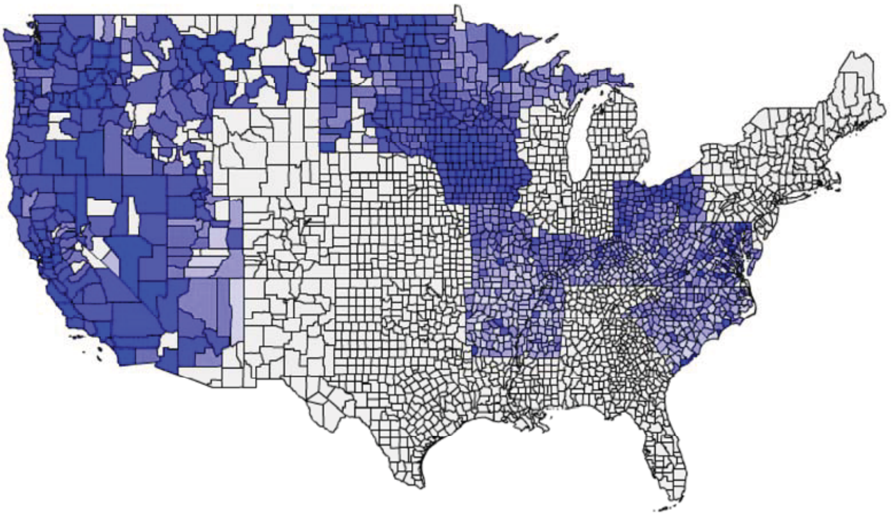
At the outbreak of World War II, American policymakers faced the same menu of financing options as Secretary McAdoo had in the previous confrontation with Germany and her allies. President Roosevelt, for his part, favored heavy taxation and a forced savings program operating through regular payroll deductions. The latter would both raise money quickly and act as a brake on inflation. Treasury Secretary Henry Morgenthau Jr., however, believed that the public would voluntarily lend its money to the government from a sense of patriotism and shared sacrifice and sought to finance much of the war expenditures through borrowing. Although the government issued a number of different debt securities during the war, among the most important were the Series E savings bonds, denoted defense bonds. These were essentially savings bonds with a new name.[15] However, unlike ordinary savings bonds, the sales of Series E bonds were promoted quite aggressively in large-scale bond drives.

Morgenthau enlisted the help of Peter Odegard, a political scientist at Amherst College, to design the Treasury's bond selling program. In many respects, the plan simply reprised many of the features of the Liberty Loan campaign: selling efforts were concentrated in short drives; America's commercial banks, sometimes at the prodding of the American Bankers Association, agreed to participate, this time as issuing agents; publishers were expected to donate space for advertising; and legions of volunteers were recruited from the ranks of America's civic, religious, and business organizations (Morse 1971; Olney 1971). Once again, department stores were commandeered for war purposes. For example, whenever a bond was sold at a Younkers store in downtown Des Moines, a coffin of Adolf Hitler was lowered from the ceiling to the floor, where it came to rest by a poster entreating passersby the store window to "Help Us Bury Hitler" (Lindaman 2014). A propaganda apparatus, the Division of Press, Radio, and Advertising, was installed in the Treasury Department, as was a Women's Section headed by Harriet Elliott, dean of women at the University of North Carolina. Morgenthau volunteered his wife to serve in the Women's Section "to keep her from worrying too much" about their son in the armed services (Olney 1971, 56). During the loan drives, some five or six million volunteers canvassed their local communities, asking their neighbors to do their part to "buy our boys back" (Sparrow 2008, 263). Personal solicitation, in fact, proved highly effective, according to wartime research conducted by social psychologists employed in the Division of Program Surveys in the Department of Agriculture (Cartwright 1949).

Given the similarity in the roles of civil society and financial institutions in each of the wars, we might expect a resemblance in the geography of the mass financial mobilizations of World Wars I and II. This is precisely what

15. Sales of E Bonds were limited to individuals who could purchase, at most, $5,000 (at maturity) worth of bonds during any calendar year. Wealthier investors and institutions (except commercial banks) could buy Series F and G Bonds issued in larger denominations and with longer maturities. The Treasury Department also issued marketable short-term securities. In the end, 28 percent of war expenditures were financed by borrowing from the public (Rockoff 2012).

Figure 3. Series E Bond Purchases Per Capita, 1944



Source: Authors' calculations from data collected in Haines 2010.

we find. Figure 3 presents a map with counties shaded by the sales of Series E bonds per capita in 1944. The similarity between the geographical patterns exhibited in this map and that of figure 2 is striking. The raw correlation between Liberty Bond participation rates and county-level sales of Series E bonds per capita (logged) is an impressive 0.67. Counties with more effective Liberty Loan promotion also purchased Series E bonds at high rates.

U.S. Savings Bonds After World War II

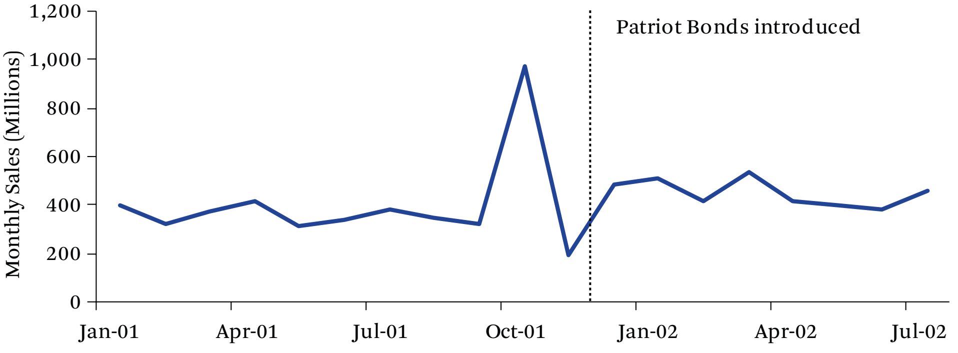
After the war, the Series E Defense Bond became a peacetime security in which American families continued to invest, either at their workplaces through payroll deduction or over the counter. The Treasury developed new methods of promoting savings bonds, including a bond-a-month program in cooperation with the nation's banks. As they did during the two world wars, the Treasury also initiated periodic drives, centered on nonwar motives or as tie-ins with highly visible government initiatives such as the space program in the 1960s. During the Vietnam War, the Johnson administration launched in 1967 a new savings product, the Freedom Share, which was not particularly successful (U.S. Treasury, Savings Bond Division 1991), perhaps because the war itself, by that point, was not very popular.

In the months following the terrorist attacks of September 11, 2001, several members of Congress proposed legislation that would have authorized the U.S. Treasury to issue updated versions of war bonds (Makinen 2002). The Treasury responded to these proposals by introducing Patriot Bonds, based on the existing Series EE savings bonds. These Series EE bonds are the modern successors to the Series E defense bonds of World War II.

The Patriot Bonds were not a new financial instrument; they were simply traditional savings bonds with the words "Patriot Bond" and a profile of Thomas Jefferson printed on them. No major initiatives were introduced to promote the purchases of these bonds, beyond the change in the name. Individuals wishing to purchase a Patriot Bond could do so through a financial institution, and a few offices operated by the U.S. Treasury that promoted savings bonds. But no large-scale effort was made to appeal to Americans' patriotism to promote the bonds, and no engagement with civil society organizations was sought for help with the marketing. Based on our analysis of the campaigns to market Liberty Bonds, we would predict that the introduction of Patriot Bonds would have had little effect.

And this is precisely what happened. Figure 4 presents monthly sales of U.S. savings bonds.

Figure 4. Monthly Sales of U.S. Savings Bonds, in Millions



Source: U.S. Treasury Bulletin, Table SBN-3, various issues.

In October 2001, sales of savings bonds increased enormously, perhaps motivated by patriotism or as a response to economic uncertainty following the terrorist attacks of September. This surge preceded the introduction of Patriot Bonds in December 2001. In the months that followed, savings bond sales appear to have been slightly higher than during the same months of 2001, but the increase was extremely small.

In 2003, the U.S. Treasury eliminated its marketing efforts for savings bonds, and over the following years, changes to the savings bonds the government offered made them far less attractive to ordinary households (see Tufano and Schneider 2005). In 2011, paper savings bonds were eliminated; rather than going to a local financial institution to purchase a bond, individuals must now use the Treasury's website. This may have reduced the appeal of savings bonds as gifts, and made them less accessible to households without high-speed Internet access. All of these changes have been motivated by concerns that the costs of issuing and administering savings bonds may have exceeded their benefits for the borrowing costs of the federal government. However, these changes neglect the critically important role that savings bonds have played in encouraging savings among households with modest means.

CONCLUSION: LESSONS FOR PROGRAMS TO INCREASE SAVINGS

The Liberty Loan drives of World War I induced millions of American households, including a substantial fraction of urban working-class families, to increase their savings and purchase government bonds. What led the loan drives to be so successful, and what lessons do they hold for modern policymakers wishing to increase the savings rates of lower- and middle-income households?

First, the Liberty Bond drives enlisted the participation of all manner of civic and economic organizations, from women's clubs to the Boy Scouts to periodicals and businesses of every description, and worked closely with local banks. These organizations devoted considerable resources to the cause of marketing the bonds, and their achievements were publicized widely. Working together with offices created by the government to create and distribute marketing materials for the bonds, these organizations created what was probably the largest and most effective sales force in American history. But the local presence of this sales force, and its successes, varied significantly across counties. Our analysis has shown that in counties with more banks, higher literacy rates, and a greater presence of groups associated with the organization of the Liberty Loan campaigns, subscription rates were higher. The quality and character of local institutions, and likely the degree of social capital, influenced the rate of success of the campaigns.

Second, although the loan drives advertised heavily in periodicals, much of the selling was done through face-to-face contacts at individuals' homes and at places such as movie theaters and department stores. The considerable "shoe-leather" element to the bond selling was complemented by large rallies held in cities and towns led by celebrities and other notable figures. Again, our empirical analysis shows that in counties where the in-person presence of the loan campaigns was greater, subscription rates were higher.

Third, a variety of marketing messages were used in selling the bonds, but for the most part they did not appeal to individuals' financial self-interest. Rather than focusing on the rates of return offered by the bonds or the importance of saving for retirement, the loan drives appealed to individuals' patriotism, local pride, and the value of contributing to a greater cause (see figure 1). To be sure, some of these messages were quite xenophobic, and some elements of the campaign worked to shame the foreign born into demonstrating their loyalty by purchasing the bonds. But even though Liberty Bonds were reasonably attractive investments, the marketing efforts behind them did not emphasize financial motives for purchasing them, consistent with Secretary McAdoo's desire to lift bond sales "above the commercial plane" (1931, 378).

That these characteristics of the Liberty Loan drives would help make them successful is consistent with the findings of modern research on savings behavior. Impatience, cognitive biases, and an aversion to banks lead many households to choose to not save at all, even if it is in their interest to do so. By creating a massive marketing campaign, and using powerful face-to-face appeals to deliver messages related to patriotism and the greater causes associated with purchasing government bonds, the loan drives were able to overcome these biases and induce historically unprecedented numbers of lower- and middle-income households to subscribe.

Given that the Liberty Loan campaigns were conducted during extraordinary circumstances—World War I—one could not reasonably expect that any modern peacetime program to increase savings could hope to be as large or as effective or rely on similar marketing messages. No modern cause is as compelling as the defeat of the Germans to inspire individuals to save, or to enlist the volunteer participation of countless individuals to market savings vehicles. Yet we believe that the sources of the Liberty Loans' success offer valuable lessons that could help inform the design of programs to raise the savings rates of ordinary households.

In recent years, a growing number of initiatives have been proposed or implemented to increase savings rates. None of them have any of the attributes that made the Liberty Loan drives so successful. For example, some programs have sought to improve the financial literacy of ordinary individuals, in the hopes that this would increase their savings rates. But the results have been mixed at best (for reviews, see Fernandes, Lynch, and Netemeyer 2014; Lusardi and Mitchell 2014; Miller et al. 2015; Hastings, Madrian, and Skimmyhorn 2012). For example, state mandates requiring high school students to take a financial literacy course have not increased savings rates (Cole, Paulson, and Shastry 2015). The notion that greater financial literacy alone would not increase savings is consistent with the experience of the Liberty Bond drives, which promoted saving and investing using a variety of marketing messages unrelated to financial self-interest.

Others have sought to increase savings by marketing low-cost savings vehicles. For example, Peter Tufano and Daniel Schneider (2005) call for a renewal of efforts to promote savings bonds, which have been all but abandoned by the federal government. In response, the Treasury added investment in savings bonds as an option on Form 8888 that allows people to allocate their tax refunds to accounts at a financial institution. However, this feature is set to expire with the 2016 tax season and currently is not widely promoted. As we have seen, the lack of any effect from the mere designation of savings bonds as Patriot Bonds in 2001 illustrates the importance of a substantial marketing campaign to induce households to save.

In a related proposal, Mehrsa Baradaran advocates for reviving the postal savings banks that served immigrants and small savers in the United States from 1911 to 1966 (2015). In an era before deposit insurance and the automobile, the safety, convenience, and familiarity of the U.S. Postal Service (USPS) proved attractive to many working-class people (Baradaran 2015). And unlike many U.S. government agencies, the USPS is incredibly popular with the public.

In the Pew survey cited earlier, 84 percent of those interviewed had a favorable impression of USPS. In addition to their trustworthiness, local post offices offer the advantage of operating in virtually every neighborhood. We found in our cross-sectional analysis that the supply of financial institutions was an important factor in increasing subscription rates, and in a recent study, researchers demonstrated that supply-side factors influence savings rates, especially for those who are at risk for being "unbanked" (Célérier and Matray 2014). Increasing the supply of nonbank financial institutions—perhaps even working with the AFS companies that are frequented by LMI individuals—might be a mechanism for improving savings rates at the lower end of the wealth distribution.

Both of these ideas hold promise, and that they do not rely on traditional banks, which many low- and middle-income Americans distrust, adds to their appeal. But our historical analysis suggests that ultimately their success may depend on whether an effective marketing campaign can be created to persuade households to participate. Without such concerted efforts, take-up rates for any kind of savings program are likely to be low (Currie 2006).[16]

A potentially significant step toward actually implementing a program along these lines was announced in 2015 by the Treasury Department: the creation of a new savings account, the myRA. These accounts would function like a Roth IRA, but would be invested in government savings bonds and would therefore be guaranteed by the government. Currently, the Treasury Department is partnering with Intuit, the maker of TurboTax,[17] to advertise the new myRA to some of its customers via email. It is also using social media platforms to promote its availability both to individuals and to employers.

The myRA is an important step, but the experience of the Liberty Bond drives suggests that to be successful, its promotion should not only rely on e-marketing but also enlist the help of community groups, businesses, churches, and other organizations to reach the families who would benefit most from increased savings. Partnerships could be forged with organizations such as the National Association of Tax Professionals or with the Internal Revenue Service's Volunteer Tax Assistance Program (VITA), for example, to encourage LMI to invest their tax returns in myRA.[18]

Moreover, such a marketing campaign would likely need to be regionally targeted—in places

16. For example, several states are experimenting or have experimented with Children's Development Accounts, savings accounts that are established for children as early as birth with deposits from the state or charitable foundations. In 2008, Harold Alfond, a Maine philanthropist, launched a pilot program, the Harold Alfond College Challenge, to facilitate access to higher education by encouraging college savings as early as possible in a child's life. Using the state's 529 college savings plan as the platform, the Challenge offered a $500 grant to every Maine child less than a year old whose parents or other responsible adult opened an account. No initial contribution was required. The pilot program featured extensive outreach and recruited health professionals to encourage and facilitate sign-up. At the end of the pilot year, the enrollment rate was 53 percent. The following year, the challenge was implemented statewide, but fewer resources were invested in outreach and marketing. At the end of the first year of statewide availability, 39 percent of eligible children had been enrolled, a drop of nearly 15 percent from the previous year (Clancy and Lassar 2010). At the urging of policy advocates, in 2014 the Challenge was redesigned as an opt-out rather than an opt-in program (Clancy and Sherraden 2014).

17. Another partnership with TurboTax, the Refund-to-Save initiative, used motivational prompts embedded in the tax preparation software as a means to increase savings from tax refunds by users (Grinstein-Weiss et al. 2014). The intervention was moderately successful, inducing treated participants to deposit between $200 and 300 more from their refunds in various types of accounts compared with controls.

18. Treasury could build on, for example, the success of the SaveUSA program, a partnership between VITA and the Corporation for National and Community Service in four cities, New York, Tulsa, Newark, and San Antonio. SaveUSA allows tax filers working with trained volunteer tax preparers to open a special savings account with a local financial institution with an initial deposit of $200 or more from their tax refund. Participants then pledged to keep at least $200 in their account for a year. If they were successful in doing so, they received a 50 percent match on the pledged amount, up to $500 (Azurdia and Freedman 2016).

where civil society institutions are not as well developed, additional effort will need to be put forth. It is also worth underscoring that retirement is just one of many motives for saving. It is understandably one that preoccupies policymakers, but for many it may not have as much significance as advocates would hope. In fact, for LMI individuals, retirement ranks below unexpected expenses and even "just to save" as motives for savings (Board of Governors 2015). Thrift can be a virtue in its own right, not just the means to some material end. Perhaps we need to be more creative in the ways we currently answer the question of "saving for what?" drawing inspiration from the historical record to design appeals that would resonate with diverse audiences.

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