By Bruce Champ

Substitutes for government-issued money are produced and used from time to time even in countries like the United States. Understanding why people turn to these substitutes and to what degree they are successful—or not—can teach us a lot about the elements essential to a well-functioning currency.

Imagine you just want a cup of coffee. It's only \$1.25, but you have no cash in your wallet. They don't take checks. They don't take credit cards. Cash only! Or...the last bus out of town leaves in 5 minutes. You have no change for the \$1.75 fare, and it's 16 miles home.

Ever been there? While such cash-poor moments happen less frequently in our modern age of credit cards, gift cards, prepaid store cards, and debit cards, each of us has probably lived through a few times where the absence of cash on hand was a big inconvenience. Throughout the history of our country, there have been many times where shortages of cash were so severe they made life difficult for a lot of people—and hindered the smooth operation of the economy.

It's interesting to explore the ways people have responded to such shortages of cash in the past. Their resourcefulness is always impressive, and the strategies they used tell us a lot about the importance of money to an economy and the value people place on having an effective medium of exchange.

One frequent response to cash shortages has been to create a local substitute currency, which we call scrip. Scrip has been issued off and on in the United States by different kinds of entities-private companies like coal mines and railroads, city governments, and civic organizations, among others-and for a number of reasons, not just to overcome liquidity shortages. Every scheme to introduce scrip has involved the same considerations faced by the U.S. government when it planned how to provide a useful currency for citizens and came up with the Federal Reserve System and Federal Reserve notes-our U.S. dollars. What denominations will be handy? What forms of paper and metal will be most convenient? How to prevent counterfeiting? How to encourage workers to be paid with it, consumers to spend it, and businesses to accept it? How to keep its value stable? The approaches that different scrip issuers have taken to address these considerations have been varied and instructive.

More scrip was issued during the Great Depression in the 1930s than ever before (or since). One particular variety tried during the time, stamp scrip, was unusual in that people actually had to pay a fee to use it. In other countries, people had tried stamp scrip schemes with success, but in the United States, stamp scrip proved less useful. The one aspect of stamp scrip that might make it seem so unworkable to many people—the fee to use it—is not the naïve idea of a quaint era but one that surfaced again very recently, when ways of conducting monetary policy in times of extremely low nominal interest rates were a pressing concern. In this *Commentary*, we examine why stamp scrip arose, its successes and failures, and lessons we can learn from its issuance.

An Era of Scarce Cash

Throughout the Great Depression, bank failures, bank runs, and bank suspensions were common and caused or exacerbated cash shortages. Bank runs occurred when a bank's customers became concerned about the soundness of the bank (bank deposits were not yet covered by deposit insurance), and arrived at the bank in large numbers to withdraw their deposits. Since banks kept only a fraction of deposits in liquid assets, their reserves could easily be wiped out during a run. To prevent the depletion of reserves, banks often partially or completely suspended the payment of deposits. Doing so allowed them to buy time in order to liquidate assets but of course, customers could not get cash if they needed it. People also hoarded cash, making the shortages worse.

In March 1933, unemployment rates in the United States reached 25 percent. Household incomes had fallen in nominal and real terms for three consecutive years. Bank suspensions had spread across the country, and President Roosevelt made the suspension of payments official by declaring a national bank holiday, which lasted ten days.

In response to cash shortages, issues of scrip began to appear. These took many forms. Some scrip was payable in goods or services. Other scrip represented claims to bank deposits, which could be redeemed once a bank ended a suspension.

Stamp scrip, sometimes called coupon scrip, arose in several communities. It was denominated in dollars, in denominations from 25 cents to \$5, with \$1 denominations most common. Stamp scrip often became redeemable by the issuer in official U.S. dollars after one year.

What made stamp scrip unique among scrip schemes was a series of boxes on the reverse side of the note. Stamp scrip

took two basic forms—dated and undated (often called "transaction stamp scrip"). Typically, 52 boxes appeared on the back of dated stamp scrip, one for each week of the year. In order to spend the dated scrip, the stamps on the back had to be current. Each week, a two-cent stamp needed to be purchased from the issuer and affixed over the corresponding week's box on the back of the scrip. Over the coming week, the scrip could be spent freely within the community. Whoever was caught holding the scrip at week's end was required to attach a new stamp before spending the scrip. In this scheme, money became a hot potato, with individuals passing it quickly to avoid having to pay for the next stamp.

Undated scrip also had boxes on the back, but there were no dates associated with the boxes. Each time the scrip was to be spent, a new stamp had to be placed in a box on the back. This was normally done in front of the seller, and both parties signed the newly affixed stamp.

In either of its forms, the scrip could be redeemed at the issuer once the boxes were completely filled with stamps the issuer took the scrip and gave back dollars equivalent to the scrip's denomination. If the issuer had kept the proceeds of the stamp sales throughout the year (which didn't always happen), there would be enough funds set aside to fully redeem the scrip, with a little extra to cover the costs of operating the scheme. Often, 4 cents extra on the dollar was built into the pricing for this purpose.

Stamp scrip was issued by municipalities, civic organizations, business organizations, and individuals. Municipalities issued stamp scrip as a source of revenue. The Great Depression caused an erosion in taxpayer income, an increase in taxpayer delinquency rates, and even tax strikes in some communities. All of these took their toll on municipal revenues. Municipalities could make up the shortfall by making purchases and paying workers with stamp scrip. Civic organizations issued scrip to promote employment and various civic projects.

Issuing scrip was also viewed during the 1930s as a way to encourage local spending. (In fact, there is a scrip in use today in Ithaca, New York, that exists for the same purpose.) Aside from the general slowdown in business caused by the Depression, local merchants were also concerned about the growth of big chain stores. They saw locally issued scrip as a way of thwarting "the growing menace of chain-store competition," as the scrip historian Joel W. Harper put it, and for that reason merchants could be persuaded to accept it. The idea of using scrip to stimulate spending is one of the reasons people chose to issue stamp scrip rather than other kinds of scrip. Other scrip, which did not require the use of stamps to spend (and involved no hot-potato scenario), would not have given consumers the same incentive to spend. The other advantage of stamp scrip was the automatic means it provided for redeeming it. For this reason, people often referred to it as "self-liquidating money." Note that since the ultimate redemption of stamp scrip and the

costs associated with its issue were financed by the users of the scrip, the issuer earned 100 percent of the seigniorage. For example, a municipality that paid for labor services with stamp scrip received those services at basically zero cost.

The Origins of Stamp Scrip

The idea of using scrip to stimulate spending dates back to the 1890s, when Silvio Gesell wrote a series of books related to monetary system reform. He claimed that since money held its nominal value over time, there was little reason to be in a hurry to spend it. This encouraged people to hoard money during periods of financial stress. Gesell, following a suggestion made by Swiss merchant George Nordman, argued that a "carrying tax" on money could prevent hoarding.

Gesell suggested that a periodic tax placed on money could do the trick. By making it costly to hold money, he believed people would be encouraged to spend it. In a severe depression, the idea that spending could be stimulated by making money costly to hold seemed appealing. In fact, Gesell's views received the stamp of approval of the renowned economist John Maynard Keynes in his *General Theory*.

Keynes viewed stamp scrip as a possible solution to what has been referred to as a "liquidity trap"—a situation where interest rates are so low in an economy, that no one cares to hold interest-bearing assets. By establishing a carrying tax on money, the nominal rate of return on money could be lowered, creating an incentive for people to hold interestbearing assets, which might stimulate greater production across the economy.

Successes and Failures

Some early, apparently successful, stamp scrip implementations inspired by Gesell's ideas occurred in Germany and Austria in the 1930s. Both countries were experiencing deflation, commercial bank failures, and high unemployment, much like the United States at the time.

The German experiment occurred in the town of Schwanenkirchen, where a stamp scrip called Wära was issued. It received attention in the United States through numerous newspaper and magazine articles, including one by Hans R. L. Cohrssen that appeared in *The New Republic* in August 1932. He reported that in 1931 the owner of a coal mine that had been closed for a couple years borrowed 40,000 Reichsmarks and approached miners about being paid in Wära and local merchants about accepting it. Merchants were at first hesitant, but soon supported the scrip. By Cohrssen's account, the plan was successful. The 1 percent per month tax on the scrip appeared to encourage its rapid circulation. Cohrssen called it the "miracle of Schwanenkirchen."

Ultimately, Wära was accepted in thousands of stores in Germany, and a few banks actually created accounts denominated in it. But eventually the scrip was declared illegal by the German Ministry of Finance.

In Austria, stamp scrip was issued in the town of Wörgl in August 1932 to finance a number of public works projects.



Accounts of the episode indicate it had some success. However, as in Germany, the Wörgl experiment was short-lived. An Austrian court forbade its issuance in November 1933.

The U.S. experience with stamp scrip began in the small town of Hawarden, Iowa, in 1932. Hawarden's scrip strayed from Gesell's original suggestions in that it was undated. To spend this kind of scrip, customers had to buy a stamp at the time they were making their purchase and affix it to the scrip. Dating was intended to encourage rapid turnover of the scrip, but undated scrip served in effect as a tax on consumption.

Many towns in the United States issued stamp scrip. Most scrip was issued in early 1933, when bank suspensions were frequent and widespread. The state legislatures of North Carolina, Indiana, Michigan, Tennessee, New Jersey, Ohio, and North Dakota passed laws allowing localities in their respective states to issue stamp scrip. Statewide stamp scrip issue was proposed in Iowa but never enacted.

However, stamp scrip issues were not widespread, nor was any U.S. issue large. (There were far more issues of scrip that did not have the stamp feature. Many of these were successful.) Harper, in his unpublished 1948 Ph.D. thesis about the scrip of the 1930s, found 95 specific issues of stamp scrip by 37 cities, 8 counties, and numerous business groups. Most of the stamp scrip issues were of the undated variety; Harper found only two instances of dated stamp scrip schemes. Furthermore, most of the issues were small, the majority being between \$300 and \$500, and no issue above \$2,000 was successful. The largest municipal issue (\$120,688) was in Polk County, Iowa, but it ultimately failed.

In 1933, the famous economist Irving Fisher wrote a small monograph entitled Stamp Scrip, in which he extolled the virtues of this medium of exchange. Fisher believed that stamp scrip could be used to encourage spending. In fact, he claimed it could "break the back of the Depression." As early as October 1932, Fisher began to push for a nationwide issue of dated stamp scrip. A bill he crafted was introduced in Congress by Senator J.H. Bankhead of Alabama on February 17, 1933, as an amendment to another act. It proposed a nationwide issue of up to \$1 billion in \$1 dated stamp scrip. The scrip would be declared legal tender, a feature the local scrip issues could not achieve. The bill never came to a vote. Senator Bankhead and other members of Congress subsequently introduced other similar bills (including one where the Fed would issue stamp scrip). None of these attempts met with success.

Problems with Stamp Scrip

Launching and keeping a scrip issue viable requires coordination, cooperation, sound design, and good planning, and those who have attempted it in the U.S. have met with many difficulties. Harper, who had canvassed hundreds of communities that had experimented with scrip during the 1930s, observed that "the effort required to maintain the use of local scrip seems to have been greater than the results, with the exception of a considerable number of municipal

The Miracle of Schwanenkirchen

"Indeed, one could not have recognized Schwanenkirchen a few months after work had been resumed at the mine. The village was [prosperous], workers and merchants were free from debts and a new spirit of freedom and life pervaded the town.... Had Herr Hebecker used his 40,000 Reichmarks instead of Wära, his efforts would have inevitably resulted in failure; the money would have circulated through only one or two hands, each person retaining as much as possible and hoarding it because of the hard times."

—Hans R.L. Cohrssen, 1932

issues." The successful schemes he alluded to used standard scrip, while most of those that used the stamp feature failed.

One of the common problems associated with any scrip issue was simply getting the schemes off the ground. People accept a form of money in payment because they believe it will be accepted in future exchange. But often, businesses were reluctant to agree to accept scrip. Without such agreement, workers often refused to be paid in it. If a community could coordinate on the acceptance of scrip, the scheme typically met with at least limited success. Even then, scrip was local in scope. At best, it circulated only in the community of issue.

Most U.S. stamp scrip was of the undated variety, which meant it had no mechanism to keep it circulating, as dated scrip was expected to do. Workers recognized undated stamp scrip as the tax on consumption that it was and refused to use it. It is puzzling why the dated stamp scrip schemes successful in Austria and Germany were not mimicked more often in the United States. In fact, Fisher criticized the widespread use of undated scrip in this country.

Only dated stamp scrip was expected to keep money circulating. With weekly stamps, it should have turned over at least once per week. Dated stamp scrip was used to such a limited extent in the United States that its impact on the speed of money's circulation (referred to as *velocity*) is sketchy. Stamp scrip issued in Mason City, Iowa, which combined the dated and undated features, was "scarcely moving more than once a week on the average," according to civic leaders contacted by Harper. Evanston, Illinois, reported an average velocity of four times per week over a short period. Stamp scrip issued by Russell, Kansas, and Rock Rapids, Iowa, changed hands roughly twice a week. While it's difficult to find comparable statistics, most economists believe that the velocity of official U.S. money was much lower around this time.

Lessons from Stamp Scrip

The U.S. experience with stamp scrip illustrates the importance of a well-functioning medium of exchange. People are willing to tolerate quite a bit merely to have something they can use to make transactions with. But the difficulty of using

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day Harper. 1948. Ph.D. dissertation, University of Chicago. economy is exhausted at the zero bound. Stamp Scrip, by Irving Fisher. 1933. New York: Adelphi. Bruce Champ is an economic advisor at the Federal Reserve Bank of Cleveland. The views he expresses here are his and not

would have been necessary.

Goodfriend. 2000. Journal of Money, Credit, and Banking, vol. 32.

"Scrip and Other Forms of Local Money," by Joel William Cana-

Recommended Reading

"Overcoming the Zero Bound on Interest Rate Policy," by Marvin

Milton Friedman and Anna Schwartz, in their monumental A Monetary History of the United States, 1867–1960, criticized the Federal Reserve for its actions during the Great Depression. Had the Fed created sufficient liquidity during the banking crises of the 1930s, it is difficult to believe that extraordinary measures, such as the issuance of stamp scrip by municipalities and others,

stamp scrip was probably its downfall-such troublesome money was not likely to last when other kinds of money became readily available again. As money has evolved over time, it has changed form in ways that lowered the transactions costs associated with using it, but stamp scrip ran

counter to that trend. History gives us some appreciation for what an accomplishment our current system of money is. But the lessons of stamp scrip extend to more modern concerns as well. Earlier this decade, the Federal Reserve was confronted with a situation that had not occurred since the late 1950s. Interest rates had fallen to extremely low levels. Policymakers became concerned that some aspects of monetary policy might become ineffective at low interest rates. This is because of the zero bound on nominal interest rates-interest rates cannot

be pushed lower than zero. The zero-bound problem exists because money pays zero nominal interest. The power

of interest rate policy as used by central banks to affect the

Marvin Goodfriend suggested several options for overcoming the zero bound. One involved a carry tax on money. By taxing money, its nominal return would become negative, allowing the Fed more leeway to push interest rates to negative values. Stamp scrip is an interesting historical example of money bearing a carry tax.



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