Federal Reserve

Insert Coins

The COVID-19 pandemic disrupted the supply of many items, including cold hard cash

BY TIM SABLIK

The early months of the COVID-19 pandemic were marked by shortages of toilet paper, hand sanitizer, face masks, and food staples like poultry and beef as households stocked up across the country. The sudden spike in demand combined with disruptions to supply as producers shut down to mitigate the spread of the virus led to some bare shelves in grocery store aisles. (See “Unpacking the Meat Industry,” p. 4.) As spring turned into summer, many of these shortages were resolved, but a new one had emerged.

“I started getting a few phone calls from members asking, ‘Is it just me, or are more quarters walking out the door than before?’” says Brian Wallace, president of the Coin Laundry Association.

Of the roughly 30,000 self-service laundromats in the United States, Wallace says that a little more than half take only quarters as payment to operate washers and dryers. Before the pandemic, some of these coin-operated businesses would take in more quarters each week than they gave out, meaning that most customers brought their own change to the laundromat rather than exchanging bills for quarters. But as the pandemic intensified, many of those business owners who had been used to ending the week with a surplus of quarters suddenly found they had a deficit. They turned to their local bank to purchase more, but the banks had no change to spare either.

“At first, many of our members assumed it was just their bank being difficult. But as I heard from more people, it became clear that something bigger was happening,” says Wallace.

It wasn’t just laundromats that were finding coins hard to come by. Businesses across the country were running into a similar problem, making it increasingly difficult for them to accept cash payments.

“For the grocery industry, this disruption affects a grocer’s ability to complete cash transactions because they lack sufficient coin to make change at checkout,” Hannah Walker, vice president of political affairs at industry group Food Marketplace Inc. (FMI), said in an email.

Banks were being stingy with coins for a reason. They themselves were facing supply constraints on coins coming from the Federal Reserve, which distributes cash to depository institutions. In June, the Fed announced that it had started rationing pennies, nickels, dimes, and quarters to “ensure a fair and equitable distribution of existing coin inventory.” As change dried up at the banks, some business owners turned to their local laundromats.

The Get Coin Moving campaign was part of a toolkit created by the U.S. Coin Task Force for retailers and financial institutions.

IMAGE: GETCOINMOVING.ORG

“The laundromat became the local bank,” says Wallace. Laundromat owners began observing an increased number of people without a hamper of dirty clothes coming in to use the change machines. To guard their own supply of quarters, some laundromat owners turned employees into bouncers to ensure that only customers doing laundry could exchange cash for quarters. Others installed a cutoff switch to easily cut the power and deny change machines to non-customers. But even with such creative measures, finding change was becoming a problem for everyone, leading some business owners searching far and wide — even across state lines — to get the coins they needed.

Brother, Can You Spare a Dime?

Officials for the Fed and the U.S. Mint, which produces new coins for circulation, were quick to assure the public that the United States did not have a coin shortage, per se. There was roughly $48 billion worth of coins in circulation, and the coronavirus did not cause that change to vanish. What it did do was dramatically slow the circulation of those coins through the economy.

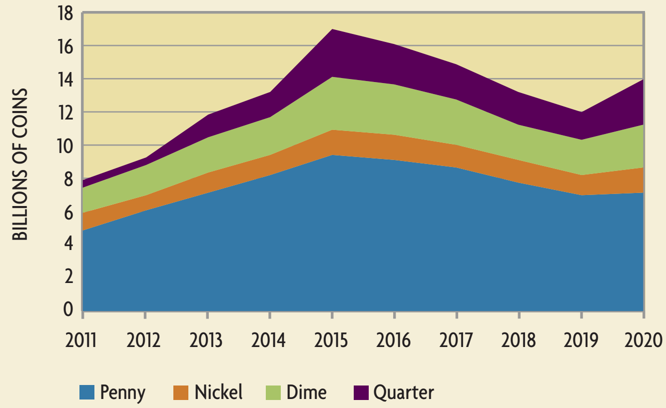
Less than 20 percent of the coins that circulate through the economy each year are newly minted stock. The rest are older coins that are recirculated through the regular

Share this article: https: //bit.ly/coin-circulation flow of commerce. The Fed distributes coins to depository institutions according to demand, and those institutions in turn supply coins to businesses and consumers. The supply of coins at banks and the Fed are replenished when businesses or households with excess coins deposit them at a bank or a coin aggregator kiosk like those operated by Coinstar, and the whole process starts over again. The average lifespan of a coin is 30 years, so change can be reused in this way many times before it is replaced.

The pandemic shook up economic activity in ways that disrupted the normal flow of coins. Some banks initially closed their lobbies and shifted business to drive-thru windows and online, making it difficult for businesses and individuals who might ordinarily bring change in for deposit to do so. And even where the option to deposit coins was still available, business owners and consumers sometimes chose to avoid the activity to limit potential contact with the virus.

2020 Coin Production Picks Up

Coins for circulation produced by the U.S. Mint



SOURCE: U.S. Mint

Consumers also changed their payment habits in response to the pandemic. A Fed survey of consumer payment choice released in July reported that 22 percent of respondents had switched from making in-person payments to paying online or over the phone, and 28 percent of respondents were specifically avoiding paying in cash, using a debit or credit card instead. This may have stemmed from concerns that cash could be a transmission vehicle for the virus. The U.S. Centers for Disease Control and Prevention recommends that people avoid touching their face and wash their hands after handling cash to minimize the risk of infection. A survey by the Bank of Canada found similar behavioral changes among Canadians: 35 percent reported decreasing their use of cash, and 17 percent said they were taking extra precautions when handling cash, such as washing their hands after making a purchase.

All these factors slowed the velocity of coins recirculating in the economy. It is estimated that the volume of coins reentering the economy has fallen by about half since the pandemic started. And while newly minted coins make up a minority of change in circulation, COVID-19 temporarily hit the supply of those as well. Early in the pandemic, the Mint took measures to protect its employees from the virus, reducing the number of personnel at its facilities to allow for greater social distancing. This slowed the minting of new coins in the spring, but the Mint has since said that it is again operating at full capacity and is on track to produce more coins in 2020 than it has in the last two years. (See chart.)

Stress on Cash-Reliant Households

Consumers with access to non-cash payment methods may barely notice the coin disruption. Cash use had been trending down long before COVID-19 hit. It remains popular as a store of value in times of uncertainty — indeed, respondents to a Fed survey said they increased their holdings of cash as the pandemic swept the country -- but as a payment method, cash is no longer the undisputed king. (See "Is Cash Still King?" *Econ Focus*, Second Quarter 2018.)

This has led some economists to question the value of physical cash in general and low-denomination coins in particular. For years, the Mint has reported that pennies and nickels cost more to produce than their face values, and the Mint produces more pennies for circulation each year than any other coin. Some economists have long called for eliminating the penny and rounding transactions to the nearest five cents. (See sidebar.)

But for the millions of households that still rely on cash as their only payment method, the coin disruption has been more impactful. According to the Federal Deposit Insurance Corporation's 2019 Survey of Household Use of Banking and Financial Services, 5.4 percent of U.S. households (that is, about 7.1 million of them) are unbanked, meaning they do not have an account at a bank or credit union. Additionally, the Fed estimates that another 16 percent of American households are underbanked, which means they have a bank account but still regularly rely on financial services outside of the traditional banking sector, such as check cashing and payday loans.

Low-income households are much more likely to be unbanked and reliant on cash. Zhu Wang and Alexander Wolman of the Richmond Fed studied a dataset of 2 billion transactions between 2010 and 2013 at a nationwide discount retailer with thousands of stores across the United States. In a 2016 paper in the *Journal of Monetary Economics*, they reported that income and access to competitive banking options strongly influenced how often consumers chose cash. The stores in their sample were largely located in low-income ZIP codes, and most transactions consisted of small-dollar purchases. Consequently, even though cash use followed the national downward trend over the three years in their study, it remained the dominant payment method, accounting for between 75 to 85 percent of all transactions. In a follow-up study, published in the Richmond Fed's *Economic Quarterly* in 2018, they showed that this retailer's average cash share of transactions across ZIP codes remained at 70 percent by 2015.

"We found that cash is more likely to be used by consumers in neighborhoods with lower income, less banking competition, or smaller population density because consumers in those locations may not have easy access to electronic payments, or they face higher costs for using them," says Wang. "The coin disruption would presumably have more of a negative impact on consumers in those neighborhoods."

Before the current crisis, some retailers experimented with going cashless. Online giant Amazon opened several physical stores with no registers or cashiers. Customers would instead scan an app connected to their Amazon account when they entered and exited the store to pay for any items they bought. Concerned that such a trend would

Will the Penny Get Pitched?

If the coin disruption of 2020 prompts the United States to reconsider the future of physical cash, the first thing on the chopping block could be the humble penny. For years, some economists and lawmakers have called for eliminating the penny because it has long been costlier to produce than it is worth at face value. Despite that, pennies make up more than half of the coins the Mint produces for circulation each year. William Luther of the American Institute for Economic Research, a free-market-oriented think tank, argues that the Mint could be better off shifting productive capacity to other coins to more quickly alleviate the current coin supply issues.

Phasing out the penny would mean rounding cash transactions to the nearest five-cent interval. Several countries have already taken this step. Canada eliminated its penny in 2013. And the United States also has some prior experience phasing out low-denomination coins, having done away with the half-cent in 1857.

But not everyone is a fan of killing off the copper coin. Low-income consumers stand to be most affected by the change because they are more likely to be unbanked and reliant on cash for transactions. In the short term, at least, merchants might round purchases for customers paying in cash but not for those paying with card, potentially disadvantaging consumers who have no choice but to pay in cash.

A widely cited 2001 article in the *Eastern Economic Journal* by Raymond Lombra of Pennsylvania State University argued that eliminating the penny could impose an estimated $600 million annual "rounding tax" on low-income consumers. Since the majority of prices end in 99 cents, Lombra argued that most cash purchases would be rounded up, harming consumers and benefiting merchants. Other economists, like Robert Whaples of Wake Forest University, have since contested those findings. In a 2007 article in the *Eastern Economic Journal*, Whaples found that once sales tax was factored in, the impact of penny rounding on consumers appeared to be neutral.

The overall cost of eliminating the penny could vary based on the size and number of purchases, however. For a single item or small-value purchase, rounding up or down could represent a significant price change. In a 2018 paper published in the *Atlantic Economic Journal*, University of British Columbia economics student Christina Cheung explored the effects of Canada's penny-rounding experience. Using a dataset of 18,000 prices from three different grocery stores, Cheung simulated the effects of rounding on different tax rates and for different types of purchases. While purchases of multiple items tended to be neutral in the aggregate, Cheung found that rounding for one- and two-item purchases came at the expense of consumers. She calculated that the rounding tax from these small number purchases cost consumers up to 3.27 million Canadian dollars annually from grocery store purchases alone.

On the other hand, there may be additional, hard-to-quantify costs to using pennies that would argue in favor of elimination. Counting pennies to make change takes time, and as the old business adage goes, time is money. Even if store clerks only spend a few extra seconds per cash transaction counting out pennies to make change, that could add up to substantial lost productivity aggregated across the entire economy. Indeed, there is evidence that some businesses already take this into account. Research by Edward Knotek of the Cleveland Fed notes that merchants that often deal in cash frequently choose convenient prices (such as charging $3.25 instead of $3.27) to reduce the amount of time it takes to complete purchases by requiring fewer coins.

Whatever the future holds for the penny, the COVID-19 coin disruption has at least prompted lawmakers to consider the costs and benefits of coins. Both the House and Senate introduced bipartisan bills in 2020 to authorize the U.S. Mint to alter the composition of circulating coins to reduce the cost of manufacturing them, though neither bill has passed yet.

— Tim Sablik

harm unbanked households, several states responded by passing laws requiring all stores to accept cash.

In a 2019 working paper, Atlanta Fed economist Oz Shy attempted to estimate the cost to consumers if all stores were to go completely cashless. Unsurprisingly, he found that the cost would be quite small for consumers who have debit and credit cards but use cash from time to time by choice. But for households who don't have access to debit or credit cards, Shy estimated a drop in their consumer surplus of nearly 31 percent per transaction.

"Without cash and coins in circulation, it's harder for underbanked families to buy basic necessities and to fully participate in the economy," says Walker of FMI.

Getting Coins Moving

Officials at the Fed and the Mint are determined to get coins circulating again for the businesses and households that rely on cash every day. In July, the Fed convened a U.S. Coin Task Force in partnership with the Mint and other participants in the coin supply chain, such as retailers, armored carriers, and coin aggregators.

The Task Force declared October to be "Get Coin Moving Month," encouraging households to check their couches, cupholders, and coin jars for loose change and safely deposit it at banks or coin kiosks. Banks and retailers were also encouraged to run promotions for customers bringing in coins or paying in exact change. Since the Task Force was formed, many businesses and households have taken the opportunity to turn their change into cash while helping to recirculate coins into the economy. One aquarium in North Carolina shuttered by the pandemic put its employees to work hauling 100 gallons of coins from one of its water fixtures that had served as a wishing well for visitors since 2006. Overall, efforts like these have started to yield results.

"We are in a different place than we were in March and April," Melissa Murdock, vice president of communications and media relations for the Retail Industry Leaders Association, said in an email. "I haven't heard from my members about this in months."

But others have seen more modest improvements so far. Wallace said that in a recent survey he conducted of laundromat owners, less than 20 percent reported that coin flow and availability of coins at banks had improved. Walker heard similar things from grocery store owners.

"While coin circulation is improving, our members are still experiencing lingering challenges in getting a full coin supply into their stores," she said.

The Coin Task Force expects circulation will gradually return to normal as more parts of the economy reopen. But will demand for cash and coins return to its previous level? The pandemic seems to be accelerating some changes in the behavior of businesses and consumers, such as the widespread adoption of teleworking and e-commerce. Will payment habits be similarly affected?

"A long-term trend we have seen in the data is the continuous migration from paper payments to electronic payments," says Wang. "This has been driven by a couple of factors, including the income growth of consumers, technological progress in electronic payment means, and the increasing popularity of online shopping. The COVID-19 pandemic is likely to add a further push to this migration."

In his survey of laundromat owners, Wallace was somewhat surprised to learn that 40 percent of respondents were looking into alternative payment systems such as card readers as a result of current disruption.

"Now, I'm not sure how many of them will actually go out and buy a new payment system," he said. "These are small mom and pop businesses for the most part, so the decision to add a new payment option is a capital investment they need to weigh against the benefits. But I think it's natural that business owners are thinking of ways to reduce their vulnerability to something like this should it happen again." **EF**

Readings

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