

Episode 308

Welcome to Money for the Rest of Us. This is a personal finance show on money, how it works, how to invest it, and how to live without worrying about it. I'm your host, David Stein. Today is episode 308. It's titled, "Cash and Coins: Shortages, Hoarding, and Threats."

A few weeks ago my daughter and I were at a bakery buying a couple of loaves of bread. We didn't have the exact change and they didn't have the coins to make change, so they rounded down. We got a small discount. This week I was going through the McDonald's drive-thru and there was a sign that said "due to treasury shortage of coins, use credit or debit cards. Round up to the nearest dollar. Donate the difference to Ronald McDonald House Charities. Or use exact change on cash transactions."

There is a coin shortage in the US right now. Federal Reserve chair Jerome Powell told Congress last month what happened is that with the partial closure of the economy, the flow of coins through the economy, it has kind of stopped. "We've been aware of it, we're working with the mint to increase the supply while working with the Reserve banks to get the supply to where it needs to be."

The agency of the US Treasury responsible for minting coins is the US Mint. It was established in 1792 by Congress when it passed the Coinage Act. And it chose Philadelphia as the site of the first mint. Now the US Mint operates production facilities in Philadelphia, San Francisco, Denver, and West Point. Every 2 years, Congress requires the US Treasury to give a report on the US Mint, its budget, and its cost to produce its coins. In 2020 the US Mint projected that it would produce 14 billion circulating coins, including 8.5 billion pennies, 1.3 billion nickels, 2.4 billion dimes, 1.8 billion quarters.

Now due to the coronavirus pandemic, the US Mint cut back production of circulating coins in March and April. Year to date through July they had produced 8.2 billion coins. They said they were back up to full capacity by mid-June and anticipate producing 1.65 billion coins per month. That would equate to 18.1 billion coins. But here's the thing about circulating coins in the US and other countries. The mint only contributes a relatively small percentage of the new circulating coins each year. In 2019, it was 17%, new coins going into the supply chain. The remainder came from third party coin processors or recyclers as individuals buy things, they get change back and there are machines where you can put your spare change and it'll sort it and this recirculation process makes sure there's a sufficient supply of coins. That has broken down.

A couple weeks ago the US Mint issued a bulletin which said, "We ask that the American public start spending their coins. Depositing them or exchanging them for currency at financial institutions. Or taking them to a coin redemption kiosk. The coin supply problem can be solved with each of us doing our part."

This isn't the first time that there has been a coin shortage. There was one in the early 1960s in the US. The July 11th edition of Grant's Interest Rate Observer pointed out that at the time each silver dollar contained .77 ounces of silver. The official silver price was \$1.29 per ounce which meant the face value of a silver dollar equaled its metallic value. Silver was also used in dimes, quarters, and half dollars. But then, the price of silver, at least the unofficial price, began to creep up.

William F. Rickenbacker in his book *Wooden Nickel* mentioned that in 1963 the Federal Reserve bank received 20% less small change than in 1962 as part of this whole recirculation process of coins. In 1964, the Federal Reserve banks received 63% less small change than it did in 1963. Why? Because the silver price was rising and businesses and individuals were taking those coins, saving them, or melting them down for the silver content. By the middle of 1964, Rickenbacker points out that Las Vegas casino operators were paying a 20% premium for coins.

By the mid-1960s the silver held at the US treasury was being depleted. President Lyndon Johnson signed the Coinage Act of 1965 to eliminate silver from the dime and quarter and reduce the silver content in the half dollar from 90% to 40%. And by 1970, even the half dollar had no silver content.

In 1964 every time the US Mint produced a new dime or quarter or half dollar, they were losing money. That's not what governments traditionally have done when they've produced coins. They've made a profit. The profits made from producing coins, the difference between the face value and the production costs, is called seigniorage. It's a term from the middle ages. For millennia many governments were partially funded from profits from minting coins.

In their most recent report to Congress, the US Mint said that for the fiscal year 2018 they made 37 cents per dollar worth of coins issued. Which means it cost them 63 cents per dollar issued. The mint loses money when it produces pennies and nickels. It costs 2.06 cents to produce a penny and 7.53 cents to produce a nickel. Quarters and dimes are very profitable and make up for the losses on pennies and nickels. The 2020 budget for the US Mint was to produce \$840 million of face value of coins, based on a 37 cents per dollar profit and 63 cents per dollar cost that would equate to \$529 million in cost and \$311 million in profits from minting coins.

Now when I looked at the US Mint budget, they also add additional obligations as part of their cost. And so on their income statement, they are only projecting a \$49 million profit from producing circulating coins. I don't know what the discrepancy is, because they gave the 37 cents per dollar worth of profit, they're going to produce \$840 million worth of coins, and yet somehow there's some additional expenses that they're allocating to circulating coins.

Given the US Mint loses money anytime they produce a penny, why do pennies exist? Back in 2004, New York Times columnist William Safire wrote an article about getting rid of the US

penny. He says you can't buy anything with a penny anymore. "Penny candy," he writes, "not for sale at the five-and-dime, which is now a dollar store. Penny-ante poker? Pass the buck. Any vending machine, put a penny in it and it will sound an alarm. There's no escaping economic history," he continues, "it takes nearly a dime today to buy what a penny bought back in 1950."

Despite this, the US Mint keeps turning out a billion pennies a month. Not 2020, total pennies produced was budgeted to be 8.5 billion, so less than a billion a month, but an incredibly large amount of pennies. They're losing 1.06 cents per penny they produce, that's a loss of \$136 million on producing pennies.

Kim Amadeo wrote an article for *The Balance* on 10 Reasons to Get Rid of the Penny. She pointed out that Americans throw away \$62 million of coins each year. Most of which are pennies. 11% of Americans report they would rather throw a penny away than bother to carry it around. And I'm guilty of that. I won't carry pennies. I sometimes tell myself by throwing my pennies away I'm reducing the money supply and reducing the inflationary threats. Amadeo mentioned that pennies take up time at the cash register to count out. And to handle them, and store them, to move them around.

With the federal minimum wage being \$7.25 an hour, it takes 5 seconds to earn a single cent. And if it took you longer than 5 seconds to pick up a penny that you found on the ground, you'd be earning less than minimum wage. We could get rid of pennies. Other countries have done that. And you just round up, or round down when you're purchasing something. And you just don't ever put prices in pennies. No buying something for 3.99.

How do Americans use cash? How often do they use cash? The Federal Reserve does an annual study called the Diary of Consumer Payment Choice. The last time they did this survey of 3,016 individuals was in October 2019. They have the participants record their payments for transactions for 3 consecutive days. The 2019 study found that consumers used cash for 26% of all payments, which was consistent with 2018.

Cash is used heavily for small value payments. 47% of payments under \$10 used cash and 40% of payments between \$10 and \$25. 35% of in-person payments were done in cash. Now of the survey participants, 42% preferred to pay with debit cards. 29% with credit cards. And 23% with cash. A Pew Research Center study found that 30% of Americans use no cash on a weekly basis. The average American carries about \$60 in cash. I typically have much less than that.

Now along with the shortage of coins we've seen in the US, consumers and businesses have also been hoarding cash. Dollar bills, currency. At the end of 2019, there was \$1.76 trillion of currency in circulation. By the end of July, it had jumped to \$1.98 trillion. That was the biggest increase in circulating cash since the year 2000 during the Y2K crisis. I'll admit that in March when there was so much uncertainty, I went to the ATM and took out cash. Just because I didn't know. And others have done the same.

The other thing that has changed with regards to cash since the great financial crisis is the 100 dollar bill has become much more popular. Not for transactions. I dislike having 100 dollar bills and trying to buy something with it because often the vendor doesn't have change. So it's inconvenient.

If we look at the distribution of bills in the US, I mentioned there was 1.76 trillion dollars of bills outstanding, 12.7 billion were dollar bills, 2.7 billion 2 dollars, 15.8 billion 5 dollars, 20.9 billion 10 dollars. Under 90.5 billion 20 dollars. 92 billion 50 dollars. And the vast majority, 1.4 trillion were 100 dollar bills. 100 dollar is the largest bill denomination. Up until 1969, you could get a 500 dollar bill, 1,000 dollar bill, and a 5,000 dollar bill. These 100 dollar bills don't circulate very much. They are hoarded. The average lifespan for a 100 dollar bill is 15 years. Compared to 8.5 years for a 50 dollar bill. This was from a 2019 article in the *Los Angeles Times* by Taylor Telford and Jeanne Whalen.

Just like there's been a call to get rid of the penny, there has also been a call to get rid of the 100 dollar bill. And the reason is most of the 100 dollar bills are outside of the US, 80% of them. And there's some evidence, based on a 2016 paper by Harvard's Mossavar-Rahmani Center for Business and Government, that these 100 dollar bills are the preferred payment mechanism of criminals. Because you're anonymous and there's a lack of transaction record. And with tougher money laundering laws, criminals are using more cash. And the 100 dollar bills is the highest denomination, there are no 500 dollar bills anymore. So some like Larry Summers have called to get rid of the 100 dollar bill.

But there's another reason to potentially get rid of the 100 dollar bill. And this was brought out by Ken Rogoff, an economist, in an editorial for Project Syndicate. It was an article on negative interest rates, a topic that we talked about, about a year ago. His recommendation to help get the economy moving was to have the Federal Reserve set its short-term policy rate to -3% or lower. He feels that would help companies, states, and cities not default on their debts because interest rates would fall. And it would boost demand because suddenly storing cash, where you're already losing your purchasing power, now you would potentially have to pay money to keep balances at a bank.

Rogoff writes of an important step that would need to be taken for deep negative interest rates to be feasible. He writes, "The most important, which no central bank, including the ECB, has yet taken it to preclude large-scale hoarding of cash by financial firms, pension funds, and insurance companies." The way that they would discourage it is by charging a fee for redepositing cash at the bank.. And phasing out large-denomination banknotes, such as the 100 dollar bill. I hope we don't do that.

Capital Economics points out that negative interest rates have had mixed results. They write, "The bond yields have fallen into negative territory even on the long end of the curve, but commercial banks in those countries with negative interest rates have been reluctant to cut their deposit rates below 0." And with interest rates flattening out, their profits have suffered because

their deposit rates are still positive, yet lending rates are much lower in many of those countries with even up to 10-year government bond yields are negative. But they didn't want, essentially the consumer backlash, by charging negative rates on deposits.

The other thing that Capital Economics points out is it might not even be legal for the Federal Reserve to set negative interest rates. The Fed has the power to pay interest on reserves but it's unclear whether they have the power to charge banks a fee on the reserves stored at the Federal Reserve. But they also point out that in 2016, Fed chair Janet Yellen said, "I'm not aware of anything that would prevent us from doing it." Maybe they will, but in order to do that they would have to reduce the amount of cash hoarding. I hope they don't do it. It's been frustrating enough earning 0% on cash, which is why the opportunity cost for holding it is so low now.

You earn very little, if any, interest on cash in the current environment. That has been a boon for gold. The other program that US Mint runs, in addition to circulating coins, is their numismatic program which provides, as they say on their website, "high-quality versions of circulating coinage. Precious metal coins, commemorative coins, and national medals for sale directly to the public." Gold bullion coins are the biggest component of that.

And they point out that the demand for these gold coins, like the American Gold Eagle, is very difficult to predict. This year is a perfect example of that. The American Gold Eagle is available in 1 oz, 1/2 oz, 1/4 oz, and 1/10 oz. Year to date through July 2019, the US Mint sold 114,000 oz of gold coins. It equated to 266,000 coins. Year to date through July 2020, they have sold 495,000 oz of gold coins. That's a 333% increase from a year ago. And the number of coins is 754,000 compared to 266,000 in 2019. That's a 184% increase.

People are buying gold coins because gold has hit an all-time high. Why? Because interest rates are so low, there's not the opportunity cost and there is a relationship between real interest rates and the price of gold and other precious metals. The American Eagle 1 oz silver coin has sold 21% more this year than last year through July.

Now the US government backs the content and purity of their precious metal coins. But there was such demand because the US Mint cut some of their production due to safety concerns, that they actually sold out of some of their silver coins and gold coins this spring. And we saw gold coins were selling at a 5-10% premium over the spot price of gold.

What do we conclude from this shortage of coins? From the hoarding of dollars, for the pressure to get rid of the 100 dollar bill or to be penalized for holding cash at your bank if the Federal Reserve decides to implement negative interest rates? Well, first I think we should all keep some cash on hand, just in case, some dollar bills.

But also diversify your cash holdings. Own some gold coins. I have spoken about owning gold for several years before the price of gold jumped. Gold prices are somewhat unpredictable.

They're not a perfect inflation hedge. Over the long term, they have done better than inflation, rising on average by 5.7% per year. But not every year. And sometimes they sell-off. There's a guide on the Money for the Rest of Us website titled "A Complete Guide to Investing in Gold" and it lists all the different ways to invest in gold and the reasons for owning gold.

Finally, we should go spend our pennies, our nickels and dimes and quarters and recirculate them so it's easier on businesses. It would be frustrating owning a business that deals with cash transactions and have to always be rounding down because you don't have the correct change. And that lowers your profits. So we can do our part, as the US Mint says, and if we got coins hanging around our house, take it to one of the coin kiosks at the grocery store, take it to your banks, and get more coins back in circulation.

That's episode 308. Have a great week.