

# THE STATE OF COIN

*A U.S. Coin Task Force Report*



U.S. COIN TASK FORCE



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# THE STATE OF COIN

## Executive Summary

The COVID-19 pandemic has disrupted normal circulation patterns of U.S. coin and has posed significant challenges for the U.S. coin supply chain. A number of factors contributed to these challenges, including changes in consumer payment behavior, stay-at-home orders by state and local governments resulting in many business and bank closures, as well as the slowdown of the ability to obtain raw materials for manufacturing new coins, the availability of labor across the coin supply chain, and changes to the coin-supply-chain-servicing infrastructure.

All of these factors contribute to hurdles for the American consumers and businesses to get the coin that they need to support cash transactions. Yet, like never before, the pandemic has emphasized the importance of cash for consumers. Millions of Americans rely on currency and coin as their only or preferred form of payment, and businesses rely on cash and coin to make change for those transactions.

This pandemic is quite unique when compared to other previous disruptions, and as a result, operational challenges caused by COVID-19 are hard to diagnose. Many factors leading to the slowdown of coin circulation were easily observable and explainable. However, given the anonymous nature of cash transactions, the proportional contributions of each factor to the problem are difficult to measure with any degree of certainty. Consequently, while the circulation slowdown has persisted now for more than a year and half, it is still unclear what factors weigh most heavily.

This paper is a work product of the [U.S. Coin Task Force](#), a group of coin industry representatives that came together at the onset of the pandemic to identify, refine and promote strategies to resolve the pandemic-related coin supply chain issues. The paper examines the causes that contributed to the coin circulation disruption, the impacts to those affected by this issue, as well as response actions taken by the coin industry to address the situation.

Notably, this is not a research paper, but rather an informed summary of the problem with the aim to generate awareness and support of the issue from the broader coin supply chain and the American public, as well as serve as the baseline for further study and action. By explaining all the different facets of this problem from the perspectives of various coin supply chain players, the paper attempts to answer the question of whether the coin circulation slowdown is temporary and will resolve itself when the pandemic ends, or whether it is a bigger issue that is here to stay. Finally, this paper lays

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out a few hypotheses for the U.S. coin supply chain in continuing to collectively respond to this challenge.

# **Historical Overview of Coin Circulation**

## **Roles and Responsibilities**

The coin supply chain is comprised of the United States Mint (U.S. Mint), the Federal Reserve Banks and their offsite coin distribution locations, financial institutions (FIs), armored carriers, coin aggregators, and retailers and other users of coin, and enables the movement of coin in the U.S. economy for businesses and the public (see figure 1 on page 6). Elements include the packaging, transportation, distribution, storage, and verification of coin to ensure healthy commerce and acceptance of cash payments.

The **U.S. Mint** is the nation’s issuing authority for coin and is responsible for the production of new coin. *“The primary mission of the Mint is to produce an adequate volume of circulating coinage for the Nation to conduct its trade and commerce.”*<sup>1</sup> The U.S. Mint is part of the U.S. Treasury and generates revenue through various means, including the sale of circulating coins to the Reserve Banks. Unlike currency, the Federal Reserve buys coin from the U.S. Mint at face value, which means the U.S. Mint earns seigniorage on the issuance of coin, not the Federal Reserve. U.S. Mint facilities in Denver and Philadelphia produce and ship new coin for circulation to Reserve Bank offices and their offsite locations.

The regional **Federal Reserve Banks** and their offsite coin distribution locations – coin terminals<sup>2</sup> and coin depots<sup>3</sup> – distribute new and circulated coin to FIs to meet public demand on behalf of the issuing authority. Under the Appropriations Act<sup>4</sup> issued by the Treasury in 1920, Reserve Banks were instructed and authorized to receive all types of U.S. coin, to make coin exchanges and replacements based on terms and conditions.

Except in a small number of instances, the Federal Reserve’s coin handling is almost entirely outsourced to coin terminals and coin depots (a total of approximately 175 locations), operated by about 10 armored carrier companies throughout the U.S.

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<sup>1</sup> <https://www.federalregister.gov/agencies/united-states-mint>

<sup>2</sup> A coin terminal resource page on the FRBServices.org website - <https://www.frbServices.org/financial-services/cash/coin-terminal.html>

<sup>3</sup> Coin depots were created more recently – in 2018 – as part of the Federal Reserve’s effort to explore new solutions for improving the quality, handling, and distribution of coin through an outsourced arrangement in partnership with a third-party vendor, and not necessarily an armored carrier. A coin depot services Federal Reserve Bank customers that are not currently serviced by a coin terminal.

<sup>4</sup> <https://fraser.stlouisfed.org/title/federal-reserve-system--purpose-work-115/purposes-federal-reserve-act-416715>

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Coin terminals and coin depots facilitate coin recirculation and reduce the cost and labor burden of processing and storing coin in Reserve Bank vaults. They operate at no cost to the Federal Reserve and earn revenue by providing coin handling services to their commercial customer FIs. While Reserve Banks are responsible for the management and settlement functions, coin terminal and coin depot operators process coin deposits, store inventories, and prepare and pay out coin orders on behalf of their servicing Reserve Bank.

The regional Reserve Banks work with the Federal Reserve's **National Cash Product Office (CPO)** to ensure that coin is available in quantities sufficient to meet the public's needs under normal circumstances and during times of stress (such as hurricanes, earthquakes, and other disruptions). This arrangement enables the U.S. Mint to manage its production schedule efficiently. The CPO manages the regional and local Reserve Banks' coin inventory from a national perspective and places monthly orders for new coin with the U.S. Mint on behalf of the Reserve Banks. Because of its responsibility for the national market, the CPO facilitates the redistribution of coin inventories between Reserve Bank markets, typically over distances greater than 100 miles.

**Financial institutions**, including commercial banks, community banks, credit unions and thrifts, place orders for coin with their local Reserve Banks through the Federal Reserve's web-based ordering application – FedCash® Services via the FedLine Web® access solution<sup>5</sup> – to meet their downstream customers' (retailers and the public) demand for coin. FIs also deposit coin with their local Reserve Bank or its outsourced offsite locations when they have excess coin.

**Armored carrier companies** play a big role in the coin supply chain. Not only do they transport coin between the Reserve Banks, FIs, and retailers, and operate the Federal Reserve's offsite coin inventories, but they may also offer a number of coin processing services to FIs, including sorting and counting loose coin, coin wrapping, coin storage, and transportation. Coin is typically deposited to vaults in loose form, and is subsequently paid out in rolled form thereafter. It is often at armored carrier sites that coin is converted from an unwrapped to a wrapped final product. Over the past decade, the cash handling industry has seen increased outsourcing of currency and coin vault operations to armored carriers by FIs for efficiency reasons. Consequently, it is common that a single armored carrier location might operate outsourced vault operations for multiple FIs from a co-located site, and simultaneously operate as a coin terminal for the Federal Reserve.

**Coin aggregators**, also known as coin recyclers, are companies that operate public-facing coin-cashing kiosks typically located at large grocery and discount store chains. Coin aggregators are the primary method of consumer coin redemption and are of the primary sources of coin deposits to the Reserve Bank inventory. These coin-cashing kiosks allow consumers to redeem coin holdings and convert

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<sup>5</sup> <https://www.frbervices.org/fedline-solutions>

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them to a form of value for a percentage fee levied by the coin aggregator. Coin aggregators hold contracts to transport coin via several armored carrier companies nation-wide who then deposit or sell the coin to an FI.

As can be seen in this section, the coin supply chain is an intricate system involving many players, ranging from private companies to federal and governmental agencies. Established regulatory roles and responsibilities pose certain challenges to understanding and influencing coin circulation patterns. And while the Federal Reserve and the U.S. Mint share the responsibility for ensuring there is sufficient amount of coin for commerce in the U.S., there is not a single governmental regulatory authority that oversees the coin supply chain.<sup>6</sup> Over the past decade, the coin supply chain participants have collaborated and established mechanisms for sharing information about coin inventory management with their partners for the greater good of the industry, but there is limited visibility into the coin supply. There is no regulation for how FIs, armored carriers, and retailers handle coin movements, and as an outcome, the coin supply chain is managed disparately by different players and is influenced by market forces.

### **Mechanics of Coin Circulation**

In order to understand the challenges that the COVID-19 pandemic has posed for the coin supply chain, it is important to first understand the mechanics of normal circulation of U.S. coin. This section will focus on normal coin circulation patterns as well as the pre-existing coin supply chain limitations.

#### ***Coin Lifecycle***

Consumers get coin primarily as change in transactions at retailer locations. At the end of the day, retailers and businesses deposit excess coins with their FIs. FI source of coin deposits consists of direct consumer deposits and business/retailer deposits. FIs send excess coins for deposit to the 28 Reserve Bank cash offices and their offsite locations, either directly or through a “correspondent” banking relationship.

The Reserve Banks take orders for coins and distribute them to approximately 11,000 FIs across the country, ranging from very large institutions with a national footprint to small community banks, credit unions, and thrifts. Annually, the Reserve Banks pay out 50 - 70 billion coins into circulation, valued at about \$4 - \$7 billion. Federal Reserve Bank coin inventory consists of deposits from FIs and coin aggregators, and coin produced by the U.S. Mint. Deposits from FIs constitute nearly half of all coin flowing into the Reserve Banks (about \$2.8 billion annually), and another nearly 40 percent (or about \$2.3 billion) comes from coin aggregators (although coin from aggregators doesn't come

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<sup>6</sup> In contrast, the Federal Reserve's role in currency is much broader than its role in coin operations. Based on the Federal Reserve System's Board of Governors' statutory authorities, it is the issuing authority for notes and is also responsible for distributing and authenticating notes.

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directly to the Federal Reserve, but through three or four extra-large FIs). The remainder is supplemented by new coin from the U.S. Mint. In 2019, the last year before the pandemic began, the Reserve Banks paid out 68 billion coins with a value of \$6.3 billion.

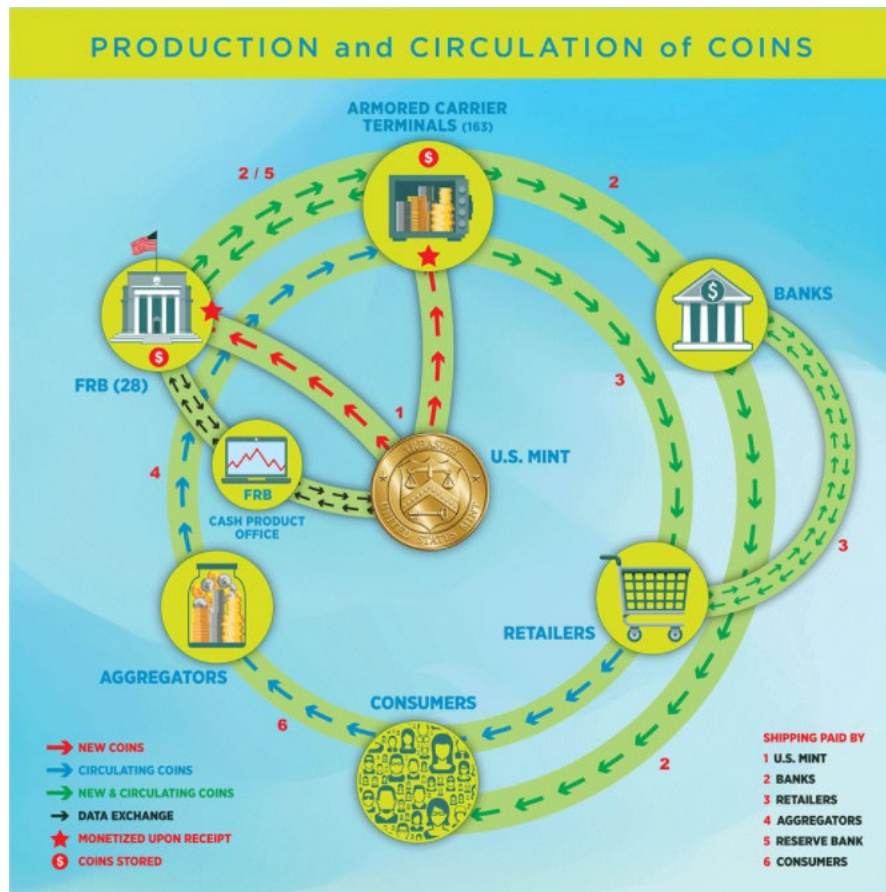


Figure 1. Production and Circulation of Coins (courtesy of the U.S. Mint)

New coin produced by the U.S. Mint accounts for a much smaller amount of coin that the Federal Reserve puts into to circulation. As reported by the Federal Reserve, in 2019, the U.S. Mint contributed 17 percent<sup>7</sup> of coins paid into the supply chain. New coin production has been declining steadily over the last two decades and has declined an average of 6.5 percent year over year during the five years leading up to 2020. Three factors have influenced this decrease. First, the introduction of public coin recycling equipment in the early 1990s has significantly increased the volume of coin flowing back to the Fed, reducing the amount of new coin needed to meet demand. Second, in 2009 the Federal Reserve began managing inventories nationally across the 28 Reserve Bank cash office locations. Previously, each Reserve Bank cash office managed its own coin inventory based on the needs of their local market. This national approach to coin inventory management facilitated an increase to the efficiency of the coin distribution process. From 2008 through 2012, the combined

<sup>7</sup> <https://fiscal.treasury.gov/reports-statements/treasury-bulletin/current.html>

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inventory for pennies, nickels, dimes, and quarters decreased 43 percent. The CPO places a monthly order for new coin with a rolling 12-month forecast to help the U.S. Mint estimate production and schedule it efficiently. And third, coin orders from FIs decreased during this same period by an average of 1.1 percent year-over-year for those same five years.

### ***Coin Supply Chain Limitations***

Before we review some of the pre-existing vulnerabilities in the coin supply chain, it is important to discuss a broader environmental trend that has been impacting coin circulation for over a decade – declining cash use. The introduction of new payment technologies has resulted in a gradual shift away from cash use overall, and the public’s willingness to hold and use coin has been diminishing in the last several decades. The utility of the coin portfolio – small coin denominations in particular – has diminished to the point where coin is used primarily to make change for cash transactions versus being used as a payment mechanism (i.e., few consumers pay with coin, most consumers receive coin back as change). Over time, these changes have led to reduced coin acceptance at traditional collection points such as bank lobbies, parking meters, tolls, and transit. Once a fluid payment mechanism, coin has turned into a relatively inert low-value asset used mostly as a settlement vehicle.

#### **The “Net-Pay” Era**

Over the past decade, demand for coin can be characterized by net-payments (or “net-pay”) - the positive difference between gross payments to and receipts from circulation. In simpler terms, **the Reserve Banks typically receive 7-8 coins back for every 10 coins paid out into circulation.** The other 2-3 coins are sitting dormant in people’s piggybanks, coin jars, or car cup holders.

The following are some of the pre-existing coin supply chain limitations. We will review additional challenges that have been imposed by the pandemic in a later chapter.

- **Dependence on Consumer Redemption.** The reduced consumer use of coin as a payment tool has increased reliance on large retailers and aggregators for coin redemption and circulation. The supply chain has been increasingly reliant on the aggregators in retail locations with the reduction of access points (i.e. bank branches) for the collection of coin through FIs. In normal, pre-pandemic times, FIs and retailers do not typically hold large coin inventories. The Federal Reserve Banks and the U.S. Mint combined hold roughly 1.5 months of payable inventories because FI deposits generate about 75 percent of the coin needed for the Fed to meet coin order demand. The pandemic has highlighted the coin supply chain’s growing vulnerability to disruptions in consumer coin redemption activity.
- **Dependence on institutional processes to recirculate coin.** In addition to consumer redemption, healthy coin circulation is also dependent on the FIs and retailers helping to



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recirculate coin. Since the introduction of large aggregator businesses in the 1990s, the primary form of coin redemption has shifted from bank branch lobbies to coin-redemption kiosks at retail locations. Over the years, many large FIs have eliminated coin-counting equipment or consolidated this service in a central location and implemented certain policies relating to coin redemption. For example, some FIs don't accept loose coin deposits and require coin to be rolled, and some don't exchange coin for currency for non-customers. For both FIs and retailers, coin recirculation includes high costs for transportation, handling and storage. And part of ensuring FIs reliably help in recirculating coin is ensuring they, in turn, have a reliable source of coin themselves. The Federal Reserve is the FIs' coin supplier of the last resort, and when the Federal Reserve limits orders for coin, FIs undoubtedly alter their approaches to supply management, as further described in this paper.

- **Much more circulation occurs that does not 'round-trip' through the Fed.** The Federal Reserve serves as an intermediary between FIs that have surplus coin and those that need additional coin. However, much of coin circulates in the economy without making its way back to the Federal Reserve. FIs get coin from various non-Federal Reserve sources, such as coin aggregators, and recirculate back to retailers. This increasingly decentralized process inherently challenges inventory visibility of the coin supply chain. Retailers recycle some of their own coin (not a common, but a growing practice), and some consumers use coin to make purchases. While healthy recirculation without the involvement of a central bank might be considered a good thing and a saver of taxpayer dollars, in the context of the pandemic and particularly without visibility into market data on FI and carrier holdings, this has emerged as a challenge for the Federal Reserve.

### ***Previous Coin Shortfalls***

During the 1970s, the penny's popularity led the country to experience periodic penny shortages. Pennies were made out of copper then, and some people collected and held on to pennies in the hope that copper prices would eventually increase enough to make a pound of copper cents worth more than the coins' face value. Many people believed that copper pennies would someday have numismatic value.

Another penny shortage occurred in 1981 and it was attributed to the penny's one-way flow in circulation. While there were sufficient amounts of pennies produced, the one-cent coins were not returning to the banks and the Federal Reserve from the public. Because of its low value, people are reluctant to carry pennies around and bring them to their bank, so the pennies were typically stored in piggy banks, jars, or dresser drawers. Later the same year, the U.S. Mint announced a new zinc penny with copper plating as a cost-cutting measure. Since its introduction in 1982, the U.S. Mint was

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able to produce enough to meet demand, and penny shortages became a thing of the past, for a while.

The most recent example was a nation-wide penny shortage in 1999. Demand for pennies had been increasing steadily for a number of years prior to 1999, and the U.S. Mint kept making more. The U.S. Mint increased its production of pennies in the early months of 1999 by 33 percent compared to the same time period in 1998, and by nearly the same amount as the same time in 1997. Similar to what we experienced in 2020, the issue was not a penny shortage but rather a penny imbalance.

## **COVID-19 Disruption to Normal Coin Circulation (2020-2021)**

### **Causes of the Coin Circulation Disruption**

The COVID-19 pandemic has caused a significant disruption in the coin supply chain and normal circulation patterns for U.S. coin. Below, we have outlined three key factors which we believe contributed to this issue. It should be noted, however, that there may be other, less transparent and observable factors that may have played a role as well.

1. **Significant drop in coin deposits.** Throughout the pandemic, deposits of coin from businesses, coin aggregators, and the public to FIs have dropped by more than half. Since the pandemic was declared in March 2020, FI coin deposits to the Reserve Banks have also dropped to 40 to 50 percent below 2019 volume, and as much as 60 percent in some denominations. As noted earlier in this paper, normal circulating coin patterns rely on a roughly 75 percent return rate of deposited coin to Federal Reserve inventories. Many coin-reliant businesses, such as laundromats, vending machines and car washes, stopped or slowed operations due to social distancing and stay-at-home measures. These businesses are key to the normal movement of coin back to FIs and redistribution into the economy. With these businesses closed or operating at reduced hours, the flow of coins back into the economy has been significantly reduced.

In addition, many FIs across the country closed their lobbies due to the same social distancing and stay-at-home mandates, making it harder for consumers and businesses to deposit their coins or exchange them for paper notes. Although some affected FI banking centers remain open in drive-through mode and many have completely reopened, the Office of the Comptroller of the Currency (OCC) and Federal Deposit Insurance Corporation (FDIC) have warned of an accelerated pace of permanent banking center closures during the pandemic period. The context of increased consolidation in the FI space is also important when

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estimating long-term total number of banking centers available to the American public for depositing coins.

Changes within the armored carrier industry have also coincided with a slowing of coin deposits. Systemic market consolidation has resulted in significant concentration of services with a small number of organizations, and coin-intensive businesses have reported difficulty sustaining armored carrier services for transporting their coin for deposit. The context of increased concentration may be relevant to assessing the coin supply chain's capacity to facilitate the coin transport necessary for deposit-generative activity. For example, changes to operational coin procedures or coin business models by a single organization can result in outsized and magnified impact for the entire supply chain.

Coin aggregators, through their multiple banking relationships, accounted for approximately 40 percent of coin deposits to the Federal Reserve, pre-pandemic. In 2019, the largest aggregator provided over three times more coin to the market than the U.S. Mint manufactured. However, as reported by a large coin aggregator, recycling through aggregation is down roughly 20 percent in 2020 and 2021.

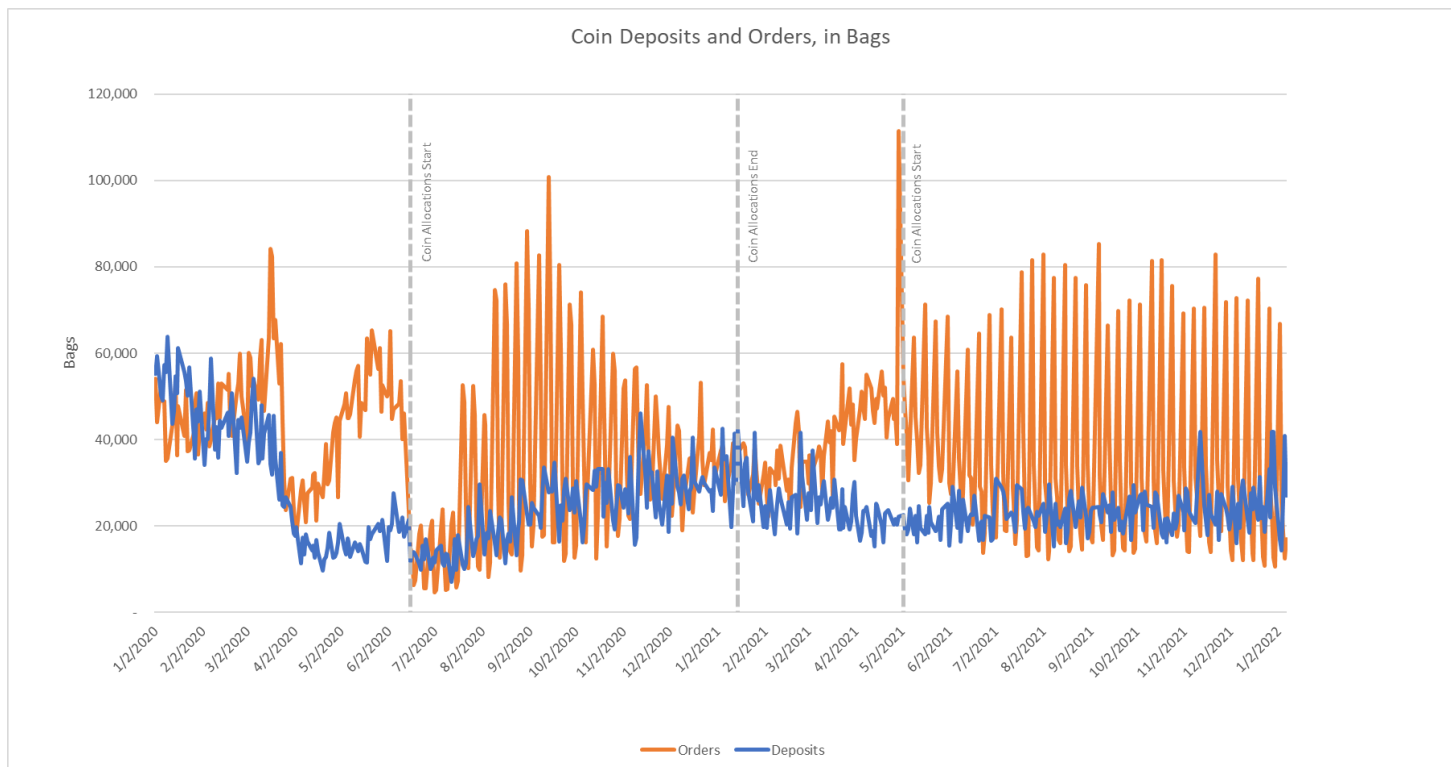
- 2. Impact on new coin production.** COVID-19 also impacted the U.S. Mint's production capacity in the early days of the pandemic. The implementation of social distancing rules and other operational changes intended to protect employee health initially caused production output to drop by as much as 35 percent at the U.S. Mint. The effect of the U.S. Mint's reduced production has been relatively short-lived, however, as the U.S. Mint successfully worked to offset production decreases. New coin production returned to pre-pandemic levels around June 2020 when the U.S. Mint introduced mandatory overtime to increase new coin output. Thanks to these measures, production facilities in Philadelphia and Denver shipped over 15 billion coins to the Federal Reserve Banks in 2020, marking an increase of 25 percent from the roughly 12 billion coins shipped in 2019. The U.S. Mint's annual production levels have increased for the first time after five straight years of gradual decline since 2015. However, even maximum U.S. Mint production cannot make up for the drop in deposits. As noted above, new coin accounts for a much smaller amount of coin that the Federal Reserve pays to circulation, while recirculated coin makes up the balance.
- 3. Increased coin orders from financial institutions.** The third factor that contributed to the coin challenges was increased demand for coin. FI coin orders with Reserve Banks dropped at the start of the pandemic but returned to pre-pandemic levels when the economy began to reopen in the late spring and summer of 2020, and some FIs began ordering more coin from the Federal Reserve as FI customer orders returned to pre-pandemic levels and coin deposits from FI customers continued to lag. Many FIs began to place large coin orders with the Federal Reserve in locations where they previously met demand with customer deposits, and

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many armored carriers have reported FI coin vault inventory holdings that exceed pre-pandemic levels.

Figure 2. Financial Institution Coin Orders and Deposits with the Federal Reserve (volume in bags)

The increased order volume and lack of deposits created a gap of as much as 3.5 billion coins per month between coin demand and available supply, quickly depleting Federal Reserve and U.S. Mint contingency inventories. For every 10 coins paid out into circulation, the Reserve Banks were getting only about 4 coins back in deposits as opposed to 7-8 coins prior to the pandemic.



The pandemic's impact on consumers has dramatically changed their behavior towards payments for everyday goods and services, and many of these changes have critical implications for the coin supply chain. We believe that many consumers who did not need value for their coin simply decided that redeeming coins was something they could defer:

- Lockdowns slowed the many small transactions that generated change providing compensation to some workers who, under normal circumstances, would redeem those coins on a routine basis.
- As noted in the [Diary of Consumer Payment Choice](#) published by the CPO in partnership with the Federal Reserve Bank of Atlanta, cash usage declined from 40 percent to 19 percent of

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consumer transactions between 2012 and 2020. Even fewer cash transactions took place during the pandemic, with consumers shifting their payments to cards and electronic payment methods. We will unpack this point in more detail in a later chapter.

- Additionally, there was at least some aversion to cash for perceived hygienic reasons. Using cash typically involves contact, and contact was initially something people were averse to when our understanding of how the virus spread was more uncertain. Ultimately, our understanding of the virus grew, and the Centers for Disease Control (CDC) identified that the virus spread primarily through aerosol and close contact with others, and not through surface contact.<sup>8</sup>

As the coin industry starts to emerge from the pandemic, the big questions now are which behavioral changes will stick and how the coin supply chain should accommodate the new normal.

### **Not a “Shortage”**

In the early days on the pandemic when coin issues initially began to surface, members of the public, the media, and some retailers referred to this problem as a “coin shortage.” Contrary to numerous “coin shortage” signs displayed in stores across the country, this is not a supply issue that can easily be resolved by simply producing more coin. In 2019, the U.S. Mint’s production of new coin accounted for only 17 percent of the coins that the Federal Reserve paid into circulation, while recirculated coins made up the balance.<sup>9</sup> In addition, according to the U.S. Treasury, that there is more than \$48 billion<sup>10</sup> in coin already in circulation.<sup>11</sup> Economic and behavioral changes resulting from the COVID-19 pandemic as well as shifting business and consumer payment preferences and decisions, suggest most of these coins are sitting dormant inside America’s 128 million households. As people have changed their spending habits in response to the pandemic, and certain coin-intensive businesses and commercial bank branch locations have been less accessible, many suspect the nation’s coin may be pooling in change jars, in car cup holders and in shuttered businesses, making it difficult for the businesses of this country to get the coin that they need to support cash transactions.

Notably, over the past 10+ years the Federal Reserve’s and the U.S. Mint’s collective efforts have allowed to make the coin production and distribution much more efficient, increasing recirculation of

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<sup>8</sup> <https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/sars-cov-2-transmission.html>

<sup>9</sup> <https://fiscal.treasury.gov/reports-statements/treasury-bulletin/current.html>

<sup>10</sup> <https://fiscal.treasury.gov/reports-statements/treasury-bulletin/current.html>

<sup>11</sup> According to the U.S. Mint, the coin in circulation amount excludes normal annual attrition. Various studies over the years have estimated annual attrition to be between 2.5 and 5 percent. Attrition rate is the rate at which coins are permanently lost from circulation each year. The U.S. Mint uses this information to inform long-term planning and policy development. Since the probability of a coin succumbing to attrition is not equal across denominations or production years, the studies provide an annual rate *range* based on U.S. Mint production data from 1960 to 2018. Attrition study documentation may be provided by the U.S. Mint upon request.

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coin and balancing regional inventories with a national view. This allowed the U.S. Mint's longer term capacity planning efforts to support demand in the short term with sufficient agility to address large unplanned short-term market swings. Through the declining use of cash and reduced demand for coin over the five years from 2015 through 2019, the U.S. Mint worked to remain agile and resilient to respond to dynamic changes. They set staffing levels accordingly, adjusted capital acquisitions, and continued to be prepared for further changes. Similarly, the Reserve Banks and their off-site coin storage and distribution locations do not keep a significant contingency inventory in normal times. When the deposits of coin dried up at the start of the pandemic, contingency inventories of coin at the U.S. Mint and the Reserve Banks were depleted within a matter of weeks.

### **Industry Response Actions and Their Effect in 2020**

In June 2020, the Federal Reserve, in consultation with the U.S. Mint and the U.S. Treasury, began to [allocate](#) available supplies of pennies, nickels, dimes, and quarters to FIs by limiting coin orders FIs place with the Reserve Banks to ensure a fair and equitable distribution of existing coin inventories. In June 2020, the U.S. Mint returned to full production and introduced mandatory overtime to increase new coin output. The U.S. Coin Task Force (USCTF) convened in July 2020 to take action to address the coin circulation challenges. We will describe the timeline and actions by the USCTF in a later chapter.

The situation began to improve in the August/September 2020 timeframe with the return to pre-pandemic U.S. Mint production and a slowdown in demand from FIs. Deposits of coin, although still below normal levels, began to increase around the same timeframe. In addition to efforts by the USCTF, this improvement was due to favorable market conditions: demand for coin was consistent with historic seasonal patterns, and this time period also happened to align with the easing of pandemic-related restrictions, businesses re-opening, and order limits being lifted.

The Federal Reserve was able to increase coin order limits consistently throughout 2020 and to ultimately remove what turned out to be the **first wave of coin allocation** in January 2021. The issues with coin seemed to have normalized at the start of 2021 with a positive outlook. Federal Reserve coin order and deposit levels remained 20 – 30 percent below historical levels from late-2020 through early-March 2021. However, orders and deposits were in a relative equilibrium, and Federal Reserve net-payments were close to normal levels and well-aligned with U.S. Mint production.

### **Coin Circulation Challenges Return in 2021**

After a relatively stable first quarter of 2021, coin demand began to increase again in March 2021, with the most dramatic spike seen in the first two weeks of April 2021. At that time, the majority of pandemic-related closed businesses began reopening, and they required larger initial orders for reopening. FIs were looking to the Federal Reserve to fund their inventories of coin due to lack of

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supply. What initially appeared to be the normal seasonal increase in FI coin orders with the Reserve Banks developed into a sustained trend that significantly exceeded typical seasonal patterns. After a brief period of increased FI deposit activity in the fourth quarter of 2020, deposits began a slow decline again in January 2021. This decline in deposits, combined with a significant increase in demand has resulted in net-payments that nearly doubled.

The Federal Reserve implemented the **second wave of coin allocation** in March 2021 to equitably manage available supply. In turn, FIs limited orders from their down-stream customers. At the time this paper was written in early 2022, coin allocation was still in place. The Federal Reserve continues to monitor U.S. Mint production, coin deposits and orders, and Reserve Bank inventories in monthly reviews of coin order limits. While efforts to get coin moving may be having an impact, all coin supply chain partners need to remain diligent to restore the pre-pandemic flow of coin.

### **Pandemic-Driven Supply Chain Limitations**

Some of the pre-existing limitations described in an earlier chapter were exacerbated by COVID-19. In this section, we will continue to unpack the coin supply chain limitations, but this time in the context of the pandemic.

#### **Acceptance**

A combination of factors impeded the basic redemption of coin by consumers. Although branch lobbies have not been the primary form of coin redemption since the introduction of coin aggregator kiosks, **redemption points inside bank lobbies are currently challenged** due to the transition to drive-up only services resulting from the pandemic and temporary and permanent location closures due to COVID-19. Sometimes, the criteria for depositing coin can even change between locations of the same institution, insofar as the consumer and retail facing arms of branch banking are not equipped to systematically receive coin. In order to meet demand more efficiently, some FIs deviated from existing supply channels by making FI to FI transactions and purchasing coin directly from aggregators. While these deviations are put in place to mitigate the Federal Reserve's ability to fulfill coin orders, they have further disrupted the pre-pandemic flow of coin and negatively impacted visibility into coin holdings.

#### **Visibility**

Although many FIs utilize the Federal Reserve's cash services to fulfil customer coin needs, there is no obligation to report inventory levels as a condition of access. As a result, the Federal Reserve does not have visibility into existing supply outside of its own inventories. While this reporting was not critically necessary pre-pandemic as supply and demand were in balance, currently coin is a scarce but shared resource and has turned into a competitive advantage for banks who have access to coin.

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Furthermore, armored carriers do not observe any formalized framework for sharing collective inventory levels at their sites, leading to potential regionalization of circulation challenges resulting from extenuating factors like business concentration, operating rules, and customer-vendor relationships. Impacts of this opaqueness include the **costly and inefficient intra-organizational movement of coin, and the possibility of holding more coin inventories than necessary to meet customer demand**. In addition, the coin supply chain is limited in its ability to anticipate and target stakeholders and messaging to improve coin circulation and deposits. Ultimately, a supply chain cannot be responsive to changing market trends and customer preferences if market data cannot be obtained.

### ***Capacity***

In normal times, the coin supply chain participants are generally **concerned about coin receipts exceeding capacity**. Given the large amount of coin that has been paid out to circulation to offset the lack of circulation during the pandemic, there is concern that when circulation returns, there will be a great deal of coin that will be returned, causing needs for large storage capacity. This worry generally surrounds insurance and vault space considerations as armored carriers hold inventories for FIs and the Federal Reserve in various locations. It is possible that efforts to promote revitalized coin circulation will not realize their full potential without sufficiently treating questions about the supply chain's capacity to warehouse an influx of coin greater than the existing infrastructure model may allow. In the future, should an influx of coin exceed existing armored carrier capacity, the Federal Reserve is prepared to utilize its storage capacity to take up this excess.

### ***Collaboration***

Insofar as any provider is a net “producer” of coin, there is opportunity for collaboration to accelerate coin (re)circulation and protect the integrity of coin supply chain. However, because it is **not systematized for institutions to cooperate outside their organizations**, more cost effective and logistically streamlined alternatives are often overlooked despite their viability. Where instances of successful inter-organizational partnership do exist, it is via informal relationships, and these solutions do not endure when personnel change over time. FIs and armored carriers do not observe any formalized routine for communicating excess inventory to the most proximate party in need (i.e. other FIs co-located at the same armored carrier site).

### ***Cost***

Coin distribution systems are expensive, labor-intensive, and costly. From the point of capture to the point when coin cycles back into a cash register, the number of transfers, storing, packaging, and distribution costs are not explicitly captured. As such, inefficiencies in coin processing are difficult to specifically identify, hampering improved changes to coin processing management.



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### **Raw Material Availability**

Last but not least, the pandemic continues to **slow down the flow of raw materials and availability of labor**, disrupting manufacturing and distribution of new coin. In the early stages of the pandemic, the U.S. Mint was able to increase orders for manufacturing materials as competition for these resources declined. Even as U.S. Mint suppliers faced staffing reductions, demand for their output from non-U.S. Mint clients fell. As such, the U.S. Mint was able to meet increased orders through year-end 2020 as the suppliers were capable to deliver all U.S. Mint orders.

A decades-long focus on supply chain optimization to minimize costs, reduce inventories, and drive-up asset utilization has removed buffers and flexibility to absorb disruptions. COVID-19 illustrates that many companies are not fully aware of the vulnerability of their supply chain relationships to global shocks.<sup>12</sup> What is gained in terms of supply chain efficiency and speed is lost in resiliency. The pandemic is only the latest example.<sup>13</sup> Disruptions caused by the pandemic were challenging, but they were certainly made worse by the increased reliance on just-in-time manufacturing. U.S. Mint suppliers faced labor shortages in the warehousing, transportation, and manufacturing sectors, issues that were felt throughout domestic supply chains. These systemic stresses became acutely prevalent as demand for coin in March 2021 increased. Additionally, U.S. Mint suppliers faced a return in demand from their other customers as the economy continued to recover.

Labor shortages remain one of the principal concerns in stabilizing the coin raw materials supply chain, although some improvement has recently been noted with suppliers filling a limited number of vacancies. U.S. Mint personnel continues to work closely with suppliers and monitor staffing concerns.

## **Implications of Limited Supply: Perspectives from the Supply Chain**

At the start of the pandemic, the world seemed to have run out of everything. From toilet paper to lumber to computer chips for cars, many industries around the world have been bewildered by shortages of a vast range of goods. For many, the pandemic has triggered “panic mentality”<sup>14</sup> – buying too much and stockpiling in anticipation of a shortage or a price increase. As we reviewed in previous sections, the main cause of coin circulation issues did not stem from a short supply of coin, as was the case with other products. Unfortunately, as we look back on the events of the previous

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<sup>12</sup> COVID-19: Managing supply chain risk and disruption – Deloitte Canada

<https://www2.deloitte.com/global/en/pages/risk/cyber-strategic-risk/articles/covid-19-managing-supply-chain-risk-and-disruption.html>

<sup>13</sup> How to Fix Global Supply Chains for Good: Council on Foreign Relations

<https://www.cfr.org/article/how-fix-global-supply-chains-good>

<sup>14</sup> <https://www.nytimes.com/2021/12/15/opinion/inflation-shortages-overordering.html>

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20+ months, these rational behavioral changes in a pandemic have affected the coin circulation as well, further exacerbating the crisis. In this section, we will unpack these behavior changes from the point of view of consumers, retailers, FIs, and armored carriers.

### **Consumers**

Changes in consumer cash usage in the last decade have led to people using coin less, and the pandemic has reduced consumers' in-person opportunities to pay with cash/coin.

As noted in the [Diary of Consumer Payment Choice](#) published by the CPO in partnership with the Federal Reserve Banks of Atlanta and Boston, cash usage declined from 40 percent to 19 percent of consumer transactions between 2012 and 2020. Three supplemental surveys were conducted to better understand how the pandemic has disrupted consumer payments and shopping behavior in 2020 and 2021. The most recent survey noted, while the overall demand for cash has increased throughout the pandemic (mostly as a store of value), the share of individuals making an *in-person* payments remains well below pre-pandemic levels and of those making an in-person payment, the share of consumers making a *cash* payment also declined. In simpler terms, consumers shopped less in stores, and when they did, they used cash (and coins) a lot less.

With fewer opportunities to use cash during the pandemic, the drop in share of transactions for cash may be a temporary pandemic-induced effect. It remains unclear whether changes in cash preference and consumer payment habits observed during the pandemic will remain beyond COVID-19 or revert closer to pre-pandemic levels. However, if the share of people making in-person payments remains below pre-pandemic levels, then there is a risk of persistent reduced use, deposit, and redemption of coin that will affect the circulation and available supply for some time. Therefore, assuming the share of people shopping in-person continues at current levels, additional and easier methods for using and depositing coin may need to be considered until a new equilibrium between supply and demand is reached.<sup>15</sup>

When it comes to coin, the supplemental surveys made a surprising discovery. Amid the disruption of coin circulation and the Federal Reserve's allocation of coin orders to banks, few consumers reported problems receiving change when they use cash, results which remained consistent in the second (August 2020) and third (April 2021) supplemental surveys. The problem with that finding is that there still remains little incentive for individuals to use, deposit, or redeem their coins. In addition, consumers found retailers who requested either exact change for purchases or requested payment using credit/debit instead. These traditional cash payers were therefore impacted but may not be captured as such in the Diary.

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<sup>15</sup> [Consumer Payments and the COVID-19 Pandemic: Findings from the April 2021 Supplemental Survey](#)

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Not only did consumers have fewer opportunities to spend coin, but they also significantly reduced their redemption of coin via coin recycling kiosks located in major grocery or discount store chains. As reported by Coinstar, the largest national coin aggregator, beginning in March 2020, coin redemptions dropped rapidly, quickly hitting a low of 60 percent below average volume the following month. From late April through August 2020, redemption volumes steadily recovered until stabilizing at 30 percent below average starting in September 2020. Through 2021, volumes further recovered but have yet to recover to pre-pandemic levels.

In addition, business closures and changes to common small payments have also made things worse. For example, parking meter enforcement was relaxed throughout the country for months in areas where businesses remained open for quick pickups. Many laundromats and other coin-intensive businesses were initially closed as well.

Health concerns also contributed to the problem. At the start of the pandemic and before any scientific research could be done on the spread of the virus on surfaces, consumers became reluctant to use cash. The U.S. Centers for Disease Control (CDC) recommended that businesses switch to touchless payment methods. In April 2020 a [study published](#) in the New England Journal of Medicine found evidence that the virus was more stable on plastic than copper, one of the metals used to make U.S. coins. However, consumer usage of cash largely returned to pre-pandemic levels through 2021 as scientific research broadened and identified that the virus spread mainly through person-to-person aerosol droplets and not from contact with surfaces.

Although today consumers can pay with alternative payment methods, such as credit or debit cards, there are still millions of unbanked American households (5.4 percent or approximately 7.1 million households).<sup>16</sup> The coin circulation disruption has highlighted a growing problem in the U.S. – financial inclusion for consumers without a bank account<sup>17</sup> for whom coins are a lifeline. These are people experiencing unemployment, working to reduce debt, or trying to establish or rebuild credit. The coin crisis potentially limits the ability of millions of cash-reliant and cash-preferring Americans to buy necessary goods and services. Figures 2 and 3 on the following page provides a visual depiction of the impacts and those impacted by the U.S. coin circulation disruption.

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<sup>16</sup> 2019 FDIC Survey. [How America Banks: Household use of Banking and Financial Services.](#)

<sup>17</sup> The 2019 FDIC Survey only focuses on the unbanked and does not cover the underbanked households.

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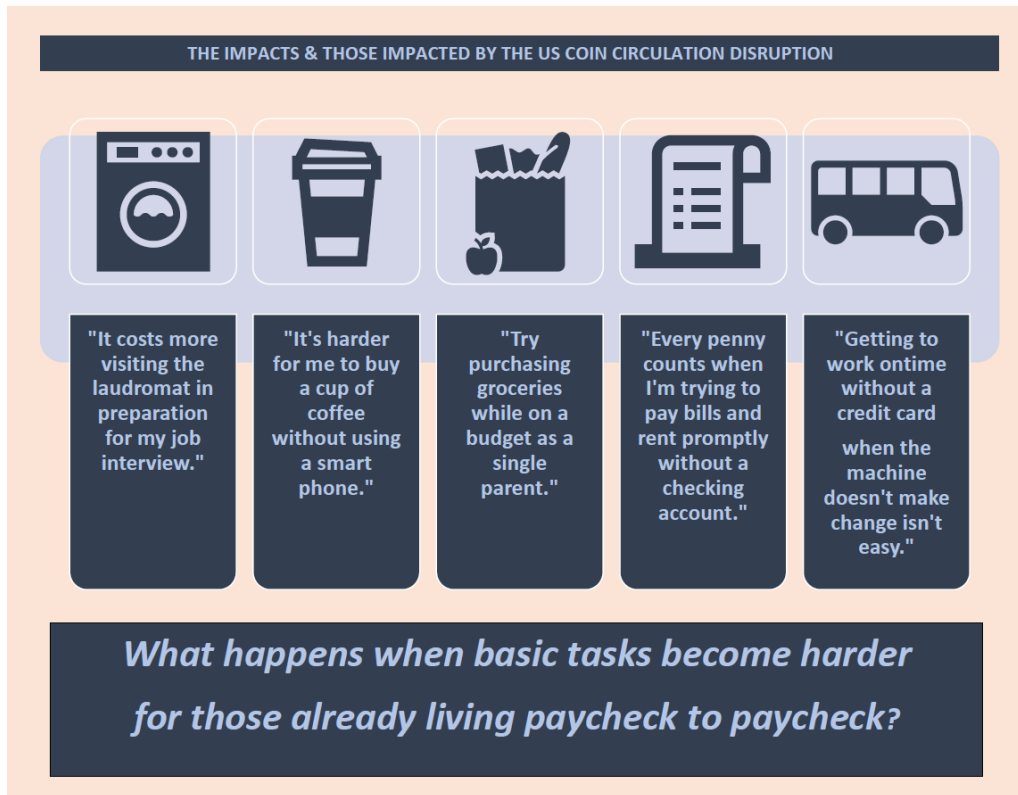


Figure 3. The Impacts and Those Affected by the U.S. Coin Circulation Disruption<sup>18</sup>

<sup>18</sup> Figures 2 and 3 were developed by Davis Bancorp Inc., an armored carrier company participating on the U.S. Coin Task Force. The quotes in figure 2 were captured and transcribed by company members from retail locations. Store patrons from the following types of cash-accepting establishments were interviewed (the respondents preferred to remain anonymous): laundromat, coffee shop, grocery store, metro station in Chicago, bill payment center in Chicago for utilities like electric, gas, and water.

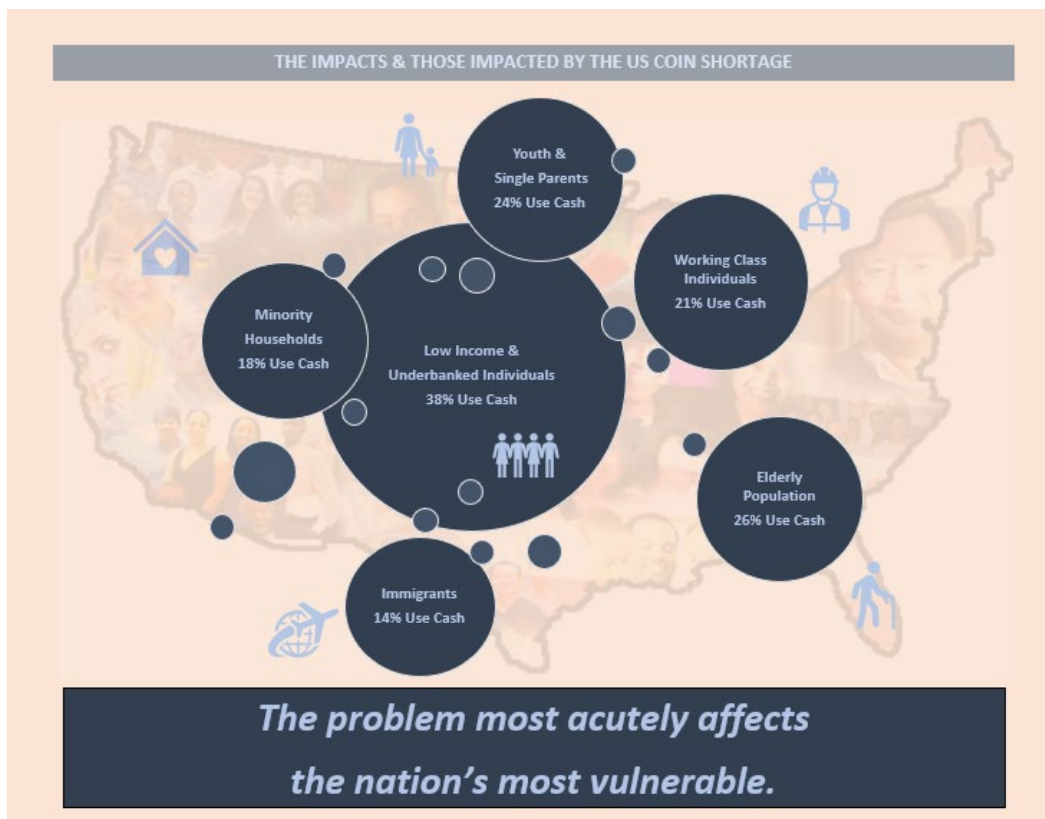


Figure 4. Who is Affected by the Coin Circulation Disruption<sup>19</sup>

## Retailers

The disruption in the coin supply chain is negatively impacting retailers, their employees, and cash-reliant customers. Retailers have been trying to mitigate the coin circulation disruption through their own efforts. Grocery stores and other large retailers who were fortunate to have invested in a coin-recycling kiosk rely on coin deposits from these kiosks. Some large retailers are even able to recirculate coin among their stores, by having stores with a surplus of coin send it to stores with a lack of coin. However, this represents a small percentage of retail businesses. Those that don't have these kiosks rely on rounding, incentives to use coin, or have no choice but to stop accepting cash without exact change.

Some retailers have tried to compensate by rounding up transactions for charity to avoid giving back coin in change, but this comes with operational complexities and the customer has to be willing to donate their change. Many retailers have to round down and incur a financial loss.

Without coins to make change or exact change from customers, many retailers across America had no choice but to turn away cash and coin transactions. Having to push cash-paying customers to pay with debit or credit cards comes at a significant cost to retailers as those transactions incur

<sup>19</sup> [2021 Diary of Consumer Payment Choice](#)

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interchange and processing fees. Some retailers established card-only or cash-only lines to delineate a payment method and mitigate the lack of coin at every register. For many businesses operating across the country going cashless in selective stores is cost-prohibitive and difficult to coordinate.

Supplemental surveys to the [Diary of Consumer Payment Choice](#) conducted by the Federal Reserve offer a glimpse into this retailer-consumer dynamic. Survey respondents were asked how often retailers asked them to use debit or credit cards instead of cash at the in-person point of sale. In August 2020, 45 percent of consumers reported that merchants asked for debit or credit cards at least some of the time, and this share declined to 19 percent in April 2021. Also, in April 2021, about two-thirds of consumers reported that merchants never asked them to use cards, up 24 percentage points from August 2020. This observed reduction in retailers steering consumers away from cash in the Spring of 2021 could also explain why consumers who shopped in-person in April and May 2021, did so more frequently and used cash more often for those in-person purchases, which would increase the demand for coin.

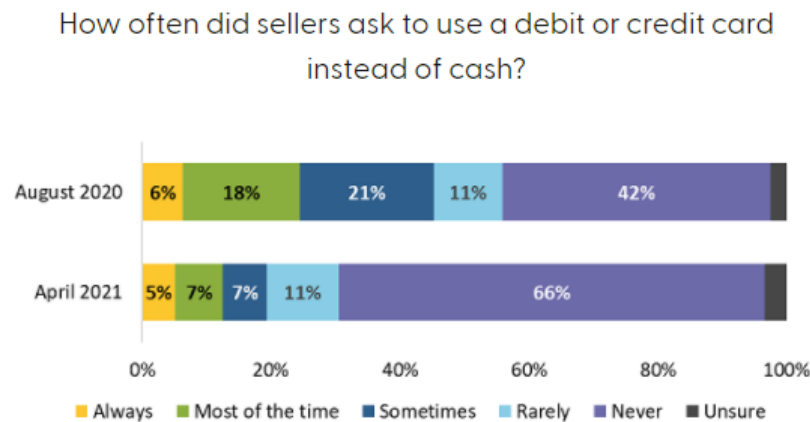


Figure 5. Third Supplement to the Diary of Consumer Payment Choice (April 2021)

Coin-dependent service providers/businesses were more severely affected and some of them began to use the costly alternative. For example, some laundromats began to use mobile apps where users load money and connect to laundry machines, avoiding coin altogether.

One key theme recurring from the retailers' response to the coin circulation issue is the brunt of the costs they are having to bear. In addition to declining sales, closures and lock-down measures from the pandemic, the U.S. retailer community has been impacted significantly by the coin issue.

How many retailers will continue these practices after the pandemic is hard to say. However, the costly changes that many of them were forced to make to accommodate contactless payments might be indicative of a more permanent shift towards less cash acceptance in the future. On the flip side, there have been reports in the media indicating consumers have difficulty properly using contactless

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payments methods, with particular uncertainty over which digital wallets are accepted at various retailers.<sup>20</sup>

Beyond incurring financial losses, businesses are facing operational challenges. In August 2021, the National Association of Convenience Stores (NACS) surveyed a sample of its members. According to the survey, 80 percent of convenience stores said that dealing with the coin issue was diverting organization resources. Specifically, the problem requires additional time and resources from the workforce – both cashiers and management – to provide change and search for coins from other vendors. Additionally, respondents reported that the issue was sporadic, affecting different stores and denominations week-by-week, and that the lack of consistency in daily operations is a burden on their business. The inability to make change is leading to customer frustration and 76 percent of respondents reported that store staff had been adversely impacted.

While the coin circulation issue has created challenges for business, many retailers have responded in creative ways. Some businesses are offering incentives to consumers to use coins. For example, Chick-fil-A offered a free sandwich to anyone who exchanged \$5 worth of coins for \$5 worth of paper money.<sup>21</sup> Wawa, a chain of convenience stores and gas stations along the East Coast, offered a free beverage for customers who redeemed \$5 of rolled coins, and a free hoagie for redeeming \$50 in rolled coins.<sup>22</sup>

Some businesses began to give electronic change through loyalty programs. For example, in July 2020, Kroger, a large grocery chain, announced that their stores would no longer return coin change to customers and instead, the remainders from cash transactions would be applied to customers' loyalty cards and automatically used on their next purchase.<sup>23</sup> Some retailers are providing QR code vouchers as change instead of coin.

These efforts help to mitigate the issue but are not feasible or sustainable for many businesses, especially small businesses, and a long-term solution is needed.

## **Financial Institutions**

Like others in the cash supply chain, the coin disruption has impacted FIs. Undoubtedly, the coin allocation implemented by the Federal Reserve throughout the country had the strongest effect. In late Spring/early Summer of 2020, deposits of coin from FIs to the Federal Reserve began to decline

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<sup>20</sup> [Apple Pay Offers Germ-Free Shopping—If Only We Could Figure Out How it Works - WSJ](#)

<sup>21</sup> <https://twitter.com/lexingtonscoc/status/1293198960128139265?s=20>

<sup>22</sup> <https://wpst.com/your-unused-coins-can-earn-a-freebie-at-wawa/>

<sup>23</sup> <https://www.newschannel5.com/news/kroger-to-no-longer-return-coin-change-to-customers>

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significantly while orders were increasing. The Federal Reserve reported seeing large orders for coin from FIs in areas with very little or no demand for coin pre-pandemic.

As discussed earlier in this paper, the lack of visibility into FI coin inventories – a pre-existing issue – has made matters worse. For example, it's impossible to say what percentage of FIs' increased coin orders were in response to high demand from their customers and how much of that coin was being ordered to stockpile coin as part of the FIs' crisis management strategy. Similarly, there is no visibility into how much coin the banks are receiving from their customers in deposits. The Federal Reserve has shared that since the pandemic was declared in March 2020, FI coin deposits to the Reserve Banks have dropped to 40 to 50 percent below 2019 volume, and as much as 60 percent in some denominations. Whether FIs have experienced the same decline in deposits or whether they are holding on to and not depositing this coin with the Reserve Banks is hard to say with certainty. Unfortunately, we can only rely on anecdotal information shared by FIs with their industry partners.

In response to alarmingly diminishing coin inventories available for distribution, the Federal Reserve began to allocate coin in June 2020. Coin allocation introduced coin order limits for each denomination applying to institutions of all sizes across the country. A scarcity mentality on the part of some FIs was unintentionally provoked by coin allocation and was particularly strong in the second wave of allocation, which the Federal Reserve applied in the late Spring of 2021 – a logical and predictable result from earlier learnings. More deposits originating from coin aggregators did not end up being deposited with the Federal Reserve in the second wave of allocation. Market demand for coin is higher in the second wave than it was during the first wave of allocations, as more businesses are operating “business as usual” than in summer of 2020.

Throughout the pandemic, reports in the media surfaced claiming that consumers are not able to deposit their coin or exchange it for paper currency at their local bank. Indeed, getting coin moving again has presented a significant challenge for FIs, and there are a few reasons for that. To begin with, many bank branches closed at the start of the pandemic, and months into it, some are still operating at limited capacity. In addition, in normal, pre-pandemic times, some FIs do not hold large inventories of coin in their vaults and branch locations. They can order what they need from the Reserve Banks and have it delivered the next day. Since coin is bulky, and storing large quantities of coin requires physical space, it can require additional infrastructure for banks to maintain and support.

Normally, large FIs without a coin redemption service require coin for deposit to be rolled. One of the recommendations that the U.S. Coin Task Force has made to FIs was encouraging unrolled coin redemption at branches. However, for branches that aren't automated this has become a concern. As mentioned above, over a number of years large FIs have removed coin-counting equipment or consolidated this service in a central location. Smaller credit unions are less likely to have the



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bandwidth or resources to prioritize investments in coin redemption over other types of assistance programs for their members, especially given the unresolved state of the pandemic.

Yet another concern for FIs is the cost of buying new coin-counting equipment for what could be a potentially a short-term issue. However, many local community banks and credit unions are still operating coin-counting machines. Banks and credit unions with coin-counting machines urged their customers to bring in their coin for deposit, with many offering customers bonuses or incentives. Without these coin-counting machines, handling loose coins is time-consuming and labor-intensive: the rolls must be checked and counted before they can be given back out. In addition, while nearly every FI will give out free coin wrappers, not every bank will accept rolled coins for non-customers, and many FIs are unable to convert coins to bills for non-customers.

Despite the challenges brought on by the coin circulation disruption, many banks have taken action to respond to the issue. Many began paying premiums for coin and launching coin buyback programs offering bonuses for coins deposited or exchanged for paper money. Some banks waived fees for the use of coin-counting machines and waived coin exchange fees for non-customers. Some credit unions have even purchased new coin-counting machines to improve their redemption capacity. Larger FIs are strategically moving coins among branches. Large FI members of the U.S. Coin Task Force have shared that they have been redistributing coin through their networks of branches so their customers can get the coin they need. (These FIs have also shared that the present coin allocation methodology is not dynamic enough to accommodate large retailers changing banks as is

### **Doing Their Part: Citizens National Bank**

Citizens National Bank is a community bank in northern Michigan. The coin circulation disruption inhibited the function of the regional economy that relies on tourism expenditures and cash transactions, so Citizens National Bank stepped up to meet the needs of its stakeholders by providing free coin-to-cash exchange services for customers and non-customers.

Citizens National Bank designed this program to support all members of its community, understanding that the coin circulation disruption disproportionately affects those who are unbanked and rely on cash as a payment system. The bank's seven locations remained mostly closed to the public during the pandemic, but staff was able to provide services to customers by appointment only. To encourage the community to do its part in alleviating the coin circulation disruption, Citizens National Bank reached out via social media to ask community members to empty their piggy banks in exchange for cash. To facilitate this effort, bank staff scheduled exchange appointments to accept coins from customers and non-customers.

Nancy Lindsay, the vice president of marketing at Citizens National Bank, said, "Being in a rural area, a bank that is celebrating its 90th year, and employing local, we are well known and respected and it's not often that we put out a call for help so that when we do, our customers and our communities are more than happy to help."

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typical during a more normal business cycle.) However, the availability of coin continues to be an issue, and customer needs are not consistently being met despite the FIs' efforts. FIs are spreading their supply of coin thinly so not to be concentrated in a single location, but it still provides their customers very limited access. Relying on this process results in increased transportation costs and unnecessary environmental impacts.

Many FIs have found creative ways to better meet the needs of their stakeholders through innovative programs and community outreach. The [Doing Their Part](#) series, available on the [getcoinmoving.org](https://getcoinmoving.org) website, highlights some of the commendable efforts that organizations have taken in order to #getcoinmoving again.

### **Armored Carriers**

Many armored carriers serve as the connective tissue linking the coin supply chain together. Because they often not only transport coin, but also conduct coin order fulfillment, coin deposit processing, and coin inventory maintenance on behalf of FIs and the Federal Reserve, armored carriers are situated at the center of the ongoing coin challenge. Examples of operational impacts to armored carriers during the pandemic include the introduction of systematic automated ordering limits, suspended audit periods, additional manual balancing processes, contingency FI-to-FI coin swap exchanges, new vault inventories, emergency transfer shipping, and intensive U.S. Mint receiving coordination.

However, decreases in coin deposit activity and the subsequent supply chain reactions have impacted different armored carriers differently. The armored carrier industry has not responded evenly or cohesively, and different organizations have made divergent business decisions regarding the ongoing coin challenge and the future of servicing the coin supply chain. Some companies have reduced their number of coin processing facilities, contracted coin wrapping operations, reduced vehicle capacity to transport coin, or discontinued service for coin-intensive depositing retailers and merchants altogether. On the other hand, some have maintained or expanded their operational capacities to facilitate coin services. Most armored carriers agree coin handling is cost-intensive.

The effects of market concentration in the armored carrier industry are important. There are relatively few companies providing services, and minimal standards of operation exist for governing coin handling, making any armored carrier process changes influential and pronounced. When considered in view of commonly co-located outsourced vault sites, and an increasingly consolidated FI client environment, the lack of standardization may be sustaining the varied approaches of different carriers, yielding serious implications for the coin supply chain.

## Development of U.S. Coin Task Force and Timeline of Activities

The U.S. Coin Task Force (USCTF) [convened](#) in July 2020 to identify, refine and promote strategies to resolve the coin supply chain issues resulting from COVID-19-related disruptions to normal coin circulation. Task force members represent all major participants in the coin supply chain, including representatives from the U.S. Mint, the Federal Reserve, armored carriers, the American Bankers Association (ABA), the Independent Community Bankers Association (ICBA), National Association of Federal Credit Unions (NAFCU), coin aggregators, and the retail trade industry.

These coin supply chain partners have come together to collaborate on addressing the coin challenges. Below is a high-level recap of key USCTF activities in 2020 and 2021.

### USCTF Activities in 2020

- On July 24, the Task Force issued its first statement titled “[Statement from the U.S. Coin Task Force on the Coin Circulation Issue.](#)” The statement, which aligned with the [U.S. Mint press release](#) issued around the same time, urged all Americans to return their spare change to circulation by using it for retail transactions, depositing it with FIs, and/or redeeming it at coin recycling kiosks, while following all safety and health guidelines and rules when visiting retailers, small businesses, grocery stores, and FIs.
- On August 3, the Task Force [published](#) its July report and initial recommendations. The report and initial recommendations were an outcome of the USCTF’s first phase, which concluded at the end of July. After the report’s publication, the Task Force turned its attention to developing materials for use in public campaigns as well as for use by retailers, FIs and armored carriers.
- On September 10, the Task Force published a number of [resources](#) for retailers, FIs, and armored carriers to help increase coin circulation:
  - Suggestions to encourage coin circulation, such as consumer incentives, charity coin drives, employee coin drives, in-store announcements, including what not to do, etc.
  - Social media recommendations and suggested graphics, and examples of photos of people depositing coin, caption examples, hashtags and links, accounts to follow, facts to share in posts, etc.

#### The [getcoinmoving.org](https://getcoinmoving.org) website

In August 2020, the U.S. Coin Task Force launched the [getcoinmoving.org](https://getcoinmoving.org) website. The website serves as the home for Task Force recommendations, materials, and toolkits, and as a communication channel with the public.

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- Another set of updates was added to the [getcoinmoving.org](https://getcoinmoving.org) site on September 15, 2020, including resources for kids and families and supply chain information.
- The Task Force announced October to be the **#GetCoinMoving** month and developed weekly themes to engage the public in alignment with the U.S. Mint’s public campaign. Social media marketing and other materials and graphics were produced to be used by the task force members and their member organizations to help spread the word on getting coin moving.
- In Q4 2020, the USCTF focused its efforts in three areas: 1) evolving our public messaging to highlight issues of financial inclusion as an unintended consequence of the pandemic; 2) developing tools and recommendations to help improve FI and armored carrier coin operations; and 3) proposing measurements and metrics that help evaluate the state of coin circulation issues and the efficacy of task force efforts. The USCTF also posted a new video on [www.getcoinmoving.org](https://www.getcoinmoving.org) to help get the word out about the importance of Americans returning coin to circulation, so that retailers can complete cash transactions and cash-reliant Americans can make purchases for their households and fully participate in the economy.

### **What is #getcoinmoving?**

Since the coin circulation issues began, the Federal Reserve has encouraged its employees across the country to bring their piggy banks and coin jars to deposit at their local bank, spend it at their local retailer, or cash coin in at a coin recycling machine. Employees began to post images of themselves depositing coin on their personal social media accounts using #getcoinmoving. Financial institutions, armored carriers, coin handlers, and other coin supply chain participants joined the movement to help raise awareness on this issue and get coin moving in local communities.

For two years – 2020 and 2021 – the U.S. Task Force announced October to be the #getcoinmoving month. The task force urged people to help get coin moving by returning their coin into circulation by spending it with retailers, returning it to their DI, or through a coin recycling kiosk, like the ones found at a grocery store. And when they do, employees of the coin supply chain participating organizations were encouraged a picture and post it to social media using the hashtag #getcoinmoving.

For the Get Coin Moving month, the Task Force developed social media marketing and other materials and graphics to be used by the task force members and their member organizations to help spread the word on getting coin moving.

Coin deposit volumes began to increase gradually starting in the summer of 2020, and the Federal Reserve raised order limits consistently throughout the year. In addition to the efforts of the USCTF, the macro market conditions helped drive the reprieve during this time. Demand for coin was consistent with historic seasonal patterns, and this time period also happened to align with the easing of pandemic-related restrictions, businesses re-opening, and order limits being lifted.

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However, even with coin allocation removal in January 2021, the usual coin circulation patterns did not fully return, and deposit volumes still remained below normal levels as the underlying conditions responsible for slowed coin circulation earlier in the year remained.

### **USCTF Activities in 2021**

- In May 2021, the Task Force reconvened with their regular cadence of meetings to reinitiate their efforts and industry campaigns to encourage consumer-level deposits to #getcoinmoving again.
- On May 18, the Task Force issued a public statement appealing to American consumers to help get coin moving. The Task Force reminded the public, FIs, and retailers about the toolkits and resources and made available fun and engaging learning resources for kids and families at [www.getcoinmoving.org](http://www.getcoinmoving.org) – all designed to help #getcoinmoving.
- In July 2021, the National Association of Convenience Stores (NACS) joined the USCTF.<sup>24</sup> NACS spearheaded efforts to push the Federal Reserve and U.S. Treasury Department to address the situation. Along with the Food Marketing Institute, International Franchise Association, National Automatic Merchandising Association, National Grocers Association, Retail Industry Leaders Association and the Society of Independent Gasoline Marketers of America, NACS wrote a letter to Federal Reserve Board of Governors Chairman Jerome Powell and Secretary of the Treasury Steven Mnuchin. The [June 23 letter](#) reminded them that “cash represents more than one-third of all funds transacted in-person by U.S. consumers and that number rises to nearly half of all funds for transactions of less than \$10. These transactions are at risk and there are not good alternatives.”<sup>25</sup>
- The USCTF once again declared October – the Get Coin Moving Month, urging people to help get coin moving by returning their coin into circulation by spending it with retailers, returning it to their FI, or through a coin recycling kiosk, like the ones found at a grocery store.
- In September, the USCTF launched the “[Doing Their Part](#)” initiative, highlighting the creative ways FIs are meeting the needs of their stakeholders through innovative programs and community outreach. The page on the [getcoinmoving.org](http://getcoinmoving.org) website launched with two profiles of Citizens National Bank and North Shore Bank and will be updated as additional stories are collected. [Doing Their Part Initiative | U.S. Coin Task Force \(getcoinmoving.org\)](#).

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<sup>24</sup> [https://www.convenience.org/Media/Daily/2021/Jul/19/3-NACS-Joins-US-Coin-Task-Force\\_GR](https://www.convenience.org/Media/Daily/2021/Jul/19/3-NACS-Joins-US-Coin-Task-Force_GR)

<sup>25</sup> [https://www.convenience.org/Media/Daily/2020/Jul/14/6-Wawa-Giant-Ask-Customers-Exact-Change\\_Payments](https://www.convenience.org/Media/Daily/2020/Jul/14/6-Wawa-Giant-Ask-Customers-Exact-Change_Payments)

### Conclusion

In conclusion, this paper summarized the observable causes that contributed to the pandemic-driven coin circulation disruption, the impacts and those affected by this issue, as well as response actions taken by the coin industry to address the situation. Given the limited transparency into the coin supply chain, there may be additional factors. This paper has taken a closer look at the limitations of the coin supply chain and behaviors by consumers, retailers, armored carriers, and FIs that are altering normal coin circulation patterns.

By unpacking all the various facets of this problem from the perspective of these coin supply chain participants, we attempted to answer the question of whether the coin circulation slowdown is temporary and would resolve itself with the end of the pandemic, or whether it is a permanent issue. Changes in consumer cash usage seen recently have altered the coin circulation significantly and have had a trickle-down effect on retailers and FIs. Retailers are adjusting their practices to serve and retain customers, while FIs continue to address business model-driven challenges to accepting coin and making it available under allocation. How many of these changes will remain is hard to predict. However, if consumer behavior towards coin is not going to change to where it was before the pandemic, the coin circulation disruption might have potential to become a much broader and more longer-term issue.

The USCTF members have worked tirelessly to address the coin circulation disruption, issue recommendations for the broader coin supply chain, and influence actions within their organizations. In carrying out its work, the Task Force has strived to stay committed to its charge and to the American public. This report reflects the commitment, enthusiasm, and creativity with which the Task Force members worked together to bring solutions to this problem that affects so many in this country.

What we know with certainty is that the coin circulation disruption is an issue of financial inclusion. It acutely affects the most vulnerable American consumers who rely on coin for many transactions and for purchasing goods and services. While the payments space has made significant advancements in the past decade, going cashless (and coinless) could be detrimental for the approximately 14 million unbanked and underbanked people in the United States. For anyone with limited access to the financial system, cash is the most inclusive payment instrument available. And the country needs a payments system that serves everyone.

We also know that the coin supply chain participants' ongoing investments into efforts to encourage consumer redemption of coin have proven beneficial. We support and encourage continuing industry efforts to raise awareness of this issue as long as the coin circulation challenges persist, or even consider a wider-reaching public awareness effort addressed to consumers. The U.S. Mint has successfully used such levers multiple times throughout the pandemic.

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Yet, there are still many unknowns in fully understanding this issue. We presume that consumers are holding most coin that isn't circulating, that the FIs' and retailers' behaviors are driven by the uncertainty of supply, and that the pandemic's impacts on the coin supply chain might be longer-term. But these are mere speculations. With limited resources and no authority, our group's ability to come to certain conclusions and to affect change in this complicated and intricate situation can only go so far. Additional research into the use and utility of coin today might help our understanding of whether this issue is important enough to take more serious action through changes in policies, regulations, or even congressional action.

In the first quarter of 2022, the Federal Reserve and the U.S. Mint will jointly contract with a third-party consultant to review the coin supply chain. Together, along with representatives from across the supply chain, the consultant will identify impediments to normal coin circulation and develop recommendations to improve the coin supply chain overall. Upon the completion of this multi-month assignment, we will issue an addendum to this paper with the consultant's recommendations.