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Driver for Contactless Payments

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Before the virus, my payments course discussed why so few of us paid for purchases with cash. Those conversations emphasized the inconvenience of carrying and using cash. When the course turned to payment cards, we discussed how the increasing speed of card-based transactions had made cards relatively more attractive to merchants. More broadly, my scholarly writings on the subject emphasized the societal downside of cash, the likely connection between crime and the dependence of an economy on cash transactions; that might be true because of the utility of cash either for sheltering criminal transactions or for avoiding taxation.¹

As a consumer, my primary experience with cash before the virus was standing in checkout lines observing the sluggish pace of cash transactions in front of me. Like so many things in our lives, the advent of the virus has changed the situation markedly. From the earliest days of infection, it has been far more unsettling to observe cash transactions knowing that the virus persists on paper and metal surfaces for days.²

The dynamic that has driven the choices merchants offer in face-to-face retail transactions will change as well. Driven by the private exigencies of the retail environment, the last few decades have witnessed private mechanisms spreading cash-less retail transactions, predominantly card-based. In some countries, policymakers have supported that spread, reacting to the societal costs of a heavy reliance on cash by adopting rules that limit or even aim to eliminate the use of cash.³ More recently in this country, however, as a few businesses have

¹ See RONALD J. MANN, CHARGING AHEAD: THE GROWTH AND REGULATION OF PAYMENT CARD MARKETS 102-05 (Cambridge Univ. Press 2006).

² See Neeltje van Doremalen, et al., *Aerosol and surface stability of HCoV-19 (SARS-CoV-2) compared to SARS-CoV-1*, *New Engl. J. Med.* (Mar. 17, 2020) (DOI: 10.1056/NEJMc2004973).

³ See, e.g., See Jon Henley, *Sweden Leads the Race to Become Cashless Society*, *Guardian* (June 4, 2016), <https://www.theguardian.com/business/2016/jun/04/sweden-cashless-society-cards-phone-apps-leading-europe>;

refused to accept cash, local policymakers have pushed back, reasoning that a refusal to accept cash excludes less affluent purchasers (frequently unbanked) from fair access to commerce. Among others, Massachusetts,⁴ New Jersey,⁵ New York,⁶ Philadelphia,⁷ and San Francisco⁸ have banned cashless businesses. Indeed, the present Congress has considered two bills that would extend such a ban to the federal level.⁹ The likelihood that Amazon's cashier-less stores (Amazon Go) would refuse cash payments has been a particular stimulant to those bills.¹⁰

This essay makes two basic points about the effect of the virus on that mix of policy, legal, and institutional arrangements. First, policies fostering the use of cash in retail transactions are much harder to justify in the world of the virus, as it is harder to make those transactions safe for purchasers, cashiers, or the populace in general. Second, the slow pace of the shift from card-based payments from swipe to chip, with the slower drift to phone-based payments, is more worrisome now, where fully contactless payments are safer for all involved than authentication either by swipe or chip.

Virginia Harrison, *This Could Be the First Country to Go Cashless*, CNN Money (June 2, 2015), <http://money.cnn.com/2015/06/02/technology/cashless-society-denmark/>; Abigail Adams, *Norway's Biggest Bank Calls for Country to Stop Using Cash*, Int'l Bus. Times (Jan. 22, 2016), <http://www.ibtimes.com/norways-biggest-bank-calls-country-stop-using-cash-2276140>.

⁴ See Ed Shanahan & Jeffery C. Mays, *Cashless Businesses? City Council Says No*, N.Y. Times, Jan. 24, 2020, at A21.

⁵ See Aaron Moselle, *US Ban Proposed on Cashless Businesses*, Phila. Tribune, May 21, 2019, at 2B.

⁶ See Shanahan & Mays, *supra* note 4.

⁷ See Moselle, *supra* note 5; Christian Hetrick, *Phila. Passes Ban on Cashless Stores*, Phila. Inquirer, Mar. 1, 2019, at A7.

⁸ See Joshua Sabatini, *SF Approves Ban on Cashless Stores*, S.F. Examiner, May 7, 2019.

⁹ Payment Choice Act of 2019, H.R. 2650 ((116th Cong., 1st Sess.); Cash Always Should Be Honored Act, H.R. 2630 (116th Cong., 1st Sess.).

¹⁰ See Sabatini, *supra* note 8; Robert Channick, *Amazon Go Stores Will Give Accepting Cash a Go*, Chi. Trib., Apr. 11, 2019, at 1.

I. Cash Payments

As mentioned above, the willingness of businesses to accept cash before the virus reflected the intersection of two conflicting trends: the creeping superiority of card-based payments from the merchant's perspective and the increasing perception of policymakers that a refusal to accept cash disproportionately affects the large underbanked segment of the populace.¹¹ The advent of the virus shifts the relevant considerations markedly. Now, cash payments are a danger not only to the individuals directly involved, but to society at large, as they spread the virus through the population. Nor is it a simple matter to sanitize those transactions, given the difficulty of removing the virus from paper, especially the cotton-and-linen weave of American currency.¹² Relatively speaking, the card-based payment is much safer, as the cashier typically need not touch the card and the cardholding purchaser can disinfect the card after any contact with a terminal at the point of sale.

That new factor — the contagion of cash transactions — should change the reaction of local policymakers, who now should discourage cash payments and welcome the efforts of merchants to shift purchasers toward card-based payments. I doubt legislators will take seriously the notion of obligating merchants to refuse cash payments. Nor do I consider it realistic for the United States to move rapidly toward the eradication of the domestic currency. I do see, though, a few initiatives that might align the public and private interests to accelerate the trend away from cash.

A. Public Policies

The increasing societal cost of cash transactions justifies the use of policy levers to reduce the use of cash. The most obvious response would repeal the cash-obligating ordinances several

¹¹ See Shanahan & May, *supra* note 4 (noting that one in nine NYC households has no bank account); Sabatini, *supra* note 9; Hetrick, *supra* note 7.

¹² Jenny Surane et al., *Is It Safe to Use Cash During Outbreak?*, L.A. Times, Mar. 15, 2020, at C2.. Perhaps the problem would be different in the United Kingdom or one of the other countries that now issue currency made of plastic rather than paper. See Kirill Adamovich, *Which Countries Use Polymer Banknotes*, PaySpace Mag., Feb. 10, 2020, available at <https://payspacemagazine.com/banks/which-countries-use-polymer-banknotes/>

cities and States recently have passed. The most prominent of those probably is the New York City ordinance, which ironically came into effect this winter, just weeks before the virus spread through the city.¹³ If that recommendation seems obvious and overdetermined, consider the remarkable circumstances of the Delaware legislature, in which a legislator introduced a bill obligating businesses to accept cash in March of 2020, well after the pandemic had reached our shores.¹⁴

The second proposed response reflects the relatively arbitrary choice between cash and card. For most of us, the choice between using cash or a card often reflects much less of a rational calculation about the costs and benefits of the competing payment devices than it does some combination of habit and rough rule of thumb. Most suggest, for example, that they use cash for transactions below a certain threshold. In part, that habit might have developed because merchants often have prohibited purchasers from using payment cards for small transactions.¹⁵

To the extent the choice for cash is a “soft” choice founded in habit rather than calculation, policymakers should be able to alter that choice for many transactions by raising awareness about the private and social costs of payments with cash: they are dangerous not only for the purchaser that pays with cash, but for society more broadly. In the same way that we accept the costs of social distancing as a group, even though third parties reap most of the benefits, appreciation of the risks of cash should lead to a cognizable shift away from cash and toward card-based payments.¹⁶ That suggests that public-service announcements and advertisements might substantially alter behavior. At the same time, to facilitate the use of cards in small

¹³ The City Council passed the bill on January 23, 2020. See Shanahan & May, *supra* note 4.

¹⁴ Sarah Gamard, *Proposed Del. Bill Would Ban Stores from Refusing Cash*, *Wilmington News J.*, Mar. 11, 2020, at A3 (discussing the introduction of Senate Bill 220 on March 10).

¹⁵ See 15 U.S.C. 1693o-2(b)(3)(A) (preventing network rules that bar surcharge for accepting credit cards on transactions below ten dollars).

¹⁶ I would expect the apparent riskiness to cash to drive a shift toward card-based payments even without government support. It will be quite some time, though, before data would document such a shift.

transactions, Congress should reconsider the Dodd-Frank provision validating merchant payment-card minima.¹⁷

It is harder to address the limited access of the unbanked to payment cards.¹⁸ It is beyond the scope of this essay to recapitulate the causes of that problem or the various solutions that other scholars have proposed. I should mention, though, the ready ability of stored-value cards as a mechanism for mitigating that problem. As I have written in previous work with Liran Haim, stored-value cards provide a simple way to get those without bank accounts into the mainstream of modern payments. As we explain, stored-value cards already are used successfully for all federal payments to unbanked individuals. They also are commonly used for recurring salary payments to the unbanked.¹⁹ Rolling out similar programs at the state and local level should put an even larger share of the populace in a position to choose card-based payments over cash.

B. Merchant Initiatives

Public policy and legislation has played only a minor role in the shift over the last half century from cash to payment card at the point of sale. Rather, the dominant force driving that shift was the relative desirability of those transactions for merchants and purchasers. Hence, initiatives that accelerate that shift are at least as likely to come from merchants as they are to come from legislators.

One key point is the likely alignment of the public and private interests in sanitizing retail payment transactions. Merchants understand that our choices among competing retailers rest in part on our perception about the safety of those retailers. Retailers that mandate social distancing and offer conspicuous disinfection of their stores are more attractive than those that do not. The same will be increasingly true for payments, as purchasers gain awareness of the relative risk of cash payments as opposed to card-based payments. A few likely merchant responses come to mind.

¹⁷ See *supra* note 15.

¹⁸ See, e.g., Shanahan & May, *supra* note 4.

¹⁹ *Putting Stored Value Cards in Their Place*, 18 LEWIS & CLARK L. REV. 989 (2014).

The first is softer, parallel to the informational response suggested above: when purchasers offer to pay with cash, cashiers could suggest that they pay instead with a card.²⁰ That would parallel the common efforts of merchants in recent decades to shift payments from credit cards to debit cards. In this context, though, the savings would come not from decreased out-of-pocket costs, but rather from the safety to the store's own employees (who would touch the currency of fewer purchasers) and from the increased perception of the store's safety (as customers less commonly observe contagion-preferent cash transactions).

A second initiative, parallel to retailer segregation of checkout lines by payment type, would be to funnel all cash payments to separate "cash-only" payment lines. That would reassure card-using purchasers that they could pass through a checkout line that had not been infected with currency-borne virus. Similarly, it would support more careful disinfectant procedures for the cash-only transactions. It might be easier for a merchant to more rigorously sanitize the checkout station and cash drawer after each transaction involving the receipt or distribution of cash if the cost of slowing the pace of transactions was borne largely by the purchasers making the relatively risky choice to pay with currency.

II. Card-Based Payments

It is only a first step to support the shift from cash payments (with their inherent contact) to card-based payments (at least potentially contactless). Concerns about contagion create a new fault line in the ongoing deployment of advancing technologies for card-based payments. Specifically, where the advances of the last few decades have been driven by concerns about enhancing security, the circumstances the industry now confronts suggest an entirely new motivation for accelerating the use of advancing technologies.

To explain, the most important story of the century to date has been the shift away from the authentication of retail card transactions by a swipe of a magnetic strip on the back of the card. The basic problem with swipe-dependent authentication always has been that malfeasors easily could produce forged cards that readily could be used to conduct transactions at retail

²⁰ This is already happening. See Surane et al., *supra* note 12 (discussing Dick's Drive-in in Seattle).

stores without detection by conventional payment terminals. Most of the world shifted to chip-laden cards early in the century, implementing an encryption system that is impervious to forgery, at least under current technological conditions. The United States, though, did not shift to that technology until 2015. That technology is now widely deployed in retail establishments in the United States, as substantially all issuers of credit and debit cards have replaced stripe-bearing cards with chip-laden cards, and the great majority of retail merchants now use terminals that interrogate the chip to validate the authenticity of the card.²¹

A few years later, Apple released the Apple Pay application on its cellphones, subsequently mirrored by Android Pay and Samsung Pay for phones from other manufacturers. That technology essentially mimics the authentication of the chip cards so that transactions conducted by any of the phone-pay applications are as secure as transactions conducted with chip cards (assuming that the holder of the phone is an authorized user of the card).

The deployment of those technologies left a wide gap in retail authentication regimes between the great majority of retail commerce (in which transactions are secure - authenticated by a chip or phone) and those lingering pockets of retail commerce at which terminals rely on a swipe as opposed to the chip (at this point, most of those transactions occur at gasoline stations). But the advent of the virus brings a different dichotomy, between the transactions in which the card contacts the payment terminal (those in which a card is swiped or a chip inserted) and the phone-based transactions that are wholly contactless. In the former case, the card necessarily contacts a terminal that has contacted numerous previous cards, each of them a plastic surface possibly carrying the virus. In the latter case, the purchaser need not contact any surface at all to complete the payment transaction.²² The new milieu, then, is one in which cardholding purchasers, and thus the merchants that wish to attract them, have a strong incentive to ramp up their acceptance of phone-based payment applications.

²¹ See, e.g., MRONALD J. MANN PAYMENT SYSTEMS AND OTHER FINANCIAL TRANSACTIONS 8-9 (7th ed. 2020); Visa Chip Card Update (Dec. 2018), *available at* <https://usa.visa.com/dam/VCOM/regional/na/us/visa-everywhere/documents/emv-chip-infographic-q4.pdf>.

²² I do not consider the intermediate step of contactless “tap-and-pay” transactions, which are available at a much larger group of merchants than phone-pay transactions. In my experience, it is not routinely practicable to conduct those transactions without the surface of the card firmly contacting the terminal.

To date, the use and acceptance of those applications has increased incrementally.²³ The relatively limited use of those applications by consumers has limited the incentives of merchants to expend the resources to upgrade their payment terminals to accept the phone-based applications. The discussion above suggests that the increased consumer awareness of the relative safety of wholly contactless payment transactions might change both sides of that dynamic. As cardholding purchasers seek to avoid contact with objects in the retail establishments that they patronize, they should increase the frequency with which they use those applications. Similarly, as merchants compete to attract customers by enhancing the apparent safety of their establishments, they will have an increased incentive to be seen to embrace those applications as the safest possible instrumentalities of payment.

III. Conclusion

The pressure for contactless payments well might affect areas other than the two I emphasize above. Among other things, it might accelerate the decline of check usage, interpose another obstacle to merchant preference for PIN-based authentication of payment-card transactions, or spur more restaurant owners to adopt European-style pay-at-the-table card terminals. It is enough for this short piece if I have illustrated a few of the most important changes it might support.

²³ See, e.g., Chance Miller, *Apple Pay Usage Continues to Lag in the United States, New Data Suggests*, 9to5Mac, Aug. 29, 2019, available at <https://9to5mac.com/2019/08/29/apple-pay-adoption-united-states/>.