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Cash and COVID-19: The impact of the pandemic on the demand for and use of cash

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We would like to dedicate this paper to the essential workers at the Bank of Canada, including colleagues who work in the Bank Note Distribution System, the Agency Operations Centres in Montréal and Toronto and in the regional offices. Their work has helped ensure that bank notes remain accessible to Canadians.

Abstract

Consumer spending declined significantly during the recent COVID-19 pandemic. This negative shock likely reduced spending across all methods of payment (cash, debit, credit, etc.). As well, the mix of payment methods that consumers use could also be affected. This paper is a first step in analyzing the effects of the pandemic on the demand for cash and on the methods of payment in Canada. We present insights drawn from the Bank Note Distribution System and from a recent survey conducted by the Bank of Canada in collaboration with our survey provider, Ipsos, and technical advice from Statistics Canada. We also plan to conduct follow-up surveys and analyses later in 2020 and in the first half of 2021. This work will help us assess whether any effects on demand for cash or the mix of payment methods used by consumers are transitory or persistent.

Topics: Bank notes; Central bank research; Digital currencies and fintech; Econometrics and statistical methods
JEL codes: C9, C12, E4, O54

1. Introduction

Consumer spending declined significantly during the COVID-19 pandemic. This negative shock likely reduced spending across all methods of payment (cash, debit, credit, etc.).[1] Further, the relative shares or mix of payment methods used also could have shifted given the nature of the shock. That is, along with a decrease in the dollar amount spent, we could see a change in how that spending is distributed across different methods of payment. In addition, changes in consumer preferences and behaviour related to the pandemic could be either temporary or long-lasting.

These various outcomes are empirical matters that can be measured and analyzed over time. Caution is therefore warranted to avoid extrapolating behavioural changes during the recent pandemic into forecasts of permanent effects, instead of possibly temporary adjustments. This paper is a first step in analyzing the effects of the pandemic on methods of payment in Canada and on the demand for cash more generally.[2] We will continue to monitor these developments and learn the extent of any behavioural changes over time.

In this paper, we present initial insights drawn from the Bank Note Distribution System (**Section 2**) and from a recent survey conducted by the Bank of Canada (**Section 3**). Our goal is to provide a coherent understanding of the recent empirical evidence concerning cash and developments affecting other methods of payment, such as debit and credit cards. We provide concluding remarks in **Section 4**.

2. Insights from the Bank Note Distribution System

This section summarizes evidence concerning the demand for bank notes in March and April 2020 based on data extracted from the Bank Note Distribution System (BNDS).

The Bank Note Distribution System

The Bank of Canada supplies financial institutions with the bank notes they need to meet public demand through the BNDS. More specifically, the Bank distributes bank notes to financial institutions at regional distribution centres located in 10 regional distribution points (RDPs) across Canada. The RDPs are Calgary, Halifax, Montréal, Ottawa, Québec, Regina, St. John's, Toronto, Winnipeg and Vancouver. The RDPs roughly correspond to the provinces of Canada. So, for example, the Toronto RDP can be considered the main supply centre of bank notes for Ontario. Financial institutions can withdraw notes from the BNDS to meet the demand for cash, or they can deposit surplus notes. The same distribution system is used to return bank notes that are considered unfit for further circulation. (See Bilkes 1997 for more details on the BNDS.)

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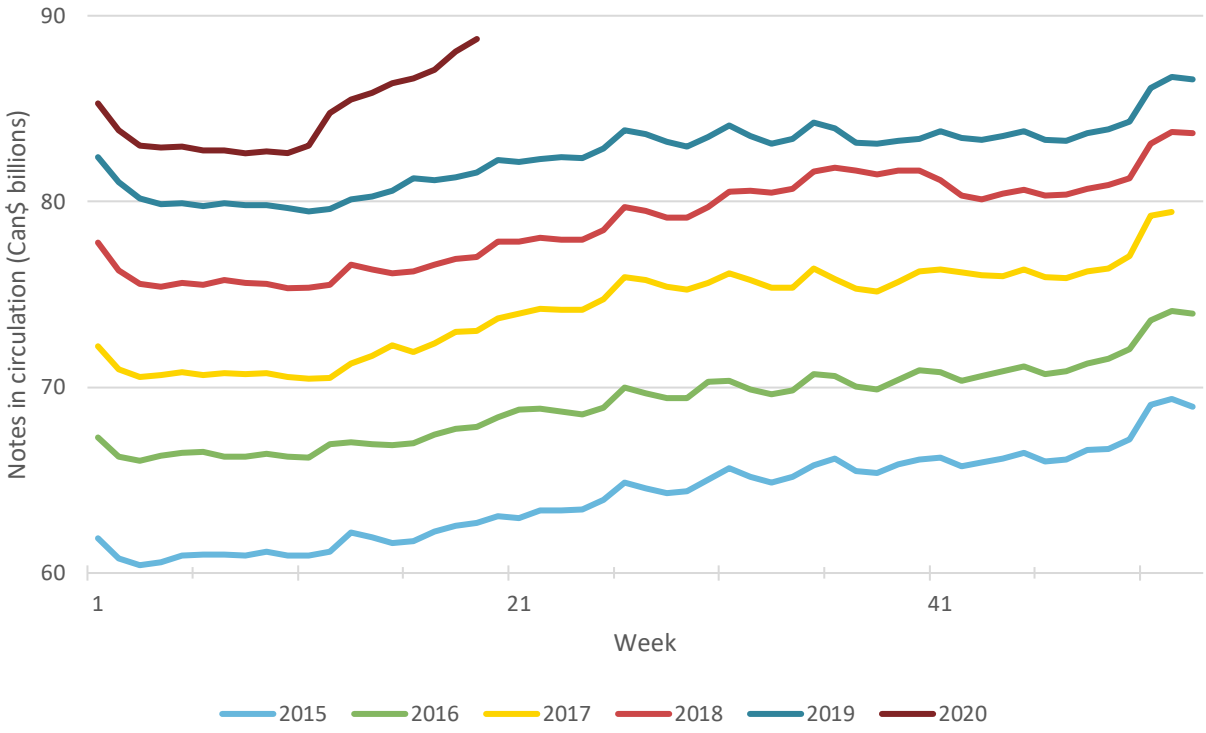
1 See Chart 7b of the Bank of Canada *Monetary Policy Report*, April 2020, and Schembri (2020).

2 In this regard, it is important to keep in mind that the demand for cash is motivated by both its use for payments and by precautionary or store of value reasons. While the cash share of consumer payments has been declining steadily in recent years, cash demand has been stable for decades in Canada and in most other advanced economies (Engert, Fung and Segendorf 2019).

Bank notes in circulation by year, 2015–20

Chart 1 shows the value of notes in circulation (NIC) through each year from 2015 to 2020. We see that NIC increased significantly in March and April 2020. Further, this increase was larger than those seen during the same two months in previous years. The rise in NIC was spread across different denominations of bank notes, but the $20 and $50 notes were most in demand, which is typical.

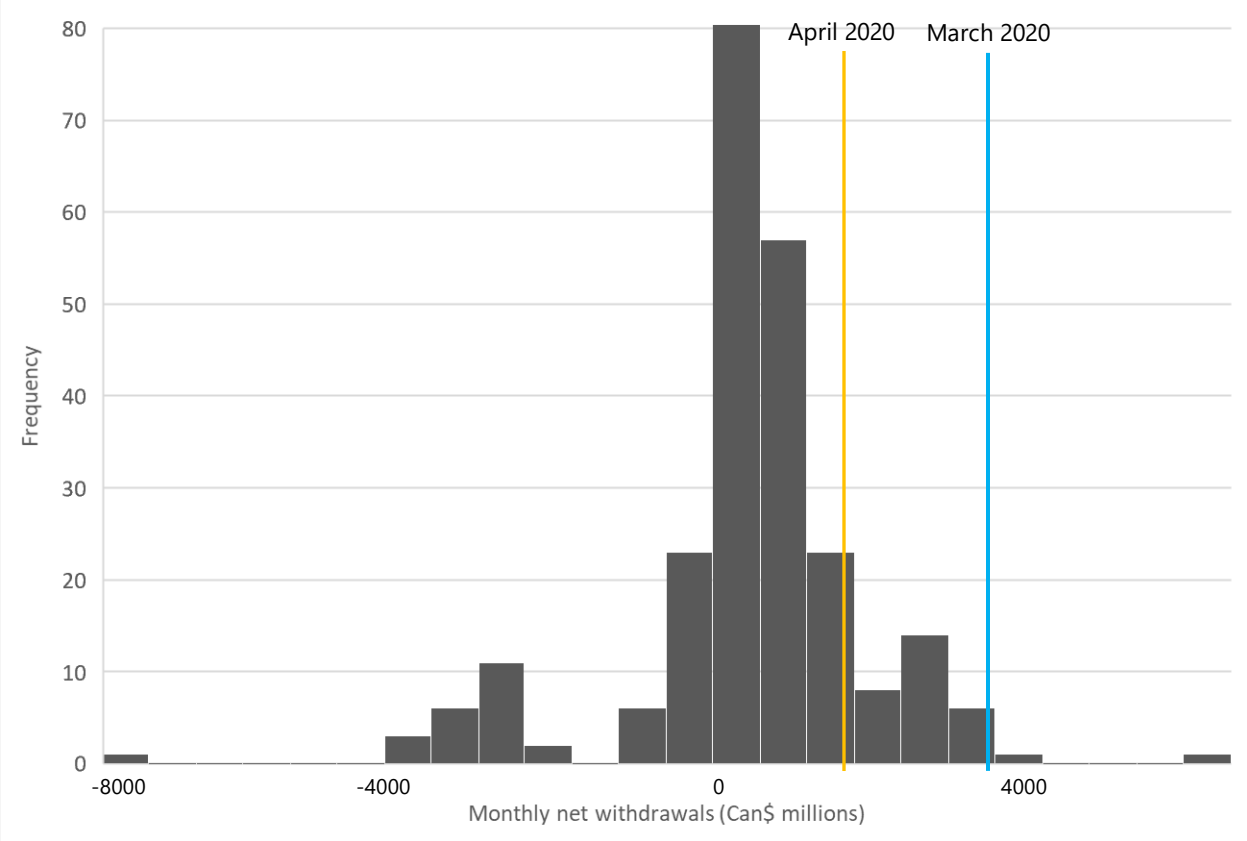
Chart 1: Notes in circulation by year



Net note withdrawals from the Bank of Canada, January 1998 to April 2020

The change in NIC equals the value of **net** note withdrawals from the Bank of Canada, which is withdrawals of bank notes less returns. **Chart 2** plots the frequency distribution of all monthly net withdrawals of bank notes from the Bank since January 1998, highlighting those in March and April 2020. Consistent with **Chart 1**, we see that the net note withdrawals in March and April were among the largest NIC increases since 1998; this is particularly the case for March 2020.

Chart 2: Monthly net withdrawals from January 1998 to April 2020

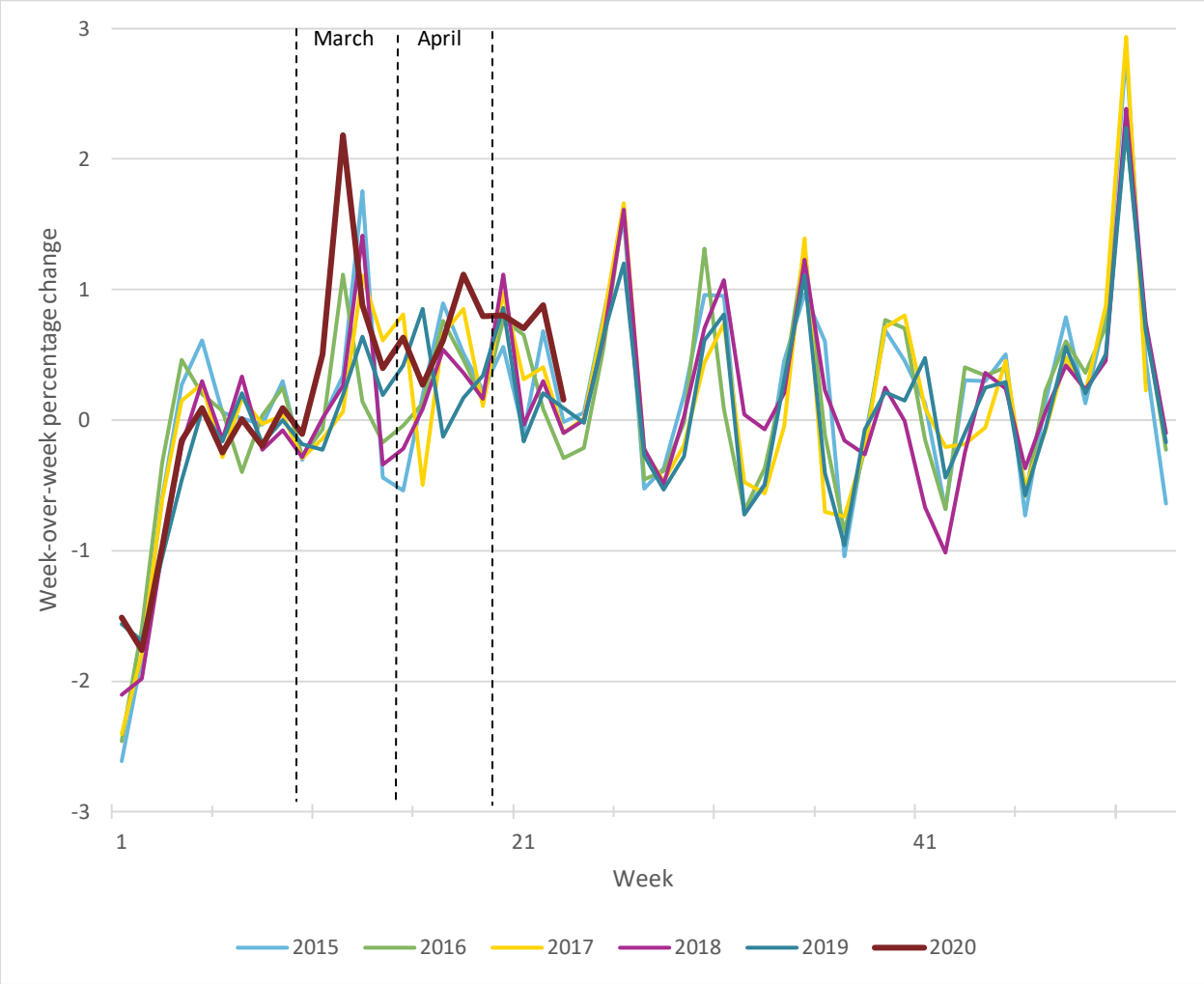


To some extent, these results could be expected with the increasing value of NIC over time. As the dollar value of NIC increases, recent extreme values are more likely to be in the tails of the historical distribution of net note withdrawals. Therefore, next, we compare weekly percentage changes in NIC across years, which abstracts from the effects of the increasing dollar value of NIC over time.

Weekly percentage changes in each year since 2015

Chart 3 shows that the weekly percentage changes in the value of NIC through March and April 2020 are indeed large compared with the percentage changes during these months in previous years.

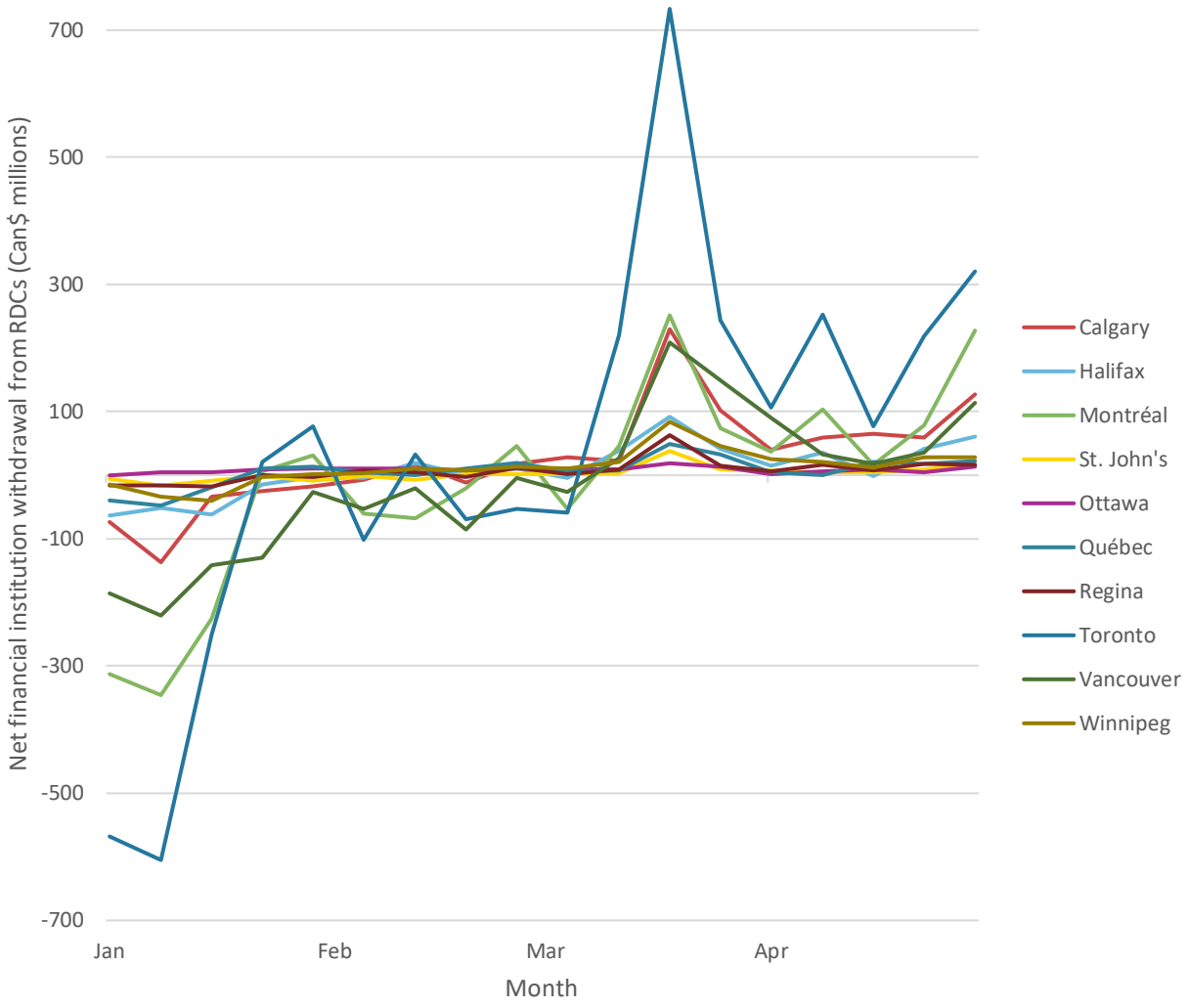
Chart 3: Week-over-week percentage change in notes in circulation since 2015



Weekly net note withdrawals by region in 2020

In **Chart 4**, we see that the increase in NIC in March and April was spread across the country, but was concentrated in Canada's major economic and population hubs: Toronto, Montréal, Calgary and Vancouver.

Chart 4: Weekly net note withdrawals from regional distribution centres, by location



Note: RDC stands for Regional Distribution Centre.

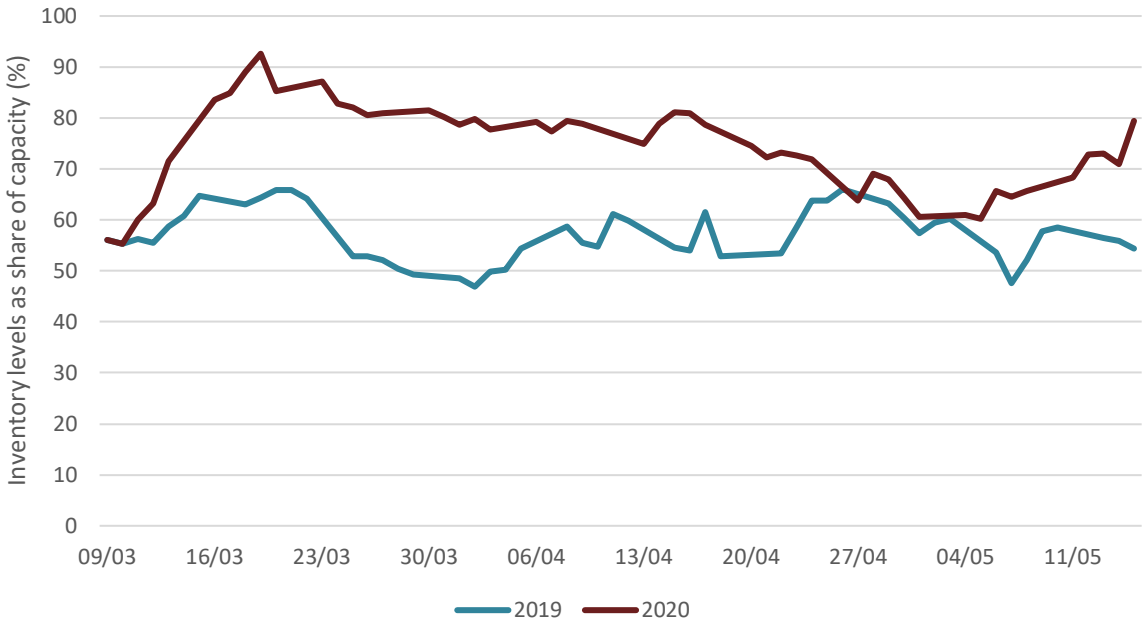
To recap, the value of NIC rose sharply in March and April. This increase was large—in both absolute and percentage terms—compared with increases in these same months in previous years. The growth in NIC was spread across the country, but the largest increases were in the major economic and population centres of Canada, as might be expected.

What was going on?

In early March 2020, the Bank became concerned that the bank note supply channel could become compromised during the pandemic. Accordingly, the Bank increased its own note reserves across the BNDS to ensure that any increase in demand for cash by financial institutions across Canada could be met. Note that this does not increase NIC because these notes are held in the Bank's inventory.

Chart 5 shows that the Bank filled its BNDS note inventory from less than 60 percent capacity to more than 90 percent in early March. This amount was drawn down by BNDS members over the following weeks, resulting in a decline to less than 70 percent capacity by late April. This reduction in the Bank's note inventory in March and April corresponds to the large increase in NIC during this period.

Chart 5: Bank of Canada inventory in the Bank Note Distribution System



To help understand these developments, Bank staff collected field reports from BNDS participants. These reports suggest that a few factors likely contributed to the sharp increase in NIC in recent months.

- Part of the increase reflects precautionary steps taken by financial institutions to increase their cash inventories during the pandemic, given concerns about possible disruptions to cash transportation services, and to reduce the risk of cash stockouts from potential customer demand.
- The flow of cash deposits from retailers to financial institutions—which would typically help replenish institutions' note inventories—was disrupted during the pandemic. As a result, financial institutions compensated for this shortfall by drawing cash from the Bank of Canada.
- Finally, increased NIC during the pandemic also reflects consumer demand for bank notes, and field reports suggest that this component was significant.

For a more detailed analysis of cash demand during the pandemic, we turn to the Bank's recent survey work.

3. Insights from the 2020 Cash Alternative Survey (Wave 1)

We can learn much more about Canadians' use and holdings of cash during the pandemic from a survey conducted by Bank staff. Throughout the design of the questionnaire and sampling strategy, we collaborated with our survey provider, Ipsos, and Statistics Canada. The rest of this paper provides an overview of that work.

A few words on methodology

To assess cash use and related considerations during the pandemic, we conducted "Wave 1" of the 2020 Cash Alternative Survey (CAS) from April 3 to 22, 2020, which yielded a nationally representative sample of 4,192 respondents. The methodology used in the CAS has undergone extensive testing and analysis.

The methodology was designed to minimize selection bias, and weighted estimates were cross-validated with three separate Statistics Canada surveys. Finally, a range of data cleaning and editing rules were used to reduce total survey error, including analyzing and correcting for "straightliner" respondents and transcription errors. The survey weights were computed as of May 22, 2020.

The appendices provide additional information on methodological and related considerations.

Key takeaways

Following are the main lessons from the 2020 CAS.

- A significant share (36 percent) of Canadians reported using cash during the week, comparable to the percentage who used Interac e-Transfer (38 percent), but less than the proportion reporting debit use (52 percent) and credit use (62 percent).
- Few Canadians (7 percent) reported difficulties accessing cash during the pandemic. The mean withdrawal value was $195 from an automated banking machine (ABM) and $141 from a bank teller. (The 2017 Methods of Payment Survey reported that the mean withdrawal value was $140 from an ABM and $289 from a bank teller.)
- Canadians who hold cash report having $85 in cash on hand (median), compared with $70 in the 2019 CAS. This represents a modest increase in cash holdings during the pandemic.
- In response to COVID-19, 35 percent of Canadians reported that they decreased their cash use, but only 12 percent reported that a merchant refused to accept cash in a transaction.
- Most Canadians (74 percent) continue to report that they have no plans to go cashless in the next five years, which is somewhat less than reported in the 2019 CAS (82 percent).

We elaborate on these points in the rest of this section. More information will be provided in future research.

Core measures of cash use

Cash holdings are similar to estimates from the 2019 CAS. We estimate that Canadians who hold cash held a median amount of $85 in their cash on hand and $225 in their other cash holdings.[3] (We use the median because the distribution of cash holdings has some large values, which increases the mean relative to the median.) We present our results in **Table 1**. Notably, these estimates align well with the 2019 CAS (Huynh, Nicholls and Nicholson forthcoming). The proportion of Canadians who report holding zero cash on hand increased from 20 percent to 28 percent, and the proportion with zero other cash holdings increased from 71 percent to 82 percent. However, conditional on holding cash, Canadian cash users increased their holdings in response to COVID-19. We provide further analysis on Canadians' cash holdings in **Appendix A-1**.

Table 1: Canadians' cash on hand and other cash holdings

	Cash on hand		Other cash holdings	
	2019 CAS	2020 CAS	2019 CAS	2020 CAS
Median	$70	$85	$185	$225
Mean	$136	$158	$460	$523
	Proportion holding zero cash			
Share (%)	20	28	71	82

Note: The Cash Alternative Survey (CAS) contains "cash on hand" and "other cash holdings" measured in Canadian dollars. The mean estimates were winsorized at the 99th percentile in 2019 and 2020.

Few Canadians (7 percent) report problems accessing cash. We find that 93 percent of Canadians reported no difficulty obtaining cash during the pandemic, relative to their typical withdrawal behaviour. In the 2020 CAS, the mean withdrawal value was $195 from an ABM and $141 from a bank teller. In contrast, the 2017 Method-of-Payment (MOP) survey reported that the mean ABM withdrawal value was $140 from an ABM and $289 from a bank teller (Henry, Huynh and Welte 2018). This finding aligns with our other research on cash accessibility, such as Engert and Fung (2019), and may reflect Canadians' growing reliance on ABMs for cash as financial institutions shift away from offering cash services through tellers. This could also reflect a reduced availability of tellers during the pandemic because financial institutions reduced branch hours.

A significant share (36 percent) of Canadians reported using cash during the survey week. This estimate was taken during the pandemic. Our estimates for cash use are comparable with those for Interac e-Transfer (38 percent), but less than those for debit use (52 percent) and credit use (62 percent), as shown in **Table 2**. So, while most Canadians have relied on electronic payment methods during the pandemic, a large

3 "Cash on hand" is the amount of cash in the respondent's purse, wallet or pocket. "Other cash holdings" is the amount of cash the respondent's household keeps in locations other than a purse, wallet or pocket, such as at home or in a vehicle.

proportion also used cash. (Future survey work will assess the shares of payment methods used at the point of sale.)[4]

Table 2: What methods of payment were used in the past week, in percent

	2020 CAS
Cash	36
Debit	52
Tap and go	*38*
Chip and PIN	*38*
Credit	62
Tap and go	48
Chip and PIN	*38*
E-Transfer	*38*
Mobile	8
Prepaid card	11

Note: Respondents could select multiple answers, so the shares do not sum to 100. The overall measures of debit and credit use include Canadians who made at least one transaction with tap and go, chip and personal identification number (PIN) or both in the week before they responded to the survey.

The recall time frame for this survey question was over a one-week period. Note that the 2017 Methods-of-Payment Survey used a three-day diary to understand the intensity of payment use. We changed the survey questionnaire to reflect the social distancing directives put in place to limit exposure to the virus, which lead to a decrease in the number of in-person shopping opportunities. We will conduct further research to understand the potential effects of the decrease in purchasing opportunities on the composition of payments.

The impact of COVID-19 on payment behaviour

A majority of Canadians (64 percent) report that they did not change their cash use in response to COVID-19, but 35 percent said their use of cash decreased (**Table 3**). Note also that 30 percent of survey respondents report that they do not use cash at all. We find, however, that a significant proportion of these respondents had cash on hand. Adjusting for this provides an estimate of 14 percent of respondents who do not use cash (indicated by the parentheses in **Table 3**). Only 13 percent were not concerned about reports that

4 The 2017 Methods-of-Payment Survey conducted by the Bank of Canada found that 99 percent of respondents have a bank account (Henry, Huynh and Welte 2018), indicating that almost all Canadians can access banking services. The same result is reported in the Global Findex Database by the World Bank (2017). Therefore, the proportion of the unbanked population (not having a bank account) in Canada is very small.

viruses could be transmitted by bank notes. Notably, we find that 17 percent reported taking precautions while using cash, such as washing their hands after making a purchase. Of the 36 percent who reported a change in their behaviour, 35 percent reported that they decreased their use of cash.

Table 3: Canadians' use of cash in response to reports of virus transmission, in percent

		2020 CAS
No change	I don't use cash	30 (14)
	I wasn't aware of reports of virus transmission	4
	I am not concerned about virus transmission	13
	I have taken precautions to protect myself	17
Change	I have *decreased* my cash use	35
	I have *increased* my cash use	1[E]

Note: Respondents could select only one option, so the estimates sum to 100 (excluding the estimate in parentheses). The estimate in parentheses is the share of Canadians who stated they do not use cash and reported zero cash on hand, so stated and actual behaviours are aligned. "E" indicates "use with caution." For more information, see Appendix A-3.

Most Canadians were not affected by merchants refusing to accept cash. A sizable share (43 percent) reported they did not hear, see or experience a merchant refusing to accept cash during the past week (**Table 4**). In comparison, 16 percent stated that they had heard such news reports, and 22 percent reported seeing a sign indicating that a merchant does not accept cash. Importantly, only 12 percent of Canadians reported that a merchant refused to accept cash during their transaction. In the 2018 Merchant Acceptance Survey (which surveyed merchants directly), we found that 96 percent of small and medium-sized businesses in Canada accept cash (Huynh, Nicholls and Nicholson 2019).

Table 4: Canadians' experiences with merchants' acceptance of cash, in percent

	2020 CAS
I didn't hear, see or experience a merchant refusing to accept cash	43
I saw a sign that stated a merchant was not accepting cash	22
I saw a sign that stated cash was accepted but other payment methods were preferred	14
I heard news reports that merchants stated cash was not accepted	16
I was not able to use cash at a merchant's point of sale	12

Note: Respondents could select multiple responses, so the shares do not sum to 100.

Expectations about future cash use

A majority of Canadians (74 percent) have no plans to go cashless. This represents a decrease from 82 percent compared with the 2019 CAS. As shown in **Table 5**, the share of Canadians stating that they are already cashless has increased to 19 percent (from 10 percent in 2019). However, of the respondents who reported that they are already cashless, more than 50 percent had cash on hand, so their stated behaviour

is not consistent with their actual behaviour. The 2019 CAS showed similar findings, indicating that this group still holds cash despite stating that they are cashless. The estimates in parentheses in **Table 5** are the shares of Canadians stating they are already cashless and hold no cash. In the 2020 CAS, this estimate is 10 percent.

Table 5: Canadians' planned future cash use, in percent

	Already cashless	Within 5 years	More than 5 years	No plans
2019 CAS	10 (4)	6	2[E]	82
2020 CAS	19 (10)	6	1[E]	74

Note: Respondents could select only one option, so the estimates sum to 100 (excluding the estimate in parentheses). The estimate in parentheses is the share of Canadians who stated they are already cashless and reported zero cash on hand, so stated and actual behaviours are aligned. "E" indicates "use with caution." For more information see Appendix A-3.

4. Conclusions and next steps

Cash in circulation in Canada grew sharply in March and April 2020, and the increase was large in both absolute dollars and percentages compared with historical experience. Field reports suggest a few relevant factors:

- precautionary steps by financial institutions to increase their cash inventories;
- reduced cash deposits from retailers to institutions; and
- increased demand for cash by consumers.

To better understand recent events, the Bank of Canada conducted an in-depth survey in April 2020 in collaboration with Ipsos and Statistics Canada. The results indicate that Canadians continue to have good access to cash, are generally (but not universally) able to use cash at merchants and increased their cash holdings somewhat. A significant share (36 percent) of Canadians reported using cash during the survey period, comparable with the percentage who used Interac e-Transfer (38 percent), but less than the proportion reporting debit use (52 percent) and credit use (62 percent). Finally, most Canadians (74 percent) expect to continue using cash in the coming years.

To assess whether there will be any persistent effects on payment behaviour and preferences regarding cash or other payment methods, Bank staff will conduct a second wave of the 2020 CAS later in 2020 and another follow-up survey in the first half of 2021. We also plan to assess whether the recent increase in the stock of cash is temporary; along with the potential timing and magnitude of the return of bank notes to the Bank of Canada.

Appendices

A-1: Ancillary tables

We find composition changes in the cash holdings of Canadians. The proportion of Canadians_holding at least one $20 bank note in their cash on hand was unchanged and increased for other cash holdings, while the shares for other denominations have not changed significantly (**Table A-1**). We also observe an increase in the mean number of $20 and $100 notes held in Canadians' other cash holdings from 2019 to 2020.

Table A-1: Canadians' cash on hand and other cash holdings

	Cash on hand		**Other cash holdings**	
	2019 CAS	2020 CAS	2019 CAS	2020 CAS
Median	$70	$85	$185	$225
Mean	$136	$158	$460	$523
	Proportion holding zero cash			
Share	20%	28%	71%	82%
	Proportion holding each denomination			
$5	73%	56%	46%	35%
$10	59%	48%	37%	34%
$20	78%	78%	65%	70%
$50	23%	23%	44%	39%
$100	11%	12%	35%	34%
	Mean number of bank notes held by denomination			
$5	1.7	1.6	3.5[E]	3.2[E]
$10	1.2	1.1	2.8[E]	2.2[E]
$20	3.2	3.5	7.1[E]	10.5
$50	0.6	0.6	3.3[E]	3.0
$100	F	0.5	3.6[E]	4.9[E]

Note: Cash on hand and other cash holdings for 2019 and 2020 were winsorized at the 99th percentile. "E" indicates "use with caution," and "F" indicates "too unreliable to be published." For more information see Appendix A-3.

A-2: 2020 CAS questionnaire

The 2020 CAS questionnaire has evolved considerably from the 2019 CAS. We have included questions from the 2017 Methods-of-Payment Survey and Statistics Canada's 2020 Canadians' Perspectives Survey as well as newly designed questions. The questions from the 2017 Methods-of-Payment Survey provide comprehensive coverage of Canadians' recent payment behaviour. The remaining questions focus on Canadians' experiences with COVID-19. The 2020 CAS has a representative sample of 4,192 respondents, including 1,446 who participated in the 2019 CAS or the 2019 Bitcoin Omnibus Survey. The 2020 CAS data support extensive analysis beyond the scope of this paper.

A-3: Survey methodology

An issue to bear in mind when conducting surveys is that respondents who answer surveys may differ from the general population in terms of their characteristics or behaviour. The technical term for this is "selection bias." To address selection bias, we use a technique known as calibration, following Deville, Särndal and Sautory (1993). This is a standard technique in survey methodology and was used previously in the 2017 Methods-of-Payments Survey (Chen, Felt and Henry 2018), the 2019 Bitcoin Omnibus Survey (2019 BTCOS) and the 2019 Cash Alternative Survey (2019 CAS).

We calibrate the sample to weight it so that it matches the population on some observed characteristics. We follow the framework of Mercer et al. (2017) and highlight three dimensions for reducing the potential for selection bias.

1. Examining **exchangeability**: During sample collection, we set the sample sizes across age, gender, and province to ensure the demographic composition of our sample closely matches that of the Canadian population. In addition, we adjust our weights to match national levels of education, employment and marital status, which are the most important predictors for individuals' payment behaviours. For example, our unweighted sample under-represents individuals with a high school education. We therefore place a larger weight on respondents in the sample who have a high school education during our calibration.

2. Ensuring **positivity**: This dimension is important because it ensures that the survey includes all the necessary kinds of units in the target population. Our sample consists of respondents from different survey frames, which are intended to cover the heterogeneous Canadian population and to capture individuals from as many demographic profiles as possible. For example, in addition to the primary national representative frame, we sample individuals who participated in the previous 2019 BTCOS or 2019 CAS. Given low response rates in some hard-to-reach segments (e.g., males aged 18 to 24), we proactively recruit respondents using a river sampling or an online sampling method where we can redirect potential respondents to a survey. River sampling is a popular method to supplement survey respondents who are young and internet users. We assess the survey frames' homogeneity using an Epps–Singleton test. Based on these tests, we merge respondents from these frames to ensure that most two-way cells (e.g., age interacted with province) had sufficient sample sizes and then compute weights following Chen, Felt and Henry (2018).

3. Matching **composition**: We compute the weights using the iterative proportional fitting procedure (IPFP); see Kolenikov (2014). IPFP is a flexible method for matching our sample to the Canadian population on many characteristics while controlling for issues such as extreme weights and convergence. In addition, we also study the respondents with larger IPF weights by permuting among different data frames and associated with demographic characteristics. As robustness checks and to analyze the stability of weighted estimates, we also experiment with:

    - trimming IPF largest weights; and
    - nonparametric non-response adjustment.

    More details will be provided in future research.

The survey weights used in this document are created as of May 22, 2020.

After carrying out the three procedures described above, we cross-validated our weighted estimates with two Statistics Canada surveys:

- Digital Economy Survey; and
- Impacts of COVID-19 on Canadians;

Results from these surveys are based on a probability-based sampling approach used by Statistics Canada, which has a survey frame with sufficient coverage and high response rates. We find that our survey matches Statistics Canada's results for most of the cells; see the next section for details. With respect to precision of estimates or a measure of variance, we follow guidelines established by the American Association for Public Opinion Research (Baker et al. 2013) and use the bootstrap resampling method to estimate the standard error.

We follow Statistics Canada's guidelines on data reliability using the coefficient of variation (CV), defined as the standard error divided by the mean (see Statistics Canada 2016, Section 7). Throughout the paper we use "E" to indicate "use with caution" (CV between 16.5 and 33 percent) and "F" to indicate "too unreliable to be published" (CV above 33.3 percent). Further research will be conducted in consultation with Statistics Canada to implement a model-based delta method approximation.

In future work, we will extend our current methodology to aggregate estimates for use in subsamples, where the properties of exchangeability or positivity may be violated. We are also working on the inverse probability tilting approach (Graham, Campos De Xavier Pinto and Egel 2012) to improve robustness and efficiency.

A-4: Cross-validation of 2020 CAS Estimates

The 2020 CAS methodology has undergone extensive testing and analysis. We collaborated with Statistics Canada and our survey provider, Ipsos, throughout the design of our questionnaire and sampling strategy. Moreover, we employ the survey weighted methodology developed in Henry et al. (2019). Finally, to reduce total survey error as suggested by Groves and Lyberg (2010), we implement data cleaning and editing rules, such as analyzing the potential for straightliner respondents and transcription errors, among other things.

Our weighted estimates align with corresponding surveys, providing evidence of external validity. Our estimates of payment shares in a typical month are similar to the findings in Statistics Canada's 2018 Digital Economy Survey and 2019 CAS (**Table A-2**).

Table A-2: Payment shares in a typical month, in percent

	2018 DES	2020 CAS
Cash and cheque	21	23
Debit and credit	76	72
Other	3	6

Note: The 2018 Digital Economy Survey estimates correspond to Statistics Canada's 2018 Digital Economy Survey.

Table A-3 reports the changes in Canadians' daily behaviour in response to COVID-19. We find that 93 percent reported actively social distancing, 89 percent have taken steps to improve their cleanliness, particularly through hand washing, and 61 percent took measures to improve their preparedness, including stocking up on food and medicine. These findings are closely aligned with Statistics Canada's Canadian Perspectives Survey Series, March/April 2020 on COVID-19.[5]

Table A-3: Canadians' preparation for COVID-19, in percent

	2020 CAS	Statistics Canada
Preparation	61	69
Planning	33	50
Social distancing	93	98
Cleanliness	89	93
Other	5	5
None	3	0

Note: Respondents could select multiple responses, so the shares do not sum to 100. See footnote 6 for source of Statistics Canada estimates.

5 This table was computed with a special tabulation from Statistics Canada.

Lastly, our estimates of Canadians' financial literacy (**Table A-4**) are comparable with the 2017 MOP and 2019 CAS.

Table A-4: Canadians' financial literacy, by demographic, in percent

		2019 CAS			2020 CAS		
		Low	Medium	High	Low	Medium	High
Overall		18	35	47	20	35	45
Gender	Male	14	29	58	16	31	53
	Female	23	41	36	23	39	37
Age	18–34	30	35	35	32	37	31
	34–54	19	36	45	19	36	44
	55+	10	33	57	11	33	56
Education	High school	24	41	35	27	40	33
	College	16	35	49	17	35	47
	University	11	25	64	11	28	61
Region	British Columbia	15[E]	32	53	16	37	47
	Prairies	23	39	39	19	38	43
	Ontario	18	35	47	19	35	46
	Quebec	18	31	51	23	33	44
	Atlantic	20[E]	41	38	26	34	41

Note: We use the "Big Three" financial literacy questions from Lusardi and Mitchell (2011), which test respondents' understanding of compound interest, inflation and diversifying risk. In each year, we compute our score measure as the number of correct answers minus incorrect answers, while assigning a score of zero when respondents selected "don't know." Low corresponds to a score of 0, medium corresponds to a score of 1 or 2, and high corresponds to a perfect score of 3. This methodology has been used in the 2017 MOP and 2018 BTCOS, in addition to the 2019 and 2020 CAS. E indicates "use with caution." For more information see Appendix A-3.

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