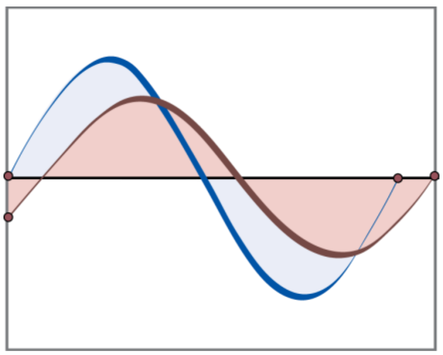
CENTRAL BANK OF TRINIDAD & TOBAGO

Working Papers

WP 03/2020 June 2020



The Great Exchange: Rapid Demonetization in Trinidad and Tobago

Alvin Hilaire and Reshma Mahabir

Trinidad and Tobago conducted a surprise demonetization of its largest currency note in December 2019 in order to address financial crimes. This evaluation of the outcome finds that the exercise was relatively well managed by the authorities within the short time frame established, facilitated by good coordination among the banks and widespread public communication. There were some avenues for leakages and sidestepping of the restrictions on conversions, including via an initially unplanned concession allowing low value exchanges at the Central Bank to all individuals after the banknote was no longer legal tender. Nonetheless there appears to have been an impact on 'black money', with over 5 per cent of the demonetized notes not being presented for exchange. The early evidence suggests that the exercise affected the demand for cash for transactions and savings, but not digitization. It also contributed valuable information for the detection of tax evasion and money laundering.

JEL Classification: E42, E51, E65

Keywords: Demonetization, Trinidad and Tobago, Black Money, Digitization

The Great Exchange: Rapid Demonetization in Trinidad and Tobago

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I. **Introduction**:

In early December 2019, the Government and Central Bank of Trinidad and Tobago announced a surprise demonetization of the largest currency denomination—the $100 cotton note—by the end of the year. A new $100 polymer note was introduced, and co-circulated for a time with the cotton version. The key objective of this sweeping and dramatic action was to aid in the effort to combat financial crimes, particularly those involving significant cash transactions and holdings of cash from underground and illegal economic activities[2]. In 3 weeks' time, the entire stock of around 80 million $100 cotton notes, equivalent to around 5 per cent of Gross Domestic Product (GDP) was to be called in, for redemption or exchange for polymer notes at domestic commercial banks or the Central Bank under certain conditions. In particular, large value transactions required, among other things, proof of legitimacy of the source of the funds and filing of anti-money laundering declarations. Legislation was quickly changed to allow for the short demonetization window, a 3 month period after January 1, 2020 in which the Central Bank could exchange the $100 cotton notes under very restricted conditions, and Ministerial power to delimit any subsequent redemptions.

This paper recounts and makes an early evaluation of the demonetization project. It is evident that several of the impacts will take time to show up, so that some of our results could be reinforced or attenuated in the future. Nonetheless we believe that the paper could make an important contribution by setting the stage and presenting the initial outcomes that would be useful for subsequent assessments. We hope that the study provides not only technical results but also policy insights.

[1] The authors are, respectively, Governor and Assistant Manager, Research Department of the Central Bank of Trinidad and Tobago.

[2] This is sometimes referred to loosely in the literature as "black money". See for example Lahiri (2020).

Following this Introduction, the paper briefly reviews in Section II the role of cash in illegal transactions and the attempts of some countries—India, Mauritius and Kenya—to employ sudden demonetization as one facet of a solution. The characteristics of the Trinidad and Tobago economy, and the role of cash in the country's financial sector on the eve of the exercise also furnish the backdrop. Section III explains how the three phases of the demonetization in Trinidad and Tobago were organized and actually unfolded: (i) the announcement phase—December 5-9, 2019; (ii) the co-circulation redemption phase—December 10-31, 2019; and (iii) the post-demonetization exchange phase—January 1-April 1, 2020. Section IV presents the evaluation under 4 broad headings: (i) effectiveness of project administration in facilitating the exchange in a manner to achieve the national security objectives; (ii) the measure of success in blocking undesired conversions of cotton notes; (iii) findings on how the use of cash was affected; and (iv) revelations on tax avoidance and money laundering. Section V concludes and examines the way forward.

II. **Background and Experiences of Rapid Demonetization Elsewhere**:

The case for demonetization can be grouped into three broad categories. The first is to deal with inflation or hyperinflation. Countries such as Zimbabwe and Venezuela have used the demonetization of notes to "knock some zeros off" the currency. The second case can be found within the context of a monetary union. Perhaps the most famous example of this is the European Union, where the member states gave up their national currencies in favour of the euro. A third category is the prevention of illegal activities—this can range from the stopping of counterfeiters to the formalization of the black market[3] and prevention of money laundering. It is under this third category that some recent episodes of rapid demonetization have occurred. Before we review the experiences of India, Mauritius and Kenya, let's examine the basic characteristics of the Trinidad and Tobago economy on the eve of its December 2019 effort.

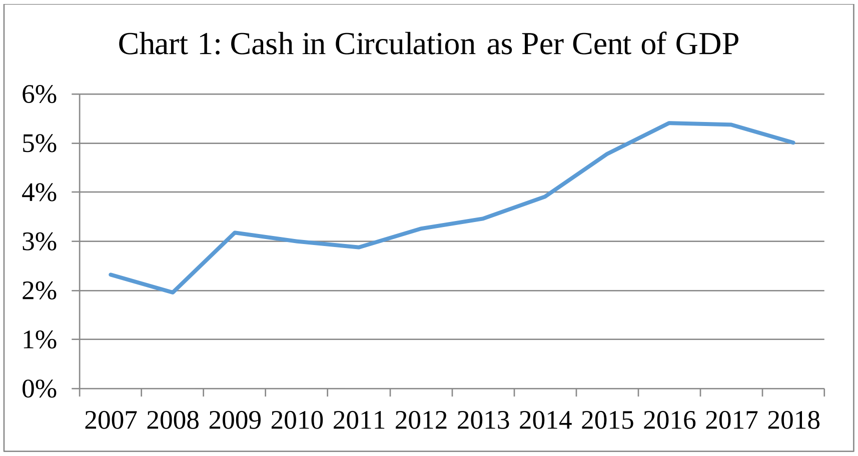
[3] Demonetization can employed to bring the legal part of the informal sector into more formal structures, while penalizing the illegal part which engages in money laundering and other nefarious activities. It can also encourage persons to put their cash into financial institutions once they have to convert their cash holdings, instead of exchanging all of the demonetized notes for the new currency.

Trinidad and Tobago is an energy-based economy. Natural gas, crude oil and the various petrochemical industries are the main drivers, followed by construction, manufacturing and distribution. In the months leading up to December 2019 inflation hovered between 1-2 per cent, and while Trinidad and Tobago is a member state of the Caribbean Community (CARICOM) this relationship has not deepened into a monetary union. The country has a large informal sector. Maurin, Sookram and Watson (2006) estimated that the size of the informal sector in Trinidad and Tobago stood at around 20 per cent of GDP in the late 1990s. More recently Peters (2017), who utilized electricity usage to proxy the informal sector, estimates that the informal sector was 26–33 per cent of GDP. A large informal sector is typically associated with significant use of cash.

The level of financial inclusion and literacy are also generally inversely related to cash usage. A 2013 national literacy survey found that approximately 21 per cent of respondents did not have an account with a financial institution[4]. The World Bank's 2017 Global Financial Inclusion Survey found that 80.8 per cent of the population over the age of 15 years had an account in a financial institution, up from 75.9 per cent in 2011. Meanwhile, debit card ownership in 2017 was 60.8 per cent and credit card 16.0 per cent.

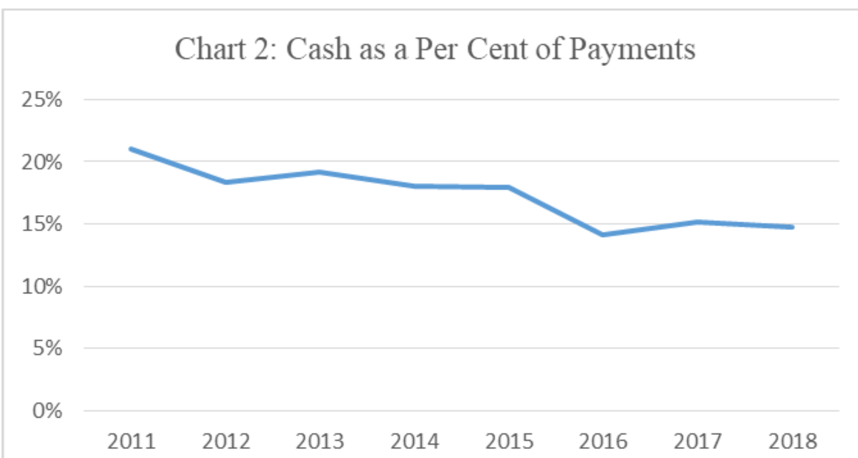
The 2019 Annual Report of the Financial Intelligence Unit of Trinidad and Tobago (FIU), the Government's anti-money laundering agency, provides some insight into the possible financial crimes. In 2019 the value of "suspicious transactions" reported to the FIU was TT$1,777.6 million, up from the 2018 figure of TT$981.7 million. Based on the FIU's analyses, tax evasion, fraud, forgery and money laundering represented 96 per cent of the monetary value of the suspicious transactions. A cash-dominant economy can facilitate some of these activities. Cash in (active) circulation as a per cent of GDP has been trending upwards, but stabilized at around 5 per cent between 2016 and 2018 with progressively greater use of credit and debit cards (Chart 1).

[4] https://newsday.co.tt/2019/07/25/ombudsman-half-of-tt-cant-manage/



Sources: Central Bank of Trinidad and Tobago and Central Statistical Office.

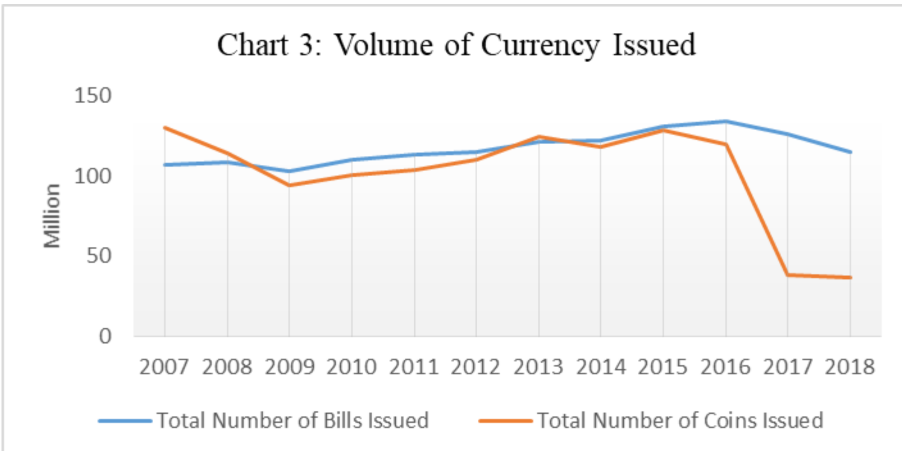
Based on Khiaonarong and Humphrey's (2019) wider measure of cash usage[5], there was a slowly declining trend of cash for transactional purposes (Chart 2). In general the value of cash being withdrawn from tellers has been falling, while cash withdrawals from automatic teller machines (ATMS) increased between 2011 and 2017, before slipping somewhat in 2018. The value of point-of-sales transactions exhibited a similar pattern. Overall, we estimate cash as a percent of payments to be around 15 per cent in 2018.



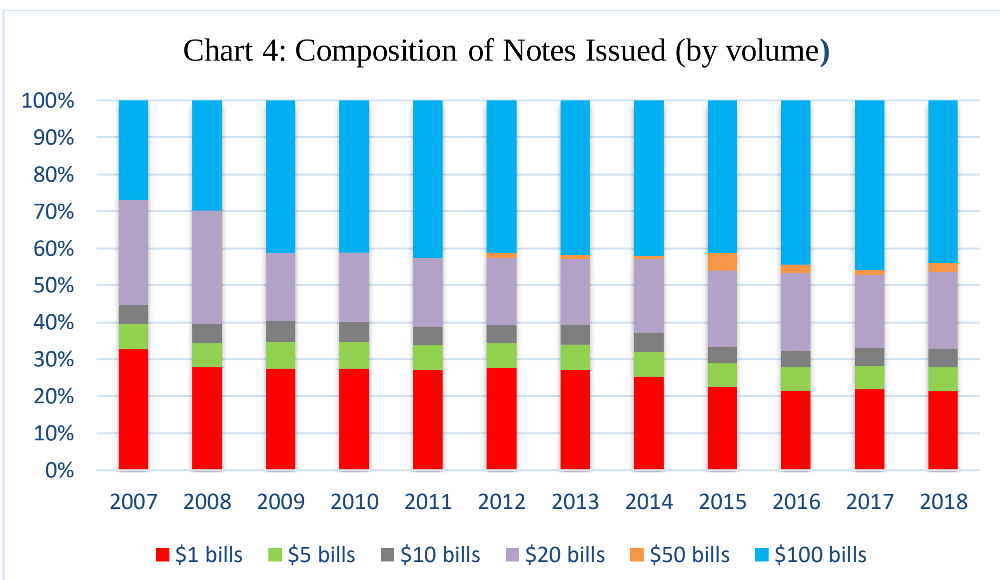
Source: Authors' calculations

[5] The authors include cash withdrawn from ATMs and over the counter, as a ratio of cash plus the value of cheques cleared and the value of point-of-sales purchases.

In Trinidad and Tobago the volume of currency issued to commercial banks had generally been in an upward direction for most of the last decade (Chart 3). However after 2016 these issuances have declined. The $100 note is the highest value denomination; it is also the most issued (representing over 40 per cent of the volume of notes), and the one most dispensed by the ATMs (Chart 4). There are seasonal highs in currency demand at the Carnival and Christmas periods—February/March and December respectively. On the eve of the demonetization it was estimated that there were some 80 million $100 notes in circulation.



Source: Central Bank of Trinidad and Tobago.



Source: Central Bank of Trinidad and Tobago.

Case Studies (see Table 1 for a summary of the key aspects)

India: On November 8, 2016 the Prime Minister of India announced that Rs500 and Rs1,000 notes would no longer be considered legal tender from that midnight. These notes represented some 86 per cent of the value of cash in circulation. The stated objectives of the policy were to target black money, reduce corruption, and remove fake currency notes. Persons holding these notes would have until the end of the year to exchange them for new notes or deposit the cash into their bank accounts (non-resident Indian citizens had until June 30, 2017). This resulted in long lines as persons sought to acquire the new notes, and there were numerous changes to the amount of funds person were allowed to deposit or withdraw over the exchange period. One interesting aspect of the conversion was the use of indelible ink on the right hand index finger to prevent multiple cash withdrawals as persons sought to exchange more than the limit by going to several banks. Banks were required to report to the income tax department all cash deposits of Rs2.5 lakh or more made in one or more accounts of a person between November 9 and December 30, 2016.

One difficulty that surfaced was that the Reserve Bank of India (RBI) did not print sufficient replacement notes prior to the announcement and printing press limitations resulted in a significant reduction of notes available for transactions for several months (Chodorow-Reich et al, 2020). In addition, it took several weeks for the ATMs to be calibrated to dispense the new notes. The Indian demonetization process was challenged in the courts on various grounds, including that the process was only gazetted, unlike the previous demonetization exercises (1946 and 1978) where there were changes to the legislation, and that it violated the rights to property and legitimate expectations. The challenges were referred by the Supreme Court to the constitutional bench. An October 2019 article suggested these petitions had still not been addressed[6]. In the case of the 2016 Indian demonetization over 99 per cent of the notes were returned to the RBI.

[6] https://www.telegraphindia.com/opinion/how-the-higher-judiciary-let-down-the-citizenry/cid/1712825

Mauritius: In December 2018 the Central Bank of Mauritius (CBM) announced the issuance of a polymer banknote of Rs2000 denomination and advised that the paper banknotes of Rs2000 would cease to be legal tender from February 1, 2019. The demonetization process began on December 5, 2018. The public could have changed or deposited their Rs2000 paper bank notes at commercial banks until January 31, 2019, after which they could be exchanged at the CBM. The exchange was subject to the statutory limit of Rs500,000 regarding payment in cash. The denomination of the paper-based Rs2000 notes represented a continuance of the transition from paper to polymer that began in 2013. Three other denominations, namely Rs25, Rs50 and Rs500 had already made the change. The CBM would have learnt lessons from the 1998 demonetization process where all the banknotes had to be replaced as the Tamil language was missing from the previous set of notes.

Kenya: On June 1, 2019 the Central Bank of Kenya (CBK) announced the demonetization of older series KSh.1,000 notes. The demonetization process was facilitated by a Gazette Notice dated May 31, 2019, which indicated that all persons had until October 1, 2019 to exchange those notes, after which the older one thousand shillings banknotes would cease to be legal tender. This represented over 200 million notes in the country's largest denomination (Botho, 2019). At the same time the CBK rolled out new KSh.1,000 notes. The aims of the demonetization in Kenya were to stop illicit financial flows and to address counterfeits. According to a speech by the CBK Governor on September 24, 2019, the Central Bank employed a targeted and layered public awareness campaign. This included physically engaging the citizens on the changes, and producing a multi-channel campaign with coverage in social media, television, newspaper and radio stations. The CBK ran more than 15,000 advertisements on radio, television and print media. Anyone who sought to exchange more than KSh.5 million in the old banknotes had to seek Central Bank approval.

An October 2, 2019 CBK press release indicated that from a total of 217,047,000 KSh. 1,000 notes on June 1, the CBK had received 209,661,000 pieces (96.6 per cent) at the end of the demonetization period on September 30. Thus, 7,386,000 pieces of the older KSh.1,000 notes, worth KSh.7.386 billion, were rendered worthless at the end of demonetization. It was further noted that 3,172 suspicious transactions were flagged and investigated. Like in India there were legal challenges to the process; while there were similar arguments, such as the infringement of right of person to enjoy their property, in the case of Kenya there was also the issue of the use of images of persons on the new notes.

Table 1: Recent Episodes of Demonetization

Country	Year	Objective	Process	Period	Result
India	2016	To tackle counterfeiting, to effectively nullify black money hoarded in cash and curb funding of terrorism with fake notes.	Demonetization of all ₹500 and ₹1,000 banknotes of the Mahatma Gandhi Series.	Announced: November 8, 2016 Started: November 9, 2016 Any person who is unable to exchange or deposit the specified banknotes in their bank accounts on or before December 30, 2016 shall be given an opportunity to do so at specified offices of the Reserve Bank	99.3 per cent of notes returned to the financial system Of the Rs 15.41 lakh crore worth Rs 500 and Rs 1,000 notes in circulation on November 8, 2016, when the note ban was announced, notes worth Rs 15.31 lakh crore have been returned. Cash shortages, negatively impacted economic growth, employment, positively impacted digital payments
Mauritius	2018/2019	To prevent counterfeiting and money laundering. The new polymer banknotes has enhanced security features.	Replacement of Rs2000 paper banknote with The polymer Rs2000 denomination banknote	Announced: December 4, 2018 Started: December 5, 2018 Ended: January 31, 2019. Rs2000 paper banknotes which are still in circulation on or after February 1, 2019 may be exchanged only at the counter of the Bank of Mauritius.	
Kenya	2019	Aimed at addressing the grave concern of illicit financial flows, and the emerging risk of counterfeits.	Older series KSh.1,000 notes.	Announced: June 1, 2019 Started: June 1, 2019 Ended: September 30 2019	From a total of 217,047,000 pieces of the KSh 1,000 notes on June 1, CBK had received 209,661,000 pieces at the end of the demonetization period on September 30. The demonetization exercise had little impact on the economy—inflation, exchange rate, etc. There was little evidence of a rush to purchase high-value assets in cash. 3,172 suspicious transactions were flagged and are being investigated. CBK also carried out 15 targeted on-site inspections.

Source: Respective Central Banks' websites.

The lessons gleaned from these recent demonetization experiences aided Trinidad and Tobago in developing the plan for its own demonetization.

III. Conduct of the Trinidad and Tobago Demonetization[7]

In the effort to capitalize on the element of surprise and minimize the capacity of criminal elements to circumvent the measures geared at limiting redemption of the $100 cotton notes from illegal sources, the Trinidad and Tobago authorities adopted an aggressive timetable. Within the 5 days following the initial announcement by the Minister of National Security, the laws were changed and the national community was informed about how the redemption would take place (phase 1). The cotton and polymer $100 notes co-circulated as legal tender over the next 3 weeks, with redemptions conducted through the commercial banks and Central Bank (phase 2). Following demonetization on December 31, 2019 restricted categories of exchanges were allowed at the Central Bank for 3 months (phase 3). See Appendix 1 for the chronology.

Phase 1: Announcement Phase (December 5-9, 2019). In this very short time period, the country was informed of the plans to demonetize, the security and other features of the new note were unveiled, the new currency was brought in, changes were made to the law, and commercial banks prepared their operations to redeem large volumes of $100 cotton notes.

In a normal setting of introduction of a new currency the lead time is quite generous, often a few years. In order to foster buy-in to the upcoming changes in the currency, public sensitization and information campaigns are mounted and the public given the opportunity to comment on and influence the note design. On finalization of the design, prior to widespread distribution, the commercial banks receive "exemplars" of the new note in order to prepare their note counting machines and ATMs.

[7] We acknowledge the assistance of Mrs. Sharon Villafana, Manager, and the staff of the Banking Operations Department of the Central Bank in providing us with the information on currency transactions.

Similarly, in normal circumstances, the public is generally given a fairly long period to 'cash in' their note/coin that is being taken out of circulation as legal tender. In fact, prior to the change in the legislation on December 8, 2019, the laws of Trinidad and Tobago required at least 3 months for demonetization[8]. Moreover, in the 2018 withdrawal of the one cent coin from circulation in Trinidad and Tobago, the public was effectively given over a year to redeem their coins in the context of a long public campaign[9]. The then existing legislation also envisaged that the Central Bank would indefinitely redeem demonetized currency under conditions that it would establish—for example, on certain days only at the Central Bank. In order to cater for the more rapid changeover envisaged, the laws were amended to allow for a new category of demonetization wherein, among other things, the notice period could be compressed to a minimum of 2 weeks and strict conditions specified for any redemptions thereafter[10].

Simultaneously, the Central Bank launched a public education campaign involving radio, television and newspaper ads, as well as postings on its website and social media platforms. The new note was unveiled on the afternoon of December 5, 2019 and, following the change in the legislation, the Governor held a press conference on December 9 to explain the exercise that was underway. Apart from the national security objective, the Governor cited the advanced security features to counter forgery, cost and durability considerations and the benefit of polymer for easier recognition of denominations by the visually impaired. On the weekend of December 7-8, 80 million $100 polymer notes arrived in the country and were distributed to the banks, along with the exemplars to help prepare the note counting machines/ATMs. In essence, therefore, the lengthy preparatory periods for introduction and demonetization were compressed into less than one week in December in Trinidad and Tobago.

[8] According to Section 27 of the Central Bank Act: *The Bank, with the approval of the Minister, may on giving three months' notice published in the Gazette call in any of its notes and coins on payment of the face value thereof and any such notes or coins with respect to which a notice has been given under this section shall, on the expiration of the notice, cease to be legal tender, but shall be redeemed at face value by the Bank upon such conditions as may be prescribed.*

[9] Legal Notice 35 of 2018 stated that on April 1, 2018, the Central Bank shall call in all one cent coins, and from July 3, 2018, all one cent coins shall cease to be legal tender for cash payments. Nonetheless, the Bank shall indefinitely redeem one cent coins for face value.

[10] The Amendment to the Central Bank Act introduced a new Section 27 (A) that allowed the Minister of Finance to direct the Bank to cancel any note with a minimum of 14 days' notice. In the 3-month period after the demonetization date the Bank shall redeem the demonetized notes *"if it is satisfied that the failure to present the notes for redemption prior to demonetization resulted from circumstances beyond the control of the true owner of the notes or that there was some other good or sufficient reason for the failure."* The Minister also had the authority to specify conditions for redemption following this 3-month period.

Phase 2: Co-circulation Redemption Phase (December 10-31, 2019). Over this 3 week period, the bulk of the redemptions took place, with the commercial banks taking center stage as intermediaries. Banks extended their working hours and allowed their customers to deposit $100 cotton notes and non-customers to exchange the notes for polymer up to certain limits[11]. After the first week, the public was also able to exchange notes at the Central Bank, including over the last 2 weekends of the year and through the office of the Unit Trust Corporation in Tobago.

This phase coincided with the seasonal Christmas shopping bulge, likely adding to the number and value of purchase transactions settled in cash. In fact some merchants occasionally ran out of smaller denominations to use as change for their higher-than-normal cash operations. This pointed to one alternative to redemptions at the commercial banks or Central Bank that people employed: conversions of part of their cash holdings into goods and services. In this context, there were anecdotal reports of a spike in (sometimes unusually high value) cash purchases; some merchants and financial entities actually encouraged consumers to buy more of their products in cash. In principle, the prospect for successful money laundering via these means should have been attenuated by the various financial reporting requirements. It is clear that the urgency for conversion increased the incentives to move cash (which would become worthless in a few days) into any other available form. At the same time, the information requirements for redemption of the cotton notes at the commercial banks, and for large value transactions more generally, allowed for the flagging of "suspicious transactions" and potential tax evasion activities to the anti-money laundering and tax authorities[12].

[11] In general, banks allowed their customers to deposit or exchange cotton notes of up to TT$50,000 while non customers could exchange up to TT$10,000 with identification, proof of address and by filing a Source of Income Declaration.

[12] The Financial Intelligence Unit and Board of Inland Revenue respectively.

Throughout this period, further communication to the public was critical in explaining precisely how the conversions would work, including where to convert, the limits, reporting requirements, and how to avoid fraud. This was particularly vital given the short time frame and the differing degrees of financial literacy among the public. The Central Bank intensified its communication, mounting *Know Your Money* campaigns across the country to familiarize the media and others about the currency, and put out a series of ads, *Frequently Asked Questions* and reminders. Commercial banks also educated their clients and others about their hours of operations and convertibility criteria.

The movement of currency was intense, as the notes had to reach remote areas of Trinidad, and be transported to the island of Tobago. There was almost daily movement of cotton and polymer $100 bills across the 5,128 sq. km. of the country and the logistical and security aspects involved in transportation, storage and distribution necessitated a great deal of collaboration. In this context the national security agencies remained on high alert. Naturally, public interest and debate were heightened, with widespread media coverage and professional viewpoints aired. During the first week, there were long lines at commercial banks. By the second week, the lines diminished considerably as the public became more familiar with the undertaking, the ATMs were able to dispense the new notes, and conversions started to take place at the Central Bank.

***Phase 3: Post-demonetization Exchange Phase (January 1- April 1, 2020)**:* Given the radically compressed period for the demonetization, the new legislation allowed for certain categories of persons to continue to exchange $100 cotton notes at the Central Bank for polymer notes even after the former ceased to be legal tender. Specifically a 3-month window was created for defined situations as set out in the *Guidelines for Redemption of the $100 Cotton Notes after December 31, 2019* issued by the Central Bank on December 24, 2019:— (i) commercial banks were given some time to deposit their holdings of $100 cotton notes in their vaults; (ii) the Central Government was allowed a period to deposit its notes; (iii) merchants/organizations who collected $100 cotton notes on December 31, 2019 could deposit these at commercial banks until January 3, 2020; and (iv) individuals who were “hospitalized, incapacitated, out of the country or unable for legal or other demonstrably serious reasons” to deposit or exchange the $100 cotton notes could come to the Central Bank with valid identification, proof of address and source of funds, and documentary evidence of inability to convert by December 31, 2019[13].

The intention was to grant a certain degree of flexibility for persons/institutions who were unable to conduct the exchange before the end of December 2019, while not making it open ended. As it turned out, there were a surprisingly large number of transactions at the Central Bank over this 3 month period[14]. By way of example, the average amount of transactions at the Central Bank in the last 5 days of 2019 was 110; in the first 5 working days of 2020, the average number of persons appearing at the Central Bank for conversions was 189! Apart from those falling into the category of "demonstrably serious reasons" for inability to convert before December 31, 2019, many persons appearing at the Central Bank claimed that they had simply discovered hidden savings of $100 cotton notes after that date.

In the wake of some public representation, the Minister of Finance adjusted the eligibility for conversion to include one-time exchanges for any individual up to TT$1,000—while persons needed to complete a form and provide identification, there was no requirement to declare the source of the funds nor reason for/proof of inability to convert before the end of 2019. This new category was opened from January 17-31, 2020. The concession led to a surge in daily transactions at the Central Bank to an average of over 1,800 in the last week of January.

Thereafter, the pace of exchanges was relatively steady, with a bulge in the last weeks of February associated with visitor arrivals for the Carnival season. The declaration of the global coronavirus pandemic by the World Health Organization on March 11, 2020 led to a modification of the operating conditions for exchange at the Central Bank in Trinidad and Unit Trust Corporation Office in Tobago. In particular, the number of persons coming into the Central Bank at any specific time was limited and social distancing and sanitization measures instituted. There

13 Persons were required to sign a form containing a statutory declaration verifying the information provided and attesting that they knew they could be prosecuted for providing misleading information to the Central Bank. In general there was a 2-3 day wait period for the processing of these forms—unlike the generally instant exchange conducted by the Central Bank in December.

14 Transactions were conducted at the Port-of–Spain office of the Central Bank on Tuesdays to Thursdays between the hours of 9 a.m. and 3 p.m. and in Tobago (at the Unit Trust Corporation Office) on Thursdays between 9 a.m. and 2 p.m.

is little evidence that the coronavirus situation restricted the pace of conversions[15]. There also seems to have been a last minute rush to "beat the deadline" with a small spike in conversions over the last couple of days.

The Central Bank ended its over-the-counter exchanges of polymer for cotton $100 bills on April 1, 2020. According to the legislation, the conditions for any subsequent exchanges had to be established by an Order from the Minister of Finance. In this context, on March 31, 2020 the Minister of Finance issued the Central Bank (Extension of Period of Redemption) Order stipulating that after April 1, 2020, only for $100 cotton notes that could not be exchanged prior to that date because they were being used as evidence in court, the redemption period was extended to 2 months after the court proceedings ended.

IV. Evaluation

Like major surgery, a rapid demonetization of a high-denomination currency can be a very complex affair with medium- to long-term consequences. In gauging success, one must return to the original objectives of the project, which in the case of Trinidad and Tobago were to address financial crimes conducted through hoarding of cash[16]. To the extent that criminals with cash hoards are unable/unwilling to present their cash holdings for exchange due to fear of their illegal activities being uncovered, of their holdings being confiscated or of them being detained, the rapid demonetization can result in a one-off 'tax' on such holdings. In other words, the amount of demonetized notes that were not redeemed can provide one measure of success. Of course, one would need to consider that some notes may not have been redeemed for other (not illegal) reasons such as loss, mutilation, inertia etc.

Given that the demonetization was intended to be one element of a larger effort to combat financial crimes, another measure of effectiveness is the extent of information uncovered in the complementary areas of tax compliance and anti-money laundering. Our evaluation will seek to

[15] The Government announced that from March 29, 2020 operations at all nonessential businesses would be suspended. The Central Bank was declared to be an essential service, so that it remained open for business and the polymer exchange continued.

[16] Another reason generally cited is to remove major counterfeiting threats. In the case of Trinidad and Tobago, while the Central Bank advanced the anti-forgery advantages of polymer, the extent of counterfeiting of the $100 cotton note was not cited as a major reason for the demonetization.

assess the potential contribution of the demonetization to these data sets. Another important issue, which is beyond the scope of this paper, is the impact of the demonetization more broadly on the strengthening of the authorities' actions on the legislative and institutional fronts.

Also as in major surgery, rapid demonetization can potentially have serious side effects—some benign and some adverse. For example, certain types of economic activity could be negatively affected if there is not enough of the new currency or distribution centers are disorganized or hard to reach. Moreover, if the aims of the project are not well communicated or understood or implementation is poor, the hit to financial sector confidence could spill over to a reduction in investment and even in financial intermediation. Distributional impacts could also be severe, especially if certain groups who are not conducting illegal actions are unable to exchange their notes and therefore find themselves with worthless paper—the poor and disadvantaged are particularly at risk here.

Many of these second order effects are directly connected to how the project is conducted. This includes how the redemption is organized, public acceptance of the new notes, availability of the currency to the banks and the public, convenience and security of exchange, and the effectiveness of communication. Some degree of flexibility may also be essential as the implementation evolves and unforeseen developments arise, situations that are quite probable given the exceptional nature of rapid demonetizations. Shortcomings in these areas could lead to public disaffection and legal proceedings founded on the claim that persons were deprived of their property—demonetized notes no longer being legal tender—without reasonable opportunity to exchange for value.

Below we present the results of our evaluation, based on available information at the time of writing in June 2020. We start with an assessment of project execution over the announcement, demonetization and post-demonetization exchange phases, as well as coordination among various agencies. We then examine the statistics on redemption and currency issue, to determine the extent of 'missing money' from the system. This is followed by an evaluation of some of the side effects, notably the impact on currency demand[17]. Finally we address whether the information gathered could help in uncovering tax evasion and money laundering.

1. **Administration of the exercise**:

The conversions of the $100 cotton notes went relatively smoothly, especially given the short advance notice to the public and the compressed redemption period before the notes ceased to be legal tender. Commercial banks, which were responsible for the bulk of the conversions from the public, reacted quickly and comprehensively by restructuring their teller and cash distribution and storage operations for the massive country-wide exercise. Over the first few days there were long lines at banks as this was the only means that the public had to convert. By the second week, a combination of the extended working hours of the banks, the capacity of the ATMs to dispense the new notes, and the option that the public had to exchange their notes at the Central Bank led to a marked reduction in the lines and waiting periods[18]. These factors allowed for greater public access in remote areas of the country. For Tobago, in particular, special arrangements were made by the Central Bank and commercial banks to transport the notes securely across the sea-bridge[19].

There were nonetheless some complaints during December primarily associated with concerns regarding the potential adverse impact on business during the busy Christmas period, difficulties that the poor and disadvantaged may have in exchanging their notes, and security issues in light of the large number of cash conversions taking place[20]. In this context, public communication by the national authorities appeared to be effective in explaining the mechanics of

[17] Unavailability of data at the time of writing prevents us from examining the impact on economic activity. The Reserve Bank of India (2017) used monthly Gross Value Added statistics to assess the impact of demonetization on economic growth in India. Chodorow-Reich et al (2020) and Chanda and Cook (2019) used differences in night light data to estimate the effect of demonetization on growth in different districts in India.

[18] At the beginning of the exercise, the volume of notes available to the Central Bank was enough to cover the entire amount of $100 notes in circulation; in India there were reports of periodic shortages of new notes, which then had to be printed (see Section II).

[19] As noted earlier, since the Central Bank did not have an office in Tobago, it conducted its conversions through the UTC Office in the capital city of Scarborough.

[20] For example, there were a few reports in the newspapers of robberies of persons who had just exchanged polymer for cotton notes and a query in the Parliament that "the current shortage of currency in denominations of 5, 10, 20 and 50-dollar bills at many commercial banks is having a crippling effect on businesses…" To date, there have been no judicial challenges to the demonetization.

the conversion, the timelines and in gaining acceptance for the new note—the Central Bank's social media team was particularly active in responding to feedback.

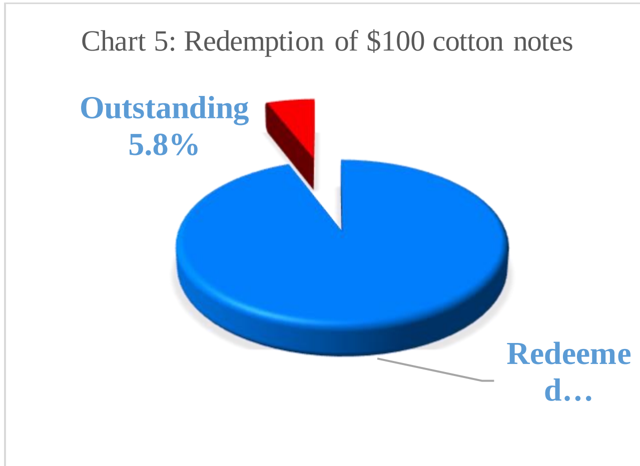
As conversions after December 31, 2019 of the now demonetized cotton note was limited to the Central Bank, there was one major change in plans. Notwithstanding a media blitz in the last few days of 2019 reminding the public that from 2020 the $100 cotton note would no longer be legal tender and the very limited cases in which conversion would be allowed, a number of persons turned up at the Central Bank who did not qualify under the stated categories[21]. Ultimately the authorities created a window between January 17 and 31, 2020 whereby any individual could exchange up to $1,000 in cotton notes. There was a noticeable leap in low value conversions during this period: the number of transactions over the last two weeks in January 2020 escalated to a daily average of over 2,000, of which 90 per cent were TT$1,000 or less. With its minimal information requirements, this adjustment created the potential for leakages by allowing criminal elements to bypass an important filtering mechanism. However, the stipulations that it could only be used by one person for a one-time exchange, the $1,000 maximum, and the short time period in which it was available (equivalent to 6 days at the Central Bank), limited the value that could have been converted through this window.

2. **The extent of "missing money"**:

On December 6, 2019 the Central Bank estimated that there 81,695,206 cotton $100 notes in circulation. By April 24, 2020 this number had shrunk to 4,765,213. In essence, 76,929,993 notes (94.2 per cent of the amount originally in circulation) had been converted. The value of "missing money" is therefore on the order of TT$476.5 million or 5.8 per cent of the value of $100 cotton notes in circulation at the start of December 2019, which is a relatively significant proportion (Chart 5). As noted earlier, some of the notes may not have been converted due to

[21] See details in Section III.

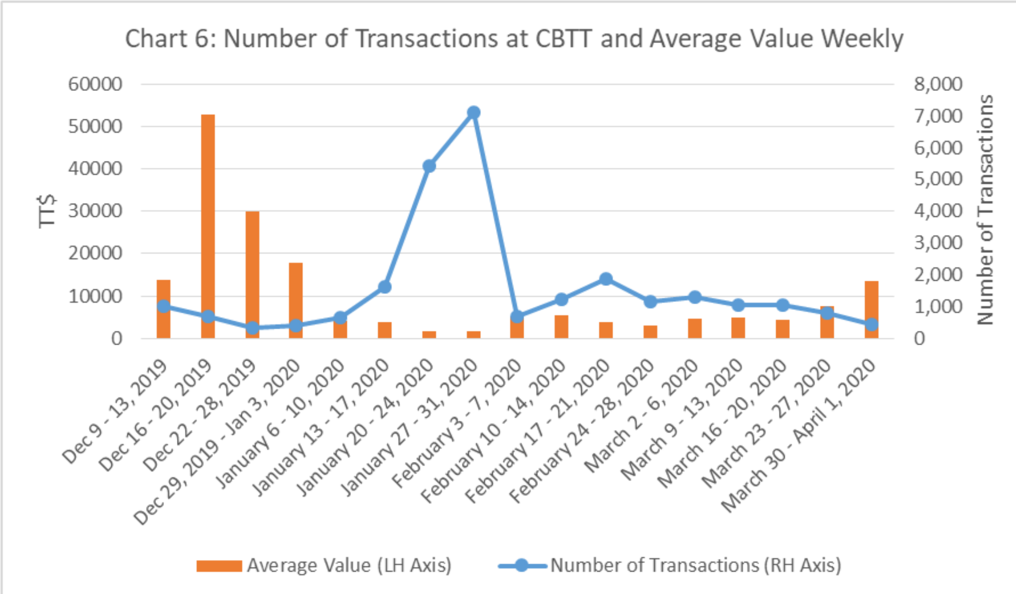
reasons not related to illegal activity[22]. Nonetheless the 5.8 per cent ratio is clearly higher than the comparative ratios of 3.4 per cent for Kenya and the less than 1 per cent calculated for India.



Source: Central Bank of Trinidad and Tobago

It should be noted that the bulk (around 95 per cent) of the conversions in Trinidad and Tobago occurred in December 2019. The public exchanged about TT$370 million directly at the Central Bank in the January to April 1, 2020 period. The adjustment in the criteria for exchange to cater for one-time, same-day conversions for all persons up to TT$1,000 led to a marked surge in the number of transactions, but not the value of overall conversions. In the two weeks between January 17 and 31, 2020 the total value of conversions was just TT$18 million while the daily average *numbers* of transactions were 1,807 and 2,373 respectively, compared to roughly 350 thereafter to April 1 (Chart 6). The evidence suggests that this window did not lead to any significant leakage via illicit conversions.

22 While it is difficult to estimate the amount of money not converted that is unrelated to illegal activity, this amount is likely to be small given the range of opportunities afforded for conversion in Trinidad and Tobago in December, as well as post demonetization in the January to April 1, 2020 period. There are also some notes that are subject to court proceedings and are to be converted once these proceedings end. For example, the FIU's 2019 Annual Report stated that the Financial Investigative Branch of the Trinidad and Tobago Police Service in 2019 seized cash amounting to TT$4 million.



Source: Central Bank of Trinidad and Tobago.

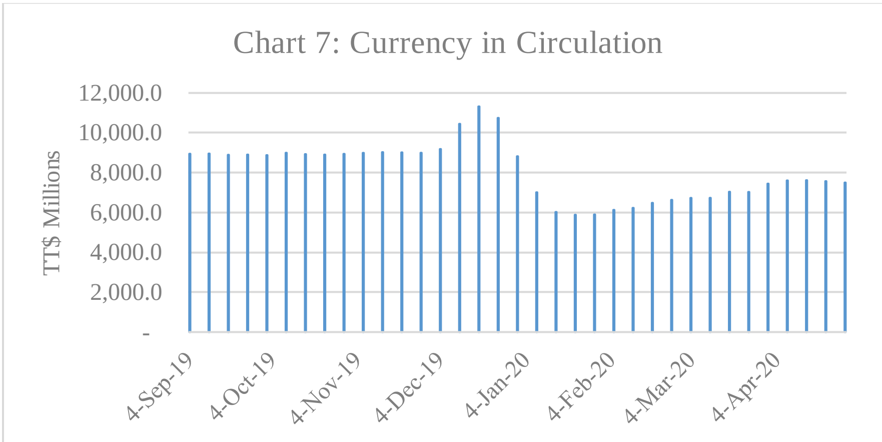
3. **Broader Impact on Cash Usage**:

A rapid demonetization involves a sudden and comprehensive intrusion on the rhythm of use of what is often the largest and most widely held currency denomination. The result is likely to not simply end at one-to-one exchange of the new for the old note, but to bring about an alteration in the pattern of financial transactions away from cash. The less than one-to-one conversion is evident in the fact that by the end of April 2020 the value of $100 polymer issued by the Central Bank was TT$376 million less than the $100 cotton notes redeemed. The data to April 2020 show three aspects of the behavioural changes that happened in Trinidad and Tobago[23]:

First of all, there was a decline in currency in circulation. Abstracting from the movements over the demonetization phases, total currency in circulation—which includes cash issued by the Central Bank and in the hands of the public (currency in active circulation) as well as in vaults of

[23] These are initial results just a few months following the demonetization and a longer time series would indicate whether these changes persist or are reversed.

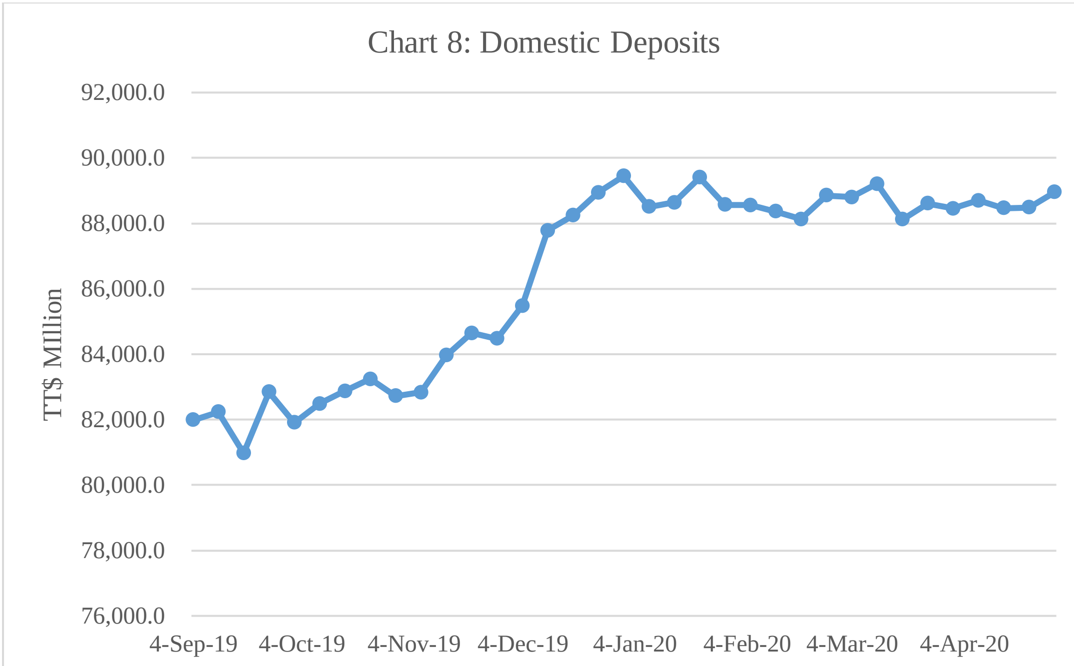
commercial banks—was TT$7.5 billion at the end of April 2020, which is 17 per cent lower than the TT$9.0 billion at the end of November 2019 (Chart 7)[24].



Source: Central Bank of Trinidad and Tobago.

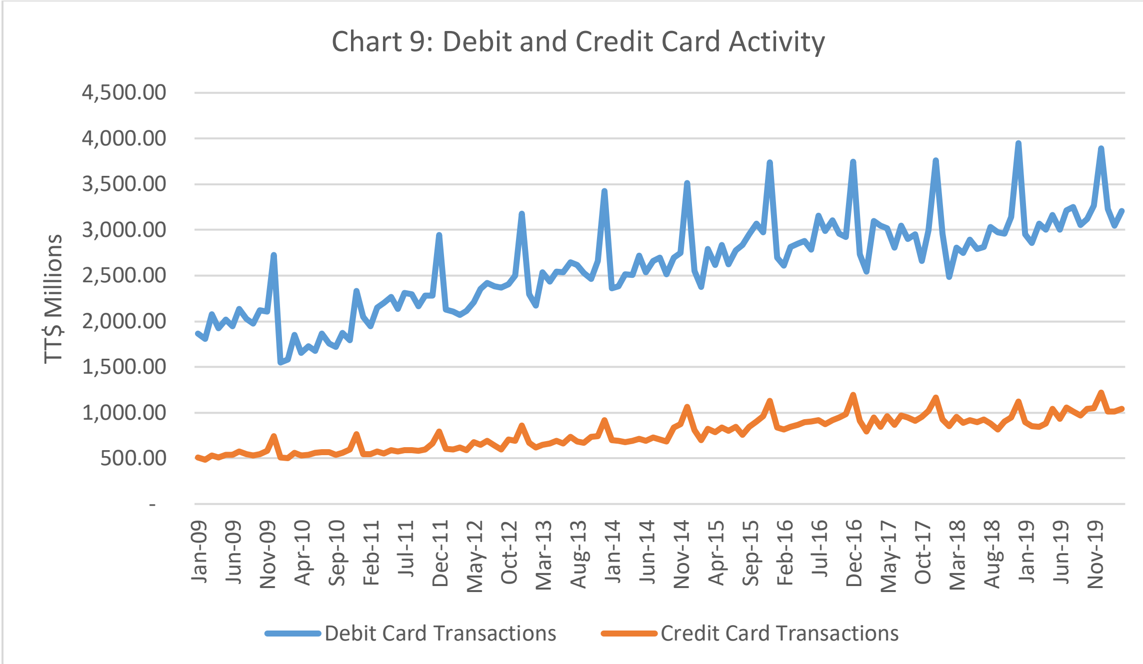
Second, the decline in currency in circulation was accompanied by a significant rise in local currency deposits to the tune of $4.5 billion over this period as companies and businesses deposited some of the $100 cotton notes at banks in December, instead of simply exchanging them for polymer (see Chart 8). There is also some evidence of a pickup in the number of deposit accounts at commercial banks in the last quarter of 2019, perhaps related to the conversion of cotton notes by previously unbanked customers. This is consistent with findings from India. For example, Schueth and Moler (2017) surveyed 1,600 randomly selected individuals and 508 merchants in the states of Gujarat, Madhya Pradesh, and Rajasthan one month prior to the demonetization and seven months later. They discovered that the number of persons with a registered financial account increased by 53 per cent, with financial inclusion increasing quickest among women and rural residents. Merchants however remained primarily cash-based.

[24] Abstracting from seasonal factors, currency in circulation at the end of April 2020 was 16.9 per cent lower than at end-April of 2019. The drop in the use of cash appears to have been concentrated on the $100 note as there was not a marked decline in use of the other note denominations. This contrasts to the earlier experience with the demonetization of the 1 cent coin when the use of all coins declined.

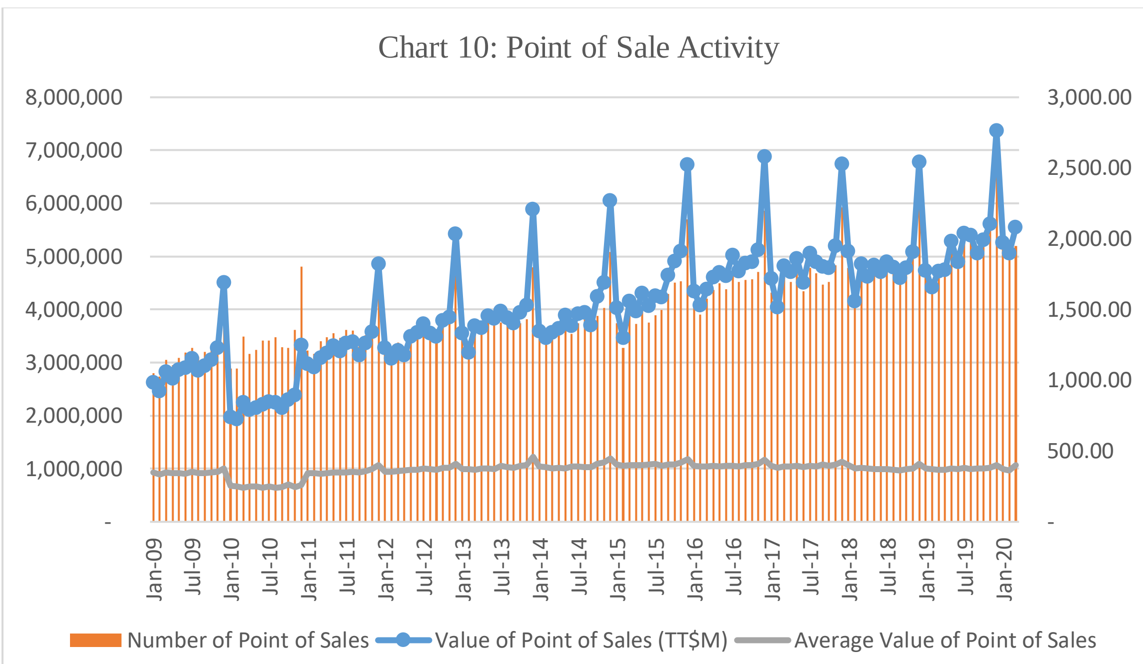


Source: Central Bank of Trinidad and Tobago.

Third, there was a noticeable boost in electronic financial transactions as some banks increased their credit and debit card limits (Chart 9). Electronic point-of-sale activity also rose above its normally high end of year levels (Chart 10). However, this seemed to be very short-lived as in the first quarter of 2020 card and point-of-sale activity returned to pre-demonetization levels. In India while some studies found an increase in electronic payments, others concluded that there was no shift in the trend pre and post demonetization. Nagdev et al (2018) analyzed the results of a questionnaire applied to 370 respondents and found that demonetization negatively affected traditional banking as persons increased the use of credit and debit cards, reactivated internet banking accounts, and increased use of payment portals and other bank apps for doing payments and other transactions. Using an interrupted time series model, Nithin et al (2019) conclude that demonetization did not assist in getting persons to use digital payment methods. The authors suggested that the findings were due to infrastructure impediments and habits; recommendations included government interventions such as incentives, greater financial literacy and financial inclusion. Lahiri (2020) also found that demonetization had done little to change the trajectory of the growth in digitized payments in India.



Source: Central Bank of Trinidad and Tobago.



Source: Central Bank of Trinidad and Tobago.

4. **Insights on Tax evasion and Money Laundering**[25]:

As noted earlier, banks required persons to provide adequate identification and to prove to their satisfaction that the source of the notes was legitimate. Banks would deny the request for conversion if they were not satisfied with the evidence submitted. Even if they did redeem the notes, consistent with the anti-money laundering/combatting the financing of terrorism (AML/CFT) legislation, the banks could note and report “suspicious transactions” to the Financial Intelligence Unit (FIU). The FIU indicated that it received almost 900 reports of suspicious transactions, mostly from the commercial banks between December 2019 and April 2020, primarily associated with the currency exchange. This represented a significant jump relative to the normal pattern (Table 2). They added that this data is being processed and cross-referenced for further action, which will include forwarding to the police or tax authorities. While we do not have details on the size distribution of exchanges at the commercial banks, anecdotal reports point to a surprisingly large number of persons with large cash holdings, purportedly from (unregistered) small businesses.

For the most part, individuals or companies exchanged their notes at the Central Bank if they were refused by the commercial bank for part or all of the desired transaction, did not have a bank account, or did not convert before December 31, 2019[26]. During the December phase, police officers were positioned on-site at the Central Bank to interview applicants with unusual or large transactions. Over this period the Central Bank processed more than 300 transactions valued over TT$50,000 each. Roughly 20 per cent of these transactions were reported to the FIU for further investigation on suspicion of potential money laundering and tax evasion. While there were fewer of the high-value transactions in the post demonetization phase of January 1-April 1, 2020, a larger percentage was identified for reporting to the FIU as suspicious: over one-third of the roughly 175 transactions.

[25] We are grateful for the insights provided by Mrs. Nadira Rahamatula-Rajack, Manager, and the staff of the Anti- Money Laundering Unit of the Central Bank of Trinidad and Tobago as well as the information provided by the FIU in this area.

[26] Central Bank staff reported that some persons who came to exchange notes said that they preferred to maintain cash in hand due to high service charges at banks, mistrust of those institutions, or because they were unable to meet the banks’ requirements to open an account.

Table 2: Number of Suspicious Transactions and Activity Reports submitted to the Financial Intelligence Unit by Category of Submitting Institution

Period	Regulated Financial Institutions	Listed Businesses	Non-Regulated Financial Institutions	**Total**
December 2019-April 2020	652	36	207	**895**
December 2018-April 2019	226	13	118	**357**
December 2017-April 2018	279	7	220	**506**
December 2016-April 2017	163	14	136	**313**

Source: Financial Intelligence Unit

V. **Conclusion and the Way Forward**:

The December 2019 demonetization in Trinidad and Tobago was large scale and implemented over a very short period. Aimed at curbing financial crimes, legislation was quickly revised and the entire national security apparatus mobilized. Project implementation went relatively smoothly, facilitated by good coordination among the banks and the Central Bank, support from the law enforcement agencies, and widespread public communication. After a few days of long lines, the conversion process became easier as ATMs were able to dispense the new notes. There were some openings for leakages and sidestepping of the restrictions on conversions, including via an initially unplanned concession allowing low value exchanges at the Central Bank to all individuals after the $100 cotton note was no longer legal tender. Nonetheless there appears to have been an impact on 'black money', with over 5 per cent of the demonetized notes not being presented for exchange. The early evidence suggests that the exercise affected the demand for cash primarily as a store of value as deposits in banks increased, while the boost in digital payments did occasioned by the demonetization itself did not seem to persist. It also contributed valuable information for the detection of tax evasion and money laundering.

This paper has presented some of the details of the demonetization and an early evaluation just a few months after the exchange ended. We believe that the findings can form the basis for future research as more data become available in determining the persistence of the observations on "missing money", currency demand, employment of digital payment methods etc. At the same time, we believe that there are important insights for policy that can be reaped from the review of the experience—including the capacity of the financial actors in Trinidad and Tobago to cooperate efficiently in a major national undertaking, the gaps in financial inclusion and literacy of some segments of the population, and the importance of having a supportive legislative and institutional apparatus. In the final analysis, the move to replace the highest value currency denomination should be considered as one module that can contribute and give impetus to comprehensive ongoing efforts to tackle financial crimes.

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Appendix1: Chronology of the Trinidad and Tobago Demonetization

Announcement Phase (December 5-9, 2019)

- On the afternoon of ***December 5, 2019***, the Minister of National Security announced at a press conference that, as part of the effort to deal with criminal activity, the $100 cotton bill would shortly be demonetized and replaced by a new polymer $100 note.

- While that press conference was underway, the Central Bank Governor met with the heads of the commercial banks to explain the exercise and the role the banks would be playing.

- Later that afternoon, the Central Bank unveiled the new $100 polymer note on its website, including design characteristics and security features and announced that it would become legal tender on December 9, 2019.

- On ***December 6 and 7, 2019*** special sittings of the Parliament were held and The Miscellaneous Provisions (Proceeds of Crime and Central Bank) Act was passed, setting out the parameters for the demonetization of the $100 cotton note.
- On ***December 7, 2019***, 80 million of the new polymer notes (value of TT$8 billion) arrived at the Central Bank.
- On ***December 8, 2019*** Legal Notice No. 357 (Cancellation of $100 Notes) was issued by the Central Bank giving notice that from January 1, 2020 the $100 notes bearing any series date prior to 2019 shall cease to be the currency of, or be legal tender in, Trinidad and Tobago and shall be cancelled and of no value.

- On ***December 9, 2019*** the Governor of the Central Bank held a media conference and explained the reasoning behind the demonetization and introduction of the new note.
- The polymer $100 note became legal tender in Trinidad and Tobago and the Central Bank started to distribute them to the commercial banks.

Co-Circulation Redemption Phase (December 10-31, 2019)

- On ***December 10, 2019***, banks started to redeem cotton $100 bills and extended their working hours to facilitate deposits or exchanges.

- On ***December 11-12, 2019*** the Central Bank hosted a series of *Know Your Money* seminars on the features of the new $100 note, distributed brochures, and intensified engagement on its website and social media.

- From ***December 12, 2019*** the first ATMs started to dispense the $100 polymer notes. By December 19, all banks' ATMs could dispense the polymer notes and dispensing of the cotton $100 notes had stopped.

- On ***December 16, 2019*** the Central Bank started to exchange $100 cotton notes from the general public on the basis of identification and Sources of Funds declarations. The exercise was done in collaboration with the Financial Investigations Branch of the Police Service, and the Financial Intelligence Unit, with input from the tax authorities.

- On ***December 24, 2019*** the Central Bank issued the *Guidelines for Redemption of the $100 Cotton Notes after December 31, 2019*.

- The $100 cotton note ceased to be legal tender at midnight on ***December 31, 2019***.

Post-Demonetization Exchange Phase (January 1- April 1, 2020)

- On ***January 1, 2020*** only the polymer $100 note was legal tender.

- Certain businesses and individuals were allowed to deposit cotton notes received up to December 31, 2019 on ***January 2 and 3, 2020*** at the commercial banks where they held accounts.

- From ***January 2, 2020*** the Central Bank was responsible for all exchanges from the general public.

- Over the period ***January 17-31, 2020*** the conditions for redemption were modified to include an expedited same day, one time exchange per person for all individuals wishing to exchange up to $1,000.

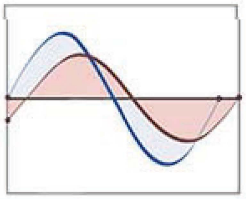
- From ***February 1, 2020*** the conditions for redemption reverted to those in force prior to January 17 (i.e. no special exemptions for transactions up to $1,000).

- Following declaration of the coronavirus pandemic by the World Health Organization on ***March 11, 2020*** the operating conditions for exchange were adjusted to cater for sanitation and social distancing requirements.

- As an essential service, the Central Bank remained open and the exchange continued after ***March 29, 2020*** when the Government suspended operations of nonessential services due to the Covid19 situation.

- On ***March 31, 2020*** the Central Bank (Extension of Period of Redemption) Order was issued, to cater only for conversion after April 1, 2020 of $100 cotton notes that had been tied up court proceedings.

- On ***April 1, 2020*** over the counter exchanges of cotton for polymer $100 notes by the Central Bank ended.



Working Papers

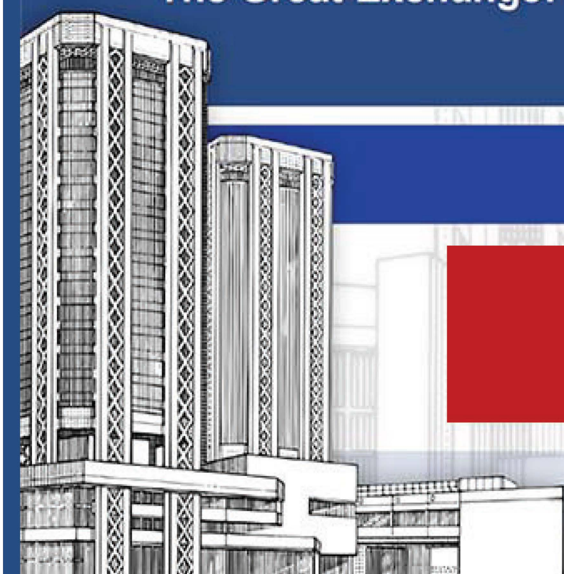
WP03/2020 June 2020

The Great Exchange: Rapid Demonetization in Trinidad & Tobago

CENTRAL BANK OF TRINIDAD & TOBAGO

Alvin Hilaire, Governor

Reshma Mahabir, Assistant Manager, Research Department



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