

The wild card: colonial paper money in French North America, 1685 to 1719

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We use the first French experiment with playing card money in its colony of Quebec between 1685 and 1719 to illustrate the link between legal tender restrictions and the price level. Initially, the quantity of playing card money and the government's poor fiscal condition appears to have had little effect on prices. After 1705, however, the playing card money became inflationary. We argue that this was caused by the government's increased enforcement of the legal tender laws and the adoption of a redemption plan intended to remove the notes from circulation.

1. Introduction

The debate over the determinants of the price level in the American colonies is one of the most contentious disagreements among monetary historians. Quantity theorists emphasize the size of the money stock (McCallum 1992; Michener 1987, 1988, 2015, 2019; Michener & Wright 2005, 2006; Officer 2005; Sumner 1993), while advocates of the “backing” theory emphasize the government's ability to “back” its liabilities with future tax revenues (Calomiris 1988; Grubb 2003, 2016a, b, 2017; Rousseau 2007; Smith 1985a, b; West 1978; Wicker 1985).¹ Rarely discussed in this debate is the importance of legal tender restrictions and the extent of their enforcement. The purpose of this paper is to illustrate that the applicability of either theory of the price level depends on the effective enforcement of legal tender restrictions by examining the case of the first French experiment with *monnaie de carte*, or playing card money, in its colony of Quebec between 1685 and 1719.

Beginning in 1685, the colonial government of Quebec lacked the specie to pay the few hundred French soldiers stationed there. Rather than borrow the specie from reluctant local merchants, government officials opted to cover the shortfall by issuing the soldiers “I-owe-you” (IOUs) on the backs of playing cards that were backed at face value by incoming specie shipments from France. Over the next two decades, the government continued to face similar shortfalls, which forced colonial officials to frequently issue increasing quantities of playing card money backed by assets of dubious value. Only the first two issues (those of 1685 and 1686) were clearly backed by specie shipments. However, contrary to both the quantity and “backing” theories of the price level, prices in the colony remained relatively stable.

¹ The “backing” theory is essentially akin to the fiscal theory of the price level—see Sargent & Wallace (1985) and Wallace (1981) for additional details.

In 1705, prices in the colony started to increase despite there being no change in the growth rate of playing card money and no improvement in the colonial government's fiscal condition. This trend accelerated after the end of the War of Spanish Succession when the colonial government announced a 1714 plan to remove the playing card money from circulation entirely by permitting the public to redeem their IOUs for specie or government bonds (initially at 50% of face value, later at 37.5%). By 1719, prices in the colony were three times their 1700 levels, despite the colonial government's efforts to reduce the quantity of playing card money in circulation.

We argue that the cause of increasing prices after 1705 was the result of Gresham's law; the proposition that when people are compelled to accept "bad" money at par, it will drive the "good" money out of circulation.² Key to the law's operation is the existence of sanctions that punish those who discount or refuse to accept the money that enjoys legal tender status, placing buyers and sellers in a prisoner's dilemma wherein the dominant strategy for both is to use the legally favored money (Selgin 1996). Absent such sanctions, however, currency competition can limit the effects that a particular money can have on the price level because the "bad" money can be discounted or cease circulating altogether.³

Prior to 1705, the Crown did not regard the playing card money as legal tender. In fact, it frequently refused to honor claims made by the colonial administration. Without the Crown's support, the colonial administration struggled to enforce restrictions and its own claim of legal tender. We argue that the disconnect between money and prices before 1705 was the result of weak and poorly enforced legal tender restrictions, which left the public free to use other monies, as evidenced by the large observed discounts on playing card money. Thus, "good" money drove the "bad" from circulation, preventing changes in the quantity of playing card money and the government's deteriorating fiscal condition from affecting the price level in the colony.

After 1705, however, the colonial government obtained support from the Crown when the latter finally recognized the legal tender status of the playing card money. Colonial officials increased the fines for violating the legal tender restrictions, and several court decisions reinforced the legal tender status of the playing card money. Moreover, the Crown began redeeming the bills of exchange backing the playing cards. These developments limited the extent to which the public could use alternative monies, and thus, "bad" money started to drive the "good" from circulation. In consequence, prices began to rise.

Yet, there were still signs of large discounts against playing card money between 1705 and 1714. Only after the announcement of the redemption plan do the discounts cease to be mentioned. The plan had the effect of creating a near perfect *de facto* enforcement of the legal tender because it imposed a time limit on redeeming the cards. If the notes were not returned before the deadline, they became worthless. The result was that playing cards held by the public that had not been circulating before now entered circulation. We argue that the terms of the redemption plan, combined with the increased enforcement of legal tender restrictions, induced the public to exchange their notes for goods and services rather than participate in the redemption plan, which accelerated the increase in prices, despite a shrinking stock of playing card money.

² To be clear, it's not the "badness" of a particular money, but its overissue that causes "good" money from circulation (Fetter 1932).

³ This version of Gresham's law differs from that offered by Rolnick & Weber (1986), who neglect the role that such sanctions play in influencing the choice of money used.

To support our argument, we use Geloso's (2016, 2017, 2019) price and output data for New France along with qualitative historical evidence drawn from the compilation of French official correspondence compiled by Shortt (1925) to provide a macroeconomic narrative of the colonial government's experiment with playing card money between 1685 and 1719.⁴ We bolster this narrative with recently collected data by Bernier (2020) on notarized transactions and the type of payment used in two parishes in the vicinity of Quebec City during the experiment. Our empirical analysis of these transactions indicates that the increased enforcement of legal tender restrictions and the redemption plan corresponds to statistically and economically significant increases in the share of transactions involving the playing card money, which supports our argument that the legal tender restrictions contributed to rising prices in the colony.

Our analysis contributes to the literature on the monetary experience of the American colonies by highlighting the link between monetary institutions, namely the existence of legal tender restrictions and the credibility of their enforcement, and the determinants of the price level. Prior to the American Revolution, the colonial governments issued bills of credit backed by future tax revenues. In some cases, these issues were inflationary but in others they were not. Unfortunately, the data from that era are insufficient to sort out which of the competing hypotheses comes closer to explaining the variation across the colonies. Our findings suggest that a possible route to understanding the different experiences in the American colonies would be to focus on legal tender restrictions and the extent to which they were enforced.

This paper also extends previous work on currency competition and Gresham's law. While there are many of historical examples of "bad" money driving the "good" from circulation, there are also several exceptions to this tendency, as several studies have shown (Mundell 1998; Redish 1984).⁵ There are two notable exceptions that share similar features of the playing card money that occurred during the US Civil War. The first is the fact that gold continued to circulate in California despite the legal tender status of the greenback, which, as Selgin (2018, p. 216) notes, was likely the result of the Union's inability to compel the greenback's use in California.⁶ The second is the municipal scrip issued by the city of New Orleans during the city's occupation by the Union army. The scrip was not legal tender, and, in consequence, was driven from circulation following its overissue (Pecquet & Thies 2010). One disadvantage that these cases have in common is that there was no change in the legal tender restrictions or the extent of their enforcement. By contrast, the French experiment with playing card money considered here permits us to analyze changes in the enforcement of legal tender laws and their effects on circulation and price levels.

We proceed as follows. The next section provides an overview of the features of New France's monetary system and the estimates of the money supply. Section 3 is a macroeconomic narrative of the playing card money episode that illustrates the role that money and velocity growth played in determining nominal expenditures in New France. We then discuss

⁴ We rely heavily on Shortt (1925). This is part of a multiple volume set produced by Canadian Public Archives on currency and exchange in Canada prior to Confederation in 1867. Shortt assembled, in two volumes, all the royal correspondence and reports contained in both Canadian and French archives regarding money markets during the French era. These letters and reports were essentially written in cursive and hard to decipher. Shortt had them typed and added detailed footnotes regarding the authors, the topics being discussed in the letters and corrections of facts where errors existed. Thus, Shortt (1925) is a primary source and not a secondary one.

⁵ See Selgin (2018) for an extensive overview of this literature.

⁶ Greenfield & Rockoff (1995) consider the applicability of Gresham's law to the California case, but conclude that whether it contradicts Gresham's law is a matter of interpretation.

the variations in the enforcement of the legal tender laws and provide econometric evidence for our conjectures about this episode. The final section concludes.

2. The monetary system of New France

To understand playing card money and its redemption, we must first discuss how New France's monetary system worked. As in the American colonies (Wright 2001, p. 20), the population of New France used a wide array of monetary instruments.⁷ The principal coins, the *écu d'or* and the *quart d'écu*, were French but there were substantial quantities of foreign coins (McCullough 1984, pp. 52–3).⁸ The sum of coins in circulation at any point in time is hard to estimate. Some of the coins entered the market as a result of international trade with France, but the majority entered as a result of royal appropriations to finance the colonial government (Moogk 1988). According to Sylvie Dépatie (1988, pp. 341–52), cash holdings in the Isle-Jésus community (a rural community north of Montreal) represented 6.9% of total assets reported in probates between 1720 and 1775—half of which were in specie.⁹ This proportion was probably greater in less remote communities that had greater access to urban markets: Desloges (1991), for example, points to proportions north of 10% in Québec City during the first half of the 18th century.¹⁰

Commodity monies were used alongside a wide array of bills of exchange drawn against merchants, fur traders, and religious congregations. These other vehicles were more popular than coins. In 1749, a foreign traveller observed that he “hardly ever saw any coin” (Moogk 1988, p. 69) and that the other types of media were much more popular. Book credit was probably the most popular. Buyers would receive goods and promise, in the near future, to pay in coins or in equally valued goods or services to the seller, e.g., a chicken, a bushel of wheat, or days of work. Substantial shares of net wealth recorded in probates came from accounts due to the deceased (Dépatie 1988; Paquet & Wallot 1983).

To navigate the plethora of different methods of payment, the units of accounts were separated from the units of exchange. A system of accounting units known as the *Monnoye du Canada* (the currency of Canada) unified these different media of exchange. This system was composed of *livres*, *sols* (20 *sols* = 1 *livre*), and *deniers* (12 *deniers* = 1 *sol*). All the different media would be expressed in this accounting system, which had the advantage of allowing different parties to ask for the type of payment before stating prices in the accounting units (Wright 2001, p. 21). As such, an entry of 30 *livres* in an account book meant 30 *livres* worth in specie at the official rates of *livres* to specie—regardless of the medium used for exchange. The account books would frequently add the mention of the type of medium used. For example, the mention of 30 *livres* would then be followed by a note like *argent* (silver), *billet*

⁷ The colony's population between 1685 and 1719 went from 11,368 to 26,739 (Lalou & Boleda 1988, p. 67). In contrast, the population of the American colonies grew from 180,899 to 453,454 (Rabushka 2010, Appendix).

⁸ McCullough refers to a 1760 shipwreck found in 1976 by maritime archaeologists. The *Auguste* was a ship carrying French officials and treasury following the surrender of Montreal in 1760. Among the artifacts found in the wreck, some 1,200 coins were found—a little more than half of which were French.

⁹ The playing card monies Dépatie measured were related to the latter episodes of experimentation with paper money (the post-1730 issues). The numbers she provides are merely used for suggestive purposes.

¹⁰ Data for the late 18th century point to proportions of 11.7% to 13.7% in the areas around Montreal and Québec City (Paquet & Wallot 1983).

(bill of exchange), *blé* (wheat), or *jours de travail* (labor days).¹¹ Most contemporary sources—including those used by Geloso (2016, 2017, 2019) to create his macroeconomic series for the colony—cite prices in accounting units. The same accounting system existed for France (the *Monnoye de France*), but at a different rate: 133.33 *livres du Canada* were needed to match 100 *livres de France* from 1672 to 1717 (McCullough 1984, p. 32).

In 1685, New France's colonial government ran out of coins to pay its soldiers, who preferred specie over other media since they were returning to France. Lacking the funds to pay them, the administration first allowed the soldiers to hire themselves out to the inhabitants to acquire "certain means of living" until the Crown sent funds (Shortt 1925, p. 71). When this was deemed insufficient, the administration attempted to borrow from local merchants who initially refused.¹² The merchants came back with a new offer, which was to lend money in terms of *Monnoye du Canada* but be repaid in terms of *Monnoye de France*. This essentially amounted to a 33.3% interest rate—suggesting that the financial credibility of the administration was deemed to be relatively low (Shortt 1925, p. 71). The intendant, Jacques de Meulles, refused those terms. Instead, he resorted to writing IOUs on the backs of playing cards. These IOUs were backed by incoming specie shipments from France (Shortt 1925, p. 69) and de Meulles hoped that they would pass as hand-to-hand money. This issue, like the one that followed in 1686, was quickly redeemed in full thanks to shipments of coins (Shortt 1986, pp. 128–29). The redemption of the first two issues surprised the local population, who began to accept the notes at face value and as temporary increases in the money supply (Lester 1964).

The subsequent issues were not so quickly redeemed, and they were backed increasingly by assets of dubious quality instead of specie.¹³ The colonial administration offered bills of exchange redeemable in Paris (Shortt 1925, p. 141) for other bills of exchange drawn against other royal institutions such as the city of Paris and the Navy department (Shortt 1925, pp. 222–3).¹⁴ In addition, incoming shipments of gold coins were sometimes lost at sea (Heaton 1928, pp. 653–4). In some years, the Crown sent merchandise that the colonial administration was expected to sell to generate revenues (Shortt 1925, p. 103). As early as 1691, it was also clear that the colonial government frequently issued notes in considerable excess of incoming revenues (Heaton 1928, p. 654), and that this was still the case by 1705 (Shortt 1925, p. 141). The credibility of the administration's promises of redemption that it had apparently built with the 1685 and 1686 issues rapidly vanished. Beginning with the 1690 emission, mentions of discounts, i.e., higher prices quoted in playing card money, and refusals to accept the playing cards begin to appear in the historical record, reflecting the change in expected payoff.¹⁵

¹¹ However, the account books available to historians rarely specified the details of the conversion rates. For example, when account books of religious congregations used by Geloso (2019) to create a price index specified that payment had been made in specie, it did not specify which coins and how many coins. Same thing when playing card money and bills of exchange were used.

¹² The initial terms proposed have been lost to history.

¹³ The first issue to have been delayed seems to be the 1690 issue (Shortt 1925, p. 93).

¹⁴ Some issues, such as that of 1704, were based on no incoming assets. Another, the 1700 issue was based on the credit of the crown-supported corporation, the *Compagnie des Indes Occidentales*, which was insolvent (Hamelin 1960, p. 42).

¹⁵ In a decidedly idiographic approach to the topic, Desbarats (2021) confirms the idea that the discounts were tied to the expected payoff from holding the notes. Frégault (1958, p. 470) argues the same when discussing the legal tender decision of 1705 by the Crown.

While the governors of New France argued that their notes were legal tender and had to be accepted at face value, the Crown disagreed. In fact, until 1705, the King explicitly disapproved of the colonial government's experiment with playing card money. A 1699 letter from Versailles ordered the end of the experiment (Shortt 1925, pp. 105–7). A similar letter was sent in 1701 stating that the King would not “permit the employment of it under any pretext whatsoever” (Shortt 1925, p. 117).¹⁶ Nevertheless, the colonial administration ignored the Crown's criticisms as it appears that issues were made in 1700 and 1702 (Hamelin 1960, p. 42).¹⁷ The Crown's refusal to accept the playing cards as legal tender meant that it could refuse to appropriate the necessary funds for redemption—something the Crown did on multiple occasions (Shortt 1925, pp. 101, 103–5, 141–2). This undermined the credibility of the redemption promises of the colonial government, and, as a result, from 1685 to 1705, the enforcement of the legal tender restrictions by the colonial government was confused and weak.

The Crown's refusal to recognize the legal tender status of the playing cards continued until 1705 (Heaton 1928, p. 655; Dimand 2008, p. 175) when the Crown finally relented and accepted the legal tender status.¹⁸ Simultaneously, larger fines for refusal to accept playing cards at face value were imposed (Shortt 1925, p. 145). This ended the legal uncertainty and caused a modest tightening of legal tender enforcement efforts.

The paper note supply continued to increase rapidly from 1705 to 1714. Using the amount of playing cards in circulation reported by Shortt (1925) and population estimates from the censuses, Robert Armstrong estimated that the supply of playing card money per capita at 11 *livres* in 1702 and 108 *livres* in 1712 (Armstrong 1984, p. 34).¹⁹ That was when nominal incomes *per capita* oscillated around 100 *livres* (Geloso 2016, Data appendix). When we adjust for the debasements that took place during the period the increase remains impressive.²⁰ These issues exceeded the metropolitan government's financial appropriations for the colony. Given the deteriorating state of French public finances (Rowlands 2012), the metropolitan government actively looked for ways to end the experiment and phase out the notes at a discounted share of face value.

The end of the War of Spanish Succession provided the ideal opportunity to end the experiment. With the war's end, public expenditures could more easily be curtailed. As such, in 1714, soon after the Treaty of Utrecht, a plan was announced for redemption at 50% of face value (McCullough 1984, p. 39) of the more than 1.8 million *livres* in circulation (see table 1). Initially, the Crown wanted to redeem with a devaluation of 5 to 10% (Shortt 1925, pp. 242–4), but for redemption in bills of exchange against institutions in France, which

¹⁶ The grounds for royal rejection were largely related to counterfeiting and concerns about financial control over the colonies (Shortt 1925, p. LIII).

¹⁷ In 1699, Versailles ordered the end of the experiment, and by 1700, some of the existing notes were redeemed. There is no indication as to whether it was done at face value. However, the experiment was back on track in the same year with new issues, against the explicit will of the metropolitan government (McCullough 1984, pp. 36–7).

¹⁸ Some sources point to 1706 as the start point of the King's acceptance as legal tender (McCullough 1984, p. 37). The confusion stems from two factors. The first is that the phrasing of the ordinance contained was somewhat vague about when it went into effect. Second, the decision had to be ratified by Versailles. Nonetheless, most sources tend to point to 1705.

¹⁹ However, it appears that Armstrong is using the non-corrected figures for population. Thanks to Lalou & Boleda (1988), the problem of underenumeration is resolved. Given the values that we show in table 1 below and using the corrected population figures, we arrive at 7 *livres* in 1702 versus 85 *livres* in 1712.

²⁰ We used the exchange rates provided by Allen (2001) and Hoffman (2000).

TABLE I. Mentions of money supply from main historical sources

Row	Year	Amount	Type	Source
(1)	1702	£120,000	Total amount	Shortt 1925, p.327
(2)	1703	£160,000	New issue	McCullough 1984, p. 37
(3)	1704	£160,000	New issue	McCullough 1984, p. 37
(4)	1704	£100,000	Surplus of card money to bills and species	McCullough 1984, p. 37
(5)	1710	£244,092	New issue	Shortt 1925, p.207
(6)	1711	£450,000	New issue	Zay 1892, p.132
(7)	1712	£2,000,000	Total amount	Armstrong 1984, p.34
(8)	1712	£1,800,000	Total amount	Shortt 1925, pp.327–31
(9)	1713	£500,000	New issue	Shortt 1925, pp.327–31
(10)	1713	£1,800,000	Total amount	Frégault 1958, p.476
(11)	1714	£2,120,000	Total amount	Walker 1899, p.6
(12)	1714	£636,110	Withdrawn at half value	Frégault 1958, p.479
(13)	1715	£122,000	Withdrawn at half value	McCullough 1984, p. 39
(14)	1717	£1,300,000	Total amount	Frégault 1958, p.480

Notes: By 1706, the colonial authorities had no precise idea of how many notes were issued (McCullough 1984, p. 37). This was still the case by 1714 (Frégault 1958, p. 475). There is thus some uncertainty in play about the precise level (i.e., down to the last digit). The money supply estimates for 1712 state that the year started with £1.3 million worth of card money in circulation. The reason why it jumps to £1.8 million in the year is that the colonial administration issued £0.5 million in 1712 and the same amount again in 1713 (Shortt 1925, p. 327). Frégault (1958) reports a £1.8 million figure for 1713. Yet, Frégault (1958) might have misinterpreted a somewhat unclear piece of correspondence. The letter that is used has an awkward which makes it possible that £0.5 million were added in 1712 and 1713, which would bring the figure to £2.3 million, which is a figure closer to that reported by (Walker 1899, p. 6) for 1714 before any cards were retired. As such, we will use Frégault (1958) for 1713, we understate the level. Moreover the Armstrong (1984) estimate for 1712 appears plausible given some elements of the correspondence highlighted by Hamelin (1960). This creates further confusion about precise values. As such, we again decided for a strategy that dampened our case rather than enhanced it. Any easing of our assumptions will thus enhance the argument we lay out.

were themselves uncertain as a result of the high public debt of the government in France (Desbarats 1997; Rowlands 2012). However, once informed of the actual amount of notes being held, the rate of 50% was selected with redemption in specie over 5 years rather than bills of exchange. Cardholders would initially receive bills of exchange against the treasurer of the Navy department. These bills would later have to be redeemed for cash on their maturity date, a year after their conversion from card money. At the end of the plan, playing card money would no longer be accepted. Following the announcement of the plan, notes were turned in rapidly.

However, when the first set of bills of exchange due for March 1715 was turned in, the treasurer was unable to provide the coins (McCullough 1984, p. 39). Throwing the redemption plan in further doubt, the colonial government issued new playing card money in 1716. In 1717, the metropolitan government ordered a further devaluation by abolishing the distinction between the *Monnoye de France* and *Monnoye du Canada* accounting systems, which meant that notes could only be redeemed at 37.5% of their original face value.²¹ By the autumn of 1719, the notes were out of circulation (McCullough 1984, pp. 39–40). Figure 1 below illustrates the chronology of the playing card money experiment. It contains all the

²¹ The figure of 37.5% is because it compounded the initial reduction as Desloges (1991, p. 27) explained.

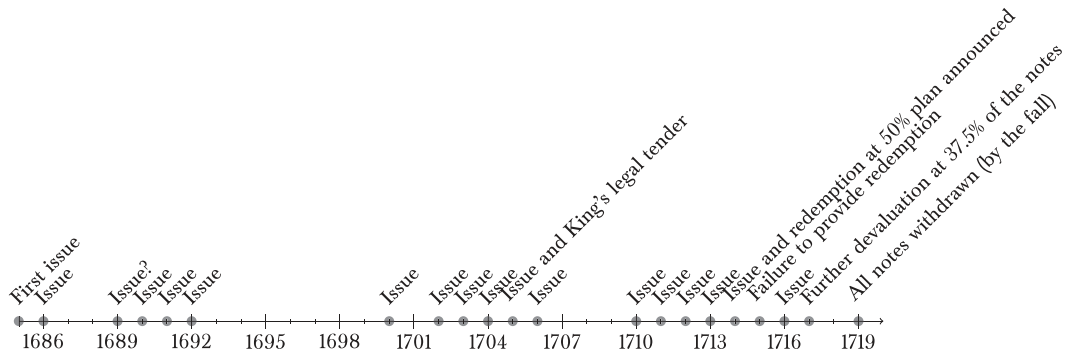


Figure 1. *Chronology of the playing card money episode, 1685 to 1719*

issues that could be documented up to 1719 as well as the dates of changes in legal status and the redemption plan.

The original sources from this period allow us to reconstruct a measure of the paper money supply and, based on certain assumptions, an estimate of the remaining money supply. These data are presented in table 1 where each item is identified with a row number. In the top panel of table 2, we use the information from table 1 to estimate the total supply of playing cards. The row numbers from table 1 are mentioned to explain our operations. In the bottom panel of table 2, we attempt to estimate the non-playing card money supply. Row (4) from table 1 provides the only mean to produce that latter estimate. In 1704, the colonial administration argued that it had issued playing cards to an amount exceeding the stock of specie and bills of exchange by 100,000 *livres*. Using the estimate of playing card money for 1704 in the top panel of 2 allows us to estimate the total non-playing card money supply. We divided that estimate by Lalou & Boleda's (1988) population estimates to provide a per capita figure. Serving as a baseline, we then multiplied that per capita figure (18.76 *livres*) by the population to estimate the total non-playing card money supply in all years before and during the redemption plan. Finally, we use the redemption rate on retired playing cards after 1714 to augment that baseline for the years of the redemption plan. Together, the two panels of table 2 provide an estimate of the total money supply.²²

To be sure, these estimates are imperfect. However, they represent an order of magnitude that will allow us, in combination with the price and output data, to deduce a plausible macroeconomic narrative.²³

²² Using data from the Group for Price and Income History regarding silver grams per *livre* we adjust for debasements. As such, we are avoiding problems associated with the simultaneous debasement of the currency in France. See Group for Price and Income History, global prices and incomes database: main database, <http://gpih.ucdavis.edu/Datafilelist.htm>; converted into *Monnaie du Canada*.

²³ Nevertheless, we can find some reassurance in the fact that cross-colonial specie flows, one of the most contentious hindering the study of the paper money experiments in the American colonies (Grubb 2016a; Michener 1988; Sumner 1993) is not an issue in the present case as Canada was a single colony and its trade (very small in amplitude) was limited to overseas trade with France and the French West Indies. Even the fur smuggling business—the main source of trade between New France and New England—was quite small (Lunn 1939). Moreover, there are no signs in the very limited pre-1729 trade data of a widening trade deficit (Lunn & Lunn 1986; Vallières *et al.* 2008).

TABLE 2. *Estimates of money supply components*

Estimates of playing card money supply		
Year	Amount	Row operations from table 1
1702	£120,000	(1)
1703	£280,000	(1)+(2)
1704	£440,000	(1)+(2)+(3)
1710	£1,205,908	$[(7)+(8)]/2-(6)-(5)$
1711	£1,450,000	$[(7)+(8)]/2-(6)$
1712	£1,900,000	$[(7)+(8)]/2$
1713	£1,800,000	(10)
1714	£1,483,890	(11)-(12)
1716	£1,361,890	(11)-(12)-(13)
1717	£1,300,000	(14)
1719	£0	End of Plan

Estimates of non-playing card money supply		
Year	Amount	Notes
1704	£340,000	Specie and bills
All years	£18.76	Baseline specie and bills <i>per capita</i>
1714	£318,055	Addition due to redemption plan
1716	£61,000	Addition due to redemption plan
1719	£487,500	Addition due to redemption plan

Notes: The population estimate for 1704 is 18,123 and is a result of an interpolation between the 1698 and 1706 census corrections provided by (Lalou & Boleda 1988, p. 67). All our data are available in the online supplementary material.

3. A macroeconomic narrative

In this section, we describe the behavior of nominal expenditures during the Canadian experiment with card money, which we classify into three periods. The first, occurring between 1685 and *circa* 1700, is characterized by relatively stable growth in nominal expenditures. We argue, “good” money drove out “bad” during that period. While we have no reliable estimates of the money supply for the first period, we possess sufficient information from the work by Shortt (1925) to know that there were substantial issues of playing card money during that period even if the numbers are elusive. The second period, which offers more reliable evidence on the quantity of money, runs from 1702 to 1714, during which time the growth rate of nominal expenditures increased. We argue that the higher growth rate of nominal expenditures was the result of increased enforcement of the legal tender laws. The final period, which begins in 1714 and ends in 1719, witnessed skyrocketing nominal expenditures brought about, we argue, by the colonial government’s redemption plan.

To create a series of nominal expenditures, we use Geloso’s (2017) data on prices and output during this period.²⁴ We estimate that spending was nearly seven times higher in 1719

²⁴ Geloso (2017) computed gross domestic product (GDP) using a second method to assess the reliability of his estimate derived from census data. This method, referred to as the indirect approach to GDP measurement in the cliometric literature, calculates output based on a demand system (Allen 2000; Arroyo Abad & van Zanden

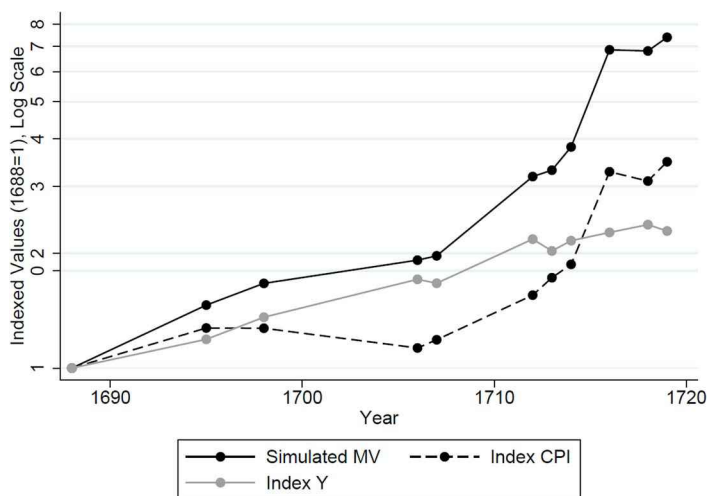


Figure 2. *Evolution of P, Y and MV (1688=1) on log scale*

than it was in 1688. Figure 2 illustrates Geloso's estimates nominal expenditures.²⁵ As the figure illustrates, nominal spending increased substantially between 1688 and 1719, despite real output growth being relatively stable over the same period.

Unfortunately, reliable evidence for the quantity of money in circulation does not exist prior to 1702, which makes it impossible to tease out the individual effects that money growth and velocity had on nominal expenditures before this point. However, the money-supply data we do have for the years between 1702 and 1719 suggest velocity played an important role, especially during the third period of the card-money experiment. Figure 3 combines our series of nominal expenditures with various measures of the money supply.²⁶ Between 1702 and 1714, the total quantity of money increased by nearly 16 percent per year, on average. While we do not have data on nominal expenditures for the period between 1702 and 1706, the data we do have indicate that nominal expenditures increased by 9 percent annually between 1706 and 1714. If we assume that this estimate applies to the entire period between 1702 and 1714, then it is evident that velocity must have been decreasing by roughly 7 percent per year, on average.²⁷

Interestingly, the reverse appears to occur after 1714. As figure 3 illustrates, nominal expenditures increased substantially after this year—increasing by roughly 14 percent per year

2016). Geloso found that it matched his estimates of output using the more direct approach he initially used. We replicated our result with both of the measures provided and achieved the same outcome, even though we prefer the direct output measure, which is computed as a quantity index. However, we can make our results available with the indirect output measure upon request.

²⁵ Figure 2 employs the consumer price index produced by Geloso (2019) to approximate P . However, Geloso (2016) also calculated a GDP deflator that can be used to do the same thing. Using it instead of the consumer price index (CPI) does not change our results. However, the GDP deflator is of lesser quality than the CPI. We can provide the results with the GDP deflator on demand.

²⁶ Note that all four series are indexed to 1712 and expressed in grams of silver equivalents to avoid the issue of coin debasements

²⁷ This estimate follows from the dynamic version of the equation of exchange: $gM + gV = gP + gY$. Since $gM = 15.9\%$ and $gP + gY = 8.9\%$, gV must be equal to roughly -7% .

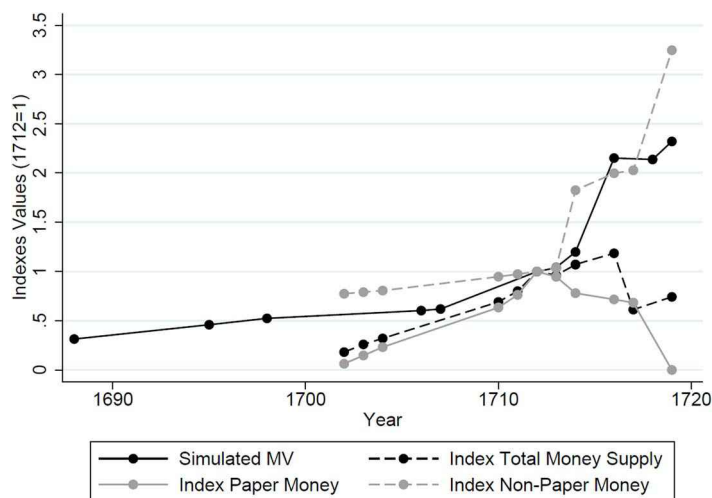


Figure 3. *Approximations of the total money supply and its components with simulated MV (1712=1)*

on average—despite the fact that the money supply was decreasing by an average of 7 percent per year. As before, velocity appears to have played a role. Based on our estimates, velocity was increasing 21 percent per year, on average. This rapid increase in velocity was likely due to the colonial government's efforts to reduce the quantity of card money in circulation by means of a redemption plan that would impose a significant capital loss on those who continued to hold card money after a certain date.

In sum, velocity appears to have been a significant factor in the behavior of nominal expenditures over the three periods. While we do not have estimates of the money supply before 1702, spending growth remained relatively constant, implying that changes in velocity were offsetting the issuance of card money during the first period of the card-money experiment. After 1700, however, things began to change. While the money supply increased significantly, velocity continued to somewhat offset the expanding stock of money. By 1714, velocity was no longer offsetting changes in the quantity of money in circulation. Indeed, it began increasing faster than the money supply was contracting, which caused nominal expenditures to soar.

4. The role of legal tender

What explains the observed variation of velocity over this period? In this section, we argue that the enforcement of legal tender laws and the colonial government's redemption policies are the key factors of importance. We present our evidence in two steps. The first is by relying on a combination of the textual evidence and macroeconomic data used in section 3. The second is by using recent research on the use of playing card money in two parishes in the vicinity of Quebec City (Bernier 2020). Both types of evidence support our argument that the strength of the legal tender restrictions mattered heavily.

4.1 Macroeconomic and textual evidence

The details we provided in section 2 suggest that there were two sources for the weak enforcement of legal tender laws prior to 1714. The first source, the King's refusal to grant legal tender, lasted only until 1705. This first source had the corollary effect of undermining the credibility of the card money issues. The second source, the difficulty in physically enforcing laws, was present until 1714. It was only when the redemption plan was announced in 1714 that a de facto and near perfect enforcement of the legal tender laws began.

As we pointed out in the introduction, the Crown refused to accept the claim of legal tender made by the colonial administration until 1705. Confusion surrounding the legal tender status of the playing cards prior to 1705 weakened the enforcement of the legal tender restrictions in two ways. First, the merchants knew that the Crown had refused to grant the notes legal tender status. This meant that they could invoke the King's decision to refuse the cards at face value.²⁸ Second, the Crown did not see itself tied to the financial promises of its colonial administration. As such, it could refuse to appropriate the necessary funds to redeem the cards, which is exactly what it did on multiple occasions.

For example, in 1692 and 1695, the Crown decided to change the way it appropriated funds to the colony. Rather than sending specie, which could be used to redeem the cards, the Crown sent a large portion of the annual appropriation in the form of food and merchandise, which the colonial administrators were expected to sell to generate revenues (Shortt 1925, p. LIII, 101).²⁹ This manner of appropriating funds made it hard for the colonial administrators to redeem the notes. In fact, the notes that were supposed to be redeemed in 1693 from the 1692 issue were still not redeemed by 1696 as the administrators complained that the Crown had continually refused to send out the necessary funds (Shortt 1925, p. 103).

In another instance from the early 1700s, the Crown refused to redeem fully some of the bills of exchange that the colonial government had used to back the playing cards (Shortt 1925, p. 141).³⁰ The Crown's refusal to appropriate the necessary funds meant that the promise of redemption at face value was seen as an empty one. Had the issues been well-backed, the local population would have been more inclined to accept them at face value. In fact, had this been the case, the issue of legal tender would have been moot. However, the Crown's recurrent refusals to appropriate unveiled the low credibility of the colonial administration's promises. This translated into a greater resistance to accept the notes at face value and made the enforcement of the legal tender a harder task. As such, the Crown's refusal to approve legal tender was one source of the inability to enforce legal tender laws during the 1685–1705 leg of the 1685–1714 period.

The legal uncertainty regarding legal tender status was heightened by an apparent limited ability of the colonial government to enforce its own legal tender until 1714. Initially, small fines were stipulated for refusal to accept at face value.³¹ However, these did not appear

²⁸ Some of the merchants would clearly have known about the refusal as many were involved in the influential fur trade whose actors were closely connected to the ministries in Versailles.

²⁹ This had the additional effect of irritating merchants in the colony who saw the government stores as competition (Shortt 1925, p. LV).

³⁰ The Crown also undermined the claims of legal tender by the colonial administration in other ways. In 1698, the Crown ordered that officers of justice be paid in *Monnoye de France* (Shortt 1925, pp. 103–5). As the wages were fixed in terms of *livres*, the change meant an increase in the real wages of officers of justice. This essentially increased expenditures at the same time that the Crown refused to send sufficient appropriations.

³¹ The colonial administration prohibited discounts on the card money in 1685 under the penalty of a 50 *livres* fine (Shortt 1925, p. 71), insisted that the notes be accepted by everyone for the payment of all debts

to have been a credible deterrent. This is evidenced by the frequent practice of discounting paper money. In 1691, for example, the intendant Bochart de Champigny pointed out to the minister in Versailles that “the troops... purchase at much higher rates for card money than for specie” (Shortt 1925, p. 95). In 1707, a similar dispatch pointed out that colonial administrators who were paid in playing card money faced 40–50% discounts (Shortt 1925, p. 175). Breckenridge (1893, p. 413) points out that soldiers in 1699 and 1700 faced higher prices when attempting to pay with playing cards. As late as 1713, after administrators had issued a new ordinance reiterating the new higher fines for not accepting playing cards (Shortt 1925, p. 145), merchants still quoted higher prices when buyers offered to pay in paper money (Heaton 1928, p. 655). Given that note-holders were either soldiers or members of the colonial government, the continued refusal to accept at face value suggests a weak ability to enforce legal tender until 1714.

This weakness in enforcement can be partly explained by the King’s refusal to recognize legal tender—but only until 1705. The other source of weak enforcement was the colony’s weak fiscal system (Bordo & Redish 2001). That weakness prevented government officials from using tax payments as an enforcement mechanism. Most exactions of the local population were made under seigneurial tenure, a land tenure institution whereby legally sanctioned landlords would exact duties from the local population. This feudal institution collected most of the in kind taxes imposed on the colonial population. More importantly, most seigneurial duties and “taxes” were paid in-kind, e.g., labor services, book credit, or specie.³² The colonial government was left with delegating revenue collection to tax farmers, who collected tiny sums from import and export taxes. This weak fiscal system meant that imposing the acceptance of playing card money through the obligation of paying local taxes in paper money was a dubious proposition.³³ This weakness contributed to the feeble enforcement of legal tender.³⁴

There are signs that enforcement efforts increased following the King’s recognition of legal tender in 1705. The first was that fines were increased from 50 to 100 *livres*. A second sign is that there were judicial decisions favorable to the authorities and their efforts at enforcing the legal tender restrictions (Dickinson 1982, pp. 127, 130). However, the difficulties in enforcement remained considerable so that the efforts in enforcement between 1705 and 1714 yielded very modest results. The fact that discounts appear to have continued up to 1713 inside the capital city is quite telling. A particularly revealing fact is that there are no mentions of coin hoarding before the 1710s while Robert Armstrong (1984, pp. 31–2) points out the lack

(Bordo & Redish 2001, p. 264), and charging different prices for coins and cards was prohibited. The fines were increased to 100 *livres* per count of refusal in 1705 when the Crown accepted the legal tender status.

³² Seigneurial account books and contracts frequently specified the methods of payment for the taxes and obligations of the peasants. Non-seigneurial organizations also frequently did the same (Bessière 2008; Beutler 1982; Dickinson 1982; Rousseau 1983). Such contractual stipulations put these transactions out of the playing cards’ reach. The widely used practice of book credit also allowed individuals to simply ignore the playing cards when they were overissued and continue referring to prices in accounting units.

³³ The early discounts are well in line with the motivation to resort to paper money in the first place. The colonial government faced borrowing at 33% interest in 1685 (Shortt 1925, p. 75), and for that reason, it resorted to playing card money. Such high interest rates suggest that the government’s promises were considered weak. The similarity between the proposed interest rate and the discounts (33% versus 40%) on playing card money confirms that the notes were viewed as dubious monetary instruments.

³⁴ By comparison, the burden of paying tithes, taxes, and duties to the church and the seigneurial landlords represented between 4% (Geloso 2019) and 14% (Dechêne 1974) of income. The estimate of the revenues collected by tax farmers (Bordo & Redish 2001, p. 261) represents less than 1% of total output as measured by Geloso (2017).

of “hard evidence” for a systematic balance of payments deficit in those years.³⁵ Had the enforcement been highly effective when issues were poorly backed, hoardings should have increased as people would have been reluctant to part with specie. However, one piece of evidence provided by Bernier (2020) suggests that the increased enforcement efforts had *some* effect on people’s decisions to use the playing card money. Analyzing notarized transactions that involved playing card money from 1694 to 1719 in two key parishes around Quebec City, Bernier found that the proportion of mixed transactions, i.e., transactions that included both playing cards and other media, fell after 1705 suggesting that some crowding-out did happen.

The relative weakness of pre-1714 enforcement meant that as long as exchange rates between the various circulating media could adjust, the adverse effects of over-issuing card money would have been heavily moderated by changes in the exchange rate between currency. That is, prices in accounting units were adjusted depending on the medium offered. Thus, the local population and the merchants refused to accept paper notes, which left note holders with large holdings of non-circulating notes, which explains why velocity fell during the second period.

The ability to discount the playing card money mitigated the increase in prices that would have otherwise been brought about by the colonial government’s deteriorating fiscal condition or the increase in their supply. Further mitigating the effect playing card money on the price level, some note-holders simply did not bother attempting to redeem them. In 1712, 2 years before the official redemption plan, when the French government attempted to redeem Canadian card money in exchange for bonds bearing 4%, less than 4% of all card money in circulation was voluntarily turned in (Armstrong 1984, p. 35).³⁶ While the government increased *de jure* enforcement efforts after 1705 (when the Crown finally sided with the colonial administration and officialized legal tender), the *de facto* enforcement of legal tender laws prior to 1714 meant that the exchange rate between card money and other monies would absorb most of the effect of its overissue, while the discounts minimized the effective increase in the money supply. As we noted in the previous section, however, exchange-rate adjustments don’t appear to have fully offset the increased quantity in circulation. Nonetheless, during the first two periods, other media of exchange appear to have driven the playing card money from circulation.

With the announcement of the redemption plan at 50% of face value in 1714, velocity started to increase. The redemption was a ticking wealth tax. The announced rate of 50%, and later 37.5%, applied only until 1719. Anyone left with notes after 1719 would be left holding worthless paper notes. This is a wealth tax. As such, households stood to lose wealth in proportion to the discounted value of their holdings. Given that Dépatie (1988, pp. 341–52) points to money holdings representing close to 6.9% of household wealth in rural areas,³⁷

³⁵ In fact, data regarding the movement of ships in and out of the colony suggest that there was minimal trade through which coins could have exited the colony (Vallières *et al.* 2008, pp. 117, 119).

³⁶ Armstrong, McCullough (1984, p. 37) and Lester (1964, p. 13) argue that this was a sign of confidence in card money, but the 40–60% rates of discount suggest otherwise. This is probably because the Crown was offering redemption against very dubious assets that were drawn against the City of Paris. (Shortt 1925, p. 223) suggests that Canadian cardholders were aware that the treasury was “practically bankrupt.”

³⁷ The figures were greater in urban areas—north of 10% (Desloges 1991, pp. 179–81)—where markets were more developed and exchanges were likely to be monetized. Moreover, this figure is probably understating the importance of money holdings for households. Dépatie (1988) relied on household wealth reported in probates inclusive of consumption goods like clothing, stored-over grain and dried meat. These were valued by notaries’ subjective evaluations and do not speak to the actual market price (i.e., value) of these goods. Most importantly, given the figures of total money holdings reported by Dépatie (1988) and Desloges (1991) and the

the prospect of being left with worthless assets would have represented a substantial capital loss. They needed to unload these notes to not lose a depreciated but not totally worthless component of their total assets. Because no one wanted to lose what wealth they owned in playing cards, few wanted to pay in coins unless a premium was offered. As such, the notes re-entered circulation and their velocity increased.

In addition to the wealth tax, there is the possibility that authorities made an incorrect estimation of the market value of the playing cards when they announced the 50% redemption rate. The discount rates that we found mentioned vary between 40% and 60%. There is thus the possibility that the 50% redemption initially announced was above the market value of the playing cards. This is not a certainty for 1714–1717 period. It could be that the money was being redeemed at less than the market value during that period, given the 40% discount mentioned. It is clear, however, that the further devaluation in 1717 (to 37.5%) brought the redemption rate below the market value observed in the primary sources.

Discussion of the changes in the velocity of other monetary media are also consistent with our claims. Correspondence between colonial officials and the metropolitan government contain little to no mention of coin hoardings pre-1710, which suggests that the velocity of playing card money fell (Breckenridge 1893; Heaton 1928; Shortt 1925, 1986; Zay 1892). However, figure 3 illustrates the overall money supply fell, while nominal expenditures increased rapidly. The velocity of paper money must have increased quickly enough to more than offset the hoarding of good money, which is consistent with our contention that non-circulating paper notes reentered circulation.

The paucity of data regarding discount rates invites cautiousness regarding the above proposition. However, the fact that the price index used in this paper is expressed in accounting units provides some support to the proposition made here. When the institutions from which the prices were collected reported that they paid 30 *livres* worth of wheat, it meant that they had paid with currency whose value they estimated would provide them with the accounting value of 30 *livres*. Depending on the effective (i.e., quality adjusted) supply of each medium of exchange, prices would be quoted in relation to that yardstick. If the money supply changed, the price of that money in terms of the account book money would have changed, not the price of an item quoted in accounting units.

In a system where discounting is present and where good money drives out bad money, changes in the money supply of a particular currency will not affect prices in accounting units. Depreciated media will simply fetch a higher price quotation. However, if legal tender is strictly enforced at rates unrelated to the market-clearing rates, the bad exchange medium drives out the other media of exchange, and since the bad medium comes to dominate the exchanges, accounting unit prices will adjust according to reflect the supply of bad money.

The evolution illustrated by figure 4 confirms this conjecture. That prices skyrocketed after the announcement of the redemption plan in 1714, which caused *de facto* enforcement of legal tender and plateaued at this new, higher level until 1719, suggests that accounting-unit prices were adjusted to reflect the crowding out of good money in French Canada resulting from changes in the enforcement of legal tender laws.³⁸ Without the increased enforcement of the legal tender restrictions, the redemption plan would not have created an incentive

figures regarding playing cards still held by 1712, it is likely that card money holdings would have represented a sizable share (if not the majority) of money holdings (measured at face value).

³⁸ Some could be tempted to argue that as the Canadian monetary system was tied to the French one, i.e., prices in Canada would mirror those in France adjusted for the differences in ratings. However, this is not the case. Prices in France between January 1711 and May 1719 were falling: in January 1711, the price index (based at

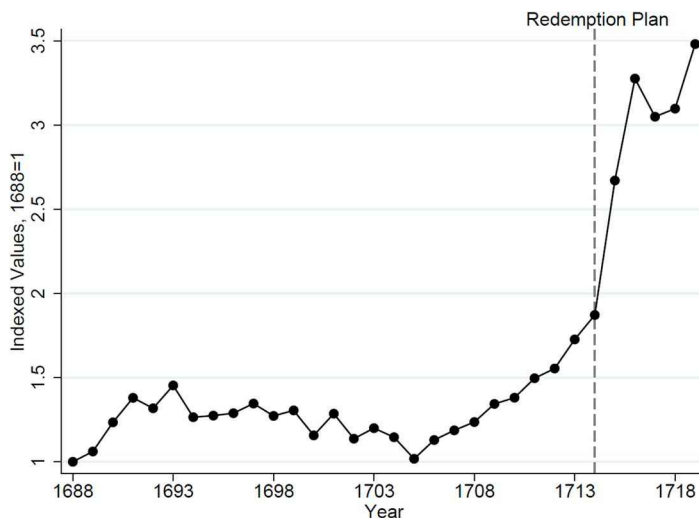


Figure 4. *Evolution of the price level, 1675 to 1719*

for the public to exchange their holdings of playing card money for goods and services. Thus, regardless of whether the value of the IOUs was determined by the quantity of notes outstanding or their backing, the increase in the price level would not have happened without the legal tender restrictions.

4.2 *Supporting evidence from notarized transactions*

The argument we have made thus far implies that as the enforcement of legal tender increased, we should observe playing card money be increasingly used in transactions as it crowds out other media of exchange. In the first period, from 1685 to *circa* 1700 or 1705 with the King's officialization of legal tender status, we should expect the proportion of exchanges in playing card money as a share of all exchanges to be relatively small and stable despite its overissue. The 1705 change to legal tender restrictions limited the extent to which currency competition could limit the effects of the playing cards on the price level—an effect that lasts until 1714 when the redemption plan is announced, at which point there is a *de facto* enforcement of legal tender.

Until recently, the data needed to test this change in the types of media was unavailable. However, thanks to archival work by Emmanuel Bernier (2020), this is no longer the case.³⁹ Bernier used the *greffe des notaires*—a list of all notarized deeds, which he used to track down the more complete documents. From the *greffe*, he created a list of all the transactions in two well-studied parishes in the vicinity of Québec City. From there, he was able to track down the more complete documents in the archives that contained the details of each individual transaction, e.g., amount, type of payment used, age of the parties involved, witnesses used etc. He then consulted all these transactions inventoried for these two parishes to find out

1716–17 = 100) was equal to 123.2. It rose to 168.1 by March 1714 but fell down to 90.6 by April 1718 and up to 106.9 in May 1719 (Hamilton 1936).

³⁹ We are thankful to Mr. Bernier for having generously shared his data with us.

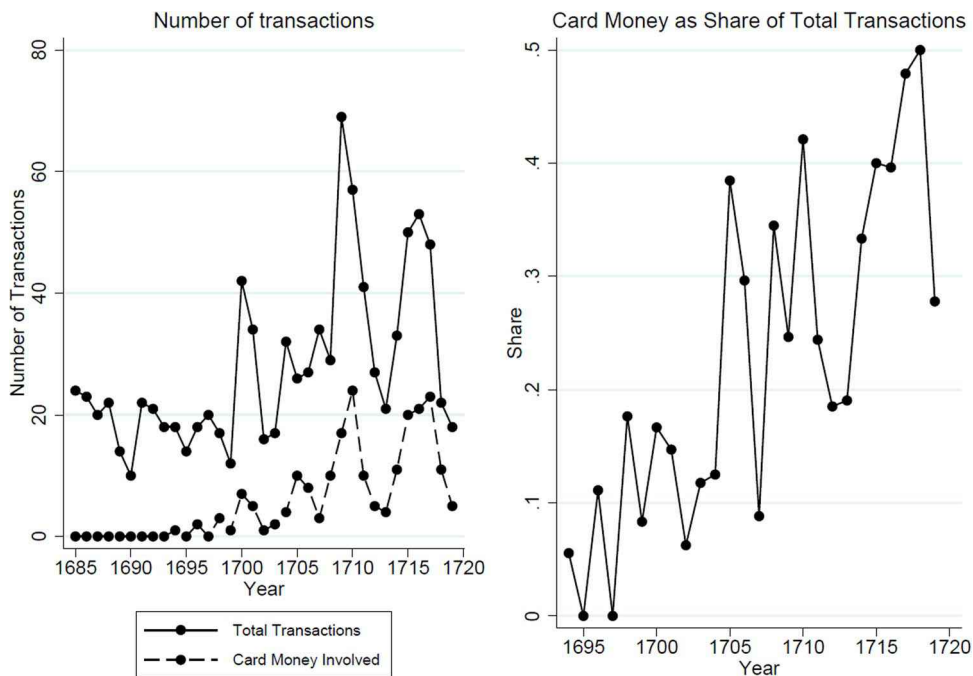


Figure 5. *Share of transactions, 1694 to 1719*

which ones contained mentions of the use of paper money. For the period from 1694 to 1719, he found that 285 transactions used playing card money. Of those, 76% were for receipts and sales (referred to in French as *quittances, échanges* and *ventes*).

However, Bernier did not preserve the information about the initial list of transactions for the parishes—he only reports detailed information about the transactions that include playing card money. The rest was discarded. Thus, we needed to recreate the initial list. To do so, we used the same initial starting point as Bernier (with his help) to identify the initial number of notarized transactions on a year-by-year basis, from which he identified those that used paper money. We used those that spoke directly to receipts and sales and we excluded marriage contracts and probates. We found a total of 795 such transactions.⁴⁰

As can be seen from figure 5, the proportion of all transactions that used paper money remained below 20% until 1705 and was closer to 10%.⁴¹ When the King officially recognized the legal tender of the playing cards in 1705, the proportion jumped to a new and higher plateau. In 1714, when the redemption plan was announced, there was an additional jump that reached the 50%. It's also important to point out that the estimates of the use paper money, while probably correct in terms of movements from year to year in figure 5, are off

⁴⁰ In the online supplementary material, we provide more details about the data collection process and the results. In turn, this allowed us to estimate what proportion of all transactions was represented by playing card money. The result can be seen in figure 5.

⁴¹ It is also worth pointing out that the playing cards never appeared before 1694 in the region even though there were issues in 1685, 1686, 1690, 1691, and 1692. When we assume that the share was 0% in the 1685–1693 period and extend the results from table 3 below, our results are unchanged in terms of statistical significance and the effect of the King's legal tender is slightly larger. See online appendix for a full set of results.

TABLE 3. *Simulation of velocity changes*

Years	Growth of nominal expenditures (average)	Money growth (average)	Velocity growth (average)
Period 1	3.69%	No info	No info
Period 2	8.93%	15.93%	-7.01%
Period 3	14.17%	-7.04%	21.21%

Notes: Period 1 refers to 1685 to circa 1700. Period 2 refers to between 1702 and 1714 for the estimate of money and 1706 to 1714 for the estimate of nominal expenditures. Period 3 refers to 1714 to 1719.

TABLE 4. *Regressions of legal tender tightening on share of transactions involving playing card money*

	(1) OLS	(2) Cochrane–Orcutt
King's legal tender	0.172*** (0.0378)	0.170*** (0.0338)
Redemption plan	0.131*** (0.0443)	0.134*** (0.0399)
Constant	0.0950*** (0.0253)	0.0963*** (0.0225)
Observations	26	25
R-squared	0.701	0.751

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

in terms of their level. Not all transactions specified the method of payment. Thus, while the denominator of our dependent variable, i.e., total transactions is accurate, the numerator is probably biased downwards in terms of its level so that the share of total transactions is also underestimated.

Econometric testing options are limited because of the sample size (less than 30 observations). However, we can run relatively simple statistical tests that consider whether the effects of dummy variables for the King's legal tender and the redemption plan are statistically significant. Because of the relatively limited data, we used a simple ordinary least square regression and a Cochrane–Orcutt regression to correct for serial correlation.⁴² Table 4 reports the results of both regressions. Both the Crown's recognition of the playing card's legal tender status and the redemption plan are statistically significant and yield substantial increases in the share of all transactions that took place in the form of playing card money. The King's recognition of the notes legal tender increased the share of transaction in card money by 17% and the redemption plan added a further 13% to the share.

Alone, the evidence from these simple regressions would not be sufficient. However, in conjunction with the evidence from the previous subsection, the empirical results confirm

⁴² The Cochrane–Orcutt method takes an AR-1 process for the residuals to deal with biased standard errors. However, as can be noticed from the table, the statistical inference is unchanged by the use of this method suggesting that serial correlation was not an issue. Our results were also unaltered when the use of a time trend was added to our results.

our interpretation of the role that legal tender played. As the legal tender was tightened *de jure* between 1705 and 1714, the use of the playing cards in transactions increased while other media receded in importance. The *de facto* enforcement of legal that the redemption plan created generated a further crowding-out of the other media. As a result, the other media began to disappear from circulation. Moreover, [Bernier \(2020\)](#) finds that in transactions where playing cards were used, they were frequently, i.e., roughly 50% of the time, used alongside under media prior to 1705. It's only after 1705 that playing card money is used more exclusively, which is a further sign that the increased enforcement of the legal tender restrictions and the redemption plan crowded out other media of exchange.

5. Conclusion

Both the quantity and fiscal theories of the price level require the existence of sanctions that force the public to use government-issued money. Absent such restrictions, currency competition mitigates the effects that both the overissue of money and deteriorating fiscal conditions can have on the price level. That is, “good” money can drive the “bad” from circulation. Once the government can credibly enforce legal tender restrictions, however, the reverse occurs: “bad” money drives the “good” from circulation, and prices rise as a result. In this paper, we used the playing card money episode from New France to illustrate this phenomenon.

For the first 20 years of its existence, the quantity of playing card money and the colonial government's poor fiscal condition appears to have had little effect on prices in New France. After 1705, however, things changed and the colonial government's reliance on playing card money became inflationary. We have argued that this puzzle can be explained by the government's increased enforcement of the legal tender laws and the adoption of the subsequent redemption plan. The former prevented the public from switching to a superior money, and the latter was essentially a wealth tax. This combination virtually guaranteed inflation. The evidence we have presented, while limited, is consistent with this explanation.

We think that our findings have several important implications for the study of monetary economies—both historical and current. In our view, the most important one is that our analysis points to a critical role for institutions in determining the behavior of macroeconomic variables, a point that [Farley Grubb \(2003, 2006, 2016a,b, 2017, 2019\)](#), among others (see [Brennan & Buchanan 1980](#), for a theoretical exposition), has made regarding the monetary experience in the American colonies. The playing card money episode demonstrates that even when the government's commitment to redeemability lacks credibility, competition between media of exchange may provide an alternative channel through which inflationary pressures can be released, which may shed some light on why the monetary experience across the American colonies varied as it did.

For instance, [Ronald Michener \(2015, 2019\)](#) has questioned whether credible-commitment problems could have had the observed effect on prices in the American colonies given that the proportion of the money supply consisting of paper money at the time was relatively small. Our analysis suggests that in certain circumstances the quantity of money may not matter as far as its effect on prices is concerned. If legal tender laws prevented some American colonists from substituting “bad” money for “good,” then prices may have increased even as the quantity of paper money decreased, as it did in New France. More research on this, and related topics will be necessary to determine whether the factors that we have identified also explain the American experience.

As we see the matter, future research on this, and related topics should focus on two strategies. The first is acquiring more, and better data to paint a richer macroeconomic picture of colonial Canada. Doing so may bolster the points we have endeavored to stress in this paper. The second strategy is for monetary historians to consider how things like legal tender laws, currency competition, and government credibility affect both the demand and supply of money. Doing so will not only provide economic historians with a superior grasp of the past, but may also yield insights to the design of modern-day monetary institutions and the alternatives that may be considered.

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Supplementary material

Supplementary material is available at *European Review of Economic History* online.

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