Two basic objectives of article:

- 1) Show that money remains a "creature of the state" (Lerner 1947), even in era of cryptocurrencies, digital banking, and electronic money.
- 2) Digital banking has reduced costs for bank customers, but it has not changed overall structure of Brazilian money and banking: large conglomerates still dominate, and workers and poor people still have no access to cheap credit.

Definition of "digital banks":

<u>Payment institutions (PIs)</u> and new <u>online</u> (non-incumbent) <u>commercial</u> <u>banks</u>.

PIs in Brazil are comparable to what are called "electronic money institutions" in the European Union.

Definition of "electronic money":

The funds held in "payment accounts" (distinct from traditional checking accounts) managed by payment institutions.

<u>Note</u>: this is truly a new form of money, because it is not issued by entities regarded as banks. Apart from this nuance, funds in payment accounts are from the perspective of bank customers, and from perspective of payments system, identical to checking account deposits.

The reason for widespread adoption of electronic money in Brazil is simple: unlike cryptocurrencies, the former rests on a solid legal framework designed to incorporate it into the payments system. Electronic money is, like bank money, a form of state money, or what Knapp (1924) called "accessory state money".

Quick recap: People use cash (state-issed paper money) and bank deposits as a means of payment because they need to obtain these things to pay off their debts to government and the banks.

Why do people use bank deposits as money? Because laws and regulations transform bank liabilities into something almost equivalent to cash (state money), at least from perspective of nonbank public.

Historically (19th century), what made bank liabilities special (generally accepted as means of payment) was

- 1) their banknotes and deposits were accepted in payments made to the government (this was key: banks without this privilege did exist but didn't last in Brazil).
- 2) legislation encouraged or required banks to accept the notes of other banks when presented by customers for opening accounts and paying debts.

These legislative/institutional features are what distinguish bank debt from the debt of nonbank entities, and created what Knapp (1924) "payment communities" based on the use of bank liabilities as money.

Key feature of this arrangement: central banks don't compete with private banks by managing bank accounts and issuing money directly to nonbank public. People and nonbank firms thus have to go to private banks to obtain credit.

side note: in theory, CBDCs could break this arrangement, which is why they haven't been introduced yet in Brazil.

Difference between 19th century and today is huge strengthening of ties between bank liabilities and those of the state. No one has to wonder anymore if their bank deposits will be accepted as a means of payment, or only accepted at a discount to face value. Final settlement of bank payments is automatic, taking place via reserve accounts which commercial banks maintain at the central bank.

Central bank guarantees final settlement in state money through open market operations and various short- and long-term loan facilities to banks.

Big change in Brazil since 2014: nonbanks, such as payment institutions, now have central bank accounts and settle payments for the customers in exact same way commercial banks do: through the BCB's Reserve Transfer System.

Privileges of Brazil's digital banks (relevant legislation between 2009 and 2016):

- they have "settlement accounts" at central bank through which they operate on interbank lending market (*Selic*), settle balances with other banks, and buy and sell Treasury bonds.
- BCB allows them to offer exclusively online banking services and manage "payment accounts" with no obligation to provide free cash withdrawal.
- they issue credit/debit cards and have access to main wire transfer and payment networks (i.e. TED/DOC, managed by clearing houses owned by traditional banks), permitting them to offer wide range of payment services to clients.
- they have access to central bank loan facilities, including zero-interest intraday loans.

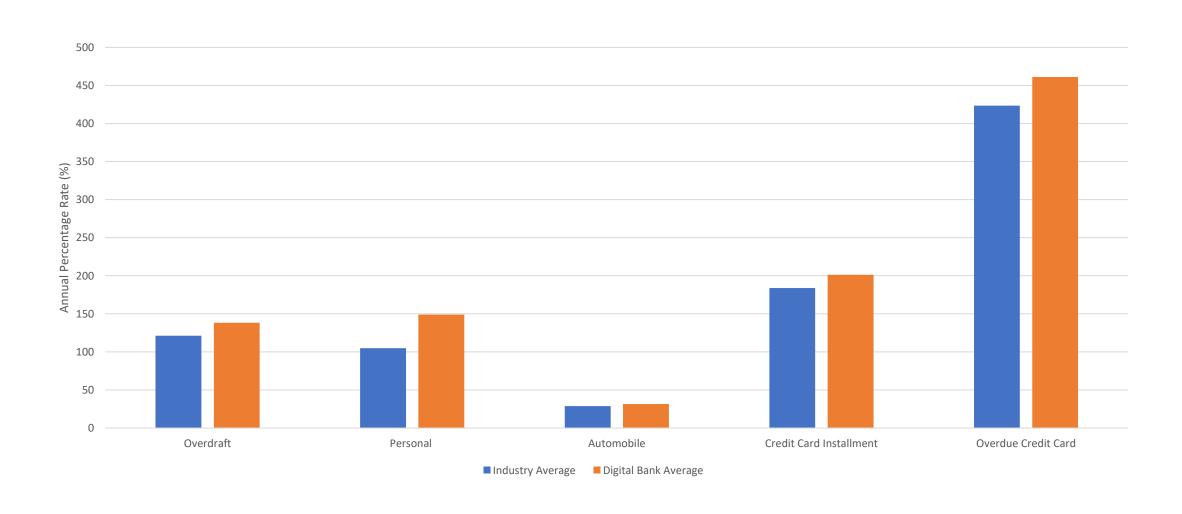
Cryptocurrencies, to the contrary, operate in a legal/regulatory vacuum, hence they are not used as money in Brazil.

Impact of Digital Banking

<u>Digital banks remains small in all categories except client base</u>, and behave no differently from traditional banks when making loans.

Digital banks have <u>not been main factor</u> behind improvements in <u>financial inclusion</u> (trend predates digital banking by well over a decade and tied more closely to economic growth and policies of the Caixa Econômica Federal).

Selected Interest Rates: Digital Banks vs. Industry Average



The Pix System

Most important step in the digitalization of Brazil's payment system: Pix, a free instantaneous payments system operating 24 hours a day and launched in October 2020.

Final settlement within Pix takes place through "instantaneous payment accounts" held by banks and PIs at central bank. All participants have equal access to a central bank lending facility created specifically for this system.

Concluding Remarks

Mainstream economists describe modern banking as an institution that channels scarce resources from savers to borrowers (Mankiw 2011, p. 156), but it is more accurately described, in Brazil and elsewhere, as a public utility that has been outsourced to private interests.

Reforms with regard to digital banking in Brazil have not changed this basic setup.

CBDCs would be a more important step, but it has yet to be introduced in Brazil, and when it is there will be constraints imposed on them to maintain the profitability of private banking.