

# MONETARY ISSUANCE AND THE U.S. MUNICIPAL BUDGET CRISIS

ELY FAIR

Knox College  
efair@knox.edu

## Abstract

*The Covid-19 pandemic once again laid bare the fiscal vulnerability of U.S. municipalities. Economic crises can be countered by expansionary fiscal policy, but only if the governmental unit has the authority to issue legal tender. Whether the challenge is as acute as a wide-spread disease or as slow and grinding as failing water infrastructure, without the ability to place itself in a deficit position, the municipality is unable to mitigate falling financial wealth in the private sector.*

*Despite the potential benefits of local currencies to municipal governments, they remain quite uncommon. This rarity may be attributed to the convoluted legal landscape surrounding non-federal currencies in the United States, as well as, a general lack of tax policy support for local money. The first issue accounts, in some part, for the slow proliferation of municipal currencies; while the second lends insight into their generally short life-spans. Through a close reading of the legal history surrounding non-federal currencies and the application of monetary theory towards local currency design, this paper aims to counter both of these tendencies.*

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*Classification Codes: B52, E42, H71, K19.*

## I. INTRODUCTION

**T**HE Federalist system in the United States is intimately shaped by the failings of the Articles of Confederation. Cut-throat economic competition between states inhibited growth and threatened to destabilize political discourse within the fledgling nation. State monetary sovereignty played a crucial role in these first Confederate ‘border wars’. The signing of the Constitution put an end to this conflict through a consolidation of monetary authority in the hands of the federal government.

This concentration has never been total; the history of the United States is replete with municipal and state currencies operating in coordination and competition with the national money. The contemporary space for these monetary schemes remains constrained, yet open. The financial hardships which befell regional governance structures during the Covid-19 pandemic grant us an opportunity to revisit and revive this history.

This discussion proceeds through the current state of local fiscal governance before turning to a broader explanation of the monetary phenomenon. Framing the problem in this way will lend urgency to the legal analysis of local and state currency issuance. Finally, armed with new theoretic tools and a grounded judicial tradition, some alternative tax-driven local currencies are discussed. This opens new possibilities for an institutional imagination, which centers the power of local monetary systems as a solution to municipal service shortfalls.

## II. A CRISIS OF LOCAL MONETARY GOVERNANCE

Across the United States; states, counties, municipalities, and public services are struggling to make ends meet. Even in the best of times, budgets can be tight, with external shocks exacerbating fiscal fragility. This trend was well evidenced in 2020, when the spread of Covid-19 simultaneously decreased governmental incomes while drastically

increasing expenses. Lacking issuance authority over the U.S. dollar, these jurisdictions were caught attempting to squeeze ever increasing tax volumes out of ever declining economic activity. It is a losing game.

While Covid-19 presented a unique set of problems, state and local fiscal sustainability is not a novel concern of the current moment (Williams, 2020). Municipalities have been particularly prone to budgetary decline and insolvency. This is in part due to their relatively small geographic and economic scale, but can also be attributed to their traditional income structure.

Municipalities provision resources towards the public good by purchasing them with USD in the market. With limited income of their own, these projects must be funded by taxing residents. By far the most common local tax scheme seizes a portion of sales and property value. Unfortunately, both of these categories are pro-cyclical, leaving a city with declining tax income exactly when it should be increasing spending. This leads to a well-documented phenomenon wherein poorer property owners endure higher tax burdens, while receiving lower quality services (Sternlieb and Burchell, 1973). Declining property values require increasing tax rates to maintain municipal programs, this in-turn drives down property values, *ad infinitum*.

Within the current set of institutional arrangements, state and local governments are forced to survive budget shortfalls through some combination of borrowing and service reduction<sup>1</sup>. Neither of these approaches is tenable beyond the short-term; soon the government must increase its income and reverse course in order to maintain solvency.

This issue does not plague central governments, which empower themselves to impose tax liabilities on residents denominated in a money of account, which it controls. This frees the federal government from the need to ‘fund’ its acquisitions. Instead of taxing in order to spend -for a sovereign currency issuer- spending creates money and taxation drains it (Wray, 1998). Just so long as there is demand for the federal money, the government can continue to purchase goods and services by creating currency and deposits.

The government need not rely on the private sector’s innate desire for USD in order to provision itself. As part of the government’s monopoly on legitimate violence it can unilaterally impose debts upon its residents and dictate how those debts are to be paid. A “nonconvertible currency is designated by the government as the only legal means of discharging federal tax liabilities. These tax liabilities are an ongoing, period-by-period debt the private sector owes the government. Accordingly, this tax obligation creates a continuous need for dollars by the private sector” (Mosler, 1998, p. 169).

Though there are some legal constraints (discussed below), states and municipalities are also empowered to issue tax liabilities denominated in a unit of their choosing. This power similarly could be utilized to increase state and municipal capacity to provision goods and services, by creating a demand for locally-issued notes. In the 1800s, smaller than federal currencies, as well as, debates over their appropriate ethical application, flourished in the United States (Feinig, 2022). Yet today, local currencies are rare and tax driven local currencies entirely absent. This presents a puzzle, but before turning to an exploration of the legal and institutional history, which has led to this dearth, a brief discussion of the nature of money is in order.

### III. MONEY IN SOCIETY

Money is not a commodity itself, but is instead a debt relationship. When the federal government buys a good or service from a citizen with a dollar, it indebts itself to that person; it promises to accept the dollar back in exchange for tax payments. The money’s ‘life’ is composed of two moments: one when it is created as a promise for a future payment, and a second when that payment occurs, and the promise is voided.

The capacity to issue promises is not an exclusive power of governments. In non-governmental money issuance, it is trust that is of the greatest concern; if a person can issue their own IOUs then they can print more than they will ever be able to pay back. “While societal trust may help promissory notes circulate more broadly, the trust at the core of the circulation of a promissory note is the financial credibility of the issuer” (Tymoigne, 2017, p. 10). The central problem then isn’t the creation of money, “everyone can create money; the problem is to get it accepted” (Minsky quoted in Bell, 2001, p. 150).

What historically evolves is not a society with a unified, singular money, but a hierarchy of monies, typically denominated in a common unit of account. The hierarchy is composed of monies of differing degrees of acceptability. In a simplified form we can envision this structure proceeding from weakest to strongest as: household IOUs, firm debts, bank money, and finally, federal currency (Bell, 2001). As we move up the hierarchy, the institutional power and regulatory control become more fixed. This aids in circulation as it insures financial credibility. At the peak, of

<sup>1</sup>All states, with the exception of Vermont, have some requirement to maintain balanced budgets (NASBO, 2021).

course, is the financial credibility of the state, which promises to accept its own money in payment for debts and, as noted above, can unilaterally impose these debts via taxes (Mosler and Forstater, 1999).

It is within this hierarchy of money that a municipality may assert itself. Local governments in the United States may impose tax liabilities and may choose the type of money that they will accept as payment. Given the contemporary and historical existence of municipal budget shortfalls, one would expect to find the near ubiquitous presence of municipally issued tax-driven currency. This is not the case.

While not absent from the United States, local currencies remain rare. The sparse adoption of municipal money can be in part explained by a common misunderstanding of the structural power of fiat currency. Additionally, the legal history of non-federal currencies has served to dissuade and confuse the issue. I will address the latter of these constraints before moving on to a discussion of the scope and purpose of actually existing local currencies, which will shed light on the former.

#### IV. CONSTRAINTS TO MUNICIPAL MONEY CREATION

Maintaining control of sovereign currency authority was deemed essential to federal functioning in the United States. Under the Articles of Confederation, states were empowered to issue their own currency and set the terms of exchange between other states. The logistical difficulties arising from a multiplicity of currencies, coupled with state sponsored protectionism<sup>2</sup> led to the inclusion of the Contract Clause within the U.S. Constitution (Epstein, 1984). Article I, Section 10, Clause 1 of the Constitution reads:

“No State shall enter into any Treaty, Alliance, or Confederation; grant Letters of Marque and Reprisal; coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; pass any Bill of Attainder, ex post facto Law, or Law impairing the Obligation of Contracts, or grant any Title of Nobility.”

The majority of case law surrounding this clause deals with issues concerning the impairment of previous contract by new state law and the question of whether other legal interventions (such as the decisions of a municipal receiver) constitute ‘Law’ (Harrell, 2015). For the purposes here, the question of impairment would only arise if the state or municipality passed a law *requiring* an *existing* contract or obligation to be paid in a different currency than it was originally demarked. This issue would likely not apply in the case that the obligation was issued (such as a new tax) in a currency other than USD.

The phrase, “*coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts*”, has been broadly interpreted to prohibit states from issuing both coinage with a lesser prohibition on printing bills of credit. Significantly, this prohibition was limited to states and governments under their authority, with no legal prohibition on private issuance of money until the passage of the *Act of June 8<sup>th</sup>, 1864* (later 18 USC 486).

While it might appear at first glance that a prohibition on emitting bills of credit would limit all possible state and municipal issuance, the courts have not held this to be the case. It has been deemed necessary that states be allowed to issue bonds for the purpose of funding public works. These bonds are certainly bills of credit, which could be understood as ‘payments’ for debt. In order to maintain a state’s right to indebted itself, while prohibiting state issued currency, the courts choose to focus on the meaning of ‘emitting’ and the question of what constitutes circulation *as* money.

In 1821, having determined that there was a general dearth of circulating currency and loanable notes, the State of Missouri empowered itself to issue certificates, which could be used for the purpose of paying staff and granting loans to citizens. The bonds were negotiable and had a range of convenient, standard denominations. While the loans themselves could be repaid in USD, the state also agreed to accept the certificates in exchange for debts owed to the state and for the purchase of state-owned salt.

In *Craig v State of Missouri*<sup>3</sup>, the Supreme Court ruled that the state could not enforce collection of its loans because the issued bonds were illegally emitted bills.

“It seems impossible to doubt the intention of the legislature in passing this act, or to mistake the character of these certificates, or the office they were to perform. The denominations of the bills, from ten dollars to fifty cents, fitted them for the purpose of ordinary circulation; and their reception in

<sup>2</sup>Under the Articles, “states had created extensive networks of public monopolies, franchises, and privileges, as well as wide arrays of local restrictions on trade and commerce” (Epstein, 1984, p. 706).

<sup>3</sup>*Craig v Missouri*, 29 U.S. 410 (1830).

payment of taxes, and debts to the government and to corporations, and of salaries and fees, would give them currency. They were to be put into circulation; that is, emitted, by the government.”

The issue of denomination and intention to circulate are paramount and continue to be. In *Poindexter v Greenhow*<sup>4</sup>, the courts ruled that bonds issued by Virginia did not constitute a Constitutional breach,

“Because, although issued by the Virginia on its credit and made receivable in payment of taxes, and negotiable so as to pass from hand to hand by delivery merely, they were not intended to circulate as money between individuals and between government and individuals for the ordinary purposes of society.”

It is of no account that the certificates, “were by that act reduced in effect into money, and as between the state and its taxpayers, were a legal tender as money.” It is not money issuance, which is unconstitutional, but *emission* of money. The distinction made has its greatest clarity in *Briscoe v Bank of Kentucky*<sup>5</sup>, “To constitute a bill of credit within the Constitution, it must be issued by a state, on the faith of the state, and be designed to circulate as money. It must be a paper which circulates on the credit of the state, and is so received and used in the *ordinary business of life* (emphasis added).”

For the purposes here, this leaves a number of unfortunate questions. First, what about the design of a money makes it *intended* for circulation? The question of denomination is raised in *Craig v State of Missouri*, but we get no further clarity as to the significant features; though the discussion below, concerning private issuance indicates that the use of the term ‘dollars’ or its symbol (\$), as well as, the shape and layout all may contribute to ‘intent’. As a second and contemporaneous issue: do these prohibitions on paper money extend to electronic wallets? In the electronic setting, money would have no clear denomination and would not take the physical form necessary for circulation per se. Though this seems a trivial distinction, the courts insistence that coinage and paper money are distinct phenomenon begs the question.

Lastly, would a state be said to emit if it only empowered others to emit on its behalf? In *Briscoe v Bank of Kentucky*, the court determined that the bill had to be specifically issued by the state in order to come in conflict with the Contract Clause. Similarly, in *Woodruff v Trapnall*<sup>6</sup> it was decided that notes circulated by the Bank of Arkansas did not constitute a breach because, even though the notes could be used in payment for taxes, they were not printed by the state or on its behalf- this despite the fact that Arkansas was the sole trustee of the bank issuing the notes. These cases taken together indicate that a state could likely *allow* the circulation of currency, which had a specific claim on that state’s assets, without violating the Contract Clause.

The organization(s) initiating the bills could be in a wide range of legal arrangements with the state, though again there is some limit. In an attempt to stifle private currency competition, the federal government, beginning with banks in 1863 and extending to all market actors in the following decades, placed a tax on all non-USD ‘notes’ paid out. This included notes rendered by local banks for acceptance by a municipality<sup>7</sup>.

Somewhat strangely, the courts again chose a rather odd delineation. The distinction is drawn between bills exchangeable as ‘money’ vs. bills exchangeable ‘for all other things’. It was determined that, “it was not likely that obligations payable in anything else than money would pass beyond a limited neighborhood”, therefore, “an order by A in favor of B, or bearer, upon C for ‘five dollars in merchandise at retail,’ paid out by A and used as circulation, is not a note” (*Hollister v Mercantile Institution*<sup>8</sup>). Again the distinction is one of form and not content, though clearly the courts did not see it in this way. It is not obvious why a printed debt obligation, which can exchange for all things *except* other printed debt obligations, presents less danger to the hegemony of the US dollar.

The tax on non-federal notes was repealed in 1976, but it remains clear that it is the intent of the legislature to limit broadly issued local currency. As noted by Lewis Solomon, the Comptroller of the Currency in 1976 asserted that the tax repeal would have no real effect as note issuance was already illegal by other statute (Solomon, 1996). It is not certain what statutes are being referred to here, but it is certain that while a state may issue limited exchangeable paper, it must simultaneously make clear that there is no intention of supplanting USD circulation.

Again, form will likely feature significantly in the legal interpretation; ‘notes’ are certainly paper things, which circulate via physical exchange. An electronic currency is not composed of separable denominated notes, which

<sup>4</sup>*Poindexter v Greenhow*, 114 U.S. 270 (1885).

<sup>5</sup>*Briscoe v Bank of Kentucky*, 36 U.S. 257 (1837).

<sup>6</sup>*Woodruff v Trapnall*, 51 U.S. 190 (1850).

<sup>7</sup>See *National Bank v United States*, 101 U.S. 1 (1879) for discussion on the legality of taxing ‘circulation’ as an act. Of particular interest, the courts ruled that a bank, “may execute its obligations, but cannot, against the will of Congress, make them money. The tax is on the notes paid out – that is, made use of as a circulating medium.”

<sup>8</sup>*Hollister v Zion’s Cooperative Mercantile Institution*, 111 U.S. 62 (1884)

circulate, but is a ledger which creates and destroys units. Though an issue only of design, the courts have consistently upheld that design is of paramount concern when determining the legality of alternative currencies.

The previous discussion focused on the powers and constraints of state currency issuance as derived from the Constitution and subsequent law. A parallel set of prohibitions and interpretations exist, which pertain to private citizens. These are rooted in 18 USC 486, the current version of which reads,

“Whoever, except as authorized by law, makes or utters or passes, or attempts to utter or pass, any coins of gold or silver or other metal, or alloys of metals, intended for use as current money, whether in the resemblance of coins of the United States or of foreign countries, or of original design, shall be fined not more than \$5,000 or imprisoned not more than five years, or both (US Code, 2009).”

While 18 USC 486 clearly expands the prohibitions of the Contract Clause to include private individuals, it continues to leave institutional space for non-federal currency issuance. Significantly, the statute refers itself only to minted coinage and sets aside the issue of bills of credit. While there is no justification for this distinction within monetary theory, the separation of coinage and bill issuance remains common in U.S. law.

The statute does introduce a novel legal concept ‘current money’, which requires some clarification. In *State v Quackenbush*<sup>9</sup> the courts ruled that,

“‘Current money’ means money which passes from hand to hand and from person to person and circulates through the community. *Stalworth v. Blum*, 41 Ala. 319. \* \* \* Whatever is intended to, and does actually, circulate as money. *Coffin v. Hill*, 1 Heisk (Tenn.) 385. \* \* \* ‘Current money,’ that which is generally used as a medium of exchange. *Bouvier, Law Dict.* vol. 1, p. 481. (quoted in *Anchorage Continental Dev Co v Van Wormer and Rodrigues, Inc.*<sup>10</sup>.)”

It would seem then that any and all exchange instruments would be considered ‘current’ under this definition as they are intended to pass from one person to another, but this proves not to be the case. The issue becomes one of breadth of acceptability and therefore intention to compete with USD. In *United States v Gellman*<sup>11</sup>, the courts decided a case in which the defendants had produced coins resembling the shape and size (though not the surface printing) of U.S. coins. The opinion states, “A reading of these sections induces the view that they were primarily adopted to prevent the coining of money in competition with the United States; resemblance or similitude is not necessarily an element.” The court went on to conclude that the limited use of these coins in vending machines could not be construed as constituting a ‘medium of exchange’ and therefore not truly money (*United States v Gellman et al.*).

This precedent establishes a somewhat convoluted test. The issue of competition applied to ‘current’ coupled with the question of extent of exchange to ‘money’ means that a currency is either both *current* and *money* or neither. The circumstance under which a money –a medium of exchange- exists, but does not supplant some amount of USD circulation is difficult to imagine.

It is likely for this reason that more recent judicial decisions have jettisoned the question of money-ness. In 2011, Bernard Von NotHaus was convicted of minting current money when he produced solid silver coinage. While the coins issued did have a vague resemblance to U.S. legal tender, the substantive issue of the case was the express desire of the minting organization to have their ‘Liberty Coin’ function as currency and undermine the reliance on USD (Federal Bureau of Investigation, March 11<sup>th</sup>, 2011). Clearly, the Western District of North Carolina held that the Liberty Coins were money despite their limited use in exchange. Here ‘current’ became a question of intent and geographic spread, not rate of circulation or acceptability as in *Quackenbush*.

Taken together the Constitutional prohibition coupled with various legislative acts still leaves significant room for money issuance by states and persons. Central to the legal history presented here has been the question of competition with federal currency. ‘Emission’, ‘notes’, ‘current’, and ‘money’ have all been understood to describe circulation which is extensive -in breadth of acceptability- and intensive -in rate of exchange. This is unfortunate in that any truly successful local currency- no matter the source of issuance- would be vulnerable to censure by the courts. Local money, which succeeds at becoming ‘ordinary’ may also succeed at becoming illegal.

That said, a number of threads can be pulled through these rulings, which indicate a path of least resistance for local money design. First, while it may be allowable for a state or municipality to issue a currency directly, it is

<sup>9</sup>*State v. Quackenbush*, 98 Minn. 515, 108 N.W. 953 (1906).

<sup>10</sup>*Anchorage Centennial Development Co. v Van Wormer & Rodrigues, Inc.*, 443 P.2d 596 (1968)

<sup>11</sup>*United States v Gellman*, 44 F. Supp. 360 (D. Minn. 1942).

probably not worth the risk; a non-public issuer can still make claims on the state, while avoiding the question of prohibited emission. Second, a clear geographic limitation should be set, such as, ‘good within the Kansas City MSA’; this is likely to assuage some of the court’s fears. Third, the bills should be framed as ‘barter’ instruments; this can be done with prohibition on the purchasing of USD with the local bills, a clause such as, ‘exchangeable only for goods and services’ would suffice. Fourth, there should be an avoidance of ‘money like’ physical design to create a visual distancing of the local currency from federal notes. And lastly, if possible the local money should not use a physical medium at all and instead rely on electronic ledger systems.

## V. FROM PURPOSE TO DESIGN

The legal complexities presented above are likely a great contributor to the paucity of local currencies in the United States today. While NotHaus’ prosecution is notable as a rare contemporary case, fear of running afoul of the law no doubt restrains many potential new money founders. We would expect this to be particularly true in the municipal setting, where the governing body has sufficient resources to engage legal opinions, but insufficient budgets to afford a currency experiment terminated by court order. These are naturally cautious institutions.

The prevalence of local currencies is a function of their formulation rate and their length of survival. We have seen that the legal ambiguities likely contribute to low formulation rates, but additionally there is a common implementation flaw, which leads many currencies to have limited penetration and short lifelines. Given the earlier discussion of sovereign currencies, it should come as no surprise that the fatal quality is their lack of acceptance for taxes.

The connection of a currency to taxes is an important one. Tax liabilities are imposed unilaterally by governments and few citizens manage to avoid having claims made against them. A currency with which one can pay taxes has a clear and broadly felt value; it is ‘pegged’ to the tax demand. Yet, few local monies incorporate this feature.

This absence may be attributable to the belief that money is simply a medium of exchange which exists, in some way, ‘outside and before’ the state. Given this understanding of monetary phenomenon, the problems, which contemporary local currencies have been designed to address have no connection to tax liabilities. The thought goes: if the state or municipality wishes to provision itself, such a means already exists through USD taxation powers. There is no reason to tie a local currency to that function.

Instead, the concerns of recent monetary designers have focused around the scarcity of affordable small business credit and rising global commodities competition (with its Buy Local response). Some attention has been brought to the issue of unemployment, but these schemes have been constructed with more resemblance to micro-credit regimes. A clearer evaluation of each of these goals (and the designs that accompany them) will be a useful departure for the discussion of alternative implementations of tax driven local currency policy, to be taken up later.

Before turning to these more contemporary motivations for local money, it is of some interest to note that the purpose and design of non-federal money in the United States has undergone a dramatic shift through time. Truly, we are in a new era of regional currency and the theory and imagination stands in contrast to earlier structures. Take for instance, Missouri’s 1821 *Act to Establish Loan Offices* - a scheme designed to overcome the general absence of circulating currency within the state (McCulloch, 1914). The Act empowered the state to make collateralized loans with its certificates. The certificates were then legally redeemable for taxes, wages owed, salt, ferry rides, etc.

The Missouri currency was by no means unique. Throughout the 1800’s, many states either issued scrip directly, or empowered a bank to issue the certificates on the state’s behalf. The first was deemed unconstitutional, but the second was general upheld before being taxed out of existence by the Federal Government. The function of these currencies was first, to inject a medium of exchange, thus enabling regularized financial transactions. Second, to provide loanable currency to local businesses- though this was often seen as the means by which to initiate circulation and not a *raison d’etre*. And, thirdly, to provide payroll funds to the state; this last function being the most uncommon.

Though this second function has some similarity to contemporary loanable currency schemes, both the purpose and design were aimed at different goals. Most contemporary loan currencies do not operate via a traditional bank underwriting structure, but instead facilitate direct, decentralized advances (often as accounts payable loans). In contrast, the state money of Missouri, or the bank money of Arkansas, were intended to provide collateralized, interest-earning loans to individuals and businesses. The loan was not initiated between two market actors as an extended barter agreement, but was created by a bank (or loan office) in currency intended to provide circulating capital. This design was by no means uncommon and by 1861 there were an estimated 1,584 bank branches operating in the United States with state charter empowering the issue of tender (Weber, 2006).

While many of these earlier local currencies were exchangeable for taxes, it is not clear that there was an explicit understanding of the means by which a tax can 'drive' a currency through the unilateral imposition of liabilities by the state. Instead, it seems that the lack of available USD was seen as an impediment on the execution of tax payment and that there was a broader intent to create a current note, of which tax acceptance was seen as a natural part (McCulloch, 1914). These were in many respects subordinated sovereign currencies in a climate in which the available national currency was simply too rare to function appropriately.

These earlier forms stand in stark contrast to the more recent currency revival. A good deal of contemporary design is directed at creating systems of local bi-lateral credit creation. These take two broad approaches: one, optimized by the Berkshire Farm Preserve Notes, is a bond issuance scheme. The notes are exchanged for USD by a group representing local farmers during the off-season, a time of tight revenue flows for farms. The farmers then guarantee the acceptance of this scrip in exchange for produce during the growing season. The bonds are purchased at a discount on their face value so that they effectively pay a coupon at the time of execution.<sup>12</sup> The farmer receives a USD advance on their accounts deliverable with a haircut taken out of profits (Solomon, 1996).

A second approach aims at providing more diverse local lending liquidity. Some systems administer the lending through a central administrator, with arms-length investors; while others facilitate direct transfer. The duration and terms of the loans also vary significantly. By way of example, in the Local Economic Trading System, merchants work through a centralized accounts payable/accounts receivable book for exchange with each other. The multi-party ledger enables much larger debt/credit flows within the community (Witt, 2020). This is a near exact modern replication of ledger systems found in the Italian nation-states.

Another common motivation for contemporary alternative currency creation is the insulation of the regional economy from competition. With the geographic spread of trade has come the geographic spread of monetary circulation. For a prosperous region, this may prove of no account, but many areas in the United States have found themselves to be net goods importers; and currency, along with employment, has become increasingly hard to come by. The very same valuation problems, which have driven trade imbalances within the Euro zone, present themselves intra-nationally.

A local currency aims to counter this trend by establishing a fixed geographic circulation, driving consumer decisions towards local establishments. While there is a potential initial welfare loss with the purchase, the money thus employed much more effectively circulates within the community, providing additional stimulus. Though we could expect these numbers to vary significantly by location, in Grand Rapids, MI estimates indicate that 73 of every 100 dollars spent at a local store is paid to another member of the community. This is in contrast with 43 of every 100 dollars spent at a non-local retailer (Robinson, 2010). If this pattern is carried to its termination then the local 100 dollars will yield 370 dollars of income versus the chain store dollars generating only 175 dollars; not an insubstantial demand difference.<sup>13</sup>

While the implementation designs vary significantly, Buy Local is a common thread among alt-currencies. Though this is a laudable desire, the lack of demand backing has led many to fizzle and fall. The more successful attempts tend to incorporate some additional pecuniary motivation -Berk-shares are purchasable at a 95 cents on the dollar, while Ithaca HOURS are periodically granted to active members. The institutional weight of the US dollar is great; its ease of use makes the adoption of local currencies sluggish at best. Adopters need a strong incentive to deal with the annoyance that comes with a dual-currency economy.

## VI. DESIGNING RESILIENT CURRENCIES

The above discussion was intended to shed light on the current state of alternative currencies. I now wish to turn to a more theoretical discussion of optimal currency design- optimal maybe a misleading designation as it implies a clear hierarchy of designs. Money, on the other hand, is a complex social phenomenon and it can aid or inhibit a wide range of goals; any implementation will have to prioritize some outcomes at the expense of others.

Within our contemporary context, a local currency could serve to: expand the supply of cheap credit, insulate against competition, shift the allocation of resources, increase the employment of resources, or increase real wages. These first two were introduced in the discussion of existing currency schemes. The latter three are divergent, though related goals; each calling for its own design features. They will be discussed below, but first a note on money demand and taxes.

<sup>12</sup>Though, of course, this is not a true interest rate in that the terms only supply goods in kind from the farmer at their stated price.

<sup>13</sup>This was calculated using a Keynesian Expenditure Multiplier, treating the 30 dollar gap as import expenditure.

The monetary theory introduced earlier in this work makes it clear that acceptance for taxes should be a central feature of the currency rollout. Yet this may be too simplified. Recall that it is not ‘taxes’, which create currency demand, but a specific feature of taxes, namely their presence as a widely distributed liability. This suggests two things: one, that not all taxes will lend equivalent currency support as they can have widely divergent distributions, and two, that the liability doesn’t have to be taxes per se.

Counties and municipalities within the United States tend to rely on property tax and sales tax to fund themselves; with a number of fees for service programs providing additional income. These may include business licensing, auto licensing, and public transportation fees, though the potential range is broad. Other taxes are less common, but still existent. A number of cities in Colorado have Occupational Privilege Taxes, which charge employers and employees per month of active labor contract (Dewitt, 2018). Seattle and Chicago had similar employment taxes and California has recently debated their use statewide (Walczak, 2020; Dardick, 2011). Though less common now, head taxes (e.g. Poll taxes) were widespread before the passage of the 24<sup>th</sup> Amendment and maintain some legal application.

Allowing any given one or combination of these taxes to be paid in a local currency would have a different effect on the function of that currency. The issue noted above is the potential spread and intensity of the tax burden, i.e. how widely and deeply is the tax felt? Additionally, there is the question of what kind of market actor has the liability. Is it homeowners that owe this money, or is it businesses? This will doubtless have an effect on the question of circulation. Lastly, is this a new tax payable *only* in the alternative currency, or is it simply that one *may* pay existing taxes in the new currency?

This last question is tied to a different, but significant concern: is the currency intended to exchange USD for local money, thus limiting the use of USD, or is the intention to inject additional notes, thus increasing the money supply? While loan schemes such as the discount bills of credit and LETS systems described above can increase the money supply regardless of the tax policy, if the desire is to create more exchange then a separate local currency tax has distinct advantages.

A *new* tax liability, in a *new* currency requires all tax payers to acquire the currency, no matter the cost. This enables the municipality to guarantee a certain degree of engagement with the currency distribution system. How easy it is to acquire the alternative money, and how demanding the tax liability, will together establish its market exchange rate with USD. A clear, policy controllable level of currency drain makes this system simpler and less risky to manage when compared with some fixed-exchange rate regimes. The more detailed case example given below illuminates this point.

The last issue is whether the government uses a tax or some other liability to drive the currency. Our local governments are not unitary, but are instead composed of a set of overlapping governance institutions. A number of these institutions are legally empowered to issue tax-like liabilities and could be utilized to create demand for a currency. Transportation authorities, school districts, universities, and chambers of commerce all have the sufficiently stable member engagement necessary for imposing liabilities.

Bus tokens can already be understood in this way, they are a pay-at-service fee similar to sales tax or automobile registration. Though it uses the carrot more than the stick, a local currency could peg itself to the bus fare as a means of generating demand. By contrast, a university student fee or graduation requirement tied to an alternative money, would initiate a similar level of compulsion as that which results from a more traditional state tax. The motivating functions of the currency, as well as pragmatism, will determine which liability is most advantageous for the specific scheme.

In designing alternative money, a municipality might desire to shift the allocation of some resource, either towards itself or towards a party of its choosing. If the resource is near full utilization, it can still be purchased by simply outbidding the existing buyer. A city might retain a building contractor with the promise of the standard USD bid plus some premium in local currency. Similarly, it might ensure sufficient housing for the elderly through the issuance of regional housing vouchers redeemable for taxes.

If the scheme is tax driven, but no additional tax liability is imposed then the lion chases its own tail. In essence the municipality is selling a currency to the market at less than par with the Dollar, but purchasing it back, one to one. Of course, the jurisdiction could double its nominal contract bid- denominated in local currency- when compared with USD, but the ease of acquiring this currency will ensure that it all returns to the city to relinquish taxes.<sup>14</sup> This only further undercuts the municipality’s ability to issue competitive bids.

Yet, resources are almost never fully utilized and so typically the government is not outbidding a private market

<sup>14</sup>This ‘complete return’ assumption is not strictly true. All currencies will have some non-refunded tokens due to loss, destruction, or saving. This ‘floating currency’ could represent some gain for the municipality.



buyer, but supplying demand that is otherwise lacking, increasing factor employment and pushing the economy towards its full productive capacity. In the example above, this allows that a city need not be outbid, but can bid on par and avoid putting itself on the wrong end of a Gresham's Dynamic. Optimally, if the municipality is bidding on otherwise unutilized resources then taxes become not the only source of demand for the currency as the increasing economic activity *ceteris paribus* calls for an expansion of the money supply.

Lastly, local money can serve to drive up the real wage. This is one of the avowed purposes of Ithaca HOURS. By pegging an HOUR- hour of labor- to \$10, the system hopes to pull up on the USD wages which fall under this mark (Ithaca Hours, 2020). If work is available in HOURS and the \$10 exchange rate is honored for goods and services, then the program could be expected to have this effect -the issue is, of course, how to maintain the USD to HOURS peg.

Other systems might use the local currency for wage bonuses. For instance, workers in non-profits could be eligible for 5 municipal bills per hour to be added to their USD wage and paid by the city. In such a scheme, any demand level for local notes will increase the targeted real wage just so long as the bonus is not utilized by employers as a means to cut USD remuneration.

## VII. ENVISIONING TAX DRIVEN MONEY

It will be useful now to explore a concrete tax driven local currency scheme. This will serve to ground the discussion surrounding the strengths and weaknesses of various approaches, which has up until this point been rather abstract. The following example is not meant as a definitive proposal, but is instead exemplary of legally available policies, which are not currently being exploited by local governments.

### i. Creating Non-profit Labor Supply

The neoliberal era of U.S. politics has seen a decline in welfare services provided. Community safety-net programs have been driven into the private sector where they rely upon volunteer labor and donations to support people in meeting basic needs. This places non-profits in a precarious position in which they are competing against each other for a limited pool of volunteer labor, which is itself unpredictable.

#### i.1 Proposal:

The municipality will create a non-profit labor notes system. The currency will be independently administered and implemented as a local crypto-currency utilizing a Simple Ledger Protocol. A tax will be placed on all working age adults living within city limits requiring them to pay 5 non-profit notes per year. Non-profits and the city will be allocated notes. A person may exchange an hour of labor for a note. Additionally, notes may be purchased from the city at the cost of \$20 per note.

#### i.2 Initial Impacts:

The Non-profit labor notes system would increase the labor supplied to the local non-profit sector and to low-skilled municipal works (such as park cleaning). This would enable an expansion of the services provided to the community. Since these services are generally targeted at poorer members of the municipality, this is a net transfer of resources towards marginalized people.

The program would expand the direct participation of residents with their neighbors, strengthening community ties and building a sense of social responsibility and cohesion. Currently, approximately 25% of adults volunteer during a given year (BLS, 2015). Mounting evidence suggests that volunteer work provides both social and health benefits, resulting in increased civic engagement, lower depression rates, and longer lives (Grimm et al, 2007). This program is not a 'volunteer' program, but the labor will be identical to that currently performed by volunteers and we can expect many of the benefits to carry through.

The Simple Ledger Protocol utilized for the system enables the easy transfer of notes from one virtual wallet to another. This facilitates decentralized exchange and would allow citizens to purchase their required notes from other residents instead of working for them. The municipality's labor tax drains labor from within the city. The unemployed and under-employed can absorb this labor demand and guarantee themselves remuneration through private exchange of the city's notes. Since the municipality stands ready to sell notes at 20 USD, the market price

will float under this rate. Thus the program will result in the transfer of USD from citizens fully employed at hourly rates greater than \$20, towards those who are unable to currently access work at that rate.

### **i.3 Additional Considerations:**

Because the project exists as an additional tax and the municipality has set a sale price for the currency, it should be capable of funding itself and possibly generating additional USD. So, while the municipality increases the local labor utilization rate, it does so at limited financial cost.

The measure of the program's social benefit will depend on what is accomplished with the additional labor. If the process by which labor is allocated is democratic then the project will strengthen the community's voice and result in an environment increasingly shaped by desire, not ability to pay.

While the currency notes are likely to transfer between individuals for the purpose of tax payment, they are not likely to gain traction for commodity exchange and will therefore do little to insulate the community's economy. The tax liability is imposed on individuals and not businesses and so there is little reason to accept the currency in payment at the sales counter. This limitation is made all the more certain by the nature of the exchange rate. While the municipality sets a sale price, they do not stand ready to purchase the currency, so the labor notes will not have a stable USD price, but will instead float under the city's sale price. This complicates its use for commodity sales as the retailer takes on exchange rate risk. Countering this tendency would require either very measured issuance or a formal buy price. The first is difficult to administer, while the second requires the city to take a position, which may result in an outflow of USD from its coffers.

While the lack of broad acceptability may be viewed as a limitation, the proposal still has significant promise as a means towards wealth redistribution and allocation of idle labor resources towards community good. In a nation plagued by inequality and unemployment, these benefits should not be dismissed lightly.

## **VIII. A NOTE ON ALTERNATIVE CURRENCY PEGS**

Any local currency will have hard decisions to make concerning the structure of exchange between the new money and USD. Because of the dominance of the Dollar in the hierarchy of money, any complementary currency's value will be defined almost entirely in terms of USD. Linking the new bills to taxes will help in stabilizing demand, but will only under extraordinary circumstances allow a separation of their value from the dominant currency.<sup>15</sup>

In the policy discussed above, the currency issuer chose to only peg a sell-price for the new money, but does not guarantee any buy-price. The government does not rely on the sale of the labor-notes in order to generate revenue and over-issuing the currency will result in a fall in the secondary market price, but will have no direct effect on the city's Dollar financing. This flexibility does come at a cost as it limits the degree of exchange-ability for commodities.

Often, local currencies are pegged to trade on par with the dominant currency. This allows for ease of use in daily exchange, but presents some difficulties for the management of a tax driven system. When the municipality agrees to accept the local notes on par with USD for the purpose of tax payment, it is forced to defend the exchange rate. This is parallel to a national currency pegging to a foreign money, except in this case the 'foreign money' is the national fiat currency, which the municipality must have in order to make almost all of its purchases.

There is no exchange risk if the local money is both bought and sold at the par rate. Unfortunately, many local currency regimes rely upon an exchange rate spread in order to promote the use of the alternative money. These discount scrip regimes allow a person to purchase the money at below par and then utilize it at par. Sometimes these systems require a delay between the purchase and use (such as farm shares) or set some kind of structural limits (such as a narrow range of redeemable goods/locations).

Exchange rate risk can be present even if there is no explicit buy-price. If a jurisdiction is using the local currency in order to purchase commodities at above their market price then inflationary pressure will follow. In the case of an attempted real wage increase, the worker only benefits if they can receive any exchange rate, which leaves them with more USD than their initial wage.

Competitive pressures will set the exact exchange, but as the gap between the private market rate and the city's published rate spreads then an increasing percentage of taxes will be paid in the new currency. The bottom line is,

<sup>15</sup>This could be affected if the municipality is only willing to accept the local money for tax payment and there is no formal purchase price for the currency. In this circumstance, the local bills would float untethered against USD, which could create serious pricing instability in the local currency unless carefully administered.

if the municipal notes are easier to access than USD then the municipality will receive them instead of USD. The locality will spend down its USD reserves as it liquidates the notes, which it prints.

Accepting a local currency on par for taxes has clear benefits as it enables a much broader penetration of the scrip in everyday exchange. Yet if it is going to be tenable then great care must be taken to not over-employ the notes. Wage gains and other benefits must be sufficiently marginal so as to not to create a clear value differential in the market. These constraints limit the scope and application of the local currency system. Put another way, "exchange rate risk is the social cost of policy autonomy, and surrendering policy autonomy is the social cost of diminishing exchange rate risk" (Levey, 2018).

## IX. CONCLUSION

States, municipalities, and public services across the United States faced Covid-19 related budget shortfalls. This crisis offers an opportunity; necessity is the mother of invention. Complementary tax driven currencies could do much to ease the current budget hardships. Yet, there is a strong institutional inertia, which must be overcome for this to be a possibility. While many local currency experiments have been launched within the last 30 years, this author knows of none which utilize the tax powers of the state to stabilize their value.

I believe the explanation for this absence is twofold: common narratives concerning the nature of money have no role for the state and the legal history of local currencies in the United States is sufficiently convoluted as to perpetuate a belief in the limited legal application of alternative money schemes. Through an investigation of the nature of money and its legal history, this work hopes to contribute to an overcoming of these hurdles.

There is institutional space for a great range of local tax driven money systems. The current state of alternative currencies clearly demonstrates the need for an opening in imagination. The goals of our society can be well served by a directed expansion of our resource utilization and an extension of our local democratic governance. If appropriately designed, alternative currency systems can be a great boon to both of these goals.

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