

ROUNDTABLE: PUBLIC MONEY

R. Hockett, *The Inclusive Value Ledger: A Public Platform for Digital Dollars, Digital Payments, and Digital Public Banking*

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Robert Hockett, Cornell Law School

1. Introduction: Two Takes on 'Public Money,' One Institutional Upshot

One fruitful way of thinking about money is simply as 'that which pays' in a payments system or 'that which counts' in a system of transaction-associated value accounting. A 'public' money might then be plausibly characterized as 'that which pays' and 'that which counts,' respectively, in a *publicly provided* payments and associated accounting system. That would be a system that even 'private-sector' parties have come jointly to recognize as an ineluctably 'public good,' and hence undertaken jointly to provide to themselves and indeed all who are constituents of their 'public' or welcome guests of their *republic*.

Another, complementary way to think about money is as a liability issued by some entity whose *obligations* 'pay' and 'count,' in the senses just described, in a payments and associated accounting system maintained by that entity. A 'public' money, then, will be describable as a species of liability issued by some *public* entity – for example, a public fiscal or monetary authority, or 'public *bank*' – that administers a payment and associated accounting system.

If we now draw together the observations just made in the previous two paragraphs, something quite interesting emerges where the relations among (a) public money, (b) a publicly administered payments system, and (c) a full public balance sheet are concerned. It is that (a) the public money is that which shifts between and among even private sector balance sheets, while (b) those private-sector balance sheets in turn jointly constitute part of the full *public* payment ledger, which (c) is itself in turn simply one piece of the liability side of the full *public balance sheet*.

In other words, even as deployed in private-sector transactions, money to be thoroughly understood and characterized will have to be understood and characterized in relation to its role on a public ledger, which itself will be understood in relation to its role on a full public balance sheet.

Now as it happens, many interesting implications emerge from these observations if one elaborates a full account – indeed, an accounting – of the full ‘public balance sheet’. Hence, I’ll be saying more on this bigger subject in due course. But a fair bit that’s useful can be said even now about just that portion which I am calling the public ledger. For our nation is faced with a ‘moment’ right now in which digitally upgrading the national payments infrastructure, which just *is* that ledger, is not only technically feasible, as it has been for some time now, but also is *urgently needed* and *politically viable* at long last as well. And since many state and now federal legislators are considering a proposal I’ve pushed for some time, while the current pandemic gives reason to *hasten* adoption and implementation, this public money and payment platform proposal seems worth elaborating here, in this timely forum on public money, in its own right.

I’ll proceed, then, as follows. First, I provide a bit more on the present moment to which I have just referred. Second, I elaborate on the public payments architecture to which I’ve

alluded – what I am calling ‘the Inclusive Value Ledger.’ I’ll then describe distinct state, local, and federal renditions of this ledger – including both Treasury and Fed flavors of the same. After that, I’ll conclude and look forward – both to next steps on the ground and to the bigger reform that I’ve referenced.

2. The Special Relevance of the Present Moment

Even last year, well before the present pandemic, Facebook’s announced Libra project had pushed central banks to accelerate already-ongoing efforts to develop new central bank digital currencies (CBDCs). Sweden and China, for example, were nearing test-launches of their own proto-CBDCs even before June of 2019, when Facebook announced its proposal. Other nations weren’t far behind, thanks to CBDCs’ promise of both more efficient transacting and ready means of publicly banking their unbanked and under-banked citizens, households, and small businesses.

The sharp drop in economic activity brought on by Covid in early March of this year rendered CBCD development all the more urgent. The productive and social distancing measures necessitated by the pandemic were and remain antithetical to productive activity in sectors outside of the so-called ‘knowledge economy.’ That imperiled, and still imperils, the incomes of those who can’t labor remotely as well. State, local, and national economies everywhere accordingly confronted and still confront both supply- and demand-side shocks simultaneously.

All of this has necessitated the rapid development of demand and supply side *relief* measures. The production of both medical and so-called ‘personal protective equipment’ (‘PPE’) has had to be sped-up quickly. Means of shoring-up individual, family, and business budgets as well, be it through UBI

payments, government lending, or both, has had to be (and must still be) further optimized. Relatedly, means of storing and transferring value – of making and receiving payments – has had to be, and again still must be, sped up as well.

Publicly issued digital currencies and their payment platforms are well adapted both to the speeding-up task just noted and to more longstanding system-improvement imperatives, including those posed by the ongoing scandals of commercial and financial exclusion, unauthorized financial data extraction and exploitation, slow and uncertain settlement of transactions, and leaky monetary policy that plague American monetary arrangements. But if a currency is, as suggested above, just 'that which pays' in a payments system, then to design a universally inclusive digital currency will in the first instance be to design a universally inclusive digital payments platform. And, thanks to the role played by 'digital wallets' in constituting modern digital payments platforms, it will also effectively be to supply a *banking and financial* architecture by supplying a *commercial* architecture.

Fortunately a growing number of US cities and states, as well as members of Congress, seem now to 'get' all of this, and hence to be waking to the need of providing, as quickly as possible, both a publicly issued digital dollar and an associated publicly administered digital payments platform. Over the past several years, and especially over the past several months, public officials nationwide have begun considering this author's aforementioned Inclusive Value Ledger (IVL) Plan, which has colloquially come to be known as the 'Public Venmo' plan ever since two visionary New York state legislators – Assemblyman Ron Kim and State Senator Julia Salazar – proposed this author's draft bill last autumn. And because the IVL can be instituted by municipal, state, or national authorities, and at the national level can be administered by either the Fed or the Treasury, some version of it now would seem poised to begin operating soon.

In light of the Covid-related and longer-standing needs noted above, states and their subdivisions will do well to move forward with the IVL plan notwithstanding how quickly or otherwise Congress moves on the matter. For the same reasons, Congress itself, once it decides to act, will do well to begin with the Treasury version of IVL, then gradually migrate the system over to the Fed and our full monetary-policy apparatus with careful deliberation and planning. I'll elaborate further upon these reasons while schematizing the IVL Plan first in its basic structure, then in its local and state, and finally in its Treasury and Fed renditions.

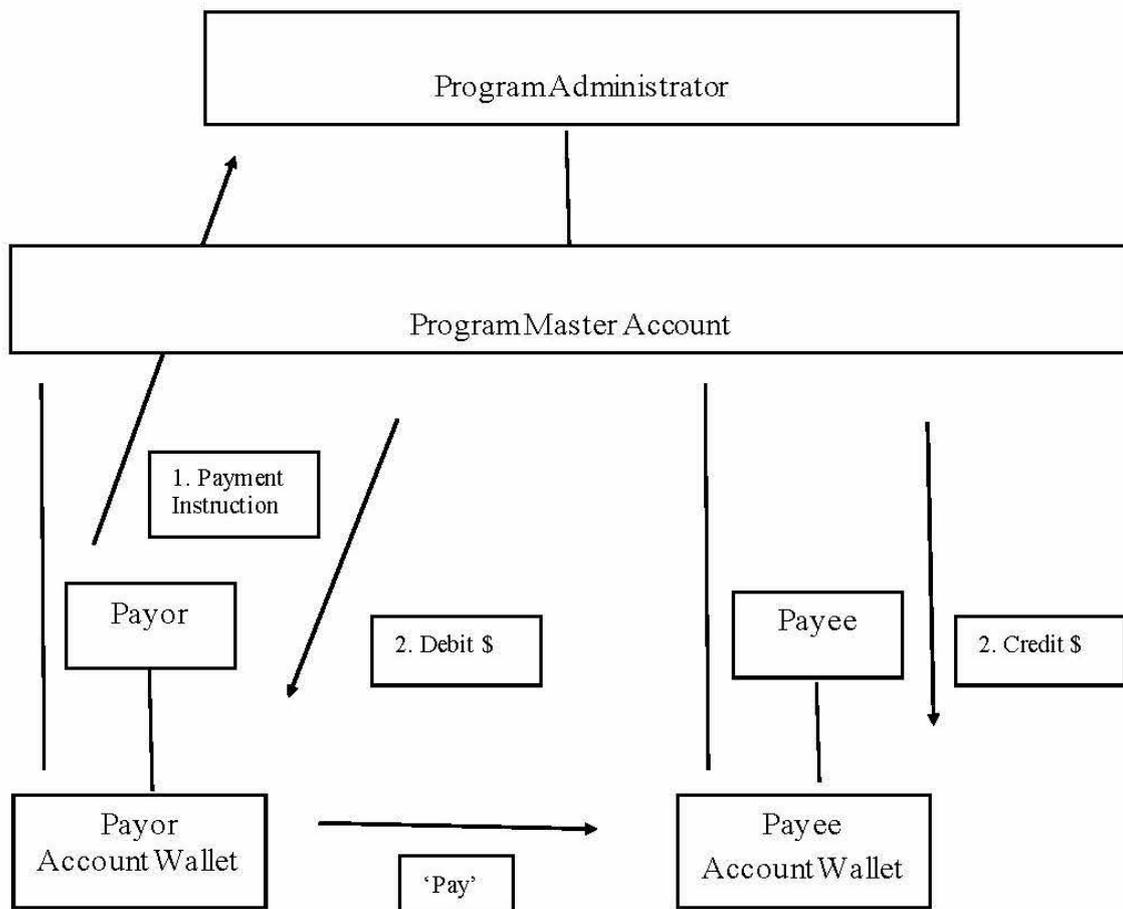
3. The IVL Architecture

It will be helpful to begin by first sketching the basic structure that all IVL systems share. We can think of this as the plan's 'chassis,' onto which any number of distinct automotive 'bodies' selected by any government, at any 'level' of government, can be installed.

3.1. *Basic Architecture*

The IVL's architecture and implementation are strikingly simple, requiring only two functionally distinct components. First, every citizen, legal resident, and business-owner or -operator is given a digital wallet accessible by smartphone or other 'smart' device. Second, each such wallet is afforded (a) 'vertical' connectivity to a public sector 'master account,' and (b) 'horizontal' (peer-to-peer, or 'P2P') connectivity to all other wallets. Wallet holders are thereby enabled to pay taxes, licensing fees, and other remittances, as well as to receive tax refunds, program moneys, and other disbursements, along the IVL's vertical dimension. They are able to make real-time payments, meanwhile, to one another along the IVL's horizontal dimension. Diagrammatically,

Figure 1: IVL Architecture



Non-arrowed line-segments here represent institutional linkages, while arrowed line-segments represent payment instructions and associated value flows. A payment occurs when a Payor instructs the public sector Master Account Administrator, via a chip card, strip card, or smart device app (Payment Step 1), to debit her own wallet account in the Master Account and correspondingly credit the Payee's wallet account in the Master Account (Payment Step 2). Along the vertical dimension of IVL, counterparties in any transaction comprise one public and one private-sector party. Along the 'horizontal' dimension, wallet transactions occur among private-sector parties.

3.2. Virtues of the IVL Architecture

The reasons to put an IVL in place are many. The short-term reason is that the IVL enables us to meet urgent pandemic-associated needs to get stimulus money to hard-hit American businesses and individuals in non-paper form as quickly as possible. The longer-term reasons are more varied.

3.2.1. Commercial & Financial Inclusion

First, in any commercial society or exchange economy like our own, a payment system must be considered an essential public utility – a functionality that justice requires we make freely available to all who legitimately take part in our collective commercial life. We don't pay to use sidewalks, nor do we or small businesses pay to use nickels or dollar bills. Neither, then, should we have to pay to use digital payment media as these now increasingly replace paper currencies and metal coins. Call this the justice, inclusion, or public utility rationale for IVL.

3.2.2. Growth & Efficiency

Second, we measure the size and growth of our economy by reference to transaction volume. It follows that a more seamless and efficient payments system, by enabling more rapid transacting and hence larger transaction volumes within any time interval – what economists call greater 'money velocity' – means greater growth and a larger economy over time, all else being equal. So, of course, does greater inclusion itself. Call this the growth or efficiency reason for IVL.

3.2.3. Leak-Proof Monetary Policy

Third, an IVL system, if administered by a nation's fiscal or monetary authority – in the US, that's either Treasury or the Fed – will enable much faster fiscal stimulus or monetary policy transmission than does our present system of private-

sector banking institutions, which we can only hope will transmit federal stimulus money to consumers in the form of cheap credit. Instead we will be able to drop digital 'helicopter money' directly into our digital wallets.

In more ordinary times, the administering agency even can offer interest on savings in wallets, enabling us to move such rates up or down when we must slow down or speed up spending activity, diminishing or augmenting transaction volumes. We will even be able to micro-target specific sectors of our economies where spending appears to be either overheating or dangerously cooling.

3.2.4. Data Privacy

Finally, going digital offers financial data privacy benefits too. Unlike private sector banks and many online payment service firms, public-sector administrators of the IVL do not do what they do for profit – there are no non-criminal 'carrots' to entice 'data harvest' and sale. Such administrators also are subject to 4th Amendment constraints as state actors, unlike, say, Wells Fargo or Facebook – there is a 'stick.'

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The case for an IVL platform, then, is strong. But where best to administer the IVL as among cities, states, or our Fed or Treasury?

4. State and Municipal IVL Plans

As noted above, states or their subdivisions inclined to act quickly in capitalizing on IVL technology need not await federal action. And indeed they should not. For our states and our cities have become our nation's 'first responders' in addressing the national Covid pandemic – and unlike our nation, they cannot issue their own currencies.

Even apart from pandemic response, many American states and their subdivisions regularly experience chronic shortages of dollar-flow into their jurisdictional domains – a fact that inspires occasional calls to adopt ‘community’ or ‘complementary’ currencies. With an IVL platform, the dollar itself becomes a community currency, for local spending by local residents even of income received from elsewhere grows easier.

Structurally speaking, a city or state IVL plan looks just like the ‘chassis’ schematized in *Figure 1*, with the state or municipality serving as account administrator and maintaining the master account.

The state or municipality receives payments – taxes, fines, fees, etc. – over the system. It disburses its own payments – refunds, program benefits, care work, etc. – over the same. And all participants, be they businesses or individuals, are then able to make people-to-people payments among themselves too.

5. Treasury and Fed IVL Plans

As noted above, the IVL can be adopted at the federal level as well as the state or local level. The federal rendition for its part is adaptable to both Fed and Treasury use. Let us consider these prospects in turn.

5.1. *The ‘TreasuryDirect’ / ‘Digital Greenback’ IVL Plan*

A Treasury-administered IVL would simply add two functionalities to Treasury’s already existing network of digital ‘TreasuryDirect’ accounts (TDAs) – a long-standing but surprisingly little-known facility through which any citizen or legal resident of the United States can already open, at any time, a digital account through which to transact with

Treasury in its own securities. To convert this existing platform into an IVL digital payment platform, we need take only two simple measures.

First, we add horizontal P2P connectivity between TDA digital wallets to the already existing vertical connectivity between Treasury itself and all TDAs, in the senses elaborated above. And, second, we either permit ordinary dollars to move into and out of TDA wallets or confer legal tender status on the 'Zero-Percent Certificates of Indebtedness' that Treasury already issues through TDAs. We'll call them 'Treasury Dollars,' or 'Digital Greenbacks' in honor of the national dollar that Treasury effectively issued from the mid-1860s until the Fed's establishment fifty years later.

Again, all would be as it was in *Figure 1*, save that the Treasury would administer the system. As with the state and municipal versions, in any vertical transaction, participants would be able to pay taxes, fines, fees and the like directly to the Treasury, and will be able to receive tax rebates, program benefits, and the like in the same manner. Counterparties in horizontal transactions, in turn, will simply be private-sector persons and businesses.

Under this Digital Greenback rendition of IVL, Treasury would in effect be issuing a digital dollar and maintaining a digital public-banking and payments system. If this aroused insurmountable political opposition from banks or raised serious systemic stability concerns, we could simply cap the amounts Treasury wallets can hold – say, at \$2,000 – and note the following: First, people with so little savings are largely unbanked now. Second, once *publicly* banked, many of the presently unbanked might at last save enough to be enabled to become even *privately* banked.

5.2. The 'FedWallet' IVL Plan

While TreasuryDirect seems the obvious route to go in

digitizing the dollar in the short run, where time is of the essence, we might nevertheless wish to migrate any national IVL system over to the Fed in the longer run. In effect, we would then construct a digital wallet rendition of something like the 'FedAccounts' proposed by Professors Ricks, Crawford, and Menand. The primary reason to do so would be to keep the digital dollar fully integrated under one administrator, with the nation's broader monetary policy apparatus and payments system, both of which are presently conducted and administered by the Fed.

What we can call a 'FedWallet' rendition of the IVL Plan would simply alter the compositions of both the Fed's and private sector banks' current balance sheets in a couple of straightforward ways. First, the Fed IVL Master Account would simply be a large portion of the liability side of the Fed's balance sheet, as noted above in introducing this post and as bank Reserve Accounts already are. Payments among businesses and individuals would then manifest as shifting allocations on that portion of that side of the Fed balance sheet (see *Figure 3*, below). Second, there would be a corresponding reduction in the sizes of private sector bank balance sheets.

Diagrammatically, then, in going the Fed route for an IVL system we would move from a banking system like that depicted in *Figure 2* to a banking system like that depicted in *Figure 3* where national money flows and associated assets and liabilities are concerned. The payment platform component of the plan would fit in the structure in the manner depicted in the lower portion of the diagram, which as an accounting matter should be imagined on the right hand (Fed liability) side of the same.

Figure 2: Current Fed/Bank/Depositor/Issuer Arrangements & Financial Flows

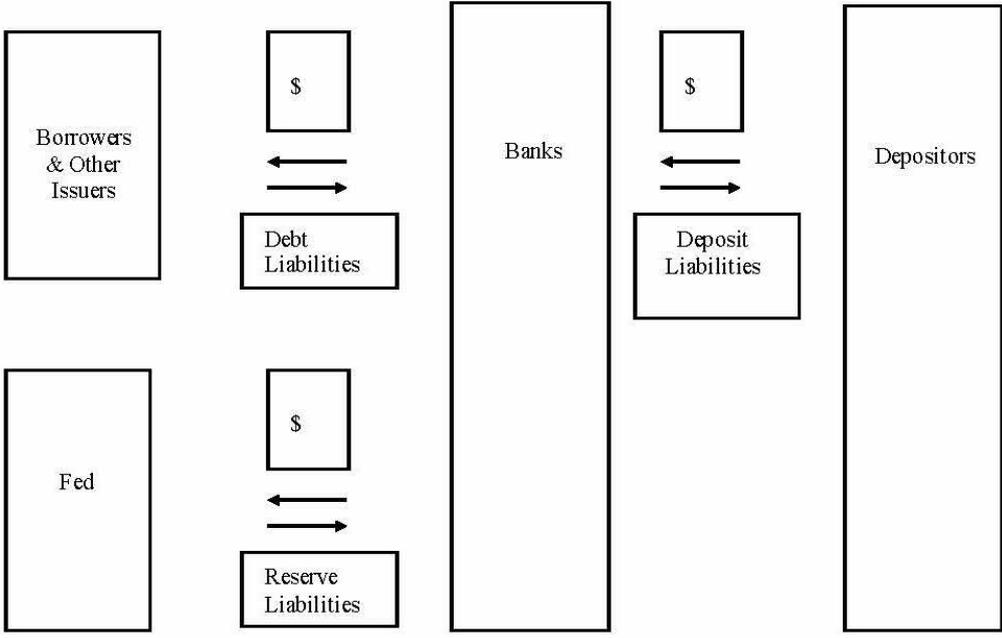
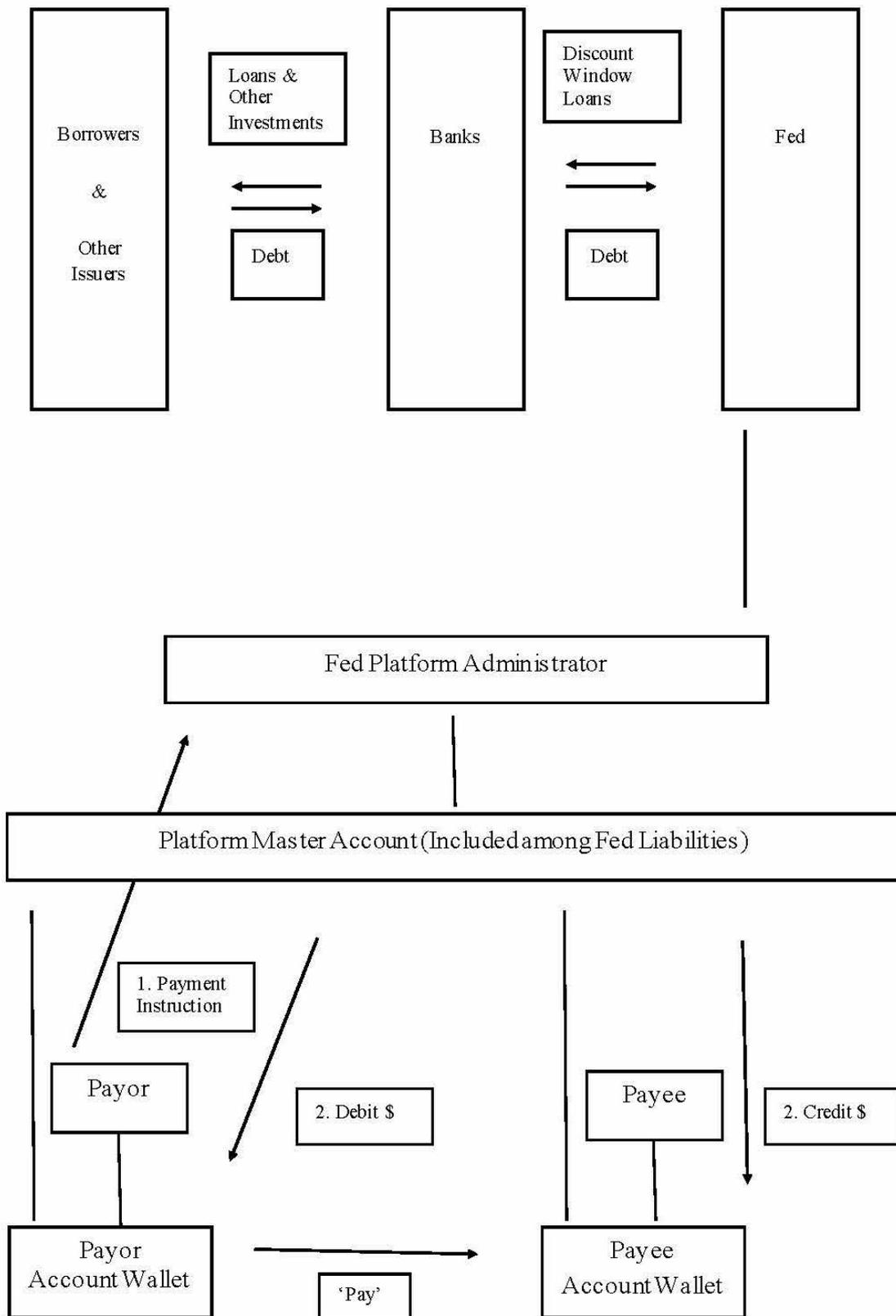


Figure 3: Reformed Fed/Bank/Depositor/Issuer Arrangements & Financial Flows, with Fed-Administered 'FedWallet' IVL Platform



Once again all is the same as in the previous renditions, the sole difference being that the system is now integrated into the Fed / private-sector bank nexus that constitutes the foundation of our present day national banking and payments infrastructure. This additional complication of course necessitates careful planning and sequencing. Hence my recommendation that cities, states, and the US Treasury adopt IVL plans immediately, with the latter then to be migrated over to the Fed in due course.

It might bear noting that insofar as we go this route, we shall recapitulate in the digital-currency space much of our previous monetary development in the paper currency space. The latter evolved from (1) state-chartered and -regulated banks issuing their own paper 'bank notes' (the earlier version of our current ecosystem of privately issued crypto-currencies) before 1863, through (2) nationally chartered and -regulated banks effectively issuing a *national* bank note (the 'Greenback') administered by the US Treasury from 1863 to 1913, to (3) the Fed-issued and -administered 'Federal Reserve Note' (a.k.a. 'dollar bill') that we use today.

6. Conclusion: From Public Money and Banking to More Fully Public Finance

The technology involved in establishing IVL systems is not particularly daunting, and industry professionals aver that the author's Digital Greenback plan could be up and running in a few months. Designing and building digital-payment platforms and associated currencies has been done before, after all, by multiple firms and networks for multiple purposes, over recent years. All that differs now is that we will be doing this for a forthrightly public purpose – that of installing a universally accessible, fee-free and frictionless, state-of-the-art national value-storage and -payments architecture. In

effect, as noted above, we'll be supplying a commercial infrastructure fit to morph into a universally-accessible banking and financial infrastructure.

For the reasons elaborated above, this is desirable in all times, not only in crisis times. So much the better, then, that in doing this now we will also be opening saving and paying to 50 million unbanked and underbanked households, businesses, and individuals in need of *immediate aid* during the current crisis and any subsequent crises. But we will also be doing yet more. We will be taking a crucial first step, should we decide as a polity to go further, toward a more complete renovation of our national financial system – a system that is falling apart at its productive republican seams. For more on that reconstruction, kindly stay tuned.