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# THE INCLUSIVE VALUE LEDGER:

Digital Dollars and Digital  
Platforms for Digital  
Public Banking

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# INTRODUCTION

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Since Facebook announced Libra, its proposed “global crypto-currency,” a bit over a year ago, central banks and monetary authorities worldwide have accelerated their efforts to develop central bank digital currencies (CBDCs). Sweden and China, for example, were nearly ready to test their own proto-CBDCs even before last summer. Thanks to CBDCs’ promise to make transactions more efficient and expand means of publicly banking to presently unbanked and under-banked households, businesses, and individuals, other countries were not far behind. Public support for the prospect in the United States is already significant.

The sudden slowdown in both the manufacturing and service sectors of our economy wrought by the Covid pandemic beginning in early March of this year makes developing CBDCs all the more urgent. The lockdown and social distancing measures necessitated by the pandemic are antithetical to these forms of productive activity, and hence to the flow of pay for such activity because labor is largely furloughed—at least in sectors outside the so-called “knowledge economy,” which allows for remote work. State, local, and national economies everywhere are thus confronted, in ways they were not during the crisis of 2008 and after, by simultaneous shocks to their supply-sides and demand-sides alike—supply-side thanks to the slow-down, and demand-side thanks to the furloughs.

Cities, states, and nations must take both demand- and supply-side relief measures as quickly as possible. For example, production of all essential clothing and equipment necessary for workers to resume production safely must be ramped-up massively. Individual, family, and business budgets

must be financially buttressed by the state, be it through UBI payments, government lending, or both. Finally, our technical means of storing and transferring value—of making and receiving payments—must become faster. This is necessary to address short-term challenges, such as current, slow modes of payment delivery, and meet the needs of those with limited access to banks to cash checks without being forced to resort to exploitative payday lenders. Facilitating reliable, expedited currency transactions helps us in the long term as well: We will all reap the benefits of this fairer, stronger, banking system long after the present pandemic is past.

Publicly issued digital currencies like CBDCs and their associated payment platforms are well suited to meet the challenges of the present moment, offering both speed and flexibility. A currency is just “that which pays” in a payments system, hence “that which counts” in a system of value accounting (since we pay not only in dollars, for example, but in specific *quantities* of dollars). To design a digital currency is thus to design a speed-of-light means of value storage and transfer.

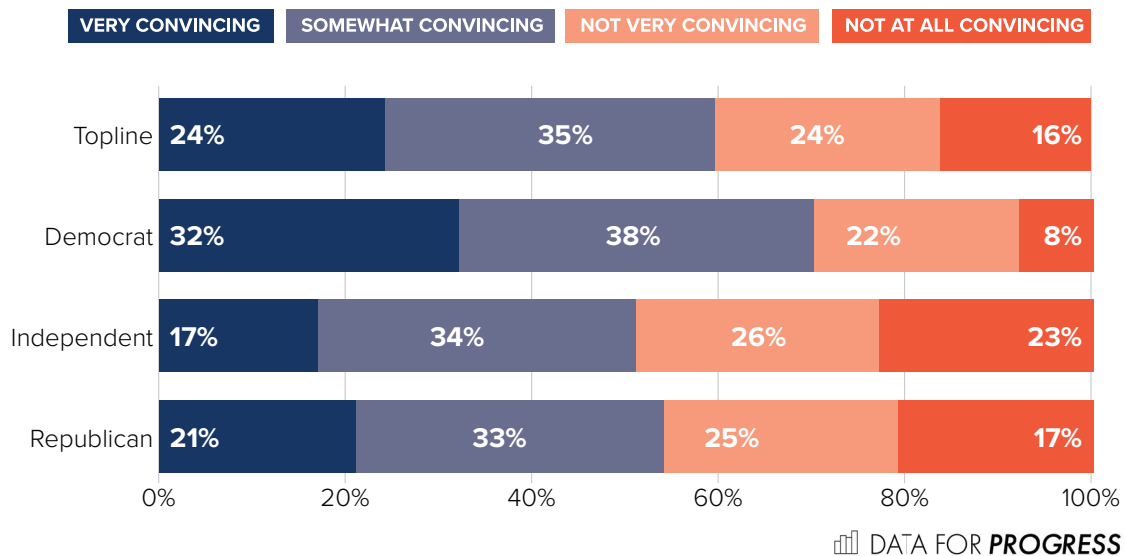
Fortunately a growing number of US cities and states, as well as members of Congress, have begun recognizing the need to update our payments system. Over the past year, and especially over the past several months, public officials nationwide have begun considering a proposal that this author has been advocating for some years: the Inclusive Value Ledger (IVL) Plan. The IVL has colloquially come to be known as the Public Venmo plan since two visionary New York state legislators—Assemblyman Ron Kim and State Senator Julia Salazar—proposed the author’s draft bill last autumn. This would be truly

game-changing, as the IVL can be instituted by municipal, state, or national authorities. And at the national level it can be administered by either the Federal Reserve or the Treasury.

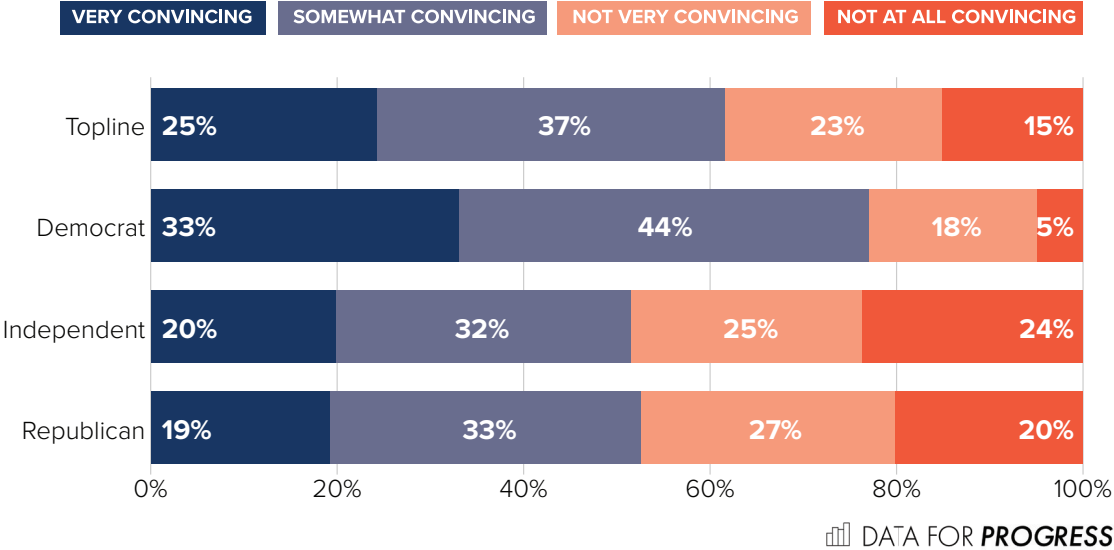
The public, too, sees the promise of digital dollars. Polling by Data for Progress found that public support for the rationale for digital dollars accounts is strong—and bipartisan. When presented with digital dollars’ potential to make it easier to transfer money to people in times of economic crisis, nearly six in ten (59 percent) likely voters found the reasoning convincing, including a majority of Republicans (54 percent).

After considering that digital dollars would free the 50 million households, businesses, and individuals who do not have a bank account or access to financial services from high fees for basic services, even more respondents find the case for digital dollars convincing (62 percent)—still including a majority of Republicans (52 percent). Similarly, a majority of respondents (61 percent), including a majority of Republicans (53 percent), find the proposal that digital dollars could be used to compensate family caregivers convincing.

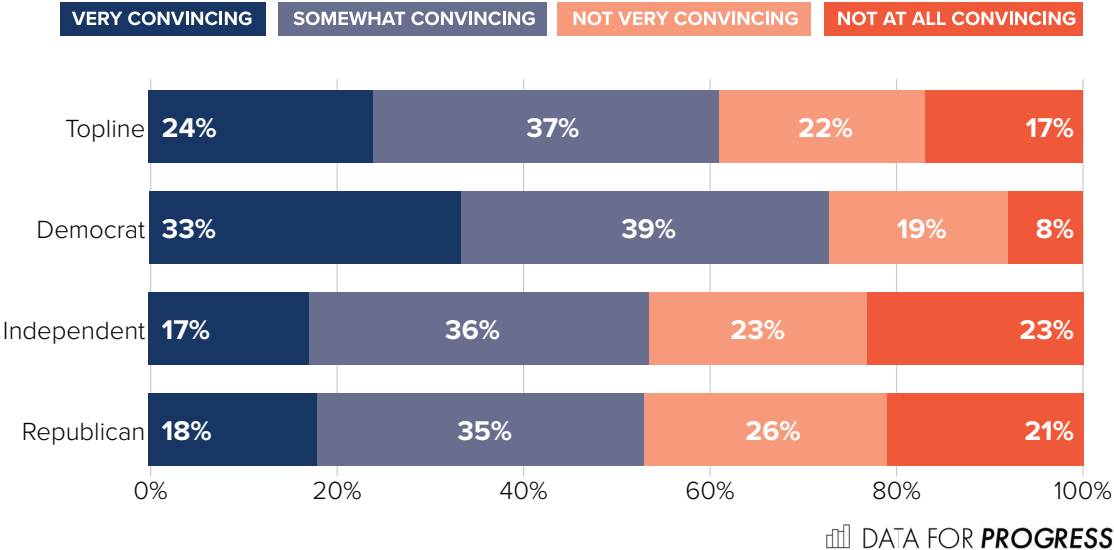
**Do you find it a convincing or unconvincing reason to support government-issued digital dollar accounts that these accounts would make it easier to transfer money to people in times of economic crisis, leading to a faster recovery?**



**Do you find it a convincing or unconvincing reason to support government-issued digital dollar accounts knowing that these accounts would free 50 million households, businesses, and individuals in the US that don't have a bank account or access to basic financial services from incurring high fees for basic services?**



**Do you find it a convincing or unconvincing reason to support government-issued digital dollar accounts that these accounts would make it easier to make payments to family caregivers if the law were changed so that caregivers are paid?**



In light of public support and the advantages of speedy financial transactions for individuals, families, and businesses, states and their subdivisions should move forward with the IVL plan immediately, regardless of whether Congress moves on the matter. Congress itself, once it acts, should begin with the Treasury version of IVL, then gradually, carefully migrate the system over to the Fed. This policy brief elaborates further upon these reasons while schematizing the IVL Plan in its local and state, then Treasury and Fed, renditions.

## THE IVL ‘CHASSIS’

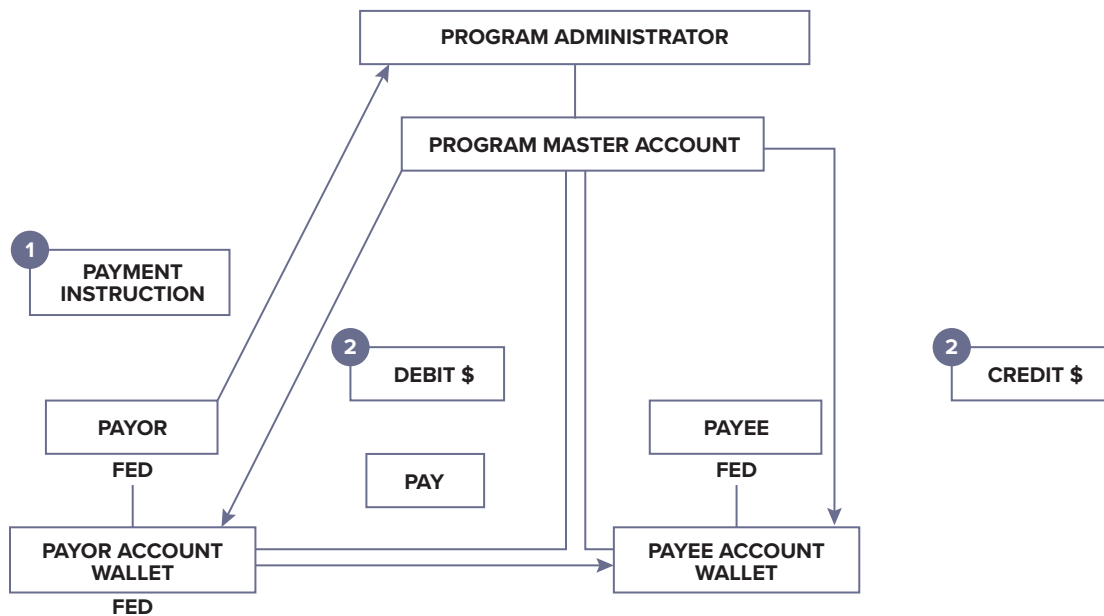
It will be helpful to begin by sketching the basic structure that IVL systems share. To borrow a metaphor from the automotive sector, one might call this structure the plan’s ‘chassis,’ onto which any number of distinct ‘bodies’ selected by any level of government can then be installed.

## Basic Architecture

The IVL’s architecture and implementation are strikingly simple, requiring two functionally distinct but temporally simultaneous steps. First, every citizen, legal resident, and business owner or operator must be given a digital wallet accessible by smartphone or other device. Second, each such wallet must be afforded (a) what we will call ‘vertical’ connectivity to a public sector ‘master account,’ and (b) what we will call ‘horizontal’ (think peer-to-peer) connectivity to all other wallets. The IVL’s vertical dimension enables wallet holders to pay taxes, licensing fees, and other remittances, as well as to receive tax refunds, program benefits, and other disbursements. Meanwhile, along the IVL’s horizontal dimension they are able to make real time payments to one another.

Diagrammatically, we have:

**Figure 1. IVL Chasis**



In *Figure 1*, non-arrowed line-segments represent institutional linkages, while arrowed line-segments represent payment instructions and associated value flows. A payment occurs when the 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 will comprise one public and one private sector party. Along the ‘horizontal’ dimension, wallet transactions will occur among private sector parties.

## Virtues of the IVL Chassis

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

## Inclusion

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First, in any self-professed ‘commercial society’ or ‘exchange economy’ like our own, a payment system must be considered an essential public utility—a function that justice requires be made freely available to all. We don’t pay a toll to use sidewalks, nor do individuals or small businesses pay for the privilege of using nickels or dollar bills. Neither, then, should people have to pay to use digital dollars as they must when relying on private sector companies, which impose transaction fees and other charges. Call this the justice, inclusion, or public utility rationale for IVL.

## Efficiency

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Second, we measure the size and growth of our economy by reference to transaction volume. A more efficient payment system, by facilitating rapider transactions and larger transaction volumes within any time interval—what economists call ‘money velocity’—means greater growth and a larger economy over time. So, of course, does greater inclusion itself. Call this the growth or efficiency reason for IVL. Justice and growth thus converge to commend it.

## Monetary Policy

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Third, an IVL system, if administered by a nation’s fiscal or monetary authority—in the US, that’s either the Treasury or the Fed—will enable a much faster fiscal stimulus or implementation of new monetary policy 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 digital wallets.

During ordinary times, the administering agency even can offer interest on savings in wallets, moving rates up or down to 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.

## Valuing ‘Care Work’

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Fourthly, an IVL system will enable public authorities, if authorized by statute, to disburse monetary awards to ‘care work’ providers and other contributors to the public good currently left out of or marginalized by our payment system. A teen who helps grade-schoolers with homework after school, for example, or a friend or family member who cares for a ‘shut-in,’ can quickly transmit digital ‘proof of work’ (POW) to a city, state, or federal social services authority and receive IVL credits—what this author calls ‘Democratic Digital Dollars,’ or ‘3Ds,’ in return. Given the savings that such work affords over time and what it achieves—a healthier, better educated, and more productive citizenry, among other things—crediting caregivers via IVL is good policy both on long-term fiscal grounds and as a matter of promoting a ‘Good Society.’

## Data Privacy

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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 would not do what they do for profit—the only ‘carrots’ to entice data harvest and sale would be highly illegal. And because state actors are subject to Fourth Amendment constraints unlike, say, Wells Fargo or Facebook, there is a ‘stick’ we can wield against transgressors. No matter how one looks at the matter, we should institute and proliferate IVLs. The question is therefore not whether, but how. Which entity among cities, states, the Fed, and the Treasury is best equipped and positioned to administer the IVL?

## STATE AND MUNICIPAL IVL PLANS

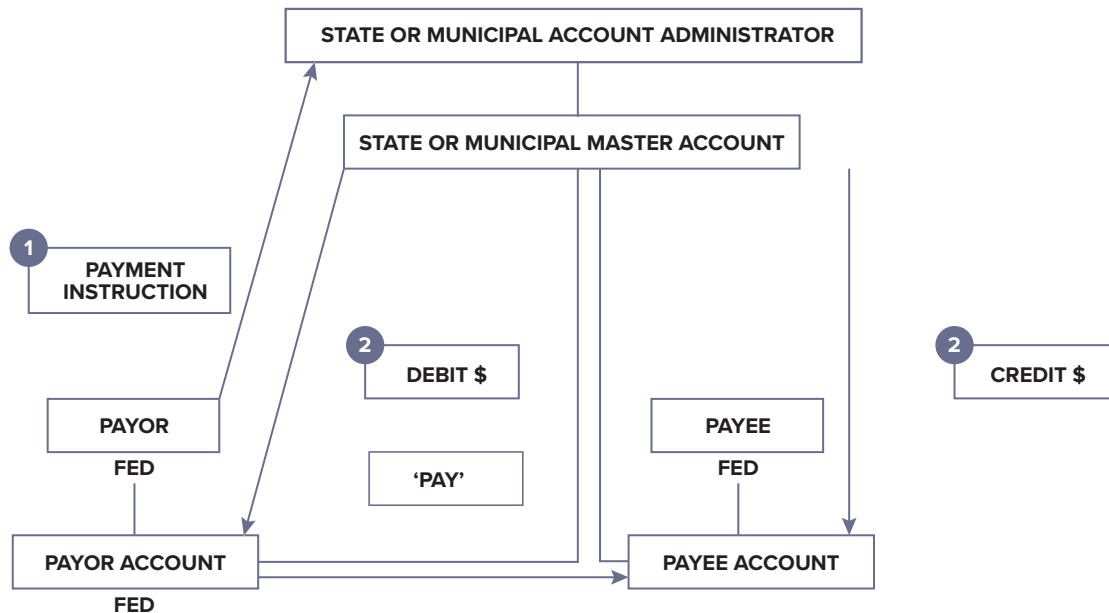
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As noted above, states and subdivisions inclined to act quickly to capitalize on IVL technology should not wait for federal action. Our states and our cities have become our nation’s first responders in addressing the national Covid pandemic, but, unlike our nation, they cannot issue their own currencies.

Even apart from pandemic responses, many American states and their subdivisions regularly experience dollar-flow shortages in their jurisdictions, which have inspired occasional calls to adopt ‘community’ or ‘complementary’ currencies. With the IVL, the digital dollar becomes community currency. Local spending by local residents will grow easier. Moreover, states and their cities would be able to monetize care work of the kinds noted above, improving state and municipal fiscal positions in the long-run.

Structurally speaking, a city or state IVL plan looks just like the chassis schematized in *Figure 1*. All that changes is the identities of some of the entities brought together in that structure, as seen now in *Figure 2*:

**Figure 2: State- or Municipal-Administered IVL System**



In the diagram, all is as it was in *Figure 1*, save that now the IVL Master Account is administered by a specific state or municipal authority. The latter receives payments—taxes, fines, fees, etc.—over the system. It disburses its own payments—such as refunds, program benefits, and care work compensation—over the same. And all participants, be they businesses or individuals, are then able to make people-to-people payments among themselves as well.

## TREASURY AND FED IVL PLANS

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

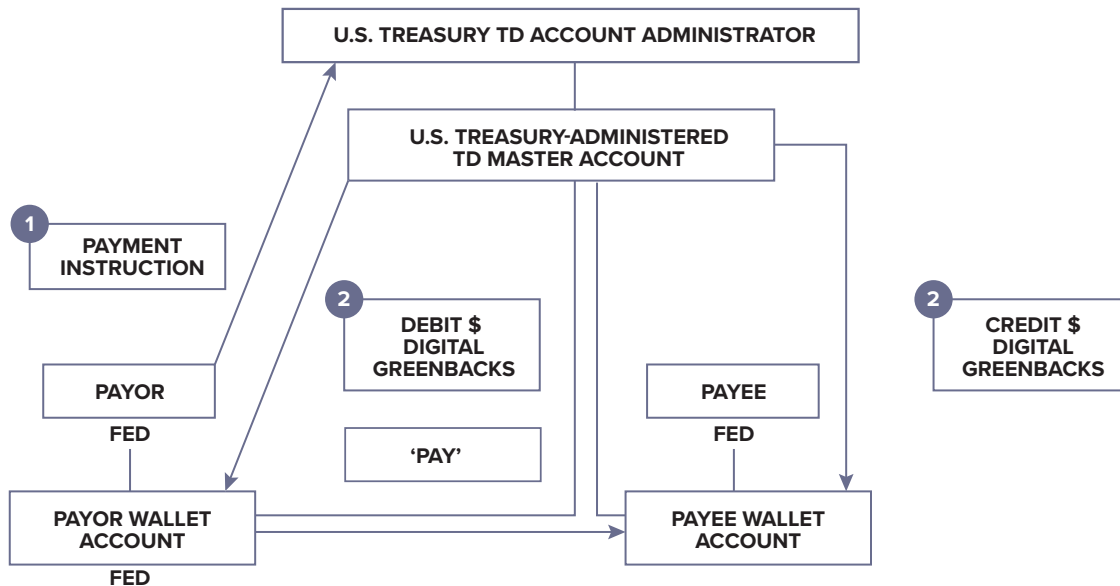
### The ‘TreasuryDirect’ / ‘Digital Greenback’ IVL Plan

A Treasury-administered IVL would simply add functionality to Treasury’s existing network of digital ‘TreasuryDirect’ accounts (TDAs)—a long-standing but little-known facility through which any citizen or legal resident of the US can open a digital account to buy and sell Treasury securities, 24/7. To convert this existing platform into an IVL digital payment platform, we need take only two simple measures.

First, we add horizontal “peer-to-peer” (P2P) connectivity between TDA digital wallets. Second, we confer legal tender status on the ‘Zero-Percent Certificates of Indebtedness’ that the Treasury already issues through TDAs. We’ll call them ‘Treasury Dollars,’ or ‘Digital Greenbacks,’ in honor of the national dollar that the Treasury issued from the mid-1860s until the Fed’s establishment 50 years later. The upshot is as seen in *Figure 3*.



**Figure 3: U.S. Treasury-Administered TDA / ‘Digital Greenback’ Payments System**



Again all is as it was in *Figures 1* and *2*, save that the Treasury is administering the system. Counterparties in any vertical IVL transaction will comprise the Treasury and one private sector party, be it an individual or a business. As with the state and municipal versions, participants will 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.

### The ‘FedWallet’ IVL Plan

While TreasuryDirect seems the obvious route to go in digitizing the dollar in the short run, as time is of the essence, we should also contemplate migrating any national IVL system over to the Fed in the long run. The primary reason would be to keep the digital dollar fully integrated, under one administrator, with the nation’s broader monetary

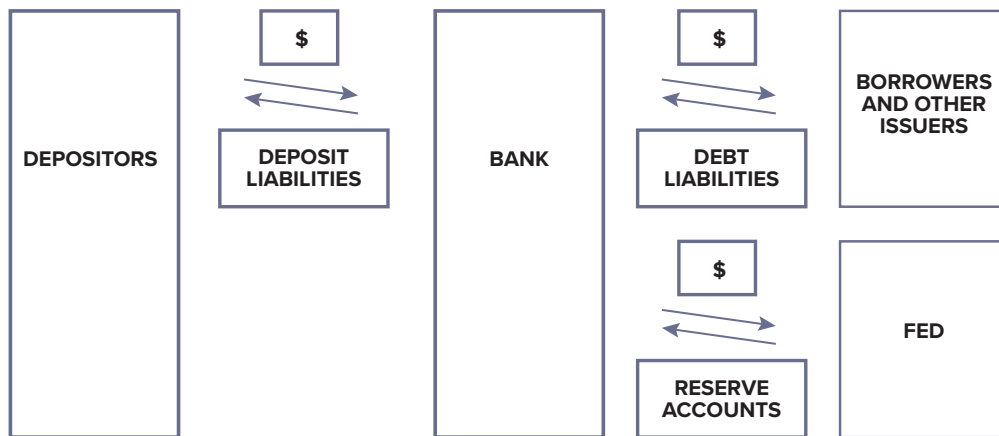
policy apparatus and payments system, both of which are presently conducted and administered by the Fed.

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 private sector bank Reserve Accounts already are. Payments among businesses and individuals would then manifest as shifting allocations on that side of the Fed balance sheet (see *Figure 5*, below). Second, insofar as individual wallet accounts subsumed within that Fed IVL Master Account on its balance sheet were employed as transaction accounts by their holders, there would be a corresponding reduction in private sector bank balance sheet sizes.

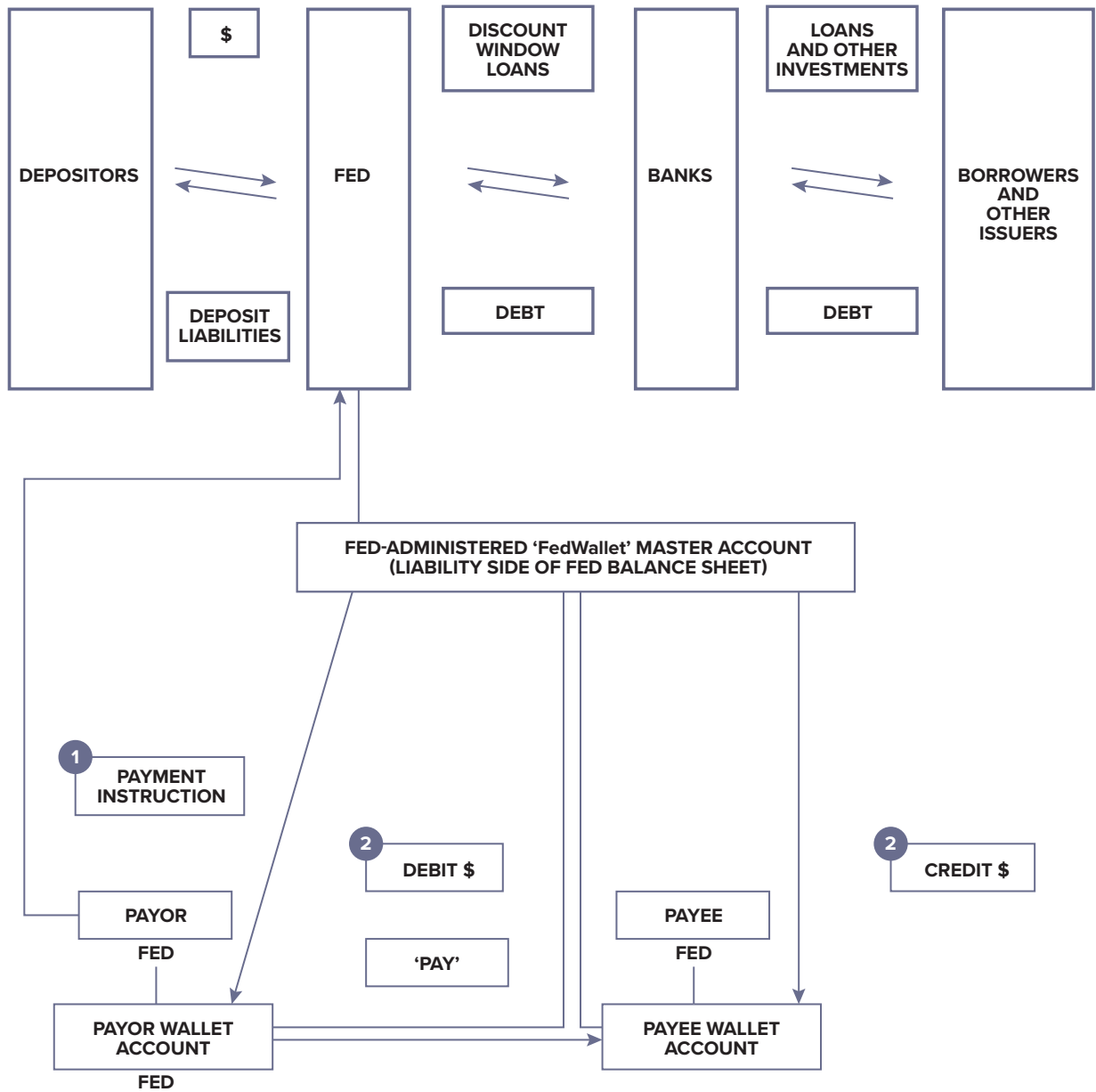
Diagrammatically, then, in going the Fed route for an IVL system we would move from a banking system like that depicted in *Figure 4* to a banking system like that depicted in *Figure 5* where national money flows and associated assets and liabilities are concerned. The payment platform component of the plan would fit in the structure in the manner depicted in the lower left-hand

corner of the diagram. It should be borne in mind that all entities represented above the Master Account box in the diagram are among the Account Holders, hence Payors and Payees, represented in the diagram.

**Figure 4: Current Fed/Bank/Depositor/Issuer Arrangements & Financial Flows**



**Figure 5: Reformed Fed/Bank/Depositor/Issuer Arrangements & Financial Flows, with Fed-Administered 'FedWallet' IVL Platform**



Once again all is as seen in *Figures 1, 2, and 3*, the sole difference being that the system is now integrated into the Fed / private sector bank nexus that constitutes the foundation of the national banking and payments infrastructure. This additional complication, of course, necessitates careful planning and sequencing. Hence the recommendation that cities, states, and the US Treasury adopt IVL plans immediately, with the latter to be migrated over to the Fed later, in due course.

It might bear noting that insofar as we as a society go this route, we shall recapitulate in the digital currency space our previous monetary development in the paper currency space. The latter evolved from (1) state-chartered and state—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 nationally regulated banks issuing a national bank note (the ‘Greenback’) administered by the US Treasury from 1863 to 1913, to (3) the Fed-issued and Fed—administered ‘Federal Reserve Note’ (a.k.a. ‘dollar bill’) that we use today.

## CONCLUSION

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The technology involved in establishing IVL systems will not be trivial to build, but neither will it be particularly daunting. Designing and building digital payment platforms and associated currencies has been done before, by multiple firms and networks, for multiple purposes, over the years. All that differs now is that we are doing this for a forthrightly public purpose—the creation of a universally accessible, fee-free, frictionless state-of-the-art national value-storage and payment architecture. The significance of a strong majority of Americans’ support for the forthright rationale behind digital dollar accounts cannot be overstated. While desirable in all times, this new paradigm is critical in these times: As many as 50 million unbanked and underbanked households, businesses, and individuals are in need of immediate aid during the current crisis.