About Us

On this website, we approach money as a legal project. Created to meet demands both public and private, money depends on law for its definition, issue, and operation. That legal structure of money – its design – matters deeply. In the words attributed to an early banker, “those who create and issue money . . . direct the policies of government and hold in the hollow of their hands the destiny of the people.” Our aim is to encourage discussion, debate, and scholarship on money’s design and its reform towards a world that is as just as it is (economically) productive. (read more)

The Capital Commons: Digital Money and Citizens’ Finance in a Productive Commercial Republic

Author: Robert Hockett

All societies must address two questions where the organization of productive activity is concerned. The first is whether production will be mainly publicly managed, privately managed, or ‘mixed.’ The second is whether the financing of production will be mainly publicly managed, privately managed, or mixed.

In the American commercial republic, we seem more or less to
have answered the ‘who does production’ question to our own satisfaction. From the founding era to the present, we have elected to leave production primarily, though not of course solely, ‘in private hands.’ Where the financing of production is concerned, on the other hand, we have been more ambivalent.

For the past 160 years, our financial system has operated as a public-private franchise arrangement. At the core of our franchise lie the sovereign public (the ‘public’ of our ‘republic’) and its money-modulator – the issuer and manager of its monetized full faith and credit, its ‘money’ – on the one hand, and the private sector financial institutions and markets we publicly license to allocate most of the resultant Wicksellian ‘bank money’ or ‘credit-money’ on the other hand. At the periphery of the franchise lie those institutions and markets that ‘shadow bank’ through relations with the banking core.

In recent years, developments in several distinct spaces have prompted what amounts to a broad reassessment of our hybrid financial arrangements. One such development is weariness with our system’s penchant for over-generating public credit that fuels bubbles and busts rather than production, a product of leaving our public capital – by far the greater part of investment capital – to private management. This is what the author has long called poor credit modulation.

Another ground of critique is our hybrid system’s poor record on what the author has long called credit allocation, from which modulation turns out to be inseparable. Our morbid fear of explicitly, rather than implicitly, ‘picking winners and losers’ is the culprit here. Finally, other sources of disenchantment are our system’s long-term worsening of inequality, the scandal of commercial and financial exclusion our system permits, and the promise offered by new financial technologies where ending both that and leaky monetary policy are concerned. The current Covid pandemic and recent murder of George Floyd of course underscore these sources of
This article embraces these critiques, which the author himself has leveled continuously over the past fifteen years, argues that privately ordered production requires publicly ordered finance, and shows how to order finance publicly on a Fed balance sheet forthrightly recognized as a Citizens’ Ledger. New public investments will make up the asset side of the upgraded Fed balance sheet, while a corresponding system of digital public banking through ‘FedWallets’ will upgrade the liability side of the same. Newly restored regional Fed functionalities (‘Spreading the Fed’), an FSOC-inspired National Reconstruction and Development Council (NRDC) and its financing arm (a restored RFC), and a price-stabilizing ‘People’s Portfolio’ round out the new system of Citizens’ Finance.

In the course of its arguments, the article traces all salient consequences that flow from its complete overhaul of our system of financing production, from banking through ‘shadow banking’ to the capital markets. It also makes some surprising discoveries along the way. Among these is that full separation of Fed and Treasury and hence monetary and fiscal policy, itself an artifact of franchise finance and hence the false hope of separating credit modulation from credit allocation, is no longer tenable. Another is that global central bank digital currency (CBDC) development is now corroborating much of what the article argues.

Digital Currencies, Stablecoins, and the Evolving Payments Landscape

Author: Lael Brainard


Book Review: Law and Macroeconomics as Mainstream

Author: Bruno Meyerhof Salama

In spite of its name, economic analysis of law is mostly unconcerned with money and markets. In a recently published book, Law and Macroeconomics: legal remedies for recessions, Professor Yair Listokin challenges this doubtful convention. He advocates “expansionary legal policies” to stimulate the economy when monetary policy reaches the zero-lower bound.
This proposal is presented as a straightforward application of mainstream economic views, not a heterodox deviation. My review considers how the book’s main arguments depart from established views in economic analysis of law and discusses how its applications fare in light of the Keynesian perspective that it purports to uphold. I conclude with a discussion of the book’s relevance for the current recession.


Banking: Intermediation or Money Creation

Prompt for Discussion

View all Roundtable #1 Contributions

Contributors: Morgan Ricks, Marc Lavoie, Robert Hockett, Saule Omarova, Michael Kumhof, Zoltan Jakab, Paul Tucker, Charles
Commercial banks are, indisputably, at the center of credit allocation in virtually all modern economies. Astonishingly, however, it remains controversial exactly how banks expand the money supply.

According to one view, banks operate as intermediaries who move money from savers to borrowers. The basic idea is that banks extend the monetary base by lending out of accumulated funds in a reiterative way. In round 1: a bank takes a deposit, sets aside a reserve, lends on the money; round 2 – the money lands in another bank, that bank sets aside a reserve, lends on the money; round 3 – the process repeats. Money’s operation is effectively multiplied in the economy because banks transmit funds constantly from (passive) savers to (active) borrowers, thus distributing money across those hands. The system works because savers, who are content to leave their funds alone, are unlikely to demand more than the (respective) reserve amounts back from any round. Banks balance their flow of funds over time as borrowers repay their loans.

According to another view, commercial banking activity amounts to “money creation” rather than the pooling and transmission of existing funds. Banks fund the loans they make by issuing deposits (or promises-to-pay in the official unit of account) that are treated by the wider community as money, not only as credit. They have, in effect, immediate purchasing power. The constraint on banks’ lending capacity is not the sum of previously accumulated funds, but the banks’ ability to clear obligations owed to other banks against obligations demanded from other banks. That activity depends on national payments.
systems coordinated and stabilized by central banks.

We open this roundtable to proponents of each approach to banking. We invite them to argue their case, to respond to one another, and to elaborate the implications that their view has on matters including the definition of money, the role of private capital accumulation, the relationship of commercial banks to central banks, and the behavior of the money supply.

---

The People’s Ledger: How to Democratize Money and Finance the Economy

Author: Saule T. Omarova

The COVID-19 crisis forcefully underscored the urgency of digitizing sovereign money and ensuring broad access to affordable banking services. It pushed two related ideas—the issuance of “central bank digital currency” and the provision of retail deposit services by central banks—to the forefront of the public policy debate. To date, however, this debate remains fundamentally incomplete. Framed by reference to fast payments and financial inclusion, most reform proposals in this vein do not offer a coherent vision of how the act of “democratizing” access to sovereign money would—and should—change the key systemic dynamics of finance. This lack of a systemic perspective both obscures and dilutes the full transformative potential of these increasingly popular ideas.
Taking the debate to a qualitatively new level, this Article offers a blueprint for a comprehensive restructuring of the central bank balance sheet, as the basis for redesigning the core architecture of modern finance. Focusing on the U.S. Federal Reserve (the Fed), the Article outlines a series of structural reforms that would redefine the role of a central bank as the ultimate public platform for generating, modulating, and allocating financial resources in a democratic economy—the People’s Ledger.

On the liability side of the ledger, the Article envisions the full migration of demand deposit accounts to the Fed’s balance sheet and explores the full range of new, more direct and flexible, monetary policy tools enabled by this shift. On the asset side, it advocates a comprehensive restructuring of the Fed’s investment portfolio, which would maximize its capacity to channel credit to productive uses in the nation’s economy. This compositional overhaul of the Fed’s balance sheet would profoundly transform the operations and systemic functions of private banks, securities dealers, and other financial institutions and markets. Tracing these structural implications, the Article shows how the proposed reforms would make the financial system less complex, more stable, and more efficient in serving the long-term needs of the American people.

Recoinage: When the Validity of Money Was Restricted in Time

Author: Roger Svensson & Andreas Westermark

A monetary system called periodic re-coinage was used during almost 200 years in large part of medieval Europe. Old coins were frequently declared invalid and had to be exchanged for new ones for an exchange fee. This system – which is equivalent to a Gesell tax – required a limited coin volume in circulation and an exchange monopoly in a geographical area. We show that such a Gesell tax works and do generate incomes for the minting authority if the tax level is sufficiently low and if the punishment for using invalid coins is sufficiently high.


The Janus Faces of Money, Property, and Governance: Fiscal Finance, Empire, and Race

Author: Jamee K. Moudud
This paper contributes to the literature on racial capitalism by deploying a key insight of the Law and Political Economy tradition, which is that politics acting through the law plays a constitutive role in the monetary hardwiring of economies and their property rights. By focusing on two key elements of fiscal finance, central banking and taxation, the paper shows that while the pressures of democratic self-governance created one type of hardwiring in Britain and its white dominions racialized politics created a different type in the colonies of color. In short, the particular monetary hardwiring of the colonies of color effectively “kicked away the ladder” needed for their successful socio-economic development, occluding the very different policies pursued in Britain and the dominions. This left the colonies of color in a vulnerable state at independence, providing much weaker foundations for their subsequent economic development. Given the key role played by gold in the anchoring of banknote emissions by the Bank of England (BoE) Britain’s global politics of gold and silver was central to its domestic economic development. And the BoE, a private joint-stock corporation, was deeply enmeshed in the government’s domestic and colonial governance policies. As with the BoE taxation systems domestically and internationally exemplified the same principle: private property was always embedded in the public sphere following different modes of governance in different historic and geographic contexts. Simply put, politics acting through the law was actively creating markets in different ways rather than protecting pre-existing and privately-created ones.

The Key to Value: The Debate over Commensurability in Neoclassical and Credit Approaches to Money

Author: Christine Desan

Neoclassical and credit approaches to money represent dramatically different theories of value. For many within the neoclassical tradition, the market exists as a conceptual enterprise—a place where independent agents compare and rank real goods, exchanging them afterwards to in accord with their preferences. That theory reflects a particular approach to value, identifying it as a pre-existing quality ranked by individual choice. The theory also generates a particular approach to money, assuming that a term of measurement naturally imports commensurability into evaluation.

By contrast, public credit approaches suggest that creating commensurability in a world heterogeneous in so many aspects is a profound challenge. Modern political communities have responded by substantiating value in a unit that is cognizable to all: they issue credit tokens that can be set off against widely shared public obligations. That means, first, that value cognizable in money follows rather than pre-exists market activity: it is produced as individuals use credit money as a medium. Second, because value is produced as people use money, the character of that money matters: its nature as credit carries with it an allocative bias. Both governments and private lenders (banks) advance credit in order to spend selectively: they create a credit medium by providing credit
to some people relative to others. According to the way money is created, definitionally we might say, individuals will not be equally situated in the process that generates prices. Decisions about value are made in the wake of that fact. The essay closes by contrasting the democratic visions at stake in neoclassical and public credit approaches to value. That exercises suggests that, if the public credit approach better describes money and market, their potential can only be realized by promoting rather than assuming equality.

Christine Desan, The Key to Value: The Debate over Commensurability in Neoclassical and Credit Approaches to Money, 83 Law and Contemporary Problems 1-22 (2020) Available at: https://scholarship.law.duke.edu/lcp/vol83/iss2/2

Just Published: Finance and Society, Vol. 6, No. 1

Author: Editors, Finance and Society

The editors of Finance and Society are pleased to announce the publication of vol. 6, no. 1 (2020).

The issue includes an article by Photis Lysandrou on financialisation and circuit theory, an essay by Daniel Tischer on Facebook’s Libra currency proposal, and a special forum on critical macro-finance.

The forum is guest-edited by Sahil Jai Dutta, Ruben Kremers,
Colonialism’s Currency: Money, State and First Nations in Canada, 1820-1950

Author: Brian Gettler

Money, often portrayed as a straightforward representation of market value, is also a political force, a technology for remaking space and population. This was especially true in nineteenth- and twentieth-century Canada, where money – in many forms – provided an effective means of disseminating colonial social values, laying claim to national space, and disciplining colonized peoples.

Colonialism’s Currency analyzes the historical experiences and interactions of three distinct First Nations – the Wendat of Wendake, the Innu of Mashteuiatsh, and the Moose Factory Cree – with monetary forms and practices created by colonial powers. Whether treaty payments and welfare provisions such as the paper vouchers favoured by the Department of Indian Affairs, the Canadian Dominion’s standardized paper notes, or the “made beaver” (the Hudson’s Bay Company’s money of account), each monetary form allowed the state to communicate
and enforce political, economic, and cultural sovereignty over Indigenous peoples and their lands. Surveying a range of historical cases, Brian Gettler shows how currency simultaneously placed First Nations beyond the bounds of settler society while justifying colonial interventions in their communities.

Testifying to the destructive and the legitimizing power of money, Colonialism’s Currency is an intriguing exploration of the complex relationship between First Nations and the state.


---

**Inside the Black Box: Credibility and Situational Power of Central Banks**

**Author: Ayca Zayim**

Despite the consensus that the power of finance constraints central banks under financial globalization, the variation in their autonomy from market forces at the micro level of monetary policymaking remains underexplored. This article demonstrates that credibility endows central banks with situational power to make monetary policy decisions that involve less sacrifice of economic growth to price stability. Based on the comparative analysis of the policy decisions of
central banks in two emerging economies, South Africa and Turkey, during 2013–2014, I show that this policy space stems from central banks’ capacity to successfully influence market expectations. The argument relies on public texts and over 130 interviews with central bankers in South Africa and Turkey and financiers in Johannesburg, Istanbul and London. The findings contribute to literature on central bank credibility and communication by exploring how credibility functions and creates room for central banks to maneuver through influencing contingent and performative expectations.

Socio-Economic Review, mwaa011, 17 March 2020

The Money Doctors of Seventeenth Century Naples

Author: Francois R. Velde

A collection of texts printed in early seventeenth-century Naples exemplifies the intersection between economic history and the history of thought. A slowly worsening monetary situation led authorities, unsure of what they could and should do, to solicit diagnostics and cures. The unfolding debate is challenging to analyze: participants viewed events through the lenses of their background, training, and interest. Merchant experts competed with university graduates and technical officials. These texts offer us a rich but contradictory set of observations and interpretations in what constitutes an early attempt at applied economic analysis and
The ECB and € E-Banknotes

Author: Corinne Zellweger-Gutknecht, Benjamin Geva, Seraina N. Gruenewald

The modern monetary system is controlled by the state and yet linked to private deposit banking. Monetary value held in deposits with commercial banks is known as ‘commercial bank money’ (CoBM). Monetary value held in deposits with the central bank – as well as banknotes issued by the central bank – is called ‘central bank money’ (CeBM). Under this scheme, central banks thus issue two forms of central bank money: cash for the retail sector and balances in traditional reserve accounts for wholesale purposes (reserves). However, for several years now, and most recently in particular against the background of private actors commencing to issue private digital currencies, a growing number of central banks have also been investigating the possibility and implications of issuing a digital form CeBM for the general public: central bank digital currency (CBDC), also known as retail CBDC (rCBDC).
The ‘Kansas City’ Approach to Modern Money Theory

Author: L. Randall Wray

Modern money theory (MMT) synthesizes several traditions from heterodox economics. Its focus is on describing monetary and fiscal operations in nations that issue a sovereign currency. As such, it applies Georg Friedrich Knapp’s state money approach (chartalism), also adopted by John Maynard Keynes in his Treatise on Money. MMT emphasizes the difference between a sovereign currency issuer and a sovereign currency user with respect to issues such as fiscal and monetary policy space, ability to make all payments as they come due, credit worthiness, and insolvency. Following A. Mitchell Innes, however, MMT acknowledges some similarities between sovereign and non-sovereign issues of liabilities, and hence integrates a credit theory of money (or, “endogenous money theory,” as it is usually termed by post-Keynesians) with state money theory. MMT uses this integration in policy analysis to address issues such as exchange rate regimes, full employment policy, financial and economic stability, and the current challenges facing modern economies: rising inequality, climate change, aging of the population, tendency toward secular stagnation, and uneven development. This paper will focus on the development of the “Kansas City” approach to MMT at the University of Missouri–Kansas City (UMKC) and the Levy Economics Institute of Bard College.
‘Funk Money’: The End of Empires, The Expansion of Tax Havens, and Decolonization as an Economic and Financial Event

Author: Vanessa Ogle

This article explores the question of what happened to European assets in the process of decolonization. It argues that decolonization created a money panic of sorts that led white settlers, businessmen, and officials to seek to liquidate assets they owned and move funds out of the colonial world. Instead of being repatriated to metropolitan countries with high tax rates and exchange controls, money moved to tax havens. Decolonization thus provided an important share of early postwar tax haven business in a period when tax havens and offshore finance expanded during the 1950s and 1960s. In turn, the withdrawal of Euro-American investments from the decolonizing world set the stage for the politics of development and modernization in the coming decades. Ironically, the outflow of funds during decolonization and the subsequent return of some funds in restructured form as investments by multinational and other companies soon caused
difficulties in newly independent developing countries. Companies soon found ways to rebook profits to have occurred in a tax haven rather than in the developing world, thus depriving low-income countries from tax revenue. The withdrawal of Euro-American investments from the colonial world during decolonization moreover had implications for the growth of portfolio investment, as funds removed from colonies were often invested through a tax haven onwards in US securities. All in all, decolonization was an economic and financial event that is only beginning to emerge in full detail.

Past & Present, gtaa001

Technology v Technocracy: Fintech as a Regulatory Challenge

Author: Saule Omarova, Cornell Law School

This article examines fintech as a systemic force disrupting the currently dominant technocratic paradigm of financial regulation. It offers a five-part taxonomy of (i) the key fintech-driven changes in the structure and operation of today’s financial system, and (ii) the corresponding challenges these systemic shifts pose to the continuing efficacy of the regulatory enterprise as it exists today. This
exercise reveals the fundamental tension at the core of the fintech problem. In the fintech era, the financial system as a whole is growing ever bigger, moving ever faster, and getting ever more complex and difficult to manage. The emerging regulatory responses to these macro-level changes, however, continue to operate primarily on the micro-level. Surveying the presently fragmented efforts to regulate fintech, this article highlights the limiting effects of the technocratic bias built into their design. Against that background, it outlines several alternative reform options that would explicitly target the core macro-structural, as opposed to micro-transactional, aspects of the fintech challenge—and do so in a more assertive, comprehensive, and normatively unified manner.


---

**Corona Crisis: Lessons of the Stress Test**

Author: Perry G Mehrling, *Pardee School of Global Studies, Boston University*

Perry Mehrling talks to Boston Economic Club June 3, 2020 about the Coronavirus Crisis.
The New Deal created a separate and unequal credit market—high-interest, non-bank, installment lenders in black ghettos and low-cost, securitized, and revolving credit card market in the white suburbs. Organized protest against this racialized inequality was an essential but forgotten part of the civil rights movement. After protests and riots drew attention to the reality that the poor were paying more for essential consumer products than the wealthy, the nation’s policymakers began to pay attention. Congress held hearings and agencies, and academics issued reports examining the economic situation. These hearings led to new federal agencies and programs, executive actions, as well as several acts of legislation. These Congressional investigations and the theories and explanations emanating from policymakers and academics were the genesis of decades of legislation aimed at supporting minority banks and other institutions. The resulting policy framework is still in effect and includes: the Community Reinvestment Act (CRA), the Community Development Financial Institution Act (CDFIA), as well as several key provisions and mandates regarding minority banks in banking legislation. In this Article, I will argue that the foundational theoretical premise of these laws and policies is
flawed. Though policymakers and scholars accurately diagnosed the root causes of the disparate credit market, the solutions did not correspond with the problem and have therefore been ineffective. These laws and policies were not aimed to address the systemic causes of the disparity but only served to treat its symptoms. The misguided focus on small community banking, minority-owned banks, and mission-oriented institutions as a response to structural inequality has been the dominant framework in banking reform.

In analyzing the varied, but theoretically consistent response to lending inequality, this Article also challenges a long-standing banking myth that “small community banking” or “microfinance” is the answer to poverty, specifically for marginalized communities. This idea was the foundational theory of the minority banking industry, the CRA, the CDFIA, and almost every legislative response to credit inequality for the past fifty years. The premise of these laws is that that marginalized communities, having been left out of the dominant banking industry, will pool their resources and collectively lift themselves out of poverty. As such, these laws are rooted in neoliberal and libertarian concepts of banking market even as they have been championed by progressive reformers and community activists. For most policymakers, activists, and scholars, the buzzword is “community empowerment” and they have legislated accordingly. In doing so, they have avoided addressing the root causes of the problem and have shifted the responsibility of a solution to the disenfranchised communities themselves instead of devising comprehensive federal policy solutions. This Article will trace the genealogy of this legislation and offer solutions that will address the root causes of this inequality.

The speed at which money moves between people and businesses in the United States lags well behind international standards. Far from being a mere inconvenience, slow payment speeds create needless financial uncertainty, lead to inefficiencies across the economy, and drive demand for high-cost credit products like payday loans and overdraft protection. To speed up the payment system, the Federal Reserve has announced “FedNow” a platform due in 2023 that would operate as a public real-time payment rail, competing with a privately-run platform in the interbank payment market.

This Article analyzes the problem of slow payments and the Fed’s many roles in addressing it. Against the Fed’s critics, we argue that the Fed’s operational involvement in the payment system holds the capacity to achieve three objectives at the
heart of payment policy in the United States: to catalyze innovation, enhance access to developing payment networks, and shore up financial stability. Fed participation in the payment system and public-private competition are not troublesome bugs or unfortunate byproducts of political compromise. Rather, they represent valuable features of the Fed’s hybrid, public-private system and are likely to drive faster payment development in the United States.

We also argue for an expanded use of Fed tools to achieve payment objectives well beyond FedNow, including by using the Fed’s unique status as operator, market participant, regulator, and supervisor of the payment system and the private financial institutions that participate in it. These are different roles that can be harmonized for the same public policy outcome.


The evolution of the Offshore US-Dollar System: past, present and four possible futures

Steffan Murau, Joe Rini & Armin Haas
Little has contributed more to the emergence of today’s world of financial globalization than the setup of the international monetary system. In its current shape, it has a hierarchical structure with the US-Dollar (USD) at the top and various other monetary areas forming a multilayered periphery to it. A key feature of the system is the creation of USD offshore – a feature that in the 1950s and 60s developed in co-evolution with the Bretton Woods System and in the 1970s replaced it. Since the 2007–9 Financial Crisis, this ‘Offshore US-Dollar System’ has been backstopped by the Federal Reserve’s network of swap lines which are extended to other key central banks. This systemic evolution may continue in the decades to come, but other systemic arrangements are possible as well and have historical precedents. This article discusses four trajectories that would lead to different setups of the international monetary system by 2040, taking into account how its hierarchical structure and the role of offshore credit money creation may evolve. In addition to a continuation of USD hegemony, we present the emergence of competing monetary blocs, the formation of an international monetary federation and the disintegration into an international monetary anarchy.


G. Epstein, Human Capital
Bonds and Federal Reserve Support for Public Education: The Public Education Emergency Finance Facility (PEEFF)

May 21, 2020

Gerald Epstein, Professor of Economics and Co-Director Political Economy Research Institute (PERI), University of Massachusetts Amherst[1]

Introduction

Public education – K-12 and public higher education – have been hit hard financially by the Covid-19 Crisis. General financial problems afflicting state and local governments – the fall off in tax revenues and increased health and public safety expenses associated with dealing with the pandemic – contribute to the shortfall. Specific increases in costs and declines in revenues afflicting the public education sector itself add to the impact. Given that most states have balanced budget provisions, states and local governments need massive financial help from the Federal Government in order to provide basic services to its residents, including public education. Estimates of the shortfall facing state and local governments suggest an amount approaching $1 trillion dollars through 2021.

In principle, there are multiple mechanisms that could raise and channel these needed funds to state and local governments including public education. In particular, grants from the Federal government would be, far and away, the best solution
to the fiscal problems of states and locales. However, even in the best likely scenario, it is unlikely that sufficient funds will be forthcoming through this route.

Fortunately, there are additional available financial channels, namely via the Federal Reserve System (Fed). The Fed has already committed itself to providing an “unlimited” amount of liquidity to the US financial system to prevent a meltdown and to provide credit to some sectors of the economy. Characteristically, this support has been primarily, if not exclusively, for financial markets and businesses. The Fed has created most of these funds through declaring the equivalent of a financial emergency under the authority given to it by section 13(3) of the Federal Reserve Act.

The Federal Reserve has so far made available up to $6 trillion to the financial markets through multiple 13(3)-sanctioned financial facilities, including a number revived from the group it used in the Great Financial Crisis of 2007-2009. Many knowledgeable observers believe this sum could get much higher. In fact, as the crisis has worsened, the Federal Reserve has been expanding almost weekly the kinds of financial institutions and markets it has been willing to support. These have included money market funds, commercial paper markets, and corporate bond markets. The Fed has even recently expanded its liquidity support measures to “junk bonds” and private equity firms. If the Federal Reserve can support “junk bond” issuers and private equity firms, it can certainly support state and local governments and public education.

Indeed, among the new facilities that the Fed has created is a Municipal Liquidity Facility (MLF) which currently has the capacity to buy up to $500 billion of state and municipal debt. This facility was created in order to calm the massive municipal debt markets which had been experiencing low liquidity, large spikes in interest rates, and financial instability at the onset of the crisis. In principle, this
facility could serve as a mechanism to channel needed funds to public education. With $500 billion in lending capacity, this would be an easy way for the Federal Reserve to begin to support the needs of public education. For example, the MLF could be used immediately to help state governments refinance outstanding debt at much lower levels, given that one of the goals of recent Federal Reserve policy has been to drive interest rates lower. This could free up millions of dollars of state funds for covering other Covid-19 costs.

Several obstacles stand in the way of public education accessing sufficient, useable funds through this mechanism. One is that education will be competing with many other institutions and interests for funds from the MLF facility, including those financing infrastructure projects and economic-development projects. Public education would simply be one of many interests vying for these funds and might lose out in this competition. A second potential problem is that the dominant way in which borrowers can access these funds is by identifying a clear revenue stream to finance interest payments and repayment of the loans from the Fed. But in the context of this public emergency, school districts and higher public education may find it difficult to identify a viable revenue source and do so in a relatively short time frame. (The MLF loans have a three-year maximum duration). Finally, as mentioned earlier, most states have balanced-budget requirements for current expenditures and regular operating expenses for education are considered current expenditures. Thus, borrowing to finance current expenditures for public education is likely to crowd out expenditures for other publicly useful activities or require governments to raise tax revenues, which is not likely during the crisis.

To address these problems, I explore several remedies. For one thing, many of these restrictions could be loosened or eliminated. The Federal Reserve has already loosened the rules governing the MLF once and they could do so again.
Alternatively, a new facility might be needed that could best address these obstacles.

**Public Education Emergency Finance Facility (PEEFF)**

With the approval of the Secretary of the Treasury, the Federal Reserve could establish, under section 13(3), a facility that would be designed specifically to provide emergency funding for public education for our children and young adults. I call this the Federal Reserve Public Education Emergency Finance Facility (PEEFF). This facility would provide both short and longer-term support to public education in order to help public education survive the pandemic and continue to provide needed education. Like the MLF, this facility could accept paper issued by state and local governments for the purpose of supporting public education.

The terms of this fund could be tailored specifically to the needs of public education. These terms could include lower interest rates and fees, longer terms (beyond the three years), and the ability to accept paper that it is not tied to immediate revenue generation but to revenue that could be generated over a longer terms period (or forgiven entirely).

The PEEFF could be created in a form similar to the MLF, with the creation of a Special Purpose Vehicle (SPV) with capital put up by the Treasury department (which has been allocated under the CARES act). Alternatively, it could be a stand-alone facility, such as some of the other emergency facilities created by the Fed in the recent pandemic. There is no law requiring it be created through a SPV structure with Treasury backing. (It should be noted, however, that as of this writing, not all of the initial $450 billion allocated by the CARES act to back up facilities at the Fed have been allocated.)

As long as the state is borrowing through its current spending authority, these borrowings might be subject to the balanced
budget constraint.

**State and Local Human Capital Bonds**

However, if the borrowings could be put on the capital budgets of states, this could give the states more flexibility. States could innovate by creating *Human Capital Bonds* that the Federal Reserve could purchase.

Most states’ balanced budget requirements apply only to the budgets for current spending. These states have separate capital budgets for longer term investments including new schools, new buildings on college campuses, new roads, etc. that are designed for borrowing. One way around the balanced budget problem is to identify this emergency education spending as a type of capital spending and put it under the capital budget. This would entail denoting these borrowing instruments as investments in *human capital*, using parlance long established in the economics profession. These *human capital bonds* could be issued under states’ capital budgets. An additional innovation would be to allow these bonds to be issued for longer than the current limit in the MLF of 3 years.

The MLF and/or the PEEFF could in turn buy the bonds. That purchase would be in keeping with the traditional economics understanding of education as building human capital. By putting its stamp of approval on these bonds, making a market in them and providing liquidity for this market, the Federal Reserve could be essential in creating a new financing tool for a critical social and public good for our country. In addition, the Federal Reserve’s financial support for these bonds would enhance their safety and help preserve the state’s bond ratings.

**Federal Reserve District Regional Human Capital Bonds**

A further innovation would be to create a regional consortium to issue human capital bonds. Regional groupings are emerging
as important innovations in the way our society is handling the fall-out from the Coronavirus. Regional differences in economics, politics and even culture are leading to these regional consortia and allow for a more flexible type of federalism to overcome acute adversity.

PEEFFs could be organized at the Federal Reserve District level, for example. The Federal Reserve Bank of Boston or the Federal Reserve Bank of San Francisco could host a PEEFF facility which issued regional Human Capital Bonds, and allocated the proceeds to states within the regions. State governments would take responsibility for allocating these funds for public education and for ultimately servicing their share of the bond issue. This regional plan builds on Federal Reserve practices developed during the Great Depression and enhanced during World War II.[2]

The Regional Federal Reserve approach has several advantages. First, it could help states overcome state-level debt issuing restrictions and ratings problems while being able to take advantage of regional risk-sharing facilities, lines of credit, and discount facilities through the District Federal Reserve. The District Fed would thus be able to reduce the risks to participating states. In addition, a Federal Reserve District Facility could help develop mechanisms for a more accountable and democratic Federal Reserve through effective elements of a more decentralized Federal Reserve System (see Epstein, “Reforming the Federal Reserve for the 21st Century”, in Epstein, The Political Economy of Central Banking: Contested Control and the Power of Finance. Elgar Press, 2019, chapter 23.) Building a more democratic Federal Reserve starting at the Regional level would build on a founding idea of the US central bank, but would help transform it into more accountability to the people, rather than to the bankers.

Conclusion

In addition to the huge direct human toll, the Covid-19 crisis
is de-railing many crucial social and public functions, including the education of the next generation. While federal government revenue-sharing would be the best way to confront this problem, the Federal Reserve can also contribute by creating additional needed resources and allocating them to state and local governments, as they have created many billions of dollars for corporations and financial institutions. I have indicated how the current Municipal Liquidity Facility might be utilized for this purpose, and how a new, specially-targeted educational facility, the Public Education Emergency Financing Facility, could serve the purpose of keeping public education afloat during this trying time. In either event, the Federal Reserve’s support of a new public financial instrument, Human Capital Bonds, might help funding of this crucial social good, especially in the context of an economic and social emergency.

[1] The author thanks, without implicating, Michael Ash, Doug Cliggott, Hasan Comert, Jane D’Arista, Christine Desan, Nancy Folbre, Dean Robinson, Max Paige and Esra Nur Ugurlu, for help with this paper.

In order to achieve racial justice in America, we must confront and then thoroughly reject simplistic and ahistorical myths about markets and capitalism. We have mistaken notions that (1) colorblind economic policies can fix vast inequalities created by centuries of explicitly race-based policies and (2) that free markets are an antidote to heavy-handed state policies of economic exploitation and exclusion. More narrowly, the reason that the United States has never significantly contemplated a meaningful program of racial justice is because demands for economic justice have been crushed by myths of self-reliance and neoliberal free market fundamentalism. The most recent and least understood of these political decoys was the Nixon era “black capitalism” program that was used to block meaningful reforms by offering capitalist dogma. These programs linked the Civil Rights coalition’s demands for justice with threats of communism in order to hide the history of heavy state intervention that created vast racial inequalities in wealth and income.
The 1968 Kerner Commission Report, which was the closest the US ever got to an official acknowledgement of its history of racial injustice, spoke to the phenomenon of protests and unrest in America’s segregated cities. The final report determined that the riots stemmed from poverty, racism, inequality and other social ills, but that the underlying cause was segregation. “Segregation and poverty have created in the racial ghetto a destructive environment totally unknown to most white Americans,” the report said. “What white Americans have never fully understood—but what the Negro can never forget—is that white society is deeply implicated in the ghetto. White institutions created it, white institutions maintain it, and white society condones it.” The report was an unapologetic excoriation of white society, which the commission deemed guilty not just of racism, but of apathy toward black poverty. The only way to address these injustices, according to the report, was through a robust federal response. Nixon won the 1968 election by promising that he would do no such thing. But first, his campaign had to get the messaging right. Alan Greenspan, who served as Nixon’s economic advisor, addressed claims by black activists for reparations in a private campaign memo to candidate Nixon in 1967 called “The Urban Riots of the 1960’s.” He wrote that capitalism itself was under attack by demands made by black militants and that “ghetto riots have become a rallying cry for an attack upon America’s system of free enterprise and individual rights.” Greenspan outlined his reasoning:

The critical question is, of course, whether the Negroes are correct in claiming that they have been exploited and that their violent reaction is the rational response. There can be little doubt that discrimination has been rampant. However, the charge of exploitation in the sense of value being extracted from the Negroes without their consent for the profit of the whites is clearly false . . . . This distinction between discrimination and exploitation is all
In other words, because whites had not profited directly from black misery, reparations should be rejected. Moreover, he underscored in the memo that any capitulation to demands for federal spending in the ghetto was a threat to free enterprise.

Greenspan believed that the cries of exploitation were misguided because black activists had misunderstood capitalism and the natural market of the ghetto, and had erroneously and unfairly blamed whites for exploitation. He was correct when he said that “profit rates in slum areas are doubtless distressingly low considering the risks,” but he erred when he concluded based on that observation that the white community was not gaining any “advantage and profit” and that therefore cries of “injustice” were “erroneous.” He could not see that the same system that discriminated against blacks had brought benefits to whites. Nor did he acknowledge that for blacks who were being crushed by the ghetto debt trap, it could still feel like an “injustice” even though the lenders were not making direct profits. He rejected the liberal notion that “the Negro ghetto must be elevated to the level of affluence of middle-class America” because “this can only be done by massive governmental expenditures.” Instead, he advised Nixon to pursue programs to “help Negroes help themselves.”

In line with the Greenspan-Nixon approach, Milton Freedman used theories and models of free market capitalism (as opposed to the actual economic history) to fight basic anti-discrimination laws in his foundational 1962 book, “Capitalism and Freedom.” The intellectual father of neoliberalism opposed such laws as a violation of free market capitalism. He decried
discrimination as a matter of bad taste, but said that Civil Rights laws were an “interference with the freedom of individuals to enter into voluntary contracts with one another.”[2] He compared laws prohibiting discrimination to laws requiring discrimination—it was all unjustified government intervention. Friedman believed that markets would themselves root out discrimination because it was costly and inefficient. Friedman claimed that anyone who opposed buying goods from black businessmen or employing black employees was expressing an inefficient preference and would therefore pay a higher price for that preference. Theoretically, this was true, but historically it was not. Because the ghetto had cordoned off a segment of risky borrowers, whites actually paid significantly less for goods, credit, and housing. Racial discrimination had not cost whites, but had actually brought many advantages through all-white suburbs, lower competition for lucrative jobs, and, for a time, even labor protections that benefited whites at the expense of blacks.

Friedman, Greenspan and other market capitalists grounded their arguments in economic theory. They were chasing a libertarian vision of the economy, but what they were describing was a hypothetical future—it had no relationship to the actual lived experience of American history. The historical American reality was that blacks had never fully participated in free market capitalism and that whites had benefited from heavy government interventions that had worked to the direct disadvantage of blacks. The arteries of trade and commerce had not flowed freely through the ghetto, at least not in the realm of credit and banking. Credit markets laid atop a federal government apparatus including guarantees, secondary markets, deposit insurance, and federal reserve support. The only places where those forces were not working were inside the ghettos. The ghetto itself had been an unnatural creation of anti-market impositions of racist
policies. Indeed, discrimination was incredibly costly, but only to blacks.

The neoliberal faith in capitalism and market efficiency was rooted in an ideal much like the egalitarian principles of the founding documents. They were aspirational faiths, but they were not accurate descriptions of the real world. In theory, it was costly to refuse to buy products from blacks if they were offering the same or lower prices. In reality, whites often refused to associate with blacks at any cost. Besides, even if discrimination did suddenly disappear, the broken markets of the ghetto would not. Discrimination had created macro market forces that were now operating on their own. Yet neoliberal dogma and market fundamentalism demanded adhesion to market theory, which meant an aversion to any and all “government intervention” aimed at black poverty.

The neoliberal right demanded smaller government involvement and spending in all spheres. Without spewing the racial animus of the George Wallace wing of his party, Goldwater, Nixon, Reagan and the rightwing judiciary and Congress opposed Civil Rights laws, integration, and any affirmative racial remedies—all in the name of free market capitalism. Since any redress for past economic exclusion required heavy federal government action, an immediate libertarian backlash began to delegitimize all government action. Conservatives began to demand a bill of rights that guaranteed the right to free use of property, including the right to segregated neighborhoods. The movement could hardly be seen as anything but a direct response to the economic demands of the black movement and the government anti-poverty program. Nixon was not a libertarian—he expanded the federal bureaucracy and created more government agencies than any modern president—but he still opposed government interference of any kind when it came to integration or anti-poverty measures. Republican strategist
Lee Atwater gave away the playbook in a 1981 interview: “You start out in 1954 saying nig***, nig***, nig***. By 1968, you can’t say nig*** — that hurts you, backfires. So you say stuff like, uh, forced busing, states’ rights, and all that stuff, and you’re getting so abstract. Now, you’re talking about cutting taxes, and all these things you’re talking about are totally economic things and a byproduct of them is, blacks get hurt more than whites…”

The theory of economic dogma which James Kwak has called “Economism” began to be adhered to like a religious dogma and used to fight each and every government intervention to remedy past sins. Economism even provided a new justification for stark wealth inequality and exploitation. Inequality along racial lines has been a constant on the American scene, but different eras have justified it with different myths. Christianity was corrupted to hold that white men had a divine right—even duty—to subjugate and enslave blacks. When religious theory fell out of favor, social Darwinism and skull measurements held that blacks were an inferior species who had lost the evolutionary race and thus their subjugation was nature’s will. Now, economic theory held that “the free market” decreed that blacks hold the bottom rung because, for example, it was the laws of supply and demand that caused blacks to pay more for credit, the market that determined how much their labor was worth, and that integration was anti-market. Any effort to change these markets were delegitimized and labeled as harmful government interference with what President Regan called “the magic of the marketplace.” And just as “God’s will” was difficult to challenge in the 1800s, so too was free market economic theory in the 1960s, lest one be labeled a heretic or a communist. For the ascendant libertarians that were taking hold of American politics, the only acceptable remedy for a history of exclusion was black capitalism. But what these white policymakers surely meant by black capitalism was capitalism only for blacks. Government
intervention in markets had been the norm, as were government-imposed Jim Crow laws. Capitalism had not created the ghetto and black poverty—racist laws and state intervention in the markets had created both. There had never been free market capitalism for blacks. After years of exclusion, Jim Crow, segregation, and the deviant markets these state interventions had created, the Nixon administration was actually proposing that maintaining that segregated market was the remedy. That somehow by attaching the word “black” to “capitalism” would remedy past wrongs. In order to achieve racial justice, we must offer economic remedies that adequately address a long history of exclusion. And in order to do that, we must confront and reject simplistic and ahistorical models of Capitalism.


State and local finances, including for public education, have been hit hard by the COVID-19 crisis, leaving more than a $500 billion hole in their budgets. Grants from the federal government would be the best solution for these temporary fiscal problems, but, even in the best-case scenario, it is unlikely that sufficient government funds will be forthcoming. Fortunately, additional resources could be made available through the Federal Reserve System (the Fed). This paper describes how the Fed’s newly created Municipal Liquidity Facility (MLF) can be used to provide substantial emergency assistance to the public education systems of states and cities. Although the MLF has a $500 billion lending capacity, public education would have to compete with many other institutions for this funding. This paper proposes a new special Fed facility, The Public Education Emergency Funding Facility (PEEFF), which would be dedicated specifically to funding public education. To fund education, as a new innovation, this facility could buy long-term human capital bonds from the states at very low interest rates. By buying these bonds, the Federal Reserve could help states maintain the crucial public job of educating our children and young adults during the pandemic, rather than only bailing out Wall Street.

D. Kennedy, The Fed Should Bail Out Low-Income Tenants and Not Just Banks and Landlords

May 12, 2020

Duncan Kennedy, Harvard Law School

In the last financial crisis millions of American home owners lost their homes while low-income renters were evicted en masse. This time the policy consensus is that renters thrown out of work by the crisis are already bearing the brunt of what may be an even worse disaster. For extremely low-income (ELI) households, the COVID crisis is aggravating what is already a highly distressed environment. The number of affordable units for ELI households is only 36 per 100, reflecting a shortage of 7 million units. 71% of ELI households are already spending more than half their income on housing (all figures from NLHIC 2020). There are many worthy plans on the table to avert the COVID rental crisis, pushed in editorials and op-eds in the New York Times, the Washington Post and the Boston Globe. They all have the serious drawback
that they require not just legislative action but taxpayer dollars in a hopelessly polarized political environment.

An alternative plan would be for the Fed to exercise, creatively, its vast powers over the monetary system to relieve poor tenants and prevent decimation of the remaining supply of low income housing. The Fed could buy mortgage debt, secured by low-income housing. Then it could bail out low-income landlords in exchange for tenant protection. The Fed would need Treasury support in order to protect against credit risk; without that protection the Fed would not be able to lend under current law. But the Treasury has generously extended protection against credit risk from its existing Exchange Stabilization Fund for large corporations, municipalities, the fossil fuel industry, and a variety of other borrowers. Surely the Treasury would do same to stop meltdown in the market for low-income mortgages.

The Fed should offer to buy the debt for more than the value of the underlying property but for significantly less than the face value of the mortgages. Creditors choosing to sell their debt would liquidate their losing investments for the price of a “haircut.”[1] Mortgage debt in hand, the Fed’s bailout of landlords and tenants would be done through the issuing banks that now hold the servicing contracts with the investors in the mortgage-backed securities into which individual mortgages are bundled. The Fed as creditor then instructs the servicing banks to forgive or defer some or all of the mortgage carrying charges of qualifying owners of low-income rental housing.

In exchange, landlords agree to a moratorium on evictions for non-payment and to forgiveness or deferral of the rent obligations of qualifying tenants. Landlords also agree to limits on their power to take units out of low-income residential housing use, and to strict enforcement of maintenance standards.[2]
The plan is based on the prediction that crisis conditions will push (are pushing) down the market value of the low income rental stock so that buildings are worth less than the face value of their mortgages – and that those conditions will persist well beyond the present moment.[³]

A realized plan to take advantage of the moment would be full of devilish details such as: how much if any means testing for tenants; what mix of rent forgiveness and forbearance; how big a haircut for the investors in mortgage backed securities; what restrictions on landlords’ rights to alienate their now rent-restricted property; how the Fed would exercise or dispose of its new creditor rights.

A big objection is likely to be that the Fed doesn’t know how to administer loans directly and certainly not low income loans containing complex tenant protections. The answer is that the servicing banks, usually originators with their own sub-servicers, will administer for the Fed just as they did for the holders of the mortgage when it was part of a mortgage-backed security. The Fed will have to supervise the servicers but not administer loans directly. This is not out of line with standard portfolio maintenance.[⁴]

As negotiated, the plan could be watered down so as to do practically nothing for low income tenants and a lot for landlords and holders of mortgage backed securities, or it could signal a vast gain for the working poor.[⁵]

The argument for a seriously pro-tenant version of the proposal goes beyond the mere assertion that if it worked it would benefit low-income tenants faced with economic wipe out and possible homelessness. Here are some of the assumptions that justify the various parts of the scheme as a response to the peculiar circumstances of the health crisis within the housing crisis that has been unfolding in metropolitan areas all over the country.
The various relief and bail out provisions of state and federal law will not come close to closing the rent gap for newly unemployed workers. The unemployment insurance system, backlogged with unprecedented claim volume, will not substantially overcome the gap for many months. Millions of workers now unemployed are not covered in the first place. The CARES Act provides certain forbearance and eviction moratorium to landlords and tenants in multifamily housing with a federally backed (=GSE or FHA) mortgage. But these provisions only cover one quarter of rental units, and even for those lucky few, protections are of limited duration. These provisions are also already running into administrative difficulties.

Owners of low income housing will see a precipitous decline in their rent rolls and in the present value of their equity in their buildings. Rent rolls will not cover mortgage covering charges, real estate taxes and current maintenance expenditures.

Among the decisions owners will have to make, a big one will be when to exercise their absolute legal power to evict tenants (except the very few represented by expert legal services lawyers) for failure to pay even part of a single payment when due, regardless of hardship. One possibility will be to empty a building and put it on the market not for low income housing but for conversion to middle or upper-income use. Another will be to forgive rent to the extent necessary to keep a building occupied while cutting back or eliminating maintenance, “milking” the building as it deteriorates.

The long-term trend in many metro areas of displacement of low income tenants in favor of middle and upper-income buyers will continue, even though middle and upper-income groups are losing wealth and income in the recession. Income inequality keeps bargaining power unequal in the housing market whether the economy is going up or down.
The recession will paralyze high cost upper-income development by new construction away from the city. Falling prices will make conversion of existing units in the remaining low income neighborhoods in and near the city much more desirable. Banks and brokers and builders will arbitrage units out of low into middle and upper income use, devastating what is left of affordable housing in the metro area.

A Fed intervention by conditional bailouts might prevent this result. (Note that passing a rent control bill with tenant eviction protection could accomplish some of the same.) That would be a major collateral benefit of preventing a chaos of eviction and displacement in the immediate future as low income people lose their ability to pay rent.

The beauty of it all: no legislative action required. No new taxes – federal, state or local. The Fed would be doing good first of all for big business, stimulating the economy through the familiar form of quantitative easing. The conditionalities for once support the survival of the poor rather than attacking them in the name of austerity.

The author is a retired Harvard Law School professor who taught low income housing law and policy for many years and still writes in that field.

1. What it is a “haircut” you ask? In ordinary times, property value (say, $10 million) is greater than mortgage face value (say, $8 million). But in crisis, property values can drop such that the relationship inverts. For example, the mortgage can become $2 million “underwater”, meaning the property’s liquidation dropped to $6m. In a stylized example, the Fed bids, say, $7m for the mortgage. The difference between the bid and the property price (=$7 million -$6 million) is the bailout to the seller; the difference between mortgage’s face value and the Fed’s offer ($8 million – $7 million) is the “haircut” or loss to the seller. ↑
2. Both my friend and a hyper critical semi-sympathetic legal economist X remind me that the structure of mortgage backed securities makes it difficult to identify creditors. X says that the trustee for the first syndicate that bought this mortgage to bundle it is the first responsible party, and could sue. But according to him the trustee could reassemble and sell the dispersed fragments by agreement of the dispersed crowd of the fragment owners, with no pre-set process to unbundle or deal collectively. It does seem that unbundling will involve substantial transaction costs, for someone. It also seems plausible that if the Fed offers hundreds of millions of bail out money to banks struggling with massive business failure all around them, quick witted finance entrepreneurs will figure out a way to get a share by helping the creditors get theirs. ↑

3. The Fed offers to buy mortgages at prices that reflect the extent to which the loan is under water. Everyone thinks the crash in rent means possible massive landlord default and concomitant loss in market value and danger of foreclosure. The creditors will only sell to the fed if something like that is happening. The amount of the haircut negotiated by the fed with the MBS holders depends on the level of distress and could be done for example, by a single fed offer to everyone or different offers for different situations.

The whole idea is that there might be a lot of distressed cases (listen to the moaning from the industry) but even a few would be all to the good. So the proposal is not dependent on there being some large minimum number of properties underwater by a particular amount. ↑

4. The concessions that need to be enforced cover:
- rent, building maintenance and evictions (again, forbearance or forgiveness, eviction moratoria with or without good faith eviction protection), and
- the agreement not to take the units out of the low-income stock (for some period of time).

The part that needs enforcement is the landlord’s promises to the tenants. The prohibition of conversion to higher-income use is easy because the landlord can’t convert the building without getting the Fed’s permission as mortgagee. That involves simple portfolio management.

The enforcement of the tenant protections is more complicated. The servicing of the mortgage is in the hands probably of the initiating bank, contracted out to a servicing firm. That firm collects the landlord’s payments and transfers them to the Fed. The servicer enforces tenant concessions by requiring the landlord to report rents charged, evictions for cause, code inspections and the like. Lying is a federal offense. The section 8 program enforces some tenant rights through this kind of mechanism.

The second enforcement mechanism is tenant self interest in the reduced rent, maintenance obligations and eviction protections. The Fed would require landlords to give a lot of information to tenants and would make it clear to the local legal services bar that it welcomes complaints to the servicer of landlord abuse of its agreement. Portfolio management of this kind would be new, but not that new, given that the Fed is already in the business of enforcing its bank operation regulations for the benefit of bank customers (analogous to renters). ↑

5. The outcome of the plan is that the losses of income
suffered by renters are born as follows:

- some portion by mortgage-backed securities owners (according to the size of the haircut);

- some part by landlords, who get carrying charge relief to avoid foreclosure but have to make all kinds of concessions to tenants;

- some part by tenants, in multiple ways determined by the amount of rent left to pay after forbearance and not forgetting the indirect benefit of the preservation of the stock;

- and some part by taxpayers, who assume the risks of default on the mortgages the Fed has bought.

Readers have had a lot of trouble grasping that this scheme distributes the cost of tenant relief among all parties with no predetermined specific outcome: it all depends on negotiations.
convoluted, and inequitably distributed. But while we talk about the steps taken to save the economy, we first need to know the structures in which that recovery originates. Who decides where the money goes, how are those decisions being made — and can these mechanisms be more effective? Not just in this current pandemic-induced economic contraction, but on a more permanent institutional level. How can we ensure our financial system is stable enough to weather these types of crises? After dedicating her academic career to answering these types of questions, law professor Saule Omarova joins to discuss her proposal for what that new type of institution can and should look like.

You can find the episode here: https://podcasts.apple.com/us/podcast/why-is-this-happening-with-chris-hayes/id1382983397?i=1000473624817

O.P. Abello, Getting to Know a Brave New Fed

April 29, 2020

Oscar Perry Abello, Next City

For me, as a journalist covering the economies of cities across the United States, this journey started maybe four years ago. That’s when I first stumbled upon this chart,
showing total reserve balances at the Fed.

Until October 2008, it had been relatively low and stable, consistent with what I had learned as an undergrad economics student – that banks are required to keep a certain level of reserve balances in their accounts at the central bank as part of a normally functioning financial system.

But then in October 2008, clearly something had radically changed. All of a sudden, reserve balances shot up to levels that seemed to make no sense, and then kept on going. And it was almost all excess reserves – orders and orders of magnitude beyond required reserves.

As a journalist covering the economies of cities, my instincts flared up. Was there some kind of insidious modern day
redlining at work here? I wasn’t sure at the time what it really meant, but at the surface level it certainly seemed plausible that banks were “sitting” on huge amounts of excess reserves at the Fed while every neighborhood I was writing about was struggling to get loans for homeownership or small business. But I wasn’t going to go around making such wild accusations without backing it up with more evidence, data, and perspective.

So, I fired off a few emails to some of the most experienced community bankers I knew, but who had been several years retired from running a community bank. They weren’t sure what was going on either. I couldn’t figure it out in between deadlines, so I filed it away on the mental shelf for a while.

Then came Coronavirus. In response to the economic fallout from this pandemic, unprecedented in both the scale and speed of economic disruption, the Fed suddenly seemed determined to bully its way onto my beat. In just one day, March 23, it leapt into action in ways that took years after the onset of the last financial crisis.

The week after that, on March 31, I published my first story about the Fed, focusing on its latent powers to buy municipal bonds and how close it was to finally using them for the first time. Just a hint of what it could potentially do.

But that was just one story, and I needed to keep digging. For the sake of serving my readers, I needed to understand what the Fed was really doing and how it was going about its work.

I had a working understanding of how the Fed operates. But now
that it was becoming more directly active as a player in my
coverage area, I needed to understand it as intimately as I
understood commercial banks and credit unions and loan funds
and foundation endowments and private capital markets and
public capital markets – all the pools of capital I had
reported about over the past few years with a focus on how
they reach some neighborhoods more than others.

I looked first where I look with every other financial
institution – its balance sheet. And once again I came across
the baffling fact that banks’ reserve balances made up the
largest share of the Fed’s liabilities, even more than
currency in circulation at that moment and for much of the
previous decade.

It was at that point I finally understood that all those
reserves on the Fed’s balance sheet clearly had something to
do with all the things that were now popping up on the other
side of its balance sheet and that seemed to be driving some
experts mad with fears of inflation and general “running
amok.”

My understanding evolved from my initial instincts. Banks
weren’t sitting on cash they should have been lending out. As
I have come to learn over the course of a few weeks, those
reserve balances at the Fed were actually just a by-product of
the central bank’s response to an economic crisis – some of it
left over from the last crisis, and even more in response to
this one.

Very little if any of this might be new to people who study
the Fed all the time, but I needed to connect the dots in a
way that worked for me as a journalist, so that I could later
connect the dots for my readers.

Poring over papers upon papers, mostly from various research shops at Federal Reserve branches around the country, I eventually came across one 2009 paper from the New York Fed, the heart of it all, explaining how the overall level of reserve balances is based solely on the actions of the Fed, and not any decisions on the part of banks. It sounded crazy at first, but the paper explained everything using the thing that made the most sense to me as an economics journalist—balance sheets.

As that paper explained, even the Fed still needs to keep its balance sheet balanced. When the Fed began creating emergency liquidity facilities in December 2007, in order to balance its balance sheet, the Fed decided initially to sell off Treasury securities and replace them with the emergency liquidity facilities. That kept the initial changes only on the asset side of its balance sheet.

But by mid-2008, the crisis wasn’t even fully realized yet and it was clear things were already going to get worse before they got better. Lehman Brothers collapsed in September 2008. The Fed had already sold off a lot of Treasury securities and it was further expanding its liquidity facilities as the financial crisis got worse. The Fed wasn’t about to sell all its Treasury securities. So, the liquidity facilities started showing up on the other side of the balance sheet as bank reserve balances.

As the New York Fed paper also noted, for a little while the Treasury tried creating a mechanism to drain some of the excess reserves on the liability side of the Fed’s balance
sheet, but even that mechanism couldn’t keep up with the growth of the emergency liquidity facilities.

By October 2008, to use words that would become immortal half a decade later, the Fed finally decided to “let it go” – to just let the reserve balances start building up within the system and worry about it later.

And the Fed would need to really “let it go” with what would come next – quantitative easing. The first round, of course, started in December 2008.

While serving a different purpose than emergency liquidity facilities, the effect I could see on the liability side of Fed’s balance sheet was the same. Quantitative Easing meant buying huge quantities of assets on one side – federally guaranteed mortgage-backed securities and longer-term Treasury securities – which in turn meant even more reserve balances started building up on the other side of the balance sheet. As I came to understand, the Fed was using its unique power to create deposit liabilities on its own balance sheet at a scale that was once thought purely theoretical and potentially disastrous in theory as a cause of rampant inflation. But those fears were all in theory.
By October 2009, reserve balances broke $1 trillion for the first time ever. By August 2014, after three rounds of QE on one side of the balance sheet, reserve balances on the other side peaked at nearly $2.8 trillion. The Cleveland Fed wrote a 2015 briefing about it calling excess reserves, “Oceans of Cash.”

There was for a time a huge question of when or if the Fed would let reserve balances come back down, as assets on the other side of its balance sheet matured or the Fed sold them back to the market. From 2014-2019, that’s exactly what one paper from the Kansas City Fed showed was happening, quietly, smoothly, behind the scenes. That paper also gave a useful but very broad breakdown of which banks it was — foreign banks, large and smaller domestic — that had reserve balances built.
up and winding down in their accounts at the Fed. By September 2019, total reserve balances at the Fed were back down to $1.4 trillion.

Then came the economic disruption from the COVID-19 pandemic. Quantitative Easing, episode four, began on March 23 — “a new hope,” the St. Louis Fed called it. Between March 11 and April 1, total reserve balances went up a trillion dollars. On April 9, the Fed announced $2.3 trillion in emergency liquidity facilities that touched more parts of the economy than it has ever touched directly before, including small businesses, the corporate bond market, and the municipal bond market.

By April 22, total reserve balances broke $3 trillion for the first time. By now, whatever fears might have existed inside the Fed before 2008 about reserve balances building up within the system had either been re-educated away or retired or were being flat-out ignored. It seemed not to matter anymore. This was a brave new Fed.
Beyond the mechanics of what was happening with the Fed and its balance sheet, as a journalist it became important for me to connect the dots to the CARES Act. The political process had found a way of explicitly shaping the Fed’s liquidity facilities. While far from perfect, what political process is perfect?

The key was the $454 billion Emergency Stabilization Fund created under the CARES Act. Nathan Tankus, in his very helpful recent writings about the Fed, calls it an “accounting gimmick.” I don’t dispute his characterization of it from a technical perspective, but in another sense, those funds are the vehicle by which the political process is shaping the Fed’s crisis response.

Section 4003 of the CARES Act lays out the process for how the Emergency Stabilization Fund gets divvied up. The legislation directs the Treasury Department to use those dollars to make
“loans, guarantees or other investments” into various emergency liquidity facilities, and the Federal Reserve comes in with its balance-sheet fire power to leverage the Treasury’s initial investment.

Subsequently, the Treasury allotted $75 billion for the two corporate bond market emergency liquidity facilities, which the Fed is leveraging up to $750 billion in bond-buying power. There’s $35 billion initial investment from the Treasury for the municipal bond market facility, which the Fed is leveraging up to $500 billion.

Most remarkable to me was the Main Street Lending Program. The Treasury Department allotted $75 billion from the Emergency Stabilization Fund for this facility, and the Fed is coming in with $600 billion behind that. That $600 billion will go out in loans to eligible businesses, under terms that include one year of deferred payments, accountability measures to retain employees, limits on executive compensation, and prohibitions on stock buybacks or paying off other debt using Main Street loan proceeds. The $75 billion will cover for any losses on the loans up to that amount before the Fed eats any losses.

Using loan participations, private lenders will underwrite and originate Main Street loans and the Fed will come in behind the scenes to supply 95 percent of the borrowed amount, leaving 5 percent on the private lender’s balance sheet to make sure they have some skin in the game. Having reported a lot recently about the Bank of North Dakota, the only state-owned bank in the country, loan participations by a public entity weren’t so far-fetched to me, but I’m sure they would seem so to others around the country.
With a $1 million minimum loan size, the Main Street Lending Program is not quite accessible to most small businesses, but that minimum could go away later if the Fed and Treasury can be convinced of the need — or maybe Congress can straight up order them to eliminate the minimum. So, in summary, the Main Street lending facility is effectively one line on a term sheet away from being accessible to the vast majority of small businesses in the country, provided they were in good financial shape before the pandemic.

The municipal credit facility also seemed to have shortcomings, but not entirely unworkable, and outcries at initial terms and eligibility have already altered it. Initially it was only available to cities with at least one million people, or counties with at least two million people, leaving out a lot of hard-hit places. On April 27 those thresholds changed to counties with at least 500,000 people and cities with at least 250,000. Maximum maturity of two years initially seemed a bit shorter than ideal, and that changed to three years. The Fed is even considering allowing additional public entities to participate, like school systems, housing authorities, transit authorities and other public entities that issue revenue-backed bonds.

As a reporter, these were all brand new and fascinating lines of questioning about the ways that each facility works and how each would be received among the private financial institutions with the most potential to make them work for the most vulnerable communities.

The Fed is flexing muscles it never used before 2008. The next time around, people need to know, they can demand that Congress make the Fed open up existing facilities to more people and places. They can demand that some of “Emergency
Stabilization Fund 2.0” should be allocated to capitalize vehicles that do other things justified under the rubric of “stabilizing the economy in a crisis.”

What if, next time around, the Fed capitalized a small facility to make loans to black-owned businesses or to buy preferred equity shares in MDIs? A secondary capital facility for credit unions? Or a facility to acquire distressed residential or commercial real estate and sell it back to current occupants or to the market with deed restrictions for permanent affordability? What if there were a network of smaller facilities that would be administered by state or local governments – making them de facto public banks, with equity from Treasury as initial capital bases and leverage from the Federal Reserve?

It’s tempting to speculate about having the Federal Reserve’s balance sheet firepower behind priorities like those. But, as a journalist, I don’t have any horse in the race when it comes to which ideas or causes for advocates to back.

What I do have is a journalistic mandate to examine whether financial institutions, public or private, are able to support the people and places that, based on historical patterns, are most likely to be left behind in a crisis or a recession. The Fed is no longer just a systemically essential but distant player in that narrative; it was suddenly, squarely within my beat and doing new things that people deserved to understand better.

The Fed’s post-October 2008 way of operating implies new ways of making demands and holding public officials accountable. It changed in ways that needed to change how I worked, and should
probably change how at least some of my readers work. People who care about economic justice and righting the wrongs of history need to know exactly how this brave new Fed works in order to understand more clearly what to demand and how to make demands of an institution that is supposed to be working on behalf of us all.

---

**F. Brunton, Virtual Money at the Edge-of-State**

April 28, 2020

**Finn Brunton, NYU Steinhardt School**

To the themes already taking shape in this roundtable on the relationship between states and virtual currencies, I would like to add the role of a zone that I’ll call “edge-of-state.” This is inspired by the use of edge-of-grid as a term in electrical infrastructure to describe those spaces which are neither outside existing infrastructure — self-sufficient, off the grid — nor inside and completely and reliably embedded on-grid. “Edge-of-state” is my way of talking about two conditions at the fringes of the money apparatus of states and central banks, which together have shaped the facts and fantasies at play in the creation of virtual currencies. These edge-of-state conditions, *interstitial* and *interregnal*, involve plenty of non-virtual monetary practices, while also providing considerable latitude for dreams — space in which to imagine scenarios. They are productive of the speculations (in
both senses) that characterize utopian virtual currency.

Many of the founding notions of virtual currencies – particularly Bitcoin – involved the idea of money that could function in the seams of the operational spheres of central banks. Of course, many existing assets and forms of money occupy exactly this zone, whether offshore, freeport, or haven. Virtual currencies draw less on this set of actual practices (anyone with that kind of wealth has no need for rickety software projects with earnest YouTube evangelists and dank-meme in-jokes) than on the idea of a disruption of central banking, technological and political, which creates new kinds of interstitial space. The interstitial is the idea that the “agora” can be everywhere, as Ross Ulbricht envisioned when creating the Silk Road Bitcoin-denominated darkmarket: “every single transaction that takes place outside the nexus of state control,” he wrote, “is a victory for those individuals taking part in the transaction. … [E]ach one makes a difference, strengthens the agora, and weakens the state” – not any state in particular, but the very idea of the state itself. For this model, the bitcoins you hold act as tokens of your divided loyalty. They don’t place you outside one state monetary regime and inside another, like holding a foreign currency or paying fees to send a remittance payment. Instead they situate you in an interstitial zone where part of your ready money is only “ready” for other outsiders who operate part-time in the same vacant spaces of the as-yet-unregulated, the unnoticed, untaxed, or illegal – and the money itself, unlike bags of laundered but legitimate dollars or euros, belongs to that space. Interstitial currency is the spatial experience of edge-of-state: the areas on the margins of monetary regimes and state structures, where it’s easier to envision wildcat techno-financial inventions in the negative space of existing institutions.

This expansive fantasy of true liquidity is one that can flow into every interstitial space: from refugees between
countries, to sans papiers without bank accounts, to the business of selling citizenship-of-convenience “passports for Bitcoin” to panicky suckers. This notional liquidity imagines the architecture of issue, transaction, and settlement working everywhere and nowhere, smeared out into the edges of the world’s systems and infrastructures wherever they pull apart and create gaps, or squeeze too tight together and create jurisdictional overlaps, interference, and opportunities for arbitrage. (In practice, of course, this technological architecture is emphatically, physically somewhere, and very much on-grid, but let that pass.)

Attempts to produce actual territory for utopian virtual currency – a truly offshore zone, a permanent interstice – have about them the cranky charm of all micronational movements, obsessed with issuing declarations and franking stamps as proof of existence: Liberland, for instance, which aims to occupy a disputed island in the Danube, and initially plans to launch its micro-state based on a blockchain governance platform with a seafaring habitat called Bitcoin Freedom. (Liberland’s history includes a relationship with Roger Ver, the Bitcoin booster who tried to sell citizenship and passports issued by St. Kitts and Nevis – the smallest sovereign nation in the western hemisphere – linked above.) However extreme their goals, the starry-eyed unreality of the new-nation approach – somewhere between performance art, satirical hoax, and the earnest bullet points one associates with Esperanto, decimal time, and orthographic reform – points up how much utopian virtual currencies need the edges of existing systems as their terrain. Without the interstitial, obliged to function as something other than the rebellious alternative to a dysfunctional or restrictive establishment, they rapidly hit the limits of their particular functionality.

In this roundtable Lev Menand has described a class of virtual currency as “utopian coins” (as distinct from backed-and-tethered stablecoins, or the corporate initiatives built on
points and rewards — and hybrid projects like the top-heavy broken mecha suit of Facebook’s Libra, blowing gaskets and sinking deeper into the mire with every colossal step). The utopian imagination of virtual currencies is distinct from classic utopian social models, which tend to be fixed, eternal, and spatially planned: Campanella’s City of the Sun, neat as a Swiss watch within its seven circular walls. Instead, fired up by the idea of transacting within the ragged interstitial chaos between areas of authority, the utopian space of the utopian coin has its foundation in the particular libertarian spatial necessity of an edge, a frontier, or an underground within the system as it currently exists, where the new currency and its philosophy can take root: the Colorado town concealed from the world in Atlas Shrugged, the parallel network of wildcat banks and contraband emporia woven through the failing state in the founding novel of agorist libertarianism Alongside Night, the encrypted partition on a laptop’s hard drive.

If the interstitial imaginary locates currency within in-between spaces of states, the closely related interregnal is the occupation of failures of or transitions between monetary authority, likewise productive of both fantasy and actual practice. Think of Curzio Malaparte’s account of a Ukrainian collective farm immediately after the Germans arrived in summer 1941 (he was covering the war for an Italian newspaper): a soldier comes in to buy a goose, kicking off a debate about what currency to use. The farmers finally sell it for fifty Romanian lei (five lire, Malaparte translates for his readers, comically cheap); “what can you expect us to know about prices?” asks a younger farmer carrying around a German requisition warrant for two horses, which she doesn’t know how or where to cash. “The Bolsheviks used to tell us: ‘This costs so much, that costs so much.’ You ought to do the same yourselves. You ought to begin by telling us how much the lei is worth in relation to the rouble.” “Naturally there will be some uncertainty at first,” Malaparte replies, uselessly. The
interregnal, like the interstitial, is not outside the state but alongside, in places where the state becomes vague, uncertain, and unreliable, like edge-of-grid power: subject to fluctuations, handoffs, and the occasional complete blackout.

“Who taught us how to cheat if not the state,” demands the terrifying discharged soldier in Stefan Zweig’s The Post-Office Girl, an account of the First World War’s aftermath in Austria. “[H]ow else would we know that money saved up by three generations could become worthless in a mere two weeks, that families could be swindled out of pastures, houses, and fields that had been theirs for a hundred years?” That “mere two weeks” and “a hundred years” is one of the temporal feelings of the interregnal, reflecting a sudden question as to the capability and authority of the state to declare what passes as money and maintain its value, as part of the practice of sovereignty. I would like to set aside the practical responses to such a situation — the Flucht in die Sachwerte, the “escape into real assets,” as people scramble to acquire paintings, wine, real estate, precious metals and stones, and the rest of the contents of the oligarchic safe deposit box — and instead explore interregnal moneyness, alongside the interstitial, as a state of mind that is very productive of utopian coinage amidst the crises of confidence.

Elias Canetti underwent a strange nervous breakdown in 1925, compulsively writing “MONEY, MONEY, AND MONEY AGAIN” in capital letters on page after page of paper, scattering them on the floor around him — “I couldn’t stop writing.” Newspapers reported largely apocryphal (but culturally telling) cases of “zero stroke” as clerks and bookkeepers found themselves handling hyperinflationary transactions of endless billions and trillions (“Many of these persons,” as John Kenneth Galbraith quoted the New York Times, “are apparently normal, except for their desire to write endless rows of ciphers”). And pamphlets, tracts, and schemes poured out to transform money and its state relationship. These
ranged across replacing the inflationary authority of central banks with currency pegged to land, food, a “market basket,” or a depreciation schedule so cash went out of date like a newspaper, rotting if unspent; they went so far as to argue for the elimination of currency entirely, as in broadsides like Berthold Otto’s 1924 The Abolition of Money, in which society operates through an austere statewide accountancy system for life’s essentials, and we settle into the sitting room after generating our “demand units” to read the day’s statistics of town-by-town production and consumption.

The interregnal puts money into a place where new currencies can be imagined against and alongside the existing issue, building on the value systems they advantage and proposing new ones. As an edge-of-state experience, the interregnal is sometimes a fact, sometimes a state of mind, and often both. We can see it in artifacts, like that issue of the Times with its bank bailout announcement encoded into Bitcoin’s genesis block, as Bill Maurer has described in this roundtable; we can see it in the very specific approach to monetary history at work in the ideologies of early virtual currency, with a focus not on the quotidian, institutional business of banking and debt but on inflationary crises, asset seizures, currency debasement, and dire prediction, where interregnal space opens up.

This essay has been an attempt to situate the territory of virtual currencies in relation to the territory of the state and state monies as neither within nor without, but in a marginal mode I’ve been calling edge-of-state. These edge-of-state experiences, spatial and temporal, are characterized by looseness, flux, the presence of authorities with an absence of regulation or oversight, chronic uncertainty, a lack of confidence and a lack of clarity combined with existing systems to imagine oneself against, and lots of boundary work and explanatory neologisms. I would like to suggest that this edge-of-state mindset can explain some of the historical
heritage of virtual currencies, and that it may have a little predictive power: we can look to zones of interstitial space and interregnal time in the world’s currencies and transactions to spot further evolutions of these utopian currency fantasies and experiments — the hothouses for more of these outrageous, sometimes successful, and occasionally poisonous blooms.

B. Geva, Payment in Virtual Currency

April 22, 2020

Benjamin Geva, Osgoode Hall Law School of York University[1]

By reference to an analysis of the operation of payment in traditional forms of money, this essay explores the meaning of ‘virtual currency’[2] and the mechanism for payment in it. Endeavoring to identify directions in which events will unfold, the essay sets the stage for a future detailed analysis of pertaining legal aspects.

Payment of money has traditionally been made in either currency or account balance. Payment in currency is by physical delivery from one person (payer) to another (payee) of banknotes and coins. Typically, this is a face-to-face process which does not require intermediaries. More specifically, ‘payment’ is “a bilateral act which requires the
[payee] to accept the [payer]’s act of tender”; and is completed on the passage of possession in the money when the payee takes delivery, thereby manifesting the acceptance of the tender. Typically, banknotes and coins are denominated in the unit of account of a national currency and are legal tender in the country of issue.

Payment in account balance requires intermediation. It is carried out by having the payer’s account debited and the payee’s account credited. Typically, both accounts are held at regulated financial institutions, broadly speaking, banks. Both accounts are typically denominated in the unit of account of a national currency. Payment is performed by means of either the extinction or reduction of the debt owed to the payer by the payer’s account-holding bank and either the creation or increase in the debt owed to the payee by the payee’s account-holding bank. Where payer and payee hold their respective accounts at two banks that are correspondents, payment in account balance requires the debiting the account of the payer’s bank by the payee’s bank or crediting the account of the payee’s bank by the payer’s bank. In a domestic payment system, at least all major banks hold their accounts with the central bank so that the interbank component of payment between two such banks is carried out as part of the multilateral interbank settlement on the books of the central bank. Otherwise, payment in account balance requires a chain of settlements on correspondent accounts, with or without settlement on the books of the central bank, or alternatively, one settlement between correspondent banks followed by another settlement on the books of a central bank.

The architecture of the interbank payment system is centralized. Thereunder, a bank maintains accounts for customers. For its part, a large bank may also maintain accounts for correspondent banks. Finally, the central bank maintains settlement accounts at least for large banks. As a whole, the system can be visualized as a pyramid at whose head
or apex stands the central bank with which at least large banks hold accounts, and possibly with small banks holding accounts with large banks. Individual and corporate customers are at the bottom or base of the pyramid holding their accounts in banks (whether large or small). Money denominated in the domestic fiat currency and held in bank accounts is redeemable in banknotes and coins which usually constitute ‘legal tender’.

With the advent of electronic banking, it became possible to initiate, transfer and process payment instructions electronically. Payment in account balance so performed is known as an electronic funds transfer. It became also possible to ‘load’ monetary value (that is, value denominated in an official or, in fact, any unit of account) on a tamper-resistant stored-value device such as a card or personal computer.

In such a case, the value became known as ‘electronic money’ or ‘e-money’. Most e-money schemes have involved “balance-based” products. In such products, devices store and manipulate a numeric ledger, with transactions performed as debits or credits to a balance. Accordingly, this type of e-money is a monetary balance or value recorded electronically on and is available from a stored-value product (SVP), such as a chips card, or a hard drive in a personal computer, or a server. Such a record, accessible from the device without resort to the bank’s computer system, can be viewed as a decentralized bank account. E-money is said to “differ ... from so-called access products, which are products that allow [customers] to use electronic means of communication to access otherwise conventional payment services” in and out bank accounts.[4] Alternatively, with a ‘pre-paid product’ variant, monetary value is available from a master account, belonging to the issuer or someone acting on the issuer’s behalf.

A minority of e-money products may still operate on devices
that store electronic “notes” (sometimes called coins or tokens) that are uniquely identified by a serial number and are associated with a fixed, unchangeable denomination. In such a “note-based” model, transactions are performed by transferring notes from one device to another, and the balance of funds stored on a device is thus the sum of the denominations of all notes on the device. However, as in the “balance-based” products, transferability is typically restricted, and cardholders may usually make payments only to merchants who may clear these payments or deposit the accumulated balances exclusively through their acquiring banks.

E-money is ultimately a variant of ‘bank money’; thus, whether e-money is purchased in cash or by means of a debit to the purchaser’s bank account, the issuer has its own bank account credited with the amount sold to the purchaser. Where the e-money is purchased from a bank, the account credited is the reserve account of the selling bank. Payment in e-money is forwarded to the payee’s bank which credits the payee’s account with the amount of payment and forwards the e-money itself for redemption against the value previously credited to the seller’s account. In the final analysis, even where prepaid value or e-money is not issued by a bank, a scheme must facilitate the purchase and redemption through banks.

Particularly outside the banking system, a balance-based payment product need not necessarily be provided in an official unit of account. For example, a balance-based payment product may be denominated in weight units of gold. As well, a balance-based product may be redeemed by specific product, usually the one in which it is denominated. Furthermore, a balance-based product may be backed – in whole or in part – by a reserve made of the product itself. In fact, any proposed ‘full reserve banking’ scheme will provide a balance-based bank product fully backed by central bank money.

For its part, digital currency consists of digital coins, and
is a completely stand-alone category distinguished from both currency (cash) and balance-based (including e-money) products. A digital coin is a distinct entity consisting of data expressed in a unique string of bits which represent value.\(^5\) Like physical coins and banknotes, digital coins are not paid out of bank accounts so that their payment does not appear to require intermediation by banks. And yet, exactly as the electronic funds transfers, they are paid over the cyber space. A privately issued digital currency is known as ‘virtual currency’ and may have its own unit of account, fluctuating by reference to the value of an official unit of account, in which case it is self-anchored. Alternatively, it may be a ‘claim check’ or stablecoin, either in a unit of account of an official currency, or in the value of a specific commodity, whether or not it is fully (or even partially) backed by a reserve of such currency or commodity. Each coin may be in the form of a total unspent amount in a wallet or a representation of what otherwise would be a physical banknote.

Virtual currency is frequently treated as a digitally-traded or transferrable digital representation of value.\(^6\) In my view, a definition along such lines is too broad. It encompasses account balance represented and transferred digitally and entirely misses the fundamental feature of the separate identity of each digital currency coin, facilitating holding and transferring without an account.

An account as well as an undivided share in a stock of digital coins may however be held with an exchange or other depositary or virtual bailee. Controlling them, the latter may thus occupy a position analogous, or at least similar, to that of a bank in relation to the deposit of funds.

Unlike payment in account balance, payment in digital currency need not be recorded on a centralized ledger. However, in a given scheme, coins may be issued, transferred and redeemed under centralized protocol in which case the scheme is said to
be centralized. Conversely, a scheme under which a digital currency is issued, transferred, and redeemed over a distributed ledger is decentralized. Finally, a digital currency transferable under a decentralized protocol – such as over a distributed ledger and yet issued by a centralized operator – is hybrid.

Centralized protocol does not require the intermediation of bank accounts and is thus entirely different from a centralized architecture in account-balance payment systems. At the same time, payment in digital currency, while being made from one digital device to another, requires the intermediation of an electronic network. Depending on its format, it may further require the intermediation of a custodian acting as a virtual storer or warehouse person for the coins.

The distributed ledger underlying decentralization is an asset database that can be shared across a network of multiple sites, geographies or institutions. Blockchain is an underlying technology, requiring the Internet to support and maintain its peer-to-peer network, that enables digital implementation of a distributed ledger. Being a computerized ledger on a distributed network, it generates a single version of the record on each computer. Its essence is:

a type of a database that takes a number of records and puts them in a block ... Each block is then ‘chained’ to the next block, using a cryptographic signature. This allows block chains to be used like a ledger, which can be shared and corroborated by anyone with the appropriate permissions.

Accuracy of the ledger is corroborated under a method determined under rules adhered to by participants. Record security and visibility to authorized users is ensured by cryptography.
A “cryptocurrency” denotes a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the execution of payment transactions on a decentralized network. Cryptography is thus used in cryptocurrencies to express and protect the value of the coins (the sequence of the bits), to prevent counterfeiting and fraudulent transactions, as well as to perform validation, execution and recording. These functions are carried out on a distributed ledger, such as a blockchain. Thereon, each block contains a cryptographic hash or algorithm that links it to the previous block along with a timestamp for the transactions from that block. The network allows online payments to be sent directly from one party to another without going through a bank or any other account holding centralized counterparty.

The mechanics of payment in a digital coin depends on the specific design of the coin and its underlying scheme. As stated, the mechanism requires the use of a telecommunication network. But to avoid double use of the same digital coin, it also requires some validating intermediary. Several options are available:

1. Being in control of a digital coin ‘affixed’ to a single internet domain, for which it attorns to the payer, a ‘baliee’ complies with the payer’s instructions and executes them by attorning to the payee, thereby causing ‘possession’ in the coin to be transferred from the payer to the payee.

2. A ‘coin’ in the form of an unspent transaction output (UTXO)\textsuperscript{18} in the payer’s wallet, reflecting earlier transactions, is transformed into a new UTXO in the payee’s wallet. Where the payer does not use up the entire UTXO, payment is carried out by splitting the payer’s UTXO into two UTXO’s: one in the sum of payment going to the payee’s wallet, and the second, in the amount of the balance of the UTXO, remaining in the
payer’s wallet.

3. The payer sends from his or her digital device to the payee’s device a ‘coin’ or any split of it. The payee may (but is not required to) validate the coin authenticity with the ‘mint.’

Respectively, these are the methods of payment in WingCash, Bitcoin and BitMint. Among these three, only Bitcoin requires a blockchain and is a cryptocurrency. Neither WingCash nor BitMint are cryptocurrencies. No blockchain is required in BitMints or even exists in WingCash.[9]

Arguably, payment in digital coins is completed when the coins get under the full control of the payee. From this perspective, completion of payment in digital coins and the discharge of the debt paid by them are governed by rules that are fundamentally similar to those governing payment in cash as well as in account balance. This, however, does not resolve the question of loss allocation where something goes wrong by the intermediary, namely the blockchain, ‘mint’ or switch. In principle, between the payer and the payee, loss is to be allocated as agreed between them, except that the law should establish a preemption, one way or another.

Predicting the impact of digital currencies is beyond the scope of this essay. I will however conclude by pointing at two directions to watch for.

First, payment in a digital currency bypasses account intermediation which is at the heart of payment in account balance. In the struggle for market share, efficiency thus appears to side with digital currencies. However, use of the latter raises its own risks, relating to trust, financial stability and misuse. Certainly, to meet such risks, oversight and regulation are required. The challenge is to ensure such oversight and regulation will put both methods of payment on an equal footing.
A second perspective to be watched is the competition between ‘self-anchored’ and ‘claim check’ virtual currencies, or more specifically, those denominated in an official currency.\(^\text{[10]}\) At the heart of this competition is the old controversy as to the concept of money, i.e. whether its value is based on the salability of the material from which it is made or on the power of its issuing authority. Having historically identified gold as the optimal material on the basis of its low stock-to-flow ratio,\(^\text{[11]}\) the former is known as the metalist\(^\text{[12]}\) approach. The latter is known as chartalist.\(^\text{[13]}\) Not surprisingly, metalists anticipate the triumph of ‘self-anchored’ currencies with low stock-to-flow ratio, such as Bitcoin,\(^\text{[14]}\) which may thus be characterized as ‘digital gold.’ For their part, chartalists are likely to anticipate the triumph of ‘claim check’ currencies denominated in an official currency unit.\(^\text{[15]}\)

---


4. CPSS, Implications for Central Banks of the development of electronic Money (Basle, October 1996) at 1, emphasis in the original; online: https://www.bis.org/publ/bisp01.pdf, visited January 17, 2020. ↑

6. See e.g. Section 102(23) Uniform Regulation of the Virtual-Currency Business Act, Drafted by the National Conference of Commissioners on Uniform State Law (NCCUSL) and approved and recommended by it for enactment in all the states in the United States at its Annual Conference Meeting in its 126th year in San Diego, California on July 14-20, 2017. So far it has been enacted in Rhode Island and introduced in California, Oklahoma and Hawaii. It is available online with Prefatory Note and Comments (and more information) at:

7. UK Government Office for Science, “Distributed Ledger Technology: beyond block chain” (2016) at 17, online:

8. The term is explained e.g. in https://komodoplatform.com/whats-utxo/ , visited on January 16, 2020. ↑

9. These systems are set out in Geva, n.1 *supra*, where direct sources are cited. ↑
10. I assume that it is issued by a trusted, properly regulated entity so as to bear a similar risk to the officially issued currency. ↑

11. This is the relation between its existing supply and the extra production that will be made in the foreseeable future. A currency with a low ratio is ‘hard’ so as to maintain its value. ↑


13. For this theory see at length: L. Randall Wray, “From the State Theory of Money to Modern Money Theory: An Alternative to Economic Orthodoxy (Working Paper No. 72, March 2014, Levy Economic Institute of Bard College) ↑


M. de Castro Cunha Filho & S. Silbey, What lies behind the
apparent trust in cryptocurrencies?

April 15, 2020

Marcelo de Castro Filho, University of São Paulo
Susan Silbey, Massachusetts Institute of Technology

At the core of Lev Menand’s and Bill Maurer’s contributions to this roundtable lie one important conclusion: virtual currencies[1] are challenging the long-standing and conventional distributions of power in the production of money. Lev Menand states explicitly that virtual currencies such as the cryptocurrency – or utopian coin – Bitcoin, the corporate coin Libra, and the stablecoin Tether will inevitably affect the way monetary policy is conducted. According to Menand, virtual currencies in general have the potential, if not the probability, to produce multiple monetary harms: to reduce economic control, lose seigniorage, encourage illegal transactions, avoid regulatory arbitrage, and promote financial instability. To address these harms, he suggests government regulation of virtual currencies qua currencies. Bill Maurer supports this view by noting how virtual currencies – whether through Facebook or a Central Bank – can effectively develop authoritarian dystopias. According to Maurer, creators and managers of some types of virtual currencies (i.e. Libra) can control “monetary” policy simply by accessing consumers’ data and funds, while simultaneously taxing the currencies to secure return for themselves.

Worries about the power exercised through currency management are not simply the province of academics and central bankers. Our interviews with Brazilian users of entirely decentralized
virtual currencies such as Bitcoin — cryptocurrencies or utopian coins in Menand’s terms — show that concerns about the reliability of a currency and democratic control occupy citizens consumers as well. In making their decisions to use and invest in decentralized virtual currencies, users and enthusiasts have implicitly chosen a new type of money with a different political architecture. Rather than expecting to lose democratic participation in the constitution and reliability of money, these members of the public expect this new type of “currency” to bring a more democratic form of money. This expectation has been the basis of a different type of trust in “money”, which can be partially explained by distrust of money itself and the institutions that have historically sustained it. In this essay, we use the term cryptocurrencies to refer to decentralized virtual currencies only (i.e. Bitcoin) — what Menand calls utopian coins. We suggest that the use of these technologies by the public denotes the existence of strong popular support for democratic regulation of money.

Cryptocurrencies such as Bitcoin, Litecoin, and Monero offer an unprecedented opportunity to rethink the long-lived trust in money — or at least in what is popularly perceived as money. Although cryptocurrencies have been used in recent years more as speculative assets than anything else, the idea that they function as a type of money, or that they will function as such in the future, persists among ordinary, non-speculative actors. The association with money is not occasional, as aspects of cryptocurrency systems routinely perform like money. Unlike standard digital money (e-money, e.g. digital dollar, digital euro), however, cryptocurrencies are designed to work entirely peer-to-peer. They are transferred directly from user to user without at any time going through the internal verification, standardization, commensuration, and review processes of any particular institution. Instead of a third-party intermediary that normally stands behind currencies, cryptocurrencies are
transmitted digitally over the internet through a cryptographic protocol that follows preprogrammed mathematical rules.

The disintermediated operation of cryptocurrencies has led enthusiasts to believe that, by virtue of the elimination of the trusted third party (e.g. state, bank or corporation) from the value transfer chain, and the insertion instead of a semiautomated electronically controlled procedure, a type of money emerged that excludes from its governance any and all types of institutional and political interference. Transferring control and management of money from the work of socially and legally organized institutions to the work of a mathematically and electronically controlled process is understood by its advocates and users to insulate money from the domain of institutions, especially the law and its associated politics. This intermediary-free currency was promoted in reaction to the waves of fluctuating – loss and gain – credibility through which the institutions of law and politics often pass. In response to what appears to be declining confidence in legal and international institutions generally, cryptocurrencies have been actively publicized as a new type of money that should inspire confidence that money managed by central authorities cannot seem to sustain.

In particular, internet-enabled social media communities promote the idea that central banks, private financial institutions, and governments manage national currencies – such as the Dollar, the Euro, and the Real – to serve the persons managing these institutions rather than the public at large. These institutions often inflate the currency, deflate, confiscate, or withdraw it from circulation. The same, however, would not apply to cryptocurrencies, since they have had their management delegated to machines incapable of changing the rules or protocols, according to which they are issued and transacted. Maurer refers to these as the mythologies from the left and the right.
The narrative built around cryptocurrencies raises a long-debated theme in the social sciences too often ignored in law, namely the issue of trust formation and the mechanisms that consolidate or break down trust in social institutions. The popular cryptocurrency narrative provides a seductive explanation for how trust can emerge from the negation of law, politics, and historically evolved social institutions, substituting for those by mathematical quantification alone.

For a long time, numbers have been considered trust providers because they claim objectivity. Objectivity can be defined as the absence of personal interests, strict obedience to norms, equal treatment of similar issues, impartiality etc. Numbers are an attractive substitute for the messy ambivalence of language and qualitative judgments because they create and overcome distance, both physical and social. They appear to offer a common language that erases cultural, historical, and geographical variations while simultaneously erecting “a new form of distance because” the discipline of numbers “erases the local, the personal, and the particular” which are always embedded in law and political institutions.

Is it possible for public trust in cryptocurrency to be sustained on the basis of mathematical objectivity and distance alone? Our research suggests that the answer is no. Offering trust in mathematics as a substitute for trust in law cannot provide the exclusive condition for the widespread embrace of cryptocurrencies because the very use of mathematics to manage the technologies does not eliminate the decisions, choices and even arbitrariness built into the algorithms as they were first created. Their technical configuration results from a series of choices made by those who created them as well as those who keep them running (developers, and server managers).

Moreover, the idea that trust may develop from the exclusion of law, institutions, and politics is also suspect because trust is not just about the processes that distinguish these
institutions. Trust is intrinsically linked to the idea of overcoming the uncertainty of future outcomes. Generally speaking, trust is a form of expectation that at some future time a person or mechanism behaves in a known way in order to produce a specific event. Reliance on cryptocurrencies as an approximate form of money comes not only from the expectation that the algorithms will work independently of human decisions but also relies on a prediction – an expectation – that the currencies will enter the social world in its materiality and concreteness to be used as a means of payment, as units of account, and as stores of value. For cryptocurrencies to become a reliable means of payment with such characteristics a number of political, legal and cultural factors must provide the conditions for overcoming uncertainty about the future use of cryptocurrencies. As Menand suggests in his reference to future imaginaries, a future with regulations can play a key role in those imaginaries by assuring the exchange and use value of the currencies (which should nonetheless be free of institutionalized manipulation concerning rates and amounts). In his essay in this symposium, Joseph Sommer suggests that for cryptocurrencies to become money they should garner “faith”, which comes from the user’s identification – communal mystique – with the communities that issue and sustain the corresponding means of payment.

Empirical research conducted in Brazil with the participation of Bitcoin users and enthusiasts has identified just such conditions for overcoming future uncertainty so that cryptocurrencies can garner confidence as a popular representation of and substitution for money. Analyzing interviews with 39 Brazilians – men and women of diverse ages, social classes and educational qualifications – we find that trust in cryptocurrencies is, despite the popular circulating anti-institutional narrative, associated with both formal and informal, familiar and common institutions. Institutions here are understood in the broad sense as the rules of the game capable of directing or accommodating the use of the new
technologies in everyday transactions. Together, (1) the law, public regulation and the state; (2) the governance model of cryptocurrencies, and also (3) market institutions provide the practical as well as symbolic conditions for suspending, or silencing, existential uncertainty concerning the use of the technologies in everyday social life.

Despite widespread interpretations as being corrupt and subject to questionable political interests, the law, financial regulations and the State are simultaneously interpreted as essential conditions for the organization of the market and therefore for establishing the circumstances under which cryptocurrencies generate public confidence. Here, one respondent anticipates the coercive and symbolic dimension of state law for Bitcoin to function as a kind of money.

(... if we want to see characteristics of currency in these cryptoassets (...) I think regulation needs to come forward pushed by the state. Because, I believe, private individuals will not be able to do this on their own (...) Because in the middle of all this, there is human greed (...). In this sense, there must be someone here who (...) is there with eyes turned toward society who takes society into account and not for the business of a few.

Alongside the law, public regulation and official state institutions, the governance model of cryptocurrencies also plays an important role in the process of building trust. Although the actual governance consists of the algorithms governing cryptocurrency systems as well as the labor of miners, users and enthusiasts describe the governance as completely outside human decision making, and therefore as enhancing trust.

I put faith in Bitcoin because it’s independent of the changing president. It’s totally independent of a political situation. There’s a program (software code) there. A moment comes and the system releases more bitcoins. This takes away
this influence on monetary policy. This influence on the value (...) this power to increase or lower the value of the currency, or to keep it the same (...). So, I think it takes away a lot of little “tricks” that people end up using to control the currency.

Even when users recognize the role of the miners in sustaining Bitcoin, and acknowledge that deviance from governing norms may arise, they see it as a condition for trust because it requires collective and collaborative participation.

The miners (servers) are there to give you this confidence. That whole thing (...) there are the mining blocks, and the miners need to reach consensus to change anything, and all that (...). This is a guarantee that no one will steal your money or block your account. That’s why I think it (Bitcoin) is safer than leaving my money in the bank.

Last but not least, users and enthusiasts also identify private institutions as an essential foundation for trust in cryptocurrencies. Here, users speak about exchange houses, and the cryptocurrency communities as a whole. Exchange houses are organizations that negotiate among currencies and cryptocurrencies. They connect buyers and sellers and work like marketplaces. The communities, on the other hand, consist of disorganized masses of users and enthusiasts. Some of them get together on virtual platforms to share news and comments about cryptocurrencies. In Brazil, cryptocurrency communities most often use Facebook. According to respondents, both types of private institutions act as trust providers as they help turn cryptocurrencies into practical and safe instruments to trade on the market. As one interviewee said,

They (exchanges) are independent, they are responsible for regulating their way (...) as long as you transact within their system, you have to respect their regulation. So, that ends up generating an “extra trust”. It ends up generating more security for you during your transaction. For example, me. I
was negotiating on their platform. I was paying their fee, but I knew I was paying it not to be scammed.

In a similar vein, the communities play an important role in enhancing trust in cryptocurrencies. Since blockchain-based cryptocurrencies are not under direct control of any organization, they lack formal mechanisms to prevent misuse and crime. The communities, however, can provide relevant information about the space of negotiation. The communities can work as watchdogs by reproaching bad behavior and letting users know who is misusing the technologies. By making explicit what is considered bad behavior and by assigning users a sort of reputation rate, the communities contribute toward the isolation of those with bad intentions. Here, users foresee not the formal, legalized regulation by the state but democratic regulation through informal communities: the imaginary of participatory democracy, unconstrained by the dilemmas posed by global scale. The following quotation shows how the Bitcoin community reproached bad behavior in the market and how it generated a safer place for negotiations.

The community ends up purging illicit people (...) Let’s imagine 100,000 people use Bitcoin. They use it in a lawful, good, correct way. If you have one person who misuses it, he will be purged (...). An example is the financial pyramids. The ecosystem itself creates mechanisms (...) an example is the Gap group, (...) an anti-pyramid group, which reproached lots of financial pyramids. In the end, they (the pyramids) fell. This gives more security to use and invest in Bitcoin.

By invoking state authority to regulate cryptocurrencies’ internal governance, the intermediary role of exchange houses, and the role of digital communities, users simultaneously spread popular narratives of trust in cryptocurrencies and distrust in the institution on which they nonetheless hope to rely. By spreading the narrative negation of politics, law and institutions, they simultaneously embrace those very institutions. For users and enthusiasts, trust in
cryptocurrencies as a representation of money emerges from the same conditions that render the technologies concrete, practical, and safe. As is the case with traditional currencies, these conditions derive from the organization of institutions responsible for mediating the use of money in daily life. Unlike the case of national currencies, however, these conditions are not provided only by formal state institutions such as statutes, regulations, and certified banks. In the case of cryptocurrencies, trust-generating conditions also emerge from the organization and design of informal institutions such as the governance mechanisms internal to cryptocurrencies, market intermediary organizations, and the community of users and enthusiasts that make the market of cryptocurrencies a solid, trusted “ecosystem” of money.

---

This piece is sponsored by FAPESP – Fundação de Amparo à Pesquisa do Estado de São Paulo

1. Virtual currencies are digital representations of value, issued by private developers, and denominated in their own unit of account. ↑

C. Sissoko, The Problem with Shareholder Bailouts isn’t Moral Hazard, but Undermining
Coronavirus and the immense economic costs associated with repressing its growth has provoked a debate over how to distribute those costs. Many law professors have argued that large, heavily-indebted corporations, such as airlines and private equity owned companies, that cannot afford the losses imposed by the coronavirus crisis need to be put through a government supported, expedited, and managed bankruptcy process along the lines of how the GM failure was managed in 2009 (e.g. Morrison and Saavedra 2020; Morgan Ricks; Ayotte and Skeel 2020). Underlying this approach is an emphasis on the importance of shareholders being wiped out – or at a minimum ending up sharing ownership with those who assist in the restructuring of the company. Several macroeconomists by contrast take a very different approach. They argue that the extent of the economic disruption caused by the coronavirus crisis is so great that it’s costs should be treated as a problem for the government, not for business. (E.g. Smith 2020; Bullard interview 2020. See also Farmer 2020.) Objections to the shareholder bailout approach are often immediately classified as concerns about “moral hazard” and then dismissed on the basis that it is unreasonable to expect businesses to prepare for an event such as the current crisis.

What underlies the gulf between these legal scholars and macroeconomists? Lawyers have a nuanced understanding of corporate structure and its economic consequences (see e.g.
Pistor 2019), whereas macroeconomic models typically simplify this structure to the point of ignoring it entirely. As a result, the lawyers consider shareholder losses even, or perhaps especially, in the event of *unexpected and unforeseeable risk* to be fundamental to how capitalism is supposed to operate. Implicitly, the lawyers understand that private sector risk-bearing plays an essential role in supporting state capacity and that turning this structure on its head is extraordinarily dangerous to our economic order. The macroeconomists by contrast are not in the habit of modeling the macroeconomic role played by corporate shareholders as risk-bearers in the economy and often have difficulty understanding this relationship. References to “moral hazard” are evidence of a purely microeconomic approach that fails to comprehend a macroeconomic risk-bearing role for the corporation.

What is a corporation? A corporation is a legal form that separates ownership of assets from control over the assets and from liability for the obligations associated with the assets. The corporate form both protects corporate assets from the shareholders (and the creditors of the shareholders) and shifts the risks of the corporation from the shareholders to the corporation’s employees, creditors, and the state. Corporations developed with these significant protections for shareholders in order to increase the willingness of the wealthy to invest not in land but in risky enterprise controlled by others – and the growth of corporations is associated with economic growth. The trade-off for the shareholder is that even though the investment is risky, the potential loss to the shareholder is limited to the amount of the shareholder’s investment. To the degree that the corporation incurs debts or causes tortious harm on behalf of the shareholder, the shareholder is shielded from liability for the actions the corporation took on the shareholder’s behalf. This liability shield means that much of the risk of
corporate activity is borne by the corporation’s employees, suppliers, the public at large (in the event of torts), and the state.

Thus, the corporate form itself is means of providing public insurance to corporate shareholders against the loss of their wealth. The justification for providing this insurance is to induce wealthy shareholders to bear risk for the economy as a whole: the shareholders bear the first loss in exchange for being assured that that loss is limited, and reaping significant rewards if the corporation has profits instead of losses. Indeed, the only economic function of the shareholders in a publicly-listed company is to bear risk: the shareholders do not control the company and have minimal say in its management.

Private-equity-owned companies are, as the name implies, privately held. As a result, the private equity fund does control the company. In practice, however, the owners of the private equity fund do not control the companies they own, instead they are limited liability partners who, just as in the case of standard corporate structure, cede control to a group of managers. Just as in the case of corporate shareholders, the only economic function that the limited partners in a private equity fund perform is to bear risk for the economy. Indeed, it’s not entirely clear what the macroeconomic function of this two-tiered limited liability structure would be – though it has obvious private advantages to the managing partners of the private equity fund who get to combine control with the public insurance of limited liability for the actions of the firms they control.

Because the function of the shareholders in a public company and of the limited partners in a private equity fund is to
bear risk, the idea that government support would protect the shareholders and limited partners from losses doesn’t make a lot of sense. The shareholders in a public company and in a private-equity-owned company can be replaced by a Chapter 11 bankruptcy process that converts debt into equity while allowing the corporation to continue operating. Indeed, this is the basic nature of our economic structure. The reason to avoid shareholder bailouts has nothing to do with “moral hazard.” Afterall, the shareholders and limited partners don’t even control the corporation. The reason to avoid shareholder bailouts is because the shareholders are there to bear risk for the economy.

A full understanding of this point requires an understanding of how private sector risk-bearing plays an important role in supporting state capacity. That is, the reason certain governments have a remarkable capacity both to borrow and to serve their citizens is because these governments are not alone in bearing risk, but have mechanisms that take advantage of private risk-bearing capacity. The financial revolution and the subsequent development of the public stock market provides the best illustration of this point.

The financial revolution represented a turning point in European history, because it took place in Britain and was the foundation of Britain’s capacity to win wars and build an empire (Dickson 1967; Roseveare 1991; Baugh 2011; Scott 2011). At the heart of financial revolution sat reliance on private sector risk-bearing both in the form of the Bank of England, which was chartered as a corporation, and in the form of private sector finance of British long-term debt. The market in public sector debt was the foundation upon which the market in corporate securities developed in the early 18th century.
From 1660 to 1763 Britain experienced a financial revolution that had several components: (i) the transformation of the state including (a) an annual budget approved by Parliament, (b) capacity to impose taxes and have them accepted by the populace, and (c) the growth of a professional and highly specialized administrative state; (ii) the transformation of government debt into annual issues of marketable, redeemable, long-term debt bearing an interest rate of 3 to 5%; and (iii) the transformation of private lending through both the Bank of England, which stabilized the value of sterling, and an active market for government debt, which supported borrowing from both domestic and foreign lenders.

The financial revolution has been widely recognized since the Seven Years War as the foundation of Britain’s pre-eminence during the years in which the Empire was consolidated. A comparison with 18th century France can illustrate how the financial revolution affected borrowing capacity: in the Seven Years War much of the French war effort was financed by short-term debts to suppliers at relatively high interest rates (Scott 2011: 433). Not only was this a less effective means of raising funds for the war, it left France with a crushing burden that destabilized the French financial system (ibid.). For this reason, the French sought (unsuccessfully) to emulate the British financial system which was described as “one of the wonders of the world”. (Ibid. See also Baugh 2011: 15).

It is worth emphasizing some of the aspects of the British system of public debt that made it so effective. The interest payments on the debt were fully funded by taxes. The debt was technically perpetual, which protected the state from the risk of being forced into default, but the debt was in practice supported by a variety of mechanisms for redemption. The relatively high interest (4 or 5%) debt that was issued at the
height of a war was typically redeemed in a peacetime conversion to lower-rate debt. The long-term debt was also supported by a “Sinking Fund” that dedicated specific tax revenues to the purpose of paying off the debt. While there was an active market in government debt, the state did not raise funds on the market (despite efforts to do so in the mid-18th century). Instead, the state placed its debt privately with wealthy financiers who had the capacity to hold the debt over time and could use the public market to slowly rebalance their holdings of public debt (Dickson 1967: 226-28). Finally, in exigent circumstances the British government also had access to short-term debt, the issue of which was supported by the Bank of England. On the other hand, this short-term “unfunded” debt typically comprised 5% or less of the total debt burden, and even at the height of the Napoleonic Wars rose only to about 8% of the debt burden (see Thomas and Dimsdale 2017: Table A29).

A cornerstone of the Financial Revolution was the Stock Exchange where the long-term government debt traded – allowing the private investors a way of exiting their investment and providing market liquidity to the government debt. After the Napoleonic Wars the issues that traded on the Stock Exchange expanded to include a large number of private issues, and by the middle of the century there was a robust market in corporate securities.

This review of 300-year-old history is just a reminder that private sector risk bearing sits at the very heart of state capacity. Government capacity is not some kind of stand-alone phenomenon that can work independent of private sector risk bearing. It is instead a consequence of a robust institutional structure that makes it possible for burdens to be widely shared, not just by taxes but also through private sector
losses on risky investments.

In short, the reason not to bailout corporate share-holders is not “moral hazard,” but because such a bailout represents a shift in the nature of burden sharing in a capitalist economy. It is the norm in macroeconomic models to treat corporations as pass-through vehicles (precisely what a corporation is not from a legal perspective), to abstract from bankruptcy (Goodhart and Tsomocos 2011), and to assume that the corporation’s income flows directly back to the shareholders – or even as in the case of Guerreri et al. (2020) back to the workers. The deficit of careful analysis by macroeconomists of the corporate form and of the role that it can play in macroeconomic risk-bearing naturally raises doubts about the degree to which macroeconomists can provide useful advice about the structure of corporate bailouts. The legal profession has the advantage of having thought long and hard about these issues. This debate matters today, because the Federal Reserve has – appropriately under the circumstances – stepped in to provide extraordinary support to US corporations. These actions have taken place so quickly, however, that the end game of these new policies has not yet been specified. Almost all of the support to the larger corporations is in the form of debt, and the Federal Reserve will, when the public health crisis is over, almost certainly have on its hands some corporations that are viable only as long as they have continued access to Federal Reserve lending and will be bankrupt without it. The lawyers will argue that government supported and managed bankruptcies should take place with significant losses to shareholders – even though such a policy will undoubtedly cause significant distress in the stock market. What will the macroeconomists say? Hopefully they will update their models and join the lawyers in demanding that the private sector, not just the government, bear the losses of coronavirus.
Off the radar in academic, professional and public experience until the early to mid-2000s, virtual currencies are a hot topic in contemporary academic literature. Like most successfully scaled digital schemes (e.g., computers, online payment systems, smart phones), the subject’s ubiquity tends to dispel any mystery at the immediate user-interface (e.g., we get the ‘hang’ of the new Gmail layout) but simultaneously relies on complex dynamics and internal processes that resist easy clarification and organisation (e.g., we send our computer in to the shop when it stops working). For academics, two interrelated questions emerge around the trope of virtual currencies: first, how does scholarship currently engage and second, what might we be missing – and ‘missing’ in a way that is not simply ‘gap filling’ or ‘bringing coherency’ but identifying blind spots that highlight structural biases and links to inherently partisan intellectual traditions (e.g., American Legal Realism, Institutional Economics). In this paper, we address the former before centering on the latter line of questioning and conclude with a couple suggestions about future work that academics might usefully push under the
phenomena of virtual currency.

The legal scholarship operates according to a relatively formal rhetorical economy. In typical ‘lawyerly’ fashion, there is often an early effort in the text to provide definitions of core concepts, which are geared toward recent initiates into the ‘law and technology field’ and that at once gesture to the sophistication of the topic and offer a sufficiently pat resolution to that difficulty. One of the most common conventions would be to tell the reader that a ‘blockchain’ is a ‘decentralised digital ledger’ that requires ‘miners’ and ‘nodes’ to authenticate and secure various types of data communication in a way that may ‘disrupt’ the necessity of trusting in current third-party mediators, such as governments and banks. For some literature, the aim then is to unpack these technicalities further: hard and soft forks, hash functions, permission-ed and permission-less systems, tokens of investment versus utility, proof of stake versus proof of work (or other cryptographic procedures), and so forth.

Another common convention is to highlight the difficult jurisdictional complexity and regulatory compliance posed by virtual currencies. If we conduct an Initial Coin Offering, what regulatory protocols will the Securities & Exchange Commission impose? If transferring data to a ‘third party’ non-European Economic Area member country, what obligations does the General Data Protection Regulation impose on ‘the controller’? Is the currency treated as ‘property’, and if so, what type, and how would this function in different social scenarios (e.g., divorce proceeding, theft)? How might we think of virtual currency platforms in relation to company law? Intellectual property? And so on.
When taking these approaches, authors tend to a ‘centrist’ or ‘practical’ oriented tone, usually not too critical of technological futures, with the aim to get colleagues ‘caught up’ with the state of play. It is meant to be the sort of information that would be useful for industry, practitioners and regulators. In the coming years, one can imagine a series of quasi-white papers emerging by academics (as often the case with other topics), staking out their competencies as the consultants of the new field of law and technology – in fact, to some extent, they are already being produced, just not so much directly on ‘virtual currencies’. That approach facilitates almost endless opportunities to map this or that legal regime, apply various legal doctrines, compare the benefits and risks of different jurisdictions, get into the weeds of legal or technical details – in short, the field is ripe for an explosion of spam jurisprudence. The volume will exponentially increase, taking on a life of its own, but with diminishing intellectual returns.

Another tack in the scholarship, though not as prevalent, is to take a ‘critical’ approach, highlighting the dark sides or limitations of technology – e.g., the data-driven infringement on personal autonomy, its oligarchical momentum, the possible incompatibilities between computer science and legal grammar. No one really disagrees within this literature that technology is here to stay nor that it offers important gains. But for some, any of these (quite substantial) costs can be off-set if only we awaken to certain dangers and make (usually modest) reforms. When taking this perspective, there is little call for any larger structural change nor any effort to situate technology within broader socio-economic contexts. In many respects, this literature is not all that different from the approaches already discussed; it is more that they are not interested to simply ‘map’ jurisdictional regimes or offer definitional clarity, but are concentrating on the risks attached to merging two formerly separate professional
industries (primarily computer scientists and lawyers). Having identified a failure with the liberal cosmopolitan order, the law steps in to mediate different interests and find a happy consensus.

A smaller body of literature situates observations within a more inter-disciplinary and/or structurally complex analysis. While empirical data reminiscent of law and society genres are used across the board in law and technology writing, scholars in this smaller cohort tend to be more open to experimenting with insights from disciplines outside of technology— and in particular, anthropology, political economy and sociology. So, for example, “critical technology” scholars will often point out that law is geared to remain ambiguous and open to interpretation and renegotiation while digital code is oriented toward stricter privity, more rigid closure requirements. The takeaway they come to is that one cannot avoid interpretative disagreement and reliance on legal professionals. In contrast, law and political economy scholars might emphasise how the inability to resolve ambiguity not only means future claims mediated by lawyers, but that the entire enterprise is reliant (or even generated) by a dense background public institutional infrastructure, which casts shade on the assumption of discrete public/private domains with distinct characteristics (e.g., private innovation disrupts and leads change in governance and society) and foregrounds how the current regime perpetuates inequalities within society (e.g., racial inequity built into algorithmic metrics).

It is this small but growing literature that we believe will (and does) offer the most interesting experiments and insights into the law/technology interface. What unites this effort is not only that its critique is interdisciplinary and structural, but also that a) capitalism is itself ‘the’
problem, b) the capitalist critique is kept implicit (e.g., it does not denounce capitalism but seeks to understand embedded socio-economic inequality outside of monadic ‘identity’ politics or show how the very promises of the liberal order are built on exclusionary, unsustainable foundations), and c) the author is measured on their ability to ‘out-perform’ more conservative colleagues and professionals at their own game (e.g., directly taking on finance rather than condemning finance from an outsider aesthetic, snatching money debates away from austerity economists by looking to other economic traditions). It is in this vein that we would like to offer a small thought piece.

Our argument is that virtual currencies have yet to enter the realm of money’s central nervous system – the modern money market. In our view, a key place to watch for the evolution of virtual currencies is the entry of retail online monetary actors into wholesale payments and collateral provisioning. In other words, the undiscussed set of possibilities, dangers and mutations for virtual currency is that of shadow money and shadow banking.

Shadow banking has gotten quite a substantial amount of discussion over the last decade, especially when it comes to dissecting what happened in the run up to the great financial crisis of 2007-2009. However, just as the law and technology literature has largely stayed clear of modern money markets, the non-technology law and finance literature is usually focused on either the expansion of the repo market or developments in other countries that may more accurately be termed “informal banking”. What is often missed in these discussions is the specific nexus of legal, monetary, social and technological innovations that opened the door to shadow banking in the first place (from trust formation and management to security issuance and payment collection). Or to
put this as a formal rule: actor and market behaviour always takes place because of pre-existing institutionalised (legal) policy constraints and motivations.

An essential ingredient to explain the past and future of this phenomena in our case study is the ongoing shortage of safe financial assets globally. In short, the development of shadow monies is (to a significant extent) fueled by shortages of certain types of money. Because of deposit insurance caps, the lack of a universally available federal book entry (or digital) currency and a meagre supply of short maturity treasury securities, there are persistently not enough treasuries to fill the demand from money managers globally. Adding to this “park it” motivation, there are those who not only want relative safety but also an asset that beats minimum rates of return guidelines set by institutional investors. While not often conceived of this way, both of these are in essence a shortage of large denomination money.

Existing digital entities involved in communication and payment may be particularly situated to capitalise on this shortage. A digital social media platform (e.g., Facebook) or a digital payment processor (e.g., Paypal) could issue large balances to money managers under the promise that regularly processing payments for retail users and investing proceeds into high quality assets reduces the likelihood of sudden large outflows. Processing payments within their large payment ecosystems may lead to little outflow – “all your payment needs can be handled by us (and maybe, for early entrants, with a discount)”. Dominance over retail payments may yet convince money managers to trust telecommunication companies’ ability to provision and sustain liquidity for themselves. This could be reinforced by the wider access to credit telecommunication companies have because of their main businesses. In other words, these actors can artfully promise
safety with a combination of collateral, network effects and commercial bank lender of last resort access.

Notice that rather than emerging outside the context of law and regulation (as financial innovation is sometimes presented), this scenario involves the manufacture of a finance franchise from the telecommunication franchises these companies have been legally granted. We are back to our first rule. The history of non-bank, corporate currencies is not a history of “unregulated” currencies or the lack of state legal construction but is rather a creative redeployment of legal privileges already granted by the state. The paradigmatic example of shadow banking is similarly beneath the surface. Rather than emerging outside the context of law and regulation, pre-2007 shadow banking was in essence the manufacture of an expanded finance franchise from a multi-subsidiary financial corporate entity granted Bank and/or Financial Holding Company status. Money creation financed (though didn’t fund) the origination of new mortgages while access to preferential credit from the bank subsidiary provided protection against liquidity uncertainties. The largest finance holding companies, secure in their own liquidity, provisioned liquidity across short term funding markets and essentially sub-franchised finance to non-bank subsidiaries and even vertically disintegrated securitization chains.

Analyzing changes in the financial ecosystem as creative uses of various state franchised powers provides a very different view of the history of finance in the United States. Viewed this way, the potential threat of virtual shadow currencies is more like the rise of antebellum U.S. railroad, canal and municipal currencies than a brand-new technological development. At that time, the problem was not a shortage of large denomination money, but small denomination currency. A
lack of small denomination coinage combined with legal prohibitions on small denomination paper banknotes led to a persistent shortage of small change. At the time, it was widely believed that issuing small denomination notes was too tempting a source of funding for banks as their role in circulation made redemption exceedingly unlikely.

This shortage was (in part) alleviated by what can usefully be considered the telecommunication companies of their day – railway and canal companies. They issued what were at the time technologically cutting-edge: paper note obligations of a corporate entity which were receivable in payment to that entity and often in state taxes as well. The ubiquity of transportation needs made their redemption far more likely, while their value nonetheless ensured successful circulation as small denomination money. The 21st century shortage of large denomination money and collateral may be (in part) alleviated by the telecommunication companies of our day. When we take this view, the problems and patterns in monetary innovation and crises take on a cyclical pattern rather than a unidirectional and triumphant one. Technological innovations shift from being the dawn of a new age to an integral part of a recurring pattern in monetary history.

Our suggestion that telecommunication companies may creatively invent a synthetic finance franchise from “money transmitter” privileges combined with their telecommunication franchise does not preclude state action or prevention. As we see with the response to Facebook’s Libra, some attempts at synthetic finance franchise making are too audacious to be contemplated. Rather, we would like to reorient those interested in money design and financial stability to adopt a “wall street view” and see the possibilities (and thus the dangers) in future financial and legal innovation. This is key to taking the initiative in money design away from large corporations and
their brilliant lawyers. This exercise also reveals that for all the technical details and seeming mundanity, those who seek to synthesize “shadow monies” use imagination and creative speculation as much as any other tool in the development of finance. We must be similarly inventive in disrupting them as money designers ourselves, which means eliminating the structural drivers of large denomination money shortages and the demand for benchmark yielding safer collateral.

J.S. Nelson, The Case for Cryptocurrencies as a New Category of Regulated Non-Sovereign Fiat Currency

March 31, 2020

J.S. Nelson, Villanova Law School

What are cryptocurrencies: securities, commodities, or another form of established currency – a non-sovereign fiat currency? In my forthcoming article, “Cryptocommunity Currencies,” I argue that, like other self-governing bodies, communities that issue cryptocurrencies should be judged on how well they support their currencies, an approach very similar to how we have evaluated traditional sovereign issuers of currency. Indeed, as traditional-sovereign-issued currency becomes
entirely digital, functional distinctions between it and widely-accepted non-sovereign fiat currency start to disappear. The primary way, then, to distinguish between the value of such currencies is to compare the quality of their institutional backing. Through that lens, some self-governing online communities are better organized and more supportive of their currencies than traditional sovereigns.

My article argues that cryptocurrencies should be regulated as a new category of non-sovereign fiat currency, and that such regulation should evaluate the institutional structures behind the currency as created and maintained by its community.

First, cryptocurrencies _qua_ currencies are neither securities nor commodities but fiat currencies. (Here we are speaking of true cryptocurrencies, and not other forms of crypto-assets.) The distinguishing feature of cryptocurrencies as currencies is that they are intended to be traded directly for goods and services: They are not being offered by another party as a future investment, nor are they valuable apart from their ability to be exchanged for something else. Their primary use is as a method of payment. This distinguishes cryptocurrencies from securities, which are often investments, such as stock; and from commodities, which have intrinsic value, such as wheat or pork bellies. See more on the legal definitions here.

For lay purposes, consider the distinction between the U.S. dollars (a fiat currency issued by a traditional sovereign) that you might use to buy tickets at a fair, and the tickets (or tokens) that you buy for use at the fair. The U.S. dollars have the backing of the U.S. government and can be used widely. By contrast, the tickets are valuable only by specific agreement within the fair, as payment for the goods and services offered by the promoters of the fair, and for only as
long as the fair exists. The fair tickets may be securities if they are an investment in the promoters’ efforts, or commodities if a market develops within the fairground for collections of fair tickets tradeable at a fixed rate for other items. Either way, the fair tickets are not general tender broadly exchanged for goods or services outside of the limited efforts of the fair. Thus, the terms and representations upon which those tickets are issued are very important and specific to the tickets’ value. By contrast, the terms upon which you trade five U.S. one-dollar bills for a U.S. five-dollar bill or for a certain number of euros, pounds, or other currencies should not be the governing factor in those bills’ (euros, pounds, or other currencies) general applicability after your trade as tender.

As a programming note, this distinction between U.S. dollars (fiat currency) and fair tickets (tokens) maps well on the distinction between coins and tokens. Cryptocurrencies (aka, often “coins” with their own blockchain) typically have more extensive infra-structure than fair tickets (“tokens”), which run over the territory of their fairgrounds for limited application. As one source summarizes: “The basic difference is relatively simple. [Coins and tokens] are both used to define a unit of blockchain value.” Coins “are unique digital currencies which are based on their own, standalone blockchains, [while]. . . tokens are built and hosted on existing blockchains.” Coins intended to be general currency: “[a]lthough there are some blurry lines between the definition of [coins and tokens], the crypto community generally agrees that coins function as a method of payment.” By contrast, “[t]okens operate on top of a blockchain and give access to a DApp [decentralized application], enabling the functions of that [specific] project.”

Second, the SEC and other authorities have the test for
whether cryptocurrencies should be subject to regulation backwards. The SEC’s director of the Division of Corporation Finance, William Hinman, for example, would look to the importance of a centralized promoter’s role in distinguishing Initial Coin Offerings (ICOs) for regulation from cryptocurrencies that escape regulation such as Bitcoin. Under the so-called “Hinman paradox,” why should cryptocurrencies such as Bitcoin and Ether escape regulation merely because they already exist as mature networks, so that the SEC does not have to evaluate their systems? Although Bitcoin and Ether are arguably decentralized, representations about how their codes work were made at some point by someone trying to encourage new people to adopt them. In fact, because the systems are arguably decentralized, such representations may have been made by more people in more places at more times for their own financial advantages. Having more potential misrepresentations in the market for a mature product would seem to argue for a greater need to regulate, not to support an argument against regulation.

Additional problems with Director Hinman’s analysis stem from his focus on generational processes (with the perverse use of decentralization as a proxy for maturity), and not on the organizational qualities of the communities behind currencies. In the case of Bitcoin, for example, a central person – the legendary Satoshi Nakamoto who invented the processes to create Bitcoin – involved a community around him to follow those uniting instructions. These people following Nakamoto’s instructions are, of course, still part of Hinman’s “person or group to carry out essential managerial or entrepreneurial efforts” necessary for a currency, but not considered as such under his analysis. Moreover, studies of Bitcoin show that Bitcoin is not as decentralized in performance as advertised – even by the SEC. Nonetheless, there is no serious talk of regulating Bitcoin as a security.
Third, some cryptocurrencies now have better institutional support than some traditional sovereign-issued fiat currencies. What is so different from a government issuing currency for universal exchange than another entity issuing it? One may say that no other entity has the market power of the U.S. or Chinese governments, but some corporations, for example, have more revenue, and arguably sophistication, than governments. Consider that Apple in 2016 had more “cash . . . on hand . . . [than] the GDPs of two-thirds of the world’s countries.” By 2017, in terms of revenue collected, “Walmart exceed[ed] [both] Spain and Australia.” During that year, in fact, “[o]f the top 100 revenue generators [including both national governments and corporations], . . . 71 [were] corporations.”

But when communities are self-governing, they may still need external regulation. The corporation is an excellent example. My article analyzes Facebook’s Libra cryptocurrency initiative, which by some estimates may be used by 2.4 billion people a month to buy goods and services by later this year. Although U.S. regulators and politicians have been cautious about this expansion of Facebook’s power, the article notes that the major arguments for being cautious are actually arguments in favor of regulation. As described in the article, our options may be the existence of the best-backed cryptocurrencies as regulated systems versus their existence as unregulated systems: U.S. prohibition of global systems may not be meaningful, and merely cuts us out of shaping them.

In exploring the political objections to Facebook’s plans, U.S. national security concerns seem to fall into two broad categories: first, concerns about more widespread money-laundering and transactions of illegal goods; and second, concerns about challenge to the hegemony of the U.S. dollar. External regulation would help combat widespread money-
laundering and transactions of illegal goods. Protecting the hegemony of the U.S. dollar may ultimately depend on the wisdom of the country’s foreign policy choices. But insofar as other steps are helpful, we should regulate what we can of the global programs that impact our financial system or lose that power because rival sovereign currencies are already becoming digital, and cryptocurrencies will be based around the world anyway – à la Libra in light-touch Switzerland.

A deeper concern is that administering its own cryptocurrency will give Facebook even more financial data than the enormous amount of information that the company and its partners already collect on individuals. Ironically then, the widespread use of alternative cryptocurrency systems insofar as individuals are allowed to remain anonymous within those payment systems (which may not be what Facebook allows through its exchange platform, Calibra), may help combat concerns about personal data abuse.

As neither securities nor commodities, cryptocurrencies fall into a significant hole in our regulatory system. My article calls on regulators and academics to rethink their assumptions about cryptocurrencies and the communities that develop them. We should recognize well-institutionalized cryptocommunity currencies as non-sovereign fiat currencies and regulate them accordingly.

This post comes to us from Professor Josephine Sandler Nelson (writing as J.S. Nelson) at Villanova Law School. It is based on her forthcoming article for the Cornell Law Review, “Cryptocommunity Currencies,” available here. The article is a tribute to the late Professor Lynn A. Stout.
The COVID-19 crisis is unlike any other we’ve seen so far. An effective response to this massive crisis requires massive coordination and redeployment of the nation’s financial, physical, technological, and human resources—not unlike a full-blown war effort. Currently, however, the U.S. lacks an institutional mechanism for an economic mobilization of the type it undertook during the Great Depression and both World Wars of the last century. There is presently no institutional analogue to the New Deal-era Reconstruction Finance Corporation (RFC).

Without such a permanent federal agency, the country must rely on ad hoc crisis-containment measures that are notoriously politicized, messy, and prone to corrupt influences. It’s already clear that neither the U.S. Treasury nor Federal Reserve are equipped to manage and oversee the implementation of the multi-trillion emergency relief package approved by Congress. And significant misuse and misallocation of federal relief are bound to have disastrous long-term financial, economic, and political consequences.
To manage this process, we need an RFC-like institution. Having a permanent institutional platform for coordinating the national crisis response, including bailouts of private companies, would help to ensure that these emergency measures are executed in an efficient, transparent, and democratically accountable, and socially just manner.

My colleague, Bob Hockett, and I have long advocated creation of a National Investment Authority (NIA) as a modern version of the RFC. Our original focus was on the NIA’s role as the federal instrumentality functionally located between the U.S. Treasury and Federal Reserve and tasked with implementing a long-term strategy of national economic development. At the heart of this strategy is the NIA’s proactive use of financial tools to channel private capital into transformative public infrastructure projects, with a view to facilitating socially inclusive and sustainable growth of the American economy. Led by the NIA Governing Board (the NIA Board), an independent federal agency structured similarly to the Federal Reserve Board, the NIA would lever private investment in public goods through federal grants, loans, guarantees, securitization, and large-scale private equity-style asset management.

Although not originally envisioned as such, the NIA is perfectly suited for taking on the RFC-worthy task of managing the nation’s response to the COVID crisis. The NIA would be well-positioned to coordinate nationwide production mobilization efforts, oversee financial bailouts, and manage post-bailout public stakes in private companies. Below is a brief outline of how that regime would work.

Production Mobilization
Most urgently, the NIA would act as the principal manager of federally appropriated funds for purposes of organizing the crisis response on the national scale. NIA’s dedicated asset-management teams will work with other federal, regional, and local authorities, medical professionals, and other relevant parties to identify specific bottlenecks in the supply chain of critically needed products, prioritize concrete action items, and organize financial and other resources needed to scale up or repurpose individual facilities’ production capacity.

Putting the NIA at the center of this mobilization campaign will facilitate and optimize what would otherwise be an impossibly difficult process. It will concentrate key resources and decision-making powers in the hands of an agency specifically designed to conduct business much like a private equity firm. Neither the U.S. Treasury nor Federal Reserve are able to act inside private firms and markets in a similarly direct way.

**Bailout Process and Oversight**

While direct public financing of private business entities is often a necessary part of crisis response, neither the Fed nor the Treasury are equipped to manage that process. Outsourcing management of the federal government’s bailout-related assets to Blackrock, the world’s largest private asset manager, is a stark reminder of that institutional gap.

The NIA will be a publicly-owned Blackrock equivalent. Working with the Treasury, it will coordinate emergency assistance to, and manage public stakes in, private companies. The NIA’s professional asset-management teams will allocate funds,
negotiate the terms of assistance, and run the portfolio of public assets—strictly with a view toward maximizing the public’s overall welfare.

The NIA would lever its regional offices and expert teams to work closely with the authorities, businesses, and communities on the ground to conduct simultaneous emergency public investment auctions across the country.

The NIA Board would set transparent and uniform guidelines for choosing individual recipients of public investment, determining the amount and structure of each such investment, and imposing specific conditions on each recipient. The NIA’s overarching goal would be to provide support to businesses and organizations of all sizes and types, specifically to stimulate economic activity and to prevent/minimize loss of jobs and income in all communities.

Accordingly, the NIA guidelines would mandate maximizing payroll retention and uninterrupted provision of social services to employees and communities as part of any bailout package. For large corporations, the NIA would also condition emergency assistance on specific changes to their dividend and stock buyback policies, executive compensation structure, and corporate governance—with a strategic view toward correcting systemically destabilizing structural imbalances in the U.S. economy.

The NIA’s auction policies and procedures would seek to eliminate potential conflicts of interest, favoritism, outside interference, etc. Working closely with the Treasury and the Federal Reserve on coordinating the bailout process with the broader financial and monetary stability goals would provide
an additional checks-and-balances mechanism.

The NIA’s assistance award decisions would be fully documented and subject to audit by the Government Accountability Office (GAO) or special federal audit panels. The NIA Board would also be required to provide regular public reports to Congress and the Treasury on the status of its public capital support programs. Finally, Congress can mandate additional public oversight the NIA’s bailout management process (including appointment of a special Inspector General, etc.).

In theory, the Treasury or the Federal Reserve can structure their emergency bailout efforts in a similar fashion. In practice, however, it is extremely difficult to ensure the necessary degree of uniformity, transparency, and integrity across multiple bespoke bailout facilities, managed by multiple public and private agents. The NIA’s strong statutory mandate, specialized expertise, and organizational accountability would render the entire process more transparent, fair, and susceptible to effective public oversight and input.

Managing Public Assets: The “Golden Share” Option

The specific form of emergency public investment in a troubled company—an outright grant of money, a loan, guarantee, or purchase of a particular type of preferred or common stock—will vary on a case-by-case basis. However, in certain cases—for example, where public capital injections are particularly substantial (either on an individual or an aggregate industry basis), or where the recipient-firms provide critical public goods or services (finance, transportation, energy, healthcare, etc.)—it may be desirable
for Congress to mandate that the NIA receive and hold, on a permanent basis, a special “golden share” in each such firm.

In the 1980s-1990s, golden shares were used by governments around the world—including the UK government under Margaret Thatcher—to reserve exclusive rights to control key business decisions by newly privatized companies in strategically significant industries. Elsewhere, I proposed the “golden share” regime for systemically important financial institutions, as a macroprudential tool. But this instrument can be easily adapted for purposes of structuring public stakes in bailed-out entities.

In brief, the “golden share” regime would work along the following lines.

The “golden share” would entitle the federal government, represented by the NIA, to receive a specified economic interest in the firm (under the terms negotiated by the NIA as part of the bailout). It would also grant the NIA, as the sole holder of the federal government’s golden share, special, exclusive, and nontransferable corporate-governance rights in the relevant firms. The golden share could not be redeemed or eliminated other than by an Act of Congress.

The NIA would occupy a permanent seat on the firm’s board of directors. The NIA’s primary fiduciary duty, however, would run directly to the American public. In this role, the NIA would have two distinct modes of operation:

- Ordinarily, the NIA would perform mainly observational functions. While not interfering with the company’s
routine operations, the NIA would actively monitor corporate actions with a view to preventing the company or its shareholders from circumventing the conditions of the bailout funding. The NIA’s affirmative vote would be required for corporate decisions authorizing significant stock buybacks and dividends, outsourcing or elimination of jobs, changing executive compensation, adopting aggressive tax-planning strategies, and other actions potentially inconsistent with public capital support.

- Upon the occurrence of specified triggering events—including corporate actions inconsistent with bailout conditions, significant deterioration in the firm’s financial condition, or signs of a systemic crisis—the golden share would be “activated,” and the NIA would assume the role of the firm’s “manager of last resort.” From this position of corporate control, it would be able to take fast and direct action necessary to protect public interest: make concrete operational changes, redeploy resources, and so forth. Once the danger subsides, the golden share would revert to its (relatively) passive state.

Importantly, in an emergency situation similar to the COVID-19 pandemic, the NIA would be able to use the golden share trigger to assume its production-mobilization role, discussed above.

While it may be possible to structure the public stake in bailed-out entities as a special class of common or preferred shares that carries similar rights and powers, the proposed golden share is far more effective for purposes of protecting the public’s interests in a corporate setting. A streamlined and flexible tool of corporate control, it can be quickly
scaled up to enforce compliance with bailout conditions—and to ensure that private firms benefitting from public support do not abuse that advantage going forward.

**Enhancing Accountability: A Public Interest Council**

To enhance the NIA’s democratic accountability, Congress should establish a special Public Interest Council (the Council) representing an explicitly public interest-oriented perspective in matters within the NIA’s ambit. A detailed proposal for designing this type of a public accountability regime can be found here.

The Council would comprise academic experts and public interest advocates, all of whom are independent of both the financial industry and regulators. Congress would appoint members of the Council for staggered terms, based on publicly solicited nominations.

The Council would play primarily an advisory and evaluative role. It would submit mandatory reports to Congress, containing its assessments and non-binding recommendations for improvement of the NIA’s performance of its statutory functions.

This institutional channel for inserting public interest into the NIA’s accountability and decision-making structure would serve as an important check against excessive private-sector influence or political incumbents’ overreach.

Ultimately, public accountability is the key to understanding
why we need the NIA in the time of Coronavirus. We need the NIA to ensure that the crisis is managed in a transparent and democratically accountable way, so that the American public is protected from the deadly effects of corruption and ineptitude. A permanent federal instrumentality with a clear statutory mandate, organizational depth, and institutional expertise in capital allocation and asset management would serve as an urgently needed—and presently missing—tool of mobilizing the nation’s productive capacity and putting our public money to good use.

For an issue brief further outlining the case for an NIA, see here.

Central Bank Digital Currencies: The New Era of Modern-day Banking

Benjamin Geva, Osgoode Hall Law School of York University

An internal report submitted in March to the Committee on Payments and Market Infrastructures (CPMI) of the Bank for International Settlements (BIS), presents an initial analysis of Central Bank Digital Currency (CBDC). What You Need To Know:

- The report poses no immediate legal implications.
Lawyers and policy makers ought to be prepared to engage in discussions which lead to decision making as to such developments as well as to address the developments as they arise.

The introduction of a CBDC in one jurisdiction could adversely affect others. Central banks that have introduced or are seeking to introduce a CBDC should consider cross-border issues.

Central banks and other authorities should continue their broad monitoring of digital innovation, keep reviewing how their own operations could be affected and continue to engage with each other closely.

select group of financial institutions. Central bank digital currency would extend this to households and firms. This column examines the proposal for such currency and assesses the opportunities and risks. It argues that while preparations for the launch of Libra have not proceeded according to plan, it has become clear that for central banks, maintaining the status quo is not an option.


J. van ‘t Klooster, Why the US Congress Gives Dollars to the Fed

March 31, 2020

Jens van ‘t Klooster, KU Leuven and University of Amsterdam

Commentators have raised various concerns over provisions in the $2 trillion US stimulus bill that assign $454 billion to protecting the Federal Reserve against losses. The most basic
worry is that losses should not matter to a central bank. Although I agree that a lot ultimately rests on conventions, that is true for many things. This fear of losses, rather than the Federal Reserve Act itself, may ultimately be what stops it from doing what Dan Awrey, Leah Downey and Robert Hockett have rightly said it should: provide at least some of the support now available to Wall Street to the US’s struggling real economy.

In this blog, I will first say something about why it makes (some) sense to spend this money to protect the Federal Reserve against technical insolvency. I then contrast the Federal Reserve’s attitude with what is happening in Europe, where the European Central Bank has historically also been immensely concerned about losses. For now, in launching its Pandemic Emergency Purchase Programme (PEPP), it has given up a lot of its earlier risk aversion.

Let me start with some philosophy: does it even make sense to think about financial risk in relation to central banks? Central banks report on their activities and design their operations assuming the reality of their accounting framework. From this balance sheet perspective, central banks are exposed to financial risk because they hold financial assets. Accounting is crucial for private sector agents because they face budget constraints. If central banks operate on an analogous logic, they face a risk of insolvency in this accounting sense. If the value of their assets drops below the value of their liabilities, they are insolvent.

Central bank budget constraints, however, are not at all like those of the private sector. They are not enforceable through the legal system in the way that budget constraints of economic agents are. Where it comes to obligations to pay in
in its own currency, central banks can always just print the money. For this reason, the consequences of insolvency are limited. Indeed, the central banks of Chile, the Czech Republic, Israel and Mexico have operated with negative equity, holding assets valued less than their liabilities, for years. It is true that central banks often have strict legal requirements for controlling and reporting the value of their assets and liabilities. Calls to “Audit the Fed,” as critics have rightly pointed out, falsely suggest that the Federal Reserve is currently not audited by an outside accounting firm. Central banks, however, often decide on their own accounting framework. The Fed, in fact, used this power in 2013 to create a new way to avoid net negative equity. A central bank is, hence, somewhat like a firm under historical socialism, where, even if accounting practices were in place, bankruptcy remained a political decision and losses per se would not result in the dissolution of the firm.

The absence of a default risk, however, does not mean that central bank accounting has no practical significance, as central bankers are keen to point out. A central bank with net negative equity may change its behaviour to a more profit-oriented strategy, which may hinder its macroeconomic and financial market roles. Financial market participants and governments may have less confidence in the central bank, threatening its independence and ability to achieve its objectives. Citizens may think all sorts of things. As is the case for all institutions at the pinnacle of the financial system, as Katharina Pistor has argued, the financial constraints that central banks face are more discretionary and depend crucially on their own perceptions, those of other political institutions and those of market participants.

We should not underestimate how serious central bankers take their budget constraints. Risk management informs an important
part of the day-to-day operations of a central bank. Many of the key operational decisions turn on whether risks are properly anticipated and mitigated. To give up on that approach in a crisis is difficult. This is illustrated by the Fed’s September 2008 decision to withhold credit from Lehman Brothers, which was based on concerns about losses. Fear of losses is also part of why central bank swap lines, which Elham Saeidinezhad already called attention to, have such a narrow geographic reach. For central bankers, taking on financial risk requires an immense psychological transformation. This, and the $4 trillion in loans that it is meant to unlock, is ultimately what Congress pays for. Eligibility criteria for these programmes may still be way too strict.

To illustrate central bank reluctance and draw some comparisons, consider a European perspective. Here too, central bankers tend to be immensely preoccupied by financial risk. In the past weeks, however, the European Central Bank has made some dramatic moves that side-line a host of preoccupations that were decisive in its response to the previous crisis (for more detail see my blogs on this here and here).

The ECB’s legal mandate does not say much about risk management beyond a provision that says that credit should be secured by “adequate” collateral. The main issues are for the ECB itself to decide, which initially gives rise to considerable internal fighting over how to deal with risk. In 2005, the ECB resolved most of these debates by committing itself to a strict market-based approach. From then on, the ECB’s collateral policy, also with regard to government bonds, had served to protect it against losses. Moreover, its risk management strategy is meant to follow, rather than shape, market practices. To this end, the ECB makes the collateral
eligibility of government bonds conditional on a sufficiently high credit rating issued by Moody’s, S&P and Fitch. In the 2010-12 Eurozone Crisis, this risk management strategy shaped the ECB’s actions and stopped it from taking up a role as lender of last resort to the member states.

The ECB gave up its narrow focus on risk management only partially after Mario Draghi in July 2012 committed to do “whatever it takes.” When in 2014 the ECB started its Quantitative Easing programme, the ECB imposed a range of constraints on purchases to protect itself against losses. For one, government bonds are bought by the national central banks (e.g. the Bundesbank and the Banque de France) to ensure that any default would not impose losses on the ECB itself. Purchases strictly followed the ECB’s capital key, which is determined by population and GDP of individual member states. The ECB also takes various measures to ensure that secondary markets continue to shape risk premia paid by individual member states. Finally, the programme remained burdened by the ECB’s minimum credit rating, which led to the exclusion of Greece and the inclusion of highly-rated corporate bonds issued by Royal Dutch Shell and other fossil fuel companies.

Although the ECB has thus historically been very preoccupied with financial risk in designing its crisis-fighting measures, the recent Pandemic Emergency Purchase Programme constituted a radical break. The key passage from the ECB press release comes at the end:

To the extent that some self-imposed limits might hamper action that the ECB is required to take in order to fulfil its mandate, the [Governing Council of the ECB] will consider revising them to the extent necessary to make its action proportionate to the risks that we face.
Although less pithy than “whatever it takes,” the PEPP’s key provision is more compelling in its implicit philosophy and certainly more powerful. It admits that most limits hitherto applied to ECB tools were self-imposed. Therefore, they can be revised in light of the risk (i.e., the economic dangers from the pandemic) that the Eurozone faces. This kind of recognition at the ECB opens the door to giving up the capital key and other restrictions on the PEPP. For now, it is noteworthy that Greece is already explicitly part of the programme. The ECB also expanded the already uniquely generous eligibility requirements of its collateral framework. It is striking that all these things become possible under its new president Christine Lagarde, who may very well lack the central banker’s intuitive risk aversion.

Are the Federal Reserve and the European Central Bank on different trajectories with regard to risk? Let’s see when the dust settles.

---

**Primer on the CARES Act SBA Payment Protection Loan Program**

Authors: Lydia J. Hwang and Nadav Orian Peer

This primer provides a user-friendly, step-by-step explanation of the Paycheck Protection Loan Program enacted last week as part of the CARES Act (Mar. 27, 2020). This $350 billion
program will provide small businesses, the self-employed and non-profits with resources to weather the coming two months. As explained in the Primer, loans under the program are intended to be forgiven, such that they essentially operate as grants (no repayment required).

You can access a .pdf of the primer here.

---

Financial Aspects of the COVID Crisis

Erik Gerding and Nadav Orian Peer

Financial Aspects of the COVID Crisis was a community teach-in in CU Law, held online on March 24, 2020. The teach-in includes presentations by Erik Gerding and Nadav Orian Peer, followed by a discussion with viewers. The main topics addressed were:

- The macroeconomic toolkit, and the unique challenges presented by COVID;
- The Federal Reserve’s emergency support of the financial sector, and its historic expansion to businesses, firms and municipalities;
- The unprecedented relief package (which just passed today, March 27);
- Cashflow disruptions, and legal issues around
forbearance, contracts, and bankruptcy law;
- Issues to address when the dust settles: in financial regulation, and in the social safety net.

You can find the full video of the teach-in here: https://www.youtube.com/watch?v=q2h0e9Qr-BE

---

C. Sissoko, A Fire Sale in the US Treasury Market: What the Coronavirus Crisis Teaches us About the Fundamental Instability of our Current Financial Structure

March 27, 2020

Carolyn Sissoko, University of the West of England

A recurring theme in the papers that I have written is that asset price instability is endemic in a system of collateralized lending based on repurchase agreements. Even I, however, was caught completely off-guard when it was the US
Treasury market that began to experience fire sales.

Almost everybody[i] thought that by moving the repo and derivatives collateral market into “safe assets” or bonds issued by the most credit-worthy sovereigns, the repo market could be de-risked. What we learned over the past few weeks is that the ineluctable logic of margin calls and forced sales can play havoc even in markets for the safest collateral. This throws into doubt the very concept of a “safe asset” and makes clear how dependent the concept is on the underlying market micro-structure.

Here is a chart that gives year-to-date values for the Fed’s policy rate (green), the market repo rate (SOFR: red), the yield on the 2-year Treasury (light blue), the yield on the 10-year Treasury (purple) and the yield on the 30-year Treasury (orange).
Keep in mind that when the Treasury yield declines, that means that people are buying Treasuries and that the price of Treasuries is increasing. And when the Treasury yield rises that means that people are selling Treasuries and that the price of Treasuries is falling.

Starting in mid-February, this chart depicts a ‘flight to safety’ into Treasuries as the coronavirus crisis generated uncertainty for investors and they chose to shift into Treasuries. This is what we expect to happen with a ‘safe asset.’ What is remarkable about this chart is what happens after March 9. Treasuries are clearly being sold in significant amounts after March 9.

I have seen two explanations for the onset of this phenomenon. The first explains that the flight to safety took place faster in futures on Treasuries than in the actual Treasuries themselves and that this caused a significant price gap between the two contracts. As there are hedge funds that arbitrage these two prices – and, because the return on this trade is so small, engage in this arbitrage on a highly leveraged basis – the price gap resulted in significant mark-to-market losses for these funds. Apparently, these arbitrage funds chose to sell out of their positions – realizing their losses now before they got worse. Liquidation of arbitrage positions is notorious for causing price gaps to worsen and for causing others engaged in a similar trade to also choose to liquidate their positions. The liquidation of these positions involved selling Treasuries.

The second explanation starts with investors in bond funds, including both mutual funds and exchange-traded funds, deciding that they no longer wished to hold those positions since the coronavirus was likely to have a significant impact
on many firms that issued bonds. When investors exit bond mutual funds, the managers of those funds have to reduce their holdings of bonds. The process for exchange-traded funds is more complicated, but has the same overall effect: if investors sell their bond ETFs, then the ETFs themselves will end up selling bonds. You can see the effect of these sales on the chart of the spread between corporate bond yields and Treasuries.

Since these sales were of corporate bond funds, one can easily ask how this behavior could end up causing a sale of Treasuries. The answer is that many bond funds have some Treasuries in their portfolios. As sales of corporate bonds ramped up and the bond fund managers didn’t like the prices they could get on the corporate bonds – or the price effects they would generate by adding to the sales – they turned to selling off Treasuries to meet their redemptions needs.

Whatever the underlying cause of the sales of Treasuries was, we can see in the first chart that, on March 10, sales of Treasuries were so significant that they drove the price of Treasuries down and their yields up. This continued through March 12, when the Federal Reserve tried to address the
problem by flooding the repo market with $1.5 trillion. While the Fed was successful in bringing the repo rate, the Secured Overnight Financing rate (SOFR), down, repo liquidity couldn’t address the selling pressure in the Treasury market, and Treasury yields continued to rise.

With the sudden decline in the price of Treasuries, the negative feedback loop that is inherent in the repo market and in the related market for derivatives collateral kicks in (see Adrian and Shin 2010, Gabor 2016, Gabor and Ban 2016, Sissoko 2016).

The negative feedback loop in repo works like this: a decline in the value of collateral results in a margin call. As an example, assume a borrower has borrowed $98 by posting $100 in Treasury collateral and is required to maintain a haircut (or excess collateral) of 2%. Then a decline in the value of the Treasuries to $99 will lead to a $1 margin call that can be met with either cash or collateral. That is, to support a $98 loan, $100 of Treasury collateral must be maintained. Alternatively, a payment of $1 in cash will reduce the loan to $97 against $99 in collateral. If the borrower happens to own additional, unpledged Treasuries, the call is easily met. However, when the repo borrower is at the limits of her borrowing capacity, the margin call forces the borrower to scramble to meet the call with additional cash or collateral. This will in general force the borrower to sell something. In other words, margin calls generate a demand for cash.

Furthermore, if the borrower fails to meet the margin call, then the lender sells the collateral to pay back the $98 loan. Note that the lender has no incentive to seek the best price for the collateral – the lender just wants to make sure that the $98 loan is covered – any excess returns from the sale of
the collateral have to be remitted to the borrower. In short, margin calls generate sales either from borrowers desperate for cash or from lenders who are liquidating the collateral to close out the repo loan. These sales push prices down further and generate more margin calls. The bottom line is that repo has always been associated with fire sales of assets in crises. These fire sales are a function of the contractual structure of the repo loan.

The issue at the present moment is that the coronavirus crisis has caused a significant increase in the volatility of many financial markets. When volatility increases, the collateral that needs to be posted in derivatives contracts typically increases too. So, the crisis has been accompanied by an increase in the collateral that needs to be posted. As a result, demand for collateral has increased. Collateral that could meet demand in late February would not be enough to meet demand in mid-March. (Indeed, it’s possible that this dynamic had already started playing a role well before March 13.)

At the same time, as we have seen, the fall in Treasury prices from March 9 to March 13 meant that the supply of collateral had declined. In fact, for 30-year Treasuries, a rise in yield of 0.5% as we see over this period can be associated with a decline in value of 8% or more. While the effects are smaller for Treasuries with shorter maturities, the aggregate effect on the supply of collateral that is generated by the interest rate movements in the first chart is both substantial and dramatic. Furthermore, this decline in value affects each and every owner of long Treasuries. In short, from March 9 to March 13 traders who held long Treasuries as “safe assets” learned (as they had always been told by people who pay attention to these things) that even Treasuries can be risky assets. This undoubtedly increased the demand for cash, and the incentive to sell long Treasuries.
This decline in the value of long Treasuries caused collateral positions everywhere to fall. The decline in collateral was inevitably accompanied by margin calls. In these circumstances there were inevitably some traders who were unable to meet the calls or who were desperately looking for cash to meet them. They looked at long Treasuries as risky assets, because they didn’t know how long this cycle of margin calls was going to continue – and how far the price of 30-year Treasuries could fall, which generated a strong demand for cash and very short Treasuries. Traders who didn’t meet their margin calls faced forced sales of their collateral, resulting in more sales of Treasuries. With these sales came lower prices and more margin calls and more sales, with no clear end in sight.

This is the fundamental nature of repo and similarly structured markets. When traders’ balance sheets are stressed, all it takes is a fall in the price of collateral to turn the repo market into a coordinating device that generates a vast liquidity drought, hitting everybody in the market. We saw this in March and September of 2008, but then the cycle was stopped by dramatic Federal Reserve action before Treasuries became illiquid. And almost everybody, certainly including myself, thought that the shift of the repo market out of private sector collateral would help stabilize it. What we learned over the past two weeks is that, in a crisis, repo markets don’t just act as a vortex sucking liquidity out of the financial system, but that this vortex is so strong that not even Treasuries can be treated as “safe assets.”

From March 15 through March 17, the Fed took dramatic actions, providing liquidity to the banking system, opening swap lines with five central banks, restarting quantitative easing, re-opening crisis programs to lend to investment banks against collateral and to help non-financial corporations to borrow on commercial paper markets. Even so, the yields on Treasuries
continued to rise through March 18. Only after the Federal Reserve re-opened crisis support for money market funds (March 18) and extended swap lines to nine more central banks (March 19) did the yields on Treasuries finally begin to fall. Even so, by end of day on March 20, yields had still only fallen to their level on March 13 and remained far above their March 9 level.

Thus, on the morning of March 23, the Federal Reserve took unprecedented action, expanding its support of credit markets far beyond the policies it adopted in the 2008 crisis. Most important to the repo market, the Fed declared that it stood ready to buy Treasuries in unlimited amounts. In short, the Federal Reserve is now a backstop for the price of Treasuries at all maturities. In my opinion, the Fed’s actions on March 23 were designed to put a stop to the repo markets’ forced run on Treasuries. And I believe the Fed has succeeded: yields on Treasuries dropped on Monday and the Fed has the means to keep them from rising significantly.

While the Fed may have stabilized the Treasury market, when the health care crisis has passed, it will be time to reconsider whether we want to continue to rely on repo markets now that we have seen twice in a dozen years how they suck liquidity out financial markets just when it is most needed. Structural reform of our money markets needs to be on the agenda.

[i] Gabor and Ban 2016 is an exception.
R. Hockett, The Democratic Digital Dollar: A ‘Treasury Direct’ Option

March 25, 2020

Robert Hockett, Cornell Law School

Introduction

On March 23rd House Democrats did something I and many others have been advocating for some time – draft plans to legislate into existence a digital dollar, along with a system of digital wallets. The plan I’ve been pushing can be instituted by municipal, state, or national authorities, and at the national ‘level’ can be administered either by the Fed or by Treasury. (We proposed the state version in New York’s Assembly and Senate last October, and it has generated much ‘buzz’ here ever since.)

It is the latter – the Treasury – version of the Democratic Digital Dollar that I want to emphasize here, in light of both (a) the ‘need for speed’ in aiding our Corona-hit public and flagging economy, and (b) the Fed’s century long common-law marriage to Wall Street. The Treasury – an agency more democratically accountable than the Fed – already has half of the requisite digital architecture in place. Treasury has a
universal account system – ‘Treasury Direct’ – available to all citizens and legal residents of our country. It would be easy in principle for Treasury to issue a new Fed ‘dollar bill’ equivalent – what I call a ‘Treasury Dollar Bill’ – receivable into these accounts, then either facilitate easy convertibility into Fed dollar bills or – better yet – declare them legal tender as well.

This isn’t as exotic as some might initially think. Our first truly nationally issued dollar – the ‘Greenback’ (sound familiar?) – was administered by the Treasury when it was first instituted during the Civil War – hence the ‘bank regulator’ OCC’s name – ‘Comptroller of the Currency.’ The dollar only came to be Fed-administered about 50 years later, when we established the Fed so as to render the dollar supply more ‘elastic.’ But we’ll come back to that. First some background…

1. **Background: The Democratic Digital Dollar & the Inclusive Value Ledger**

Last autumn, New York Assemblyman Ron Kim and State Senator Julia Salazar proposed legislation I’d drafted to institute what I call a Democratic Digital Dollar plan. The plan, designed and discussed fully here, is meant to be implementable at the state, local, or federal levels. At the federal level, it could be administered either by the Fed or by Treasury.

The plan’s architecture is strikingly simple: via this ‘public Venmo’ or ‘inclusive value ledger’ (IVL) system, every person and business receives a smart-device accessible digital wallet, with what I call ‘vertical’ connectivity to the public
fisc, and what I call ‘horizontal’ (think P2P) connectivity to all other wallets. All are thus able to pay taxes and receive tax refunds and other disbursements over the IVL, and all are able to make real time payment to one another over the same system.

The reasons to put such a plan into place are quite numerous and are especially strong now when the need to get stimulus moneys to hard-hit Americans’ wallets is as urgent as it could possibly be.

For one thing, in any self-professed ‘commercial society’ and ‘exchange economy’ such as our own, a payments system must be considered an essential public utility, which justice requires we make freely available to all. People don’t pay to use sidewalks, nor do they or small businesses pay to use nickels or dollar bills. Neither, then, should they have to pay to use digital payments media as these now supplant paper currencies.

For another thing, we measure the size and the growth of our economy by reference to transaction volume. That is all GDP is. It follows that a more seamless and efficient payments system, by enabling more rapid transacting and hence larger transaction volumes within any time interval, means much greater economic growth and a much larger economy. Justice and growth thus converge.

Thirdly, the presence of such a system, once it is in place, offers a host of collateral benefits too. If administered by a nation’s exchequer or monetary authority (think Fed and Treasury), it will enable much faster fiscal stimulus or monetary policy transmission than does our present Baroque system of bank middlemen who we hope will pass cheap credit to
consumers. Instead we just drop the helicopter money into our digital wallets.

And, in more ordinary times, we offer interest on savings in wallets, whereupon we can then move those rates up or down when we must slow down or speed up aggregate spending activity. Indeed we can even then ‘micro-target’ specific sectors of the economy where spending appears to be overheating or dangerously cooling.

Fourthly, an IVL system would enable cities and states to begin giving monetary rewards to ‘care work’ providers and other contributors to the public good that our present payment arrangements make too difficult for most governments to judge feasible. A teenager who helps grade-schoolers with homework after school, for example, or someone who looks in on and cares for a ‘shut in,’ can quickly transmit ‘proof of work’ (POW) to a city or state, even a federal welfare authority and receive spendable IVL credits in return. Given the long-term savings to municipal, state, and federal budgets such work affords, crediting it over the IVL is quite readily justified even on fiscal grounds, let alone Good Society ones.

Finally, going digital offers financial data privacy benefits too. Unlike private sector banks and online payment ‘service’ firms, public sector administrators of the IVL do not do what they do for profit – there are no ‘carrots’ to entice ‘data harvest’ and sale. They’re also subject to 4th Amendment constraints as ‘state actors,’ unlike, say, Wells Fargo or Venmo – there is a ‘stick.’. Adding more sticks through the criminal law, moreover, along with especially hard encryption for all transactions of amounts lower than what the law requires banks to report under anti-money-laundering law, is
quite easily done on an IVL system.

No matter how you look at it, then, we should do this. Commercial and financial inclusion, more rapid economic growth, leak-proof fiscal stimulus and monetary policy, valuing undervalued work, and tightening financial privacy … what’s not to like? Well, it rather depends, in the national case, on what Congress ultimately decides.

2. Latest Congressional Discussions

A lot seems to have happened in the last 24 hours or so. On March 23rd, reports emerged that something like IVL might be included in the House Democrats’ stimulus and relief bill as of that night. As more details emerged, however, it emerged that what actually was under consideration was multiple things. On the one hand, there was language suggesting that what was under consideration was something like what Morgan Ricks, Lev Menand, and John Crawford have proposed. On the other hand, there was also language suggesting that IRS accounts and prepaid debit cards of the kind I proposed for fast helicopter money earlier this week might be in the cards. And finally, there were sufficient references to wallets and digitization to make clear that the legislators really did have digitization in mind.

Needless to say, this is all very gratifying to the many of us who have been advocating central bank digital currencies in the name of more just and efficient commercial and financial architectures for so long now – not to mention the yet more of us who see the need to get money to struggling Americans quickly right now. But all is apparently up for grabs again
now, given Congress’s decision to leave any digital dollar, Treasury-housed or otherwise, out of the current bill. We should nonetheless keep discussing how to go forward before the next stimulus bill, which will surely come. This could prove interesting even later, should the Fed’s long common-law marriage to the banking sector, or should its statutory constraints, prove at any point problematic. It’s also interesting because in Treasury’s case, we already have half of the architecture in place, as I’ll now explain.

3. The Treasury Dollar Bill & the Treasury Direct Plan

Few seem aware of this fact, but the U.S. Treasury already affords any citizen or legal resident who desires it a ‘Treasury Direct’ Account (TDA) with the Treasury itself. Through this portal, citizens and legal residents can purchase or sell all four of the principal classes of Treasury security—bills, notes, bonds and Treasury Inflation-Protected Securities (TIPS)—at any time, 24/7. All that is needed is (a) a net-accessible laptop, smartphone, or other device; (b) a Social Security or Taxpayer I.D. number; and (c) a bank account out of which payments for, and into which redemptions of, Treasury securities can be made. All that is needed to make this a full Treasury-administered Democratic Digital Dollar and IVL is to add one new Treasury security—a kind of digital cash—to the basket now offered, and to establish ‘horizontal’ connectivity between Treasury Direct Accounts to supplement the ‘vertical’ connectivity between these accounts and the Treasury—by making them P2P wallet-interactive.

Here, then, is the nucleus of what can be quickly scaled-up into a national savings and payments platform administered by Treasury.
First, Treasury will be authorized, and indeed required, to issue a new denomination of a Treasury bill with no maturity date and a face value of $1. We’ll call it a Treasury Dollar Bill (TDB). It is effectively a one-dollar ‘perpetual,’ a.k.a. ‘consol,’ much like the Federal Reserve notes we call ‘dollar bills.’ Treasury will directly convey Congressionally determined ‘amounts’ of these Treasury Dollar Bills, which we’ll call ‘Starter Deposits,’ to holders of Treasury Direct Accounts, which can be digitized into digital wallets as described below. There will be no need to ‘sell’ them. Starter deposits then can be periodically supplemented by what we’ll call Supplemental Deposits as Congress determines.

Treasury Direct wallet Accounts holding TDBs will be much like accounts held with present-day money market mutual funds (MMFs), save that they will be sovereign issuances with all the guarantees thereof. TDBs will for their part be reminiscent of the ‘Greenbacks’ that Treasury issued as the nation’s primary currency from the mid-1860s until early in the 20th century, when the Fed was established and Fed Notes began to supplant Treasury issuances as primary currencies.

Second, through legislation we will mandate either (a) that henceforth Treasury Dollar Bills will be legal tender on the same footing as Fed dollar bills, or (b) that the Fed open individual deposit-cum-transaction accounts – we’ll call them ‘Fed Transaction Accounts’ (FTAs) – for all who have Treasury Direct Accounts, with free transferability of funds between each pair of twinned Fed Transaction and Treasury Direct Accounts. Any and all such accounts will be digitized into smart device-accessible digital wallets as we upgrade the national payments infrastructure as most developed nations are now planning to do.
TDBs will thus constitute Congressionally determined ‘helicopter money’ that functions alongside garden-variety Fed-administered money. Of course Treasury will coordinate with the Fed to prevent undesired inflationary impacts. Because what occasions helicopter drops is essentially by definition a significant contraction, however, this seems unlikely to become ‘an issue.’

Third, we supplement the currently open ‘vertical’ connectivity channel between Treasury and TDA wallet holders with universal P2P ‘horizontal’ connectivity among all TDA wallet holders themselves. We do that either between TDAs themselves, in the event that we opt for Option (a) just above, or between FTAs, in the event that we opt for Option (b) above. Again, then, TDAs or FTAs will become digital wallets, out of which anyone can pay anyone else for anything legally sold, and into which anyone can be paid by anyone else for anything legally sold.

As in my Democratic Digital Dollar and IVL plans more generally, private sector banking institutions will be required, as a condition of licensure, to be among those businesses with what I call ‘horizontal’ connectivity to TDA wallet-holders. In that capacity they will be required to offer full, fee-free access to teller windows, ATMs, and all other facilities at which anyone might wish to convert TDBs into Federal Reserve Notes (FRNs), coins, or any other form of legal tender cash we might ever include among our money forms.

Fourth, we will cryptographically protect all TDAs or FTAs, and all transactions performed with them. We should also guarantee cash-reminiscent anonymity of transacting for all transactions in amounts not already required to be reported to bank regulators under current bank privacy and money-
laundring enforcement laws. Violations of these protections by any government official will not only constitute 4th Amendment violations, but will also be legally prosecutable – as, of course, will be any breaches by ‘hackers’ or other miscreants. Because the Treasury, unlike private sector banking institutions and payment ‘service’ providers, isn’t actuated by a profit motive, security and data protection seem likely to be easier assured on the new Treasury direct system than they are now. But there is no need to leave this to chance.

Finally fifth, once the system is fully up and running, we might commence paying interest on funds held in TDAs or FTAs, just as the Fed now pays interest on reserves (IOR) to banks holding accounts with it, and as private sector banks pay on checking and savings accounts held with them. The reason for doing this is that it will afford our monetary authority – be that the Fed, Treasury, or a consolidated fiscal and monetary authority such as that designed in work that I have now in press – a most potent, because ‘direct,’ monetary policy tool. Rates can be raised to slow spending, and can be lowered to boost spending.

There will be no more ‘pushing on a string’ problems or other leakages in monetary policy transmission should we go this route. Nor need we ‘hope banks will lend’ or ‘hope people will borrow’ in crises. We’ll simply ‘drop money in’ when we must, soak it back up other ways – raising rates high, impounding some funds, or raising taxes if necessary. As CPI inflation seems to have been lower than policy targets for decades now, though, that seems a fairly remote possibility. We shall soon see whether productivity drops owing to Covid-wrought social distancing measures might change that.
The ‘Treasury Direct’ plan, then, offers all the advantages I laid out above for any Democratic Digital Dollar and IVL plan. But there are also three more.

First, Treasury is generally more democratically accountable than the Fed. It is more forthrightly ‘the people’s fisc,’ than is the Fed, which is presently a bank for the banks. Second, the Treasury labors under fewer statutory constraints than the Fed, which might come in handy once we start ‘People’s QE.’ And finally, my Treasury Dollar Bills clearly resemble both Fed dollar bills held at banks and other, coupon-carrying Treasuries, affording a salutary reminder to the public that their Fed Note money, Treasury Note ‘debt,’ and indeed all sovereign liabilities in a democracy at bottom come down to our liabilities to one another.

Conclusion

I hasten to add, in conclusion, that I am myself undecided at this point as between Fed and Treasury options for the Democratic Digital Dollar. In my work thus far, I’ve been interested only in saying that both can be done. I’ve taken a more advocative role here only for two reasons sharing a common cause: Our present pandemic-fueled hurry requires we act quickly, which Treasury Direct makes quite feasible. And, ironically, that same hurry has us talking about Fed plans while not giving Treasury alternatives their due.
In wild periods of alarm, one failure makes many, and the best way to prevent the derivative failures is to arrest the primary failure which causes them.

Walter Bagehot, Lombard Street

One failure makes many, wrote Bagehot, the dean of financial crisis analysts. When economies are in wild alarm, as in the fall of 2008, a failure, like the Lehman Bros. failure, can reverberate throughout the financial system, causing a wave of rescue efforts and other failures.

Our current crisis and its anxiety are borne of a different cause. Large parts of the economy have been shuttered, not because of financial stringency or economic insufficiency. Instead, conscious decisions have been made that to save lives it is necessary to close shop.

Bagehot’s words have a different interpretation now: the best way to overcome the crisis is to arrest the spread of Covid-19, the primary failure. Surely, arresting the spread of
Covid-19 through means other than social distancing remains many months away. We are left with the question of how best to prevent, or, if unsuccessful in prevention, to cope with the derivative failures.

That reduced economic activity is a derivative failure of the spread of Covid-19 demands different reactions from policy makers from more familiar recession scenarios, often caused by excessively tight monetary policy. Further, with policy rates in many advanced economies near or below zero, the room for a several percentage point drop in policy rates doesn’t exist. What steps are crucial to counter the deepening social distancing recession?

First, we must support, protect, and direct resources to the health sector to maintain and even increase its capacity. Second, outside of the health care sector, much economic activity need not be stimulated at present; instead it needs to continue to be suppressed. Third, we must work in every dimension to prevent hardship to those who are suffering—those who have or will lose their employment or income, who are isolated from necessary support, or are laboring in difficult circumstances. Finally, it is important now to preserve the knowledge and capital, much of it human capital, in society in general and also in firms.

The two elements of assisting those who have lost employment and income and preserving society’s ability to recover once the primary failure is arrested, have been the subject of many essays in this series and elsewhere. There are many laudable suggestions. In the remainder of this essay, I’ll discuss how governments might best preserve the ability of firms to survive the crisis.
As Dan Awrey pointed out in his essay, the Federal Reserve’s recent expansion of lending is welcome in that it is designed to “prevent dislocation within private money markets from triggering the failure of otherwise healthy banks and other financial institutions, along with the consequent withdrawal of lending, deposit-taking, and other key financial services.” These recent actions by the Federal Reserve are important building blocks in preserving the financial services that all modern economies rely on.

The Fed’s actions alone cannot preserve the ability of many nonfinancial firms to survive a long period of inactivity. The Federal Reserve’s lending is based on counterparties delivering collateral to the Fed. That collateral consists of loans to firms, but for the firms to receive the loans in the first place, the lender must be confident in the firm’s ability to repay. In the current crisis and as the slowdown continues, that confidence to lend will disappear. To maintain the confidence of lenders, there is an urgent need for Congress to provide assistance with pandemic insurance, in a fashion similar to the Terrorism Risk Insurance Act in 2002. Many lenders will refrain from lending if borrowers don’t have insurance for business interruptions caused by pandemics, but we’ll need the federal government to provide reinsurance to private insurers.

Some adjustments to the Fed’s programs can improve their efficacy during this slowdown. The joint U.K Treasury and Bank of England program for lending to firms, the Covid Corporate Financing Facility, has many features worth emulating here in the U.S. It measures firms’ credit quality prior to the spread of the pandemic; it allows firms that had not before issued commercial paper to participate in the facility; it uses measures of credit quality beyond those of ratings agencies; it allows firms of relatively lower credit quality to
participate in the facility; finally, it aims to match market pricing prior the economic shock from Covid. The U.K.’s CCFF is open to all firms that “make a material contribution to the U.K. economy.” Broadly inclusive features like those should be adopted by the Federal Reserve for its CPFF.

Firms also face the specter of paying interest and principal on their existing borrowing. Without the ability to refinance those borrowings and to borrow additional amounts to make interest payments, many won’t have the revenue to sustain the required principal and interest payments. Financial regulators have issued helpful guidance to banks to continue to support businesses and households Nonetheless, as the slowdown continues the confidence to lend will surely be drained from the circular flow of economic activity, limiting the efficacy of the Fed’s lending programs and guidance.

Consequently, much more must be done to preserve firms in the face of the slowdown. Simply providing funds to specific firms now, as is currently being discussed in Congress with respect to the airlines, is not likely to be effective. We have little idea how long the slowdown will persist, and we have not assessed which firms are crucial to any anticipated recovery. Spending resources injudiciously now may prevent us from applying those same resources in more effective ways in just a few months.

Some principles can assist us in determining which firms should be a priority for extraordinary government assistance. Like the auto firms in the wake of the global financial crisis, firms that have both significant employment and high capital intensity are vital to preserve. Firms with high capital intensity are difficult to replicate, and this is true for firms that employ highly skilled workers, that is, firms
that have high human capital intensity. A second principle is that firms that provide inputs to others are likely more systemic in their operation than those that provide final goods. For example, a computer chip manufacturer is likely more systemic than a computer manufacturer. Finally, extraordinary assistance should only be considered if broad-based, widely available facilities to help most firms are already in place.

It is difficult to make the determination of where to focus resources as such triage decisions are most excruciating. But the government will make such decision according to some principles. It is vital that the government should make its principles explicit, so that people can understand the reasons the government is acting and can better forecast future interventions. In general, society needs to examine, through democratic methods in Congress, which firms are harder to replace than others, and which are more systemic in their effects on other firms and focus its preservation efforts on those firms.

Notwithstanding how difficult it was to replace the auto firms given their importance to the economy, the auto firms were put through bankruptcy in 2008-2014 and continued to operate. That approach was possible, in part, because many other firms were not also in the same straits as the auto firms. New policies to reorganize the finances of systemically important firms that cannot service their debt will have to be considered.

The current crisis will strain our finances, but it may strain our imaginations even further. How to deal with the derivative failures caused by an extended shutdown of the economy without impairing the ability of the economy to recover is one such challenge. We should avoid a rush to throw money at industries
randomly. Instead a pledge to preserve the economy, to direct resources at particular industries and firms, and to do so in a deliberative and democratic way, is likely to be more effective in addressing the failures that will result from this abrupt recession.

K. Pistor, The Case for Free Money (a real Libra)

March 20, 2020

Katharina Pistor, Columbia Law School

Our money system revolves around debt. It combines state-issued legal tender with private debt instruments that in good times are money-like. Debt is a pledge on the future and debt-based money is based on the expectation that the future will produce positive returns.

The Coronavirus pandemic is a stark reminder that this is not always the case. Indeed, we are beginning to realize that the problem with our future now is not that it is uncertain, but that it will certainly be radically different from past expectations, even from our current imagination. Investors are selling assets as fast as they can, which is their way of taking back the bets they had made on the future. They are hoarding cash. Debt Money will dry up next and this will bring the economy to a grinding halt. Individuals and families without any cash (or bank deposit) reserves will be hit
The Trump administration has announced that it will send out dollar-denominated checks to all American citizens. As welcome as this government handout will be for many, there are several fundamental problems with this strategy: First, payouts that are limited to tax payers, as currently envisaged by the GOP bill, will not reach the poorest of the poor; and even if they were included, most lack bank accounts to cash in their checks. Second, a one-time payment will not be enough given looming unemployment and the huge debt burdens too many households face. Third, richer households will hoard the dollar rather than spend them, thus dampening the effects of this liquidity boost.

As an alternative, I propose that governments should issue a new type of currency Free Dollars (Euros, Pounds, Yen) – a really free Libra – and they should issue them as central bank digital currencies, or CBDCs. Free Dollars (and their equivalents) should not be issued as a one-off payment; rather a first payment that puts Free Dollars in the hands of every person living in a given currency area should be followed by subsequent releases in response to effective demand.

Free Dollars should serve as a medium of exchange as well as a unit of account. In contrast to the greenback and other conventional currencies, they should not be designed as a store of value. Instead, a Free Dollar should lose a fraction of its nominal value unless it is spent within a set time period. This feature is comparable to negative interest rates that would permanently attach to unspent money. Its purpose is not just to fight a temporary deflationary episode, but to make money abundant throughout the economy. The government should accept Free Dollars for settling outstanding tax obligations, thereby firmly anchoring the Free Dollar as unit of account. Free Dollars should be issued in the form of digital money using mobile phones and online devices that are
common already in many parts of the world, including in China and parts of Africa.\(^4\)

The Free Dollar’s *demurrage feature* – its slowly diminishing value – would ensure that a large fraction of the Free Dollar would actually be circulated, not hoarded. Even as the economy is in lock down, Free Dollars could be used to pay outstanding debt and taxes, to buy household necessities and acquire vouchers that promise future deliveries of goods and services. Once economic activities pick up again, Free Dollars would be readily available to boost spending throughout the economy.

The idea for Free Dollars takes its cue from cooperative forms of money that often emerge spontaneously in times of economic distress.\(^5\) That happened in Germany during the period of hyperinflation in the 1920s, in North America after the stock market crash of 1929 and on both sides of the Atlantic during the Depression, in Argentina after the meltdown of 2001, and again in North America and Europe after the financial crisis of 2008. Cooperative money allows everyone who has something to exchange to participate in the economy. They don’t have to be wage earners; neither do they need a bank account. What they do need is a viable currency with a high turnover, or velocity rate to participate in economic activities on their own terms. As Irving Fisher put it in the midst of the Great Depression,

> “Free money may turn out to be the best regulatory of the velocity of circulation of money, which is the most confusing element in the stabilization of the price level. Applied correctly it could in fact haul us out of the crisis in a few weeks.... I am a humble servant of the merchant Gesell.”\(^6\)

A prominent example for free money was the “Wörgl” (pronounced Voergel), a currency that was issued in the 1930s by an Austrian city bearing the same name.\(^7\) Confronted with thirty
percent unemployed and a collapsing economy, the mayor of Wörgl followed the recommendations of Silvio Gesell, a German autodidactic scholar, who had lived through the Argentine crisis of the 1890s and whose work would greatly influence Keynes. [8]

The city of Wörgl issued Freigelt, or “Free money” to its citizens in the form of “labor certificates.” It deposited its remaining cash reserves (which had dwindled during the recession) with a local bank to back the certificates. To ensure that the Wörgl served its purpose as a medium of exchange, a stamp was affixed each month to the certificate at 1 percent face value. Furthermore, the Wörgl circulated at a rate of 12-14 times that of the national currency, giving credence to the high velocity of free money. The Wörgl survived only 13 months — not, however, because it did not deliver on its promises. In fact, the city’s economy prospered, unemployment went down and local businesses frequently paid their taxes early to avoid the stamp discount, leaving the city government with a revenue stream to spend. This successful social experiment in free money was shut down, because the central government reasserted its monopoly over money and threatened sanctions for its continued use.

Sovereigns guard their monetary sovereignty carefully. Yet, over the past decade, they have stood by as new forms of digital money, spearheaded by Bitcoin, were launched. These digital currencies turned out to be an experiment in form, but not in substance. Bitcoins were designed as a trustworthy medium of exchange; but they were kept scarce so as to protect their value. While they can be acquired though work, mining bitcoins is energy intensive, and thus hardly free. But the Achilles heel of Bitcoin is its convertibility into hard currencies. This turned Bitcoin into just another debt money: an asset that is held in the expectation of future gain.

Likewise, Facebook’s “Libra”, which the company hoped to roll
out this year, was anything but free. It was designed as a for-profit currency, a “currency of currencies” that was to be backed by hard currencies and other assets denominated in hard currencies.\[^9\] Placed in a separately managed reserve, these assets were meant to produce interests, not for the Libra holders, but for the members of the Libra Association. The project was met with fierce political and regulatory backlash and seems to have been put on hold for now with Facebook turning to develop a digital infrastructure for digital currencies others might issue.\[^10\]

Still, the digital technologies private companies have developed might be used for a more egalitarian and sustainable money system. My own preference would be to open accounts for CBDCs for all people (not only citizens!) within a given currency area with their central bank. However, this might not be feasible in the short term, because outside China and a few other countries the necessary infrastructure is not yet in place. As an alternative, central banks might take advantage of the infrastructure some private companies have already developed. However, if governments choose this option, they should protect the data of their citizens from appropriation.

Free money could be issued by any community, not just the central government. Historically, free moneys emerged spontaneously in response to acute money shortages during economic downturns. This was true not only for the Wörgl, but also for other cooperative currencies, such as the credito, which emerged after the 2001 meltdown in Argentina. Other community-based moneys emerged at different times in history for designated purposes, such as elderly or child care currency, energy conversation currency, local food-growing currency, among others. These moneys link unused resources with unmet needs and as such should be encouraged. Their viability could be further enhanced with the help of blockchain technology. Indeed, several municipalities have already seen bills on blockchain-based payment platforms
introduced.\textsuperscript{[11]}

There is certainly room for more than one money. Ideally, different types of money should co-exist and be least partially interoperable, as this would greatly enhance the resilience of the money system. However, the convertibility of free money into conventional debt money must be restricted, because this would defy the purpose of free money. Obviously, this will create new governance challenges, such as setting conditions for convertibility and exchange rates, which would have to be worked out. For now, it is critical to set in motion the creation of moneys that facilitate economic exchange at every feasible level.

To be clear, issuing free money is not meant as a substitute for other much-needed government interventions, such as debt relief, social insurance schemes aimed at protecting businesses and their labor force, investments in health services, etc. Rather, the aim of this proposal is to show how we could harness the current political opening for rolling out a new form of money as the foundation for “sustainable abundance”.\textsuperscript{[12]} If there is a silver lining to this devastating pandemic, it is that it might serve to lay the foundations for economic and financial systems that are more equal and sustainable.

1. Facebook announced a new digital currency in June of 2019, The Libra (the Latin word for free), which, in fact, was designed as a for-profit currency of currencies. \textsuperscript{↑}


3. Whether or not you believe that governments need taxes
to fund themselves, imposing an obligation on everyone that must be paid in the unit of account has been a key factor in anchoring a currency historically. See Desan, Christine. 2015. Making Money: Coin, Currency, and the Coming of Capitalism. Oxford: OUP. ↑


[Recall This Buck I]: Chris Desan on Making Money

Recall this Book Podcast Talks with Christine Desan

Recall This Book is a podcast exploring important books on a pressing topic. Each episode focuses on a contemporary problem or event and zeroes in on a book or books that shed light on it. We look backwards to see into the future: we can understand things about the future by choosing texts that shed a sideways light on our present situation, and attempt to shake up the terms of present debate by showing how a topic was approached in earlier times when a different version of this question had come up before. We aim to have lively barstool discussions—a warm but involved and potentially argumentative hashing out of the best way to think through difficult present-day issues. We bring on writers to talk about their own books, or scholars to talk about the books that are helping them navigate best the world in which we live.

This is the first of several RTB episodes about the history of
money. We are ranging from the earliest forms of labor IOUs to the modern world of bitcoin and electronically distributed value. Our idea is that forms matter, and matter in ways that those who profit from those forms often strive to keep hidden. Today, we begin by focusing on the rise of capitalism, the Bank of England, and how an explosion of liquidity changed everything.

This is the first of several RTB episodes about the history of money. We are ranging from the earliest forms of labor IOUs to the modern world of bitcoin and electronically distributed value. Our idea is that forms matter, and matter in ways that those who profit from those forms often strive to keep hidden. Today, we begin by focusing on the rise of capitalism, the Bank of England, and how an explosion of liquidity changed everything.

We are lucky to do so with Christine Desan of Harvard Law School, who recently published *Making Money: Coin, Currency, and the Coming of Capitalism* (Oxford University Press, 2014). She is also managing editor of JustMoney.org, a website that explores money as a critical site of governance. Desan’s research explores money as a legal and political project. Her approach opens economic orthodoxy to question by widening the focus on money as an instrument, to examine the institutions and agreements through which resources are mobilized and tracked, by means of money. In doing so, she shows that particular forms of money, and the markets within which they circulate, are neither natural or inevitable.

You can find the episode here: https://recallthisbook.org/2020/03/20/23-recall-this-buck-i-chris-desan-on-making-money-ef-jp/
In the wake of the Great Financial Crisis (GFC) the Federal Reserve got creative. The Fed employed a set of ‘unconventional’ policies aimed at addressing the crisis within the given institutional structures and tools available. Those policies, including Large Scale Asset Purchases (LSAPs, commonly known as QE or “Operation Twist”) and forward guidance, did constitute a significant break from prior policy approaches – take a look at the Fed’s balance sheet over time – but they did not alter the fundamental structure of monetary policy. LSAPs were, after all, simply immense targeted open market operations (OMOs) and forward guidance was an internal change in communication policy.\[1\] In other words, when the GFC hit, the Fed innovated within existing structures to address the threat.
The Fed is taking exactly the same action to confront the Coronavirus. As one New York Times headline put it, “The Fed Deployed its 2008 Arsenal All in One Weekend.” This should come as no surprise. While testifying to Congress before the Coronavirus hit the US, Chair Jerome Powell was asked what tools the Fed had available to fight the next economic downturn. He answered by pointing out that the current environment of low interest rates meant that cutting rates further would likely be insufficient to fight a downturn. He went on to say that, in such a situation, the Fed would have to employ the same tools it did in the wake of the Great Financial Crisis: forward guidance and large-scale asset purchases (LSAPs). “We will use those tools. I believe we will use them aggressively should the need arise to do so.” And so they have.

In 2008 it was at least conceivable, if highly debatable, that the proper monetary policy response to a financial crisis was to inject a large amount of money into the financial sector. Can the same be said in the face of a global pandemic? In 2008, the Fed designed and executed its monetary policies to spur real economic activity. It purchased a huge amount of longer-term assets in an effort to push liquidity to businesses in the real economy. Today, in a world of social distancing, we don’t need to jumpstart real economic activity, we need to freeze it. If we get that right, “production and
spending must inevitably decline for a time.” But so far, the Fed still wields the same tools, seeking to send large amounts of money into the economy via a small set of large financial institutions (primary dealers). Given the different nature of the two crises, this seems odd.

Nadav Orin Peer ended his post writing, “the public’s financial health should come first.” I couldn’t agree more. Unfortunately, at the moment, it is very difficult, if not impossible, for the Fed to heed the call. The Fed’s only conduit to supporting the financial health of society at large is via the financial markets: it can cut rates, change regulations, and buy and sell assets from large financial institutions. When it comes to Fed interventions, it’s no wonder the financial sector comes first.

We have had twelve years to re-structure our financial architecture. After the Great Financial Crisis and the Eurozone Crisis, some called for legislatures to enable central banks to deposit money directly into the bank accounts of individual citizens: People’s QE. Notably, executing this policy would be a lot easier if individual citizens were permitted to hold bank accounts at the central bank. Perhaps ironically, Ben Bernanke poo-pooed this notion not on the basis of economic theory, but by appeal to democratic theory. He wrote, “the distribution of what are effectively tax rebates should be subject to legislative approval, not determined unilaterally by the central bank.” And he’s right. But then should QE, the distribution of what is effectively an immense amount of credit to a small set of financial institutions, be determined unilaterally by the central bank? What Bernanke’s comment reveals is that balance sheet policies, no matter to whom the money is distributed to, blur the monetary-fiscal divide.

Many economists in the wake of the GFC have called for increased monetary-fiscal policy coordination in emergency situations. Their proposals implicitly recognize the simple
fact that there are macroeconomic policy strategies which the state cannot execute without monetary-fiscal policy coordination. The most obvious example involves money creation by the Fed for public spending, a central bank operation that some call “helicopter money” and Ben Bernanke dubs a “Monetary-Finance Fiscal Program.” Instead of the Fed using new money to buy assets from large financial institutions to stimulate the economy, with helicopter money the Fed makes new money available for the legislature to spend—if they so choose, in one way or another, including sending a check to every citizen—something we’ve been hearing a lot about lately.

There is no existing institutional mechanism ready to facilitate such monetary-fiscal coordination. Congress did not act after the GFC. It did not heed the call to enable central banks to deposit money directly into the bank accounts of individual citizens. It did not heed the call to allow citizens to hold accounts at the Fed. It did not heed the call to enable soft monetary-fiscal coordination, in which the Fed runs the show, determining how much new spending it will finance but allowing Congress to decide if and how to spend it. Nor has Congress considered developing a national investment authority.

There are potential problems with all of these proposals, particularly the soft monetary-fiscal coordination proposals, but at least they are all attempts to learn from the structural limitations that American policymakers—monetary and fiscal—faced in addressing the Great Financial Crisis. Congress did nothing, and here we are. We face a whole new threat to the global economy and to global health, and still all the Fed can do is give money to large financial institutions.

In an earlier post, James McAndrews called for more fiscal action to stave off economic crisis: extend unemployment benefits, expand Medicaid and food stamps, etc. Some of his wishes have been granted since he wrote, and it’s obvious now
that we still need much more fiscal stimulus. But we should not let critiques of fiscal actions, or lack thereof, blind us to Congress’s other macroeconomic responsibilities. The Fed may be an independent central bank, but it is unquestionably Congress’s responsibility to govern monetary policymaking by setting the terms of the Fed’s power. The Fed was established over a century ago as a banker’s bank. At the time it was primarily a coordination mechanism for private banks. Today the Fed is, above all, the U.S. government’s monetary policy authority. It should possess the powers and mechanisms necessary to safeguard and promote the financial health of the entire nation directly, not merely via the financial sector, and the democratic oversight to empower it to do so legitimately.

If the monetary policy response to coronavirus is similar the monetary policy response to the Great Financial Crisis, we should expect the outcomes to be similar. The financial sector will recover quickly and benefit handsomely. The rest of the economy will survive, with long lasting scars. We should learn from the GFC. Congress should improve the existing power and mechanisms for executing monetary policy: it should consider opening up the Fed to individual depositors, engage in ‘People’s QE’, or convert the regional Federal Reserve Banks into regional investment banks. To fight the Great Financial Crisis, the Fed had to get creative in designing its approach to monetary policy. The time for Congress to do the same is long overdue.

1. Payment of interest on excess reserves was perhaps slightly different, as it constituted a change in powers of Fed to pay interest on excess reserves. However, this change was made by congress well in advance of the actual GFC. ↑
Are Central Banks Impotent?

Adair Turner and Paul Tucker

As the coronavirus pandemic spreads, two economics heavyweights debate the proposition. Replies will be updated in real time.


E. Saeidinezhad, Is the Monetary System as Systemic and International as the Coronavirus?

March 18, 2020

Elham Saeidinezhad, Department of Economics at UCLA
The coronavirus crisis has sparked different policy responses from different countries. The common thread among these reactions is that states are putting globalization on pause. Yet, re-establishment of central bank swap lines is making “money,” chiefly Eurodollars, the first element that has become more *global* in the wake of the Coronavirus outbreak. This is not an unexpected phenomenon for those of us who are armed with insights from the Perry Mehrling’s “Money View” framework. The fact that the monetary system is inherently international explains why the Fed reinstalled its standing U.S. dollar liquidity swap line arrangements with five other central banks *just after* it lowered its *domestic* federal fund’s target to zero percent. However, the crisis also forces us to see global dollar funding from a lens closer to home: the fact that the Eurodollar market, at its core, is a *domestic macro-financial linkage*. In other words, its breakdown is a *source of systemic risk within communities* as it disrupts the two-way connection between the real economy and the financial sector. This perspective clarifies the Fed’s reactions to the crisis in hand. It also helps us understand the recent debate in the economics profession about the future of central bank tools.

The Great Financial Crisis of 2008-09 confirmed the vital importance of advancing our understanding of macro-financial linkages. The Coronavirus crisis is testing this understanding on a global scale. Most of the literature highlights the impact of sharp fluctuations in *long-term* fundamentals such as *asset prices* and *capital flows* on the financial positions of firms and the economy. In doing so, economists underestimate the effects of disturbances in the Eurodollar market, which provides *short-term* dollar funding globally, on real economic activities such as trade. These miscalculations, which flow from economists’ natural approach to money as a veil over the real economy, could be costly. Foreign banks play a significant role in the wholesale Eurodollar market to raise US dollar financing for their clients. These clients, usually
multinational corporations, are part of a global supply chain that covers different activities from receiving an order to producing the final goods and services. Depending on their financial positions, these firms either wish to hold large dollar balances or receive dollar-denominated loans. The deficit firms use the dollar funding to make payments for their purchases. The surplus firms, on the other hand, expect to receive payments in the dollar after selling their products. The interconnectedness between the payment system and global supply chains causes the Eurodollar market to act as a bridge between the real economy and the financial sector.

The Coronavirus outbreak is putting a strain on this link, both domestically and globally: it is disrupting the supply chain, forcing every firm along the chain to become a deficit agent in the process. The supply chain moves products or services from one supplier to another and is essentially the sum of all firms’ sales. These sales (revenues) are, in effect, a measure of payments, the majority of which occur in the Eurodollar market. A sharp shock to sales, as a result of the outbreak, precipitates a lower ability to make payments. When an output is not being shipped, a producer of final goods in China does not have dollar funding to pay the suppliers of intermediate products. As a result, firms in other countries do not have dollars either. The trauma that the coronavirus crisis injects into manufacturing and other industries thus leads to missed payments internationally. Missed payments will make more firms become deficit agents. This includes banks, which are lower down in the hierarchy, and the central banks, which are responsible for relaxing the survival constraints for the banking system. By focusing on the payments system and Eurodollar market, we are able to see the “survival constraint” in action.

The question for monetary policy is how far central banks decide to relax that survival constraint by lowering the bank rate. This is why central banks, including the Fed, are
reducing interest rates to zero percent. However, the ability to relax the survival constraint for banks further down in the hierarchy depends also on the strength of foreign central banks to inject dollar funding into their financial system. The Fed has therefore re-established the dollar swap line with five other major central banks. The swap lines are available standing facilities and serve as a vital liquidity backstop to ease strains in global funding markets. The point to hold on to here is that the U.S. central bank is at a level in the hierarchy above other central banks.

Central banks’ main concern is about missed payments of U.S. dollars, as they can deal with missed payments in local currency efficiently. In normal circumstances, the fact that non-U.S. central banks hold foreign exchange reserves enables them to intervene in the market seamlessly if private FX dealers are unable to do so. In these periods, customer-led demand causes some banks to have a natural surplus position (more dollar deposits than loans) and other banks to have an inherent deficit position (more dollar loans than deposits). FX dealers connect the deficit banks with the surplus banks by absorbing the imbalances into their balance sheets. Financial globalization has enabled each FX dealer to resolve the imbalance by doing business with some U.S. banks, but it seems more natural all around for them to do business with each other. During this crisis, however, even U.S. banks have started to feel the liquidity crunch due to the negative impacts of the outbreak on financial conditions. When U.S. banks pull back from market-making in the Eurodollar market, there will be a shortage of dollar funding globally. Traditionally, in these circumstances, foreign central banks assume the role of the lender of last resort to lend dollars to both banks and non-banks in their jurisdiction. However, the severity of the Coronavirus crisis is creating a growing risk that such intermediation will fracture. This is the case as speculators and investors alike have become uncertain of the size of foreign central banks’ dollar reserve holding.
To address these concerns, the Fed has re-established swap lines to lend dollars to other central banks, which then lend it to banks. These particular swap lines arrangements were originally designed to help the funding needs of banks during 2008. However, these swap lines might be inadequate to ease the tension in the market. The problem is that the geographic reach of the swap lines is too narrow. The Fed has swap lines only with the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank and the Swiss National Bank. The reason is that the 2008-09 financial crisis affected many banks in these particular jurisdictions severely and their economies were closely intertwined with the US financial system. But the breadth of the current crisis is more extensive as every country along the supply chain is struggling to get dollars. In other words, the Fed’s dollar swap lines should become more global, and the international hierarchy needs to flatten.

To ease the pressure of missed payments internationally, and prevent the **systemic risk outbreak** domestically, the Fed and its five major central bank partners have coordinated action to enhance the provision of liquidity via the standing U.S. dollar liquidity swap line arrangements. These tools help to mitigate the effects of strains on the supply chain, both domestically and abroad. Such temporary agreements have been part of central banks’ set of monetary policy instruments for decades. The main lessons from the Coronavirus outbreak for central bank watchers is that swap lines and central bank collaborations are here to stay – indeed, they should become more expansive than before. These operations are becoming a permanent tool of monetary policy as financial stability becomes a more natural mandate of the central banks. As Zoltan Pozsar has recently shown, the supply chain of goods and services is the reverse of the dollar funding payment system. Central banks’ collaboration prevents this hybridity from becoming a source of systemic risk, both domestically and internationally.
Update: On March 19, 2020, the Fed announced the establishment of temporary U.S. dollar liquidity arrangements with other central banks such as Reserve Bank of Australia, the Banco Central do Brasil, the Danmarks Nationalbank (Denmark), the Bank of Korea, the Banco de Mexico, the Norges Bank (Norway), the Reserve Bank of New Zealand, the Monetary Authority of Singapore, and the Sveriges Riksbank (Sweden).

D. Awrey, Here We Go Again? Not Really

March 17, 2020

Dan Awrey, Cornell Law School

The global pandemic unleashed by the coronavirus has inadvertently shone a spotlight on the design of some of our most important monetary institutions. It has also revealed widespread misunderstandings about how these institutions work—especially in times of crisis.

In response to the escalating economic fallout of the coronavirus, central banks in the United States and elsewhere have used their emergency lending authority to mount a series of important policy interventions. On March 12th, the Federal Reserve announced that it will make available up to $USD1.5 trillion in liquidity support—that is, loans—to primary
dealers through its existing term repo operations. On March 15th, the Fed then announced that it would reduce its target interest rate to a historic low, reactivate its crisis-era USD swap lines with other major central banks, reduce borrowing costs for banks at its discount window, and eliminate bank reserve requirements. Treasury Secretary Steven Mnuchin, meanwhile, announced that he would ask Congress to remove legal constraints, introduced under the 2010 Dodd-Frank Act, on the Fed’s emergency lending authority to non-bank financial institutions.

The stated rationales for these interventions are “to address temporary disruptions in Treasury financing markets” and “support the flow of credit to households and businesses”. More generally, giving central banks the legal authority to undertake these types of interventions is designed to advance two fundamental policy objectives. The first is to prevent dislocation within private money markets from triggering the failure of otherwise healthy banks and other financial institutions, along with the consequent withdrawal of lending, deposit-taking, and other key financial services. The second is to provide an effective counterweight against potential reductions in the aggregate money supply that might otherwise trigger a deflationary spiral characterized by a broad-based decline in prices, economic output, and employment. In a world where the vast majority of our money consists of short-term liabilities issued by private financial institutions, giving central banks this authority represents an important public bulwark against the intertwined threats of financial and monetary instability.

Yet to a great many observers, these latest interventions have evoked an instinctive response: here we go again. Just as they did during the financial crisis of 2007-09, the Federal
Reserve and Treasury Department are bailing out Wall Street whilst letting Main Streets across America fend for themselves. This response reflects a number of more substantive objections, voiced by commentators across the political spectrum. Perhaps the most common objection is that the Fed’s interventions represent a subsidy to banks and other financial institutions—one not generally available to other commercial enterprises, let alone the general public. Others point to the jarring disconnect between the speed and scale with which the Fed has taken action to “rescue the stock market” versus the Trump Administration’s slow, and to date far more modest, response to the underlying public health crisis. Yet others worry that the Administration will use any expansion of the Fed’s emergency lending powers to advance its own private political and economic interests. These objections reflect a growing sense of déjà vu, along with frustration that we have somehow failed to heed the lessons of the last financial crisis.

These objections are all valid and, given the devastation wrought by the last crisis, understandable. In light of the present circumstances, however, they are also misplaced. On the first objection, few would seriously deny that these interventions are not subsidies. In theory, banks can now borrow at the Fed’s discount window at 0.25% for 90 days and immediately turn around and invest the proceeds in risk-free 3-month Treasury securities currently yielding 0.28%, 3-year Treasury securities yielding 0.58%, or 30-year Treasury securities yielding 1.56%. That’s easy money. Yet the real question is not whether these interventions represent a subsidy, but whether this subsidy advances important and socially desirable policy objectives. Given that the counterfactual is a full-blown financial crisis alongside the existing public health crisis, the answer would appear to be a resounding yes. Indeed, there is a strong argument that it is precisely these types of exogeneous demand shocks that should
be amongst the least controversial uses of the Fed’s emergency lending authority. Put bluntly: this is what the Fed was built for.

On the second objection, the fact that the Fed has responded relatively quickly to contain the potential economic fallout from the coronavirus seems like misdirected criticism. Ideally, of course, the Fed’s interventions would be accompanied by complementary fiscal policy measures. Yet while Congress may still take action in the coming days, its failure to do so reflects the current level of political dysfunction in Washington—dysfunction in which the Federal Reserve has admirably played little or no role. Nor, similarly, can the Fed prevent President Trump from running roughshod over the Emolument’s Clause. Ultimately, the idea that the Fed should not throw out a life preserver simply because there is an idle coast guard cutter anchored a few miles offshore seems like a remarkably short-sighted rescue strategy. It is not the Fed’s fault that it has become the only game in town.

Perhaps even more importantly, these objections are fundamentally mistimed. As distasteful and unjust as it may often seem, the Fed’s emergency lending authority reflects the logic and structure of our current monetary system. That system relies on banks, money market funds, and wholesale money markets to provide the vast majority of the money circulating within both the financial system and real economy. It is the fragility of these private markets and institutions, along with the potential impact of their failure on both financial and monetary stability, that ultimately necessitates the type of public backstop that is now under the spotlight. Undertaking the type of comprehensive structural reforms that might enable us to credibly rollback the Fed’s emergency lending authority is simply not possible in the thick of a crisis.
Against this backdrop, what the present crisis is revealing is our failure to use the last crisis as an opportunity to ask more fundamental questions about the type of monetary institutions that we, as a society, really want. Instead, we tinkered around the edges of the existing monetary architecture: imposing new constraints on the Fed’s emergency lending authority without asking whether these constraints would be credible in the absence of more meaningful structural reforms targeting systemically important banks, wholesale money markets, and other components of the so-called “shadow” banking system. Both logic and historical experience suggest that the answer would be no—and the current crisis is very much validating this prediction. As we begin to look beyond this crisis, the key insight may therefore be that the time has finally come to reevaluate, and potentially reimagine, the structure of our monetary system.

The good news is that there is no shortage of proposals for structural reform. Some of these proposals, such David Andolfatto and Jane Ihrig’s call for the Fed to create a standing repo facility, are designed to strengthen institutional support for the existing monetary system. Others, such as the proposal by Morgan Ricks, John Crawford, and Lev Menand to permit the public to open accounts at the Federal Reserve, envision far more fundamental changes to the nature of money and banking. Yet others attempt to grapple with the recent emergence and enormous growth of the shadow payment system and the risks posed by the resulting reappearance of bad money. My goal here is not to debate the relative merits and drawbacks of these proposals: although I sincerely hope that this roundtable, and justmoney.org more generally, will become a platform for doing so. Rather, it is to highlight that the current crisis may afford us with an opportunity to take this debate to a wider audience, to raise awareness of the importance of monetary design and, perhaps, to build momentum toward a new and better monetary consensus.
N. Orian Peer, Repo in the Time of Corona

March 16, 2020

Nadav Orian Peer, Colorado Law

“It was inevitable: the scent of bitter [money markets] always reminded him of the fate of unrequited [convergence trades].”

Yes, this is a paraphrase. The Márquez original reads “almonds” in lieu of “money markets”, and “love” instead of “convergence trades”. An odd paraphrase, I am aware, but like the Márquez classic, Repo in the Time of Corona grapples with existential features of the human condition. Those are: (1) The desire to tap money markets for high-leverage trades; (2) The incessant drive towards regulatory arbitrage; (3) The Fed’s dilemma of dealing with the former two in its role as the ultimate purveyor of liquidity. Main characters and events include the rise of FICC sponsored repo, the sponsored hedge funds and the dealers sponsoring them, corona disruptions in the treasury market, and the Fed’s policy response. It’s nowhere as charming as Márquez, but quite as dramatic.

Flashback: Repo Post-Crisis
I started studying financial regulation in 2010 and, like many of my cohort, felt an urgency to understand the causes of the Financial Crisis, and the reforms just then taking shape. An early key insight, reading people like Ricks, and Gorton, was that repo was “money like”: a short-term claim held for transactional purposes, much like a bank deposit. Repo borrowers share another trait with banks: they are vulnerable to runs. This run risk materialized in 2008, and became an inflection point in the recession that followed. Work like this trained its readers to see the issuance of money claims outside of chartered banking (and the public safety net) as a threat to stability.

A second key insight, reading people like Mehrling and Pozsar, was a mental map of the repo market. The right-hand side of this map had cash investors (money funds, corporate treasuries) lending repo as a kind of cash equivalent. The left-hand side had hedge funds borrowing repo to leverage-up their trades. A dealer was drawn in the center of the diagram, reflecting the fact that cash investors and hedge funds do not interact directly. Dealers borrow from cash investors in the triparty repo market, and lend to hedge funds (often, prime brokerage clients) bilaterally. The dealer’s ability to profitably offer its balance sheet as this meeting ground, I learned, shapes the daily workings of money and capital markets.

A third insight was about the regulatory philosophy guiding the Dodd Frank Act and Basel III, the reforms everybody was trying to wrap their heads around. This third insight knitted together the first two. Morgan Ricks and others argued that as a non-sovereign money claim, repo was crisis prone, and should be prohibited outright. The regulatory reforms did not adopt this approach. They opted instead for a middle-ground, somewhere between eliminating repo and business as usual.
Enter the smallish repo market of the 2010s, shrunk from its $5 trillion glory, to $1.5-2 trillion.[1] That the repo market would remain smallish was premised on several assumptions. First, all major dealers were now regulated as affiliates of bank holding companies. Second, Basel III’s tightening of capital, leverage, and liquidity requirements meant these dealers’ balance sheets were becoming increasingly expensive. To address rising balance sheet costs, dealers had to mark-up their bilateral repo lending rates to hedge funds. Rising rates would make levered trades less profitable to hedge funds, ultimately curbing demand. That is, of course, as long as hedge funds and cash investors could not find each other outside the dealer’s balance sheet. Spoiler alert: they did.

The End of the Basel III Honeymoon

On September 17, 2019 the otherwise sleepy repo market made headlines when the repo rate spiked from 2% to 5%, with some distressed trades reportedly paying double that rate. Much of the commentary on the repo spike focused on what it implied about the tightness of bank reserves. This was essentially a story about the supply side: looser reserves would have created opportunities for profitable repo lending by banks. But readers following this episode also learned something new about the demand side, the identity of repo borrowers. The assumptions that underwrote the smallish repo market of the 2010s were loosening. Time to update the repo mental map.

“Sponsored repo” is the name of a new segment of the repo market. In just two short years, it went from basically non-existent, to $400 billion. The service is offered by the Fixed Income Clearing Corporation (FICC), a user-owned central clearing counterparty (CCP) whose primary regulator is the SEC. A hedge fund and a cash investor enter a repo, and the
trade is novated to the CCP. As the central counterparty, FICC becomes a repo borrower to the cash investor and a repo lender to the hedge fund. The dealers themselves, it is worth noting, are still involved as the “sponsors” of those hedge funds. But the dealers’ balance sheets are basically out of the picture, thanks to the CCP.

It requires more careful study, but this arrangement raises concerns of regulatory arbitrage. In traditional CCP practice, each member (like the dealers) guarantees performance by its clients (like the hedge funds). FICC seems to use a similar model, in their words:

“While the Sponsored Members [=hedge funds] are principally liable to FICC for their securities and funds-only settlement obligations, the Sponsoring Member [=dealer] is required to provide a guaranty to FICC with respect to all obligations of its Sponsored Members, so that if a Sponsored Member does not satisfy any of its obligations to FICC, FICC can invoke the Sponsoring Member’s guaranty.”

If a hedge defaults, a dealer is still on the hook to FICC and its risk exposure as sponsor is essentially identical to on-balance sheet intermediation. It is not clear why regulators would provide sponsoring with favorable treatment. Be that as it may, dealers discovered favorable treatment was in fact forthcoming. A JPM primer explains:

“[Sponsored repo] ... takes a significant step in alleviating the regulatory costs of fixed-income financing in a post-crisis world. ‘We believe sponsored repo cannibalizes less efficient forms of repo, ultimately freeing up capital and
Since 2018, triparty repo volume (which includes FICC) rose by around $600 billion (~30%), with sponsored repo accounting for the majority of the increase. Some of this capacity was taken up by hedge funds engaging in relative value trades. A December research note by the BIS related the demand-side squeeze in the September repo spike to these sponsored hedge funds. Interestingly, the FT reports that last week’s disruptions in the treasury market were also related –to some degree, large or small, we do not yet know–to these relative value trades coming under liquidity pressure. These are the same market disruptions that the Fed cited in its string of announcements of large-scale repo auctions and asset purchases. Sponsored repo is still relatively small, but it raises new and perplexing questions about how the Fed’s crisis response is going to play out.

**Trading Liquidity Risk**

Relative value trades exploit small pricing discrepancies, which become profitable if leveraged many times over. For example, a hedge fund might purchase treasuries that are underpriced in the cash market, and hedge its position by selling futures against them. This trade elegantly eliminates market risk. The futures contract allows the seller to settle by delivering the actual treasuries towards the end of the contract period. At that time, prices would have to converge, and the seller hedge fund would pocket the pricing difference, amplified by its leverage. This leverage is obtained in the repo market, where the hedge fund can borrow cheaply by pledging its treasuries as collateral.
But while the trade eliminates market risk, the hedge fund is assuming a considerable amount of liquidity risk. The FT’s reporting about relative value traders coming under pressure amidst corona volatility is a case in point. As it turns out, the futures leg of the trade appreciated at a faster rate than the cash leg (the actual treasury securities). Here’s a speculation as to what’s going on. Futures contracts are subject to daily—and sometimes intradaily—variation margin by the clearinghouses. With treasuries appreciating, this represents a liquidity drain to hedge funds. As repo borrowers, however, the hedge funds are also gaining liquidity, because their treasury collateral is gaining in value (yields are dropping), making them entitled to positive mark-to-market. The problem, it appears, is that the cash market is moving more slowly than the futures market, meaning the liquidity drains dominate the gains. If so, the same frictions between cash and derivatives markets that relative value traders were trying to exploit are now turning against them (For more on the theme of liquidity exposure between cash and derivatives positions, see Mehrling, and Mehrling et al.).

Like many a convergence trader before them (say, LTCM), these hedge funds are struggling to maintain positions that will become profitable, if only they can survive to see the day. The FT reports that pressure on these hedge funds can translate—and perhaps, has already been translating—into disorderly liquidations, disrupting the broader treasury market. This is where the Fed’s recent policy announcements come in. To reiterate, how large a factor relative value trading has been in the current disruptions remains to be discovered. It is certain, however, that if the sponsored repo market continues its growth trajectory, such dynamics will become more likely in episodes yet to come.
Fed Support for Sponsored Repo?

At over 15% of the market, the rise of sponsored repo subverts the unspoken compromise of the post-crisis order: the repo market will survive, but only as long as dealers, the gateway to the ultimate borrowers, remain tightly regulated. With hedge funds meeting cash investors through FICC, the Fed could be increasingly facing the dilemma of whether to support sponsored repo. Failure to offer support risks market disruptions, while willingness to support is bound to increase leverage and risk. The post-crisis compromise was based on the premise that risk and leverage regulation ex-ante would save the Fed from facing this dilemma ex-post. This compromise is now unraveling.

Fed support of sponsored repo could take various forms, providing funding liquidity as a lender of last resort, or market liquidity, as Mehrling’s dealer of last resort.

Funding liquidity would become relevant if cash investors withdrew from FICC, perhaps after the failure of a sponsored hedge fund. The Fed could put itself in cash investors’ position, lending directly on the FICC platform. Indeed, only two months ago, the WSJ reported the Fed considered adding a sponsored repo facility to its evolving monetary policy implementation framework. So far, this has not happened. In part, legal concerns might be at play given the FICC’s DFMU status (designated financial market utility). Fed lending to DFMUs requires a Fed Board finding of “unusual and exigent circumstances” and consultation with the Treasury Secretary (12 U.S. Code § 5465(b)). This roughly parallels the famous Sec. 13(3) emergency lending authority to non-banks. So far, neither provision has been triggered. Stay tuned.
Short of a 13(3) announcement, funding liquidity to sponsored repo borrowers could only be provided indirectly, through the dealers. Hypothetically, a dealer could borrow repo through the Fed’s current auctions, and lend into the sponsored market. Such indirect support might face serious limitations. After all, the whole raison d’être of sponsored repo was “freeing up capital” for the dealers and BHCs. Reintermediation would require recommitment of this capital. Judging by low take-up in the first large repo auctions last week, dealers seem reluctant to offer their balance sheets for any purpose at this point.

Given that a run on sponsored repo has not yet happened, Fed actions have a more direct bearing to relative value traders through the impact those actions may have on market liquidity (as opposed to funding liquidity). As hinted on Sunday evening’s FOMC conference call, the Fed was initially hoping the large repo auctions to dealers would encourage them to make steadier markets. Low dealer take-up of repo got the Fed moving to outright purchases of at least $700 billion in treasury and agency securities (with few exceptions, the Fed is legally not allowed to purchase private credit assets). Note that the Fed’s goal here is to stabilize market pricing conditions (dealer of last resort), not merely increasing bank reserves, which given the scale of purchases, are once again on a path to super-abundance.

To the distressed hedge funds, these market purchases might come as a lifeline. If the relative value trades are coming under pressure due to slower appreciation of treasuries (slower than the futures leg, that is), Fed purchases in the cash market could bring more rapid appreciation. The hedge funds were profiting by assuming liquidity risk, and Fed actions are intended to make this liquidity risk disappear. It might work, it might not. It remains to be seen.
All of this goes to the technical question of how the Fed might support (or is already supporting, wittingly, or unwittingly) sponsored repo. The broader question, of course, is whether the Fed should offer such support in the first place. To ask this question is already to acknowledge the decline of the post-crisis order. If sponsored repo is the regulatory work-around it appears to be, its growth would compromise the immunity system that the post-crisis order was so desperately trying to boost. Repo in the time of corona is a wakeup call for regulators: the public’s financial health should come first.

[1] FRBNY’s triparty repo statistics only begin in 2010. The $5 trillion figure is my back-of-the-envelope calculation based on the primary dealer survey. It aggregates “securities out” figures for Jan. 2007, and discounts it somewhat to account for haircuts. Working with repo statistics presents challenges that are beyond our current scope.

J. K. Moudud, Beyond Pathogenic Politics

March 16, 2020

Jamee K. Moudud, Professor of Economics, Sarah Lawrence College, and Board Member, Association for the Promotion of
In considering the recent stock market crash the casual observer cannot help but be struck by the way in which history repeats itself. Seen in retrospect the current second major crisis of the twenty-first century appears to eerily parallel the first one at the end of the previous decade. Then, as now, the prelude to the crisis was a period of hubris in élite circles whose triumphalism celebrated GDP growth and falling unemployment rates. Then as now those same élites –whether in politics, the corporate world, or mass media–were blind-sided when the world fell off the proverbial cliff. One may wonder, why did they not see the troubling structural problems brewing under the superficial economic booms in each of the two decades of the twenty-first century?

And yet all the troubling signs were there in both contexts, although they were rendered hidden because of ideological reasons. If we want to stop the recurrence of cataclysmic crises of one sort or another we need to take a longer-run view of the causal factors that repeatedly plunge us into such crises, going beyond the conventional preoccupation of boosting stock markets and economic growth. A number of authors have discussed the origins of neoliberal financial flows and the roots of the subprime mortgage crisis of 2007/2008 but the purpose of this article is not to repeat their arguments. It suffices to say here that financial market “liberalization” over many decades has involved growing inequality along with the acceleration of speculative investments relative to long-term production-oriented ones. The rise of what Keynes called casino capitalism is seen by the growth of the finance, insurance, and real estate (FIRE) sectors relative to GDP in all OECD countries since the 1980s. I would argue that this growth-at-any-cost paradigm is responsible for both crises.
If neoliberal globalization has been responsible for creating toxic financial assets it has had another consequence. To understand this issue it is worthwhile quoting Dr. Margaret Chan, Director General of the World Health Organization, who in 2009 said:

Last year, our imperfect world delivered, in short order, a fuel crisis, a food crisis, and a financial crisis. It also delivered compelling evidence that the impact of climate change has been seriously underestimated. All of these events have global causes and global consequences, with serious implications for health. They are not random events. Instead, they are the result of massive failures in the international systems that govern the way nations and their populations interact. In short: they are the result of bad policies. In far too many cases, economic growth has been pursued, with single-minded purpose, as the be-all, end-all, cure-for-all. The assumption that market forces could solve most problems has not proved true.\[5\]

The narrow pursuit of growth and “free markets” has produced climatic disturbances and largescale deforestation in particular in the Global South in which countries are under the mandate of free trade agreements to pump out their purported “comparative advantages” in cash crop exports. Casino capitalism has led to “land grabs” in the Global South by domestic and foreign investors for commercial or speculative purposes.\[6\] The felling of trees and deforestation have also been linked to largescale commercial farming projects thereby “helping to create the perfect ecology for breeding newly virulent and pathogenic influenza viruses”\[7\] because of closer human contact with wild animals that harbor microbes. And there is a growing body of scientific work that has linked the melting of the polar ice caps to the release of ancient bacteria and viruses buried deep in the ground.\[8\] In
short the climate crisis, the consequence of relentless growth and privatization programs, is exacerbating the threats from dangerous pathogens. Thus the appearance of the Covid-19 virus is not the equivalent of a black swan event. As Sonia Shah reports, there is a long pattern over many decades of the periodic reappearances at random moments of deadly pathogens which have devastating consequences. In other words, like financial crises, pathogenic crises are “known unknowns”, i.e. they are events that we know will occur but not when.

Toxic pathogens and toxic financial assets are two sides of the same coin which is neoliberal financial globalization. Just like their financial counterparts, pathogenic contagions do not respect borders. Robust public health care systems in Europe and Canada will be only as effective as those in the rest of the world. However, decades of right-wing assaults against the public health care system in the US have left it woefully underfunded and unprepared while many countries in the global South under IMF-imposed austerity programs are grossly deficient in delivering high-quality healthcare to their populations. The not-for-profit Trust for America’s Health reports that, adjusted for inflation the CDC’s (Centers for Disease Control and Prevention) budget was cut by 10 per cent over the decade 2010 – 2019. To compound the problem pharmaceutical corporations, like those in other sectors, have over the past several decades devoted disproportionate shares of their earnings in stock buybacks relative to R&D expenditures, especially in basic research. In other words, for the pandemic crash of 2020 all the pre-conditions, established over many decades, were in place to create the perfect storm just like those leading up to the financial crash of 2007/2008. Then as now blind faith in our current market architecture ruled in élite circles.

The problem is that the dominance of neoclassical economics has elevated “market forces” to a Panopticon-like status with
the prison yard of the market providing little scope for political agency. This has reached its highest level of absurdity in US élite-level political discourse when calls by large segments of the population for universal healthcare in this turbulent period are routinely derided as “dangerously socialistic.” Markets in this view are implicitly treated as pre-political; thus “state interference” is always unnatural. In order to change the dominant discourse, therefore a first step is to debunk the purportedly purely private and “natural” basis of markets. As the Legal Realists, Karl Polanyi, and “old” institutional economists such as John R. Commons wrote, markets are fundamentally political constructions with the background regimes of property, contracts, and tort laws constituting the context within which “market forces” operate. And of course markets cannot exist without money creation and flows. In short, in order to understand how the economy currently works and how it could be reconstituted one needs to drill down to reveal the political and legal foundations of money, as Christine Desan has shown.\[14\]

Variants of capitalism exist precisely because the political and legal foundations of money and markets can vary enormously in different contexts. This is the central conclusion that comes from the contributions of Wesley Hohfeld, Robert Hale, and John R. Commons. The romanticized notion of the isolated private entrepreneur saving, investing, and creating jobs is completely at odds with both contemporary capitalism\[15\] and its history. One of the central concerns of business historians is the study of varying political and legal contexts\[16\] that determine business investment thereby creating different variants of capitalism. As I have argued, one has to conceptualize the business enterprise as constitutionally embedded, i.e. the “small c” constitutionalism that Christine Desan and Sabeel Rahman discuss.\[17\]

This has two important implications. First, given the
corrosive feedback relationship between inequality, destitution, ill-health, and vulnerability to infection. There is an urgent need to change the tax code to mitigate the highly regressive nature of the current taxation system by bringing it back to its previously more progressive nature.

Second, in the wake of the current public health crisis state-business relations, in particular with regard to the pharmaceutical industry, have to be reconfigured because that industry will play a central role in mass producing a global vaccine that should be accessible to all. For example, share buybacks need to be made illegal (as they once were) so that greater proportions of retained earnings can be devoted to basic R&D in developing current and future vaccines. Given the massive direct and indirect subsidies that corporations have historically received from the government, pharmaceutical companies should be required to contribute taxes to a government-administered fund (equivalent to the Social Security Trust Fund) that would expand research on pathogens at public agencies like the National Institutes of Health (NIH) and the CDC. The reconfiguration of state-business relations is not a particularly radical proposal – it has always been a central feature of capitalism, as business historians have documented. Given the governance context in which they are embedded, which includes their state-enforced charters, private corporations are quasi-public agencies. Thus their modus operandi has been restructured many times and continues to be malleable.

In terms of a global immunization program the distinguished global health expert Jonathan Quick, author of *The End of Epidemics* (2018), concluded that “Virus biology and vaccines technology could be the limiting factors, but politics and economics are far more likely to be the barrier to immunisation.” Further, despite the optimistic title of his book, Quick notes that infectious diseases with the potential
to become epidemics or even pandemics are inevitable.\textsuperscript{[23]} Given the plausibility of this pessimistic assessment, I would argue that the current moment is equivalent to the widespread increase in industrial accidents that spread across the US, Europe, and other countries starting in the mid-nineteenth century. What came to be known as “occupational risk” was one of the first major challenges confronting industrializing societies. As Julia Moses\textsuperscript{[24]} and John Fabian Witt\textsuperscript{[25]} discuss in their legal histories of industrial accidents, economic development had over time generated the dominant view that this human disaster which crippled, killed, and caused widespread destitution among the working classes was an “inevitable” concomitant to industrialization. And yet industrial accidents were causing labor unrest, production interruptions, and liability lawsuits against employers by injured workers. In short, faced with a growing governance crisis, occupational risks over time triggered workplace safety laws which included workmen’s compensation. Moses, in particular, argues that the significance of such laws which mitigated workplace risks provided the foundation to the modern social states in which public authority came to play an increasingly important role in managing new and emerging risks faced by society, such as lack of healthcare and prolonged unemployment.

We are at such a moment now in terms of the urgent need to rethink global public policy in the face of existential risks. For scholars, this requires challenging the core theoretical foundations of neoclassical economics and legal formalism whose cultural power has made terms like “market forces” and “free markets” seemingly non-controversial terms. As the coronavirus demonstrates all too tragically, we must strengthen, not subvert, our society’s ability to create socio-economic and legal arrangements to deal with such threats.


7. Sparke, supra note at 243.


19. See the website *Tax Justice Now*: https://www.taxjusticenow.org/#/. ↑


J. McAndrews, Economic and Financial Responses to the Coronavirus

March 15, 2020

James McAndrews[1]

What principles should guide our government’s responses to the economic fallout of the Covid-19 pandemic?

To answer the question, it helps if we have a good model of what is happening.

Perhaps the best way to think about the effects of Covid-19 on the economy is to use one of the best models in economics: the circular flow. One can picture the circular flow as a sort of M.C. Escher-like stream, always flowing downhill and yet in a circle. Workers flow to businesses, products and services flow out of businesses to consumers, the consumers are workers who flow to businesses, etc., in a healthy widening gyre.
Above this flowing activity is another circular flow—a halo of sorts—that represents financial flows. Expenditures from consumers flow to businesses; wages, rents, and interest flow to workers, landlords, and lenders.

Markets can be thought of as traffic signals located in the stream that help everyone flow at the right pace and to the right place. Markets help workers get to the right businesses, they help businesses find the right equipment, they help determine how big consumers’ expenditures will be, help businesses decide whether to expand or contract production, and so on. The traffic signals in the financial stream also help direct loans to businesses and households, provide incentives for individuals to save, and set the rate of interest—the trade-off between consuming now or saving for the future. Banks can be thought of as straddling the two streams, active in financial markets, but lending directly to households and businesses to finance real investment.

The government, including the central bank, is on the island around which the circular stream and its halo flow, connecting with the broader stream via canals. Some workers flow to the government, and services such as schools, roads, courts flow out to households and businesses from the government. Importantly, in the financial stream, taxes flow to the government, and payments from the government flow to households and business, via social security, crop support payments, wages and rents, expenditures for medical inputs, etc.

With that model in place, let’s think of the Covid-19 risk, and the containment measures that are now necessary to prevent widespread transmission of the disease, as a leak of workers, businesses, and consumers from the circular flow into a pond
nearby the circular stream. Fewer workers flow to businesses, less production of goods and services flow to consumers because of the leakage of those factors into the still pond. Furthermore, the financial stream suffers a similar leak. Much of the expenditure of those quarantined does not take place, businesses do not earn revenues, and workers don’t earn wages.

One might imagine that this sudden leakage from the stream is manageable. Suppose, for instance, that half of all people go into quarantine for a few months, and, moreover, all payments to and from those people were held in abeyance during the period of quarantine—a sort of temporary payment and interest Jubilee. Then we might imagine that the flows around the circular stream and its halo would continue unimpeded, although on a diminished basis.

Several factors make such a Jubilee unworkable. In general, the leakage from the circular stream is disruptive to the flow with some people earning income but not spending, and others not earning but needing to spend. These imbalances will cause impedance and turbulence in the flow of economic and financial goods and services. We can group these factors into four broad categories: unbalanced flows, prices and expectations, contractual rigidities, and rejoining the stream.

**Unbalanced flows:** Flows of expenditures must still occur for households in quarantine, but their productivity is diminished while they are away from work. While some people can work from home, many cannot. So where does the money for their expenditures come from? This is an example of an unbalanced flow: expenditures must be made, but no source of income is flowing into the household. The same is true for businesses: many businesses cannot produce (such as airlines, for example) but must still make expenditures to maintain equipment and pay
other necessary costs. Such unbalanced flows require a source of funding from outside the circular flow, as individual households and businesses with limited wealth cannot sustain expenditures for long without corresponding inflows of income.

**Prices and expectations:** The traffic signals that help route the flow of workers, goods and services, loans and savings, i.e., markets, rely on expectations of how many of those factors are needed. Those expectations are human sentiments—they are based on experience, foresight, and the usual patterns of behavior. But given the sudden leakage from the flow and the resulting imbalances in flows, expectations will be more disperse and markets will not perform as smoothly as is usually the case. These “start/stop” moves can lead to a further slowing of activity around the stream.

**Contractual Rigidities:** A lot of the traffic in the stream is guided by past agreements, or contracts. Those contracts include home mortgages, leases, credit card loans, employment contracts, etc. Like the stockpiles of wealth that allow individuals and businesses to continue expenditures even without an offsetting flow of income, these contracts have their limits. They often do not have a “reset” button; in general, if a homeowner misses too many payments on her mortgage, she defaults, and ownership of the house passes to the owner of the mortgage. The reasons why the homeowner missed the payments usually does not matter, even if there is a systemic medical emergency, such as a pandemic, that prevents the homeowner from going to work and to earn income.

**Rejoining the stream:** Once one has left the circular flow of economic activity, it requires some significant force to rejoin it. It can require getting a new job, finding new customers, doing business in a new way, and, crucially, having
the confidence that one is not endangering others, such as one’s customers or family members, by venturing out into the stream of activity. These actions to get a new job, find new customers, establish new ways of doing business, are all costly. The people and businesses in the still pond have not had a flow of income to provide for their expenditures, and the extraordinary expenses of rejoining the stream will be additional shortfalls for them.

As we review policies to limit the damage to the economy, we should first recognize that without policies directed at maintaining the circular flow there is a risk that because of the impediments to the flow we just reviewed, the flow could continue to diminish, and because of the costs to rejoin the flow many people and businesses could become stuck in the still pond of a stagnating economy. So, without vigorous policies to support economic activity the flow could remain only a trickle, even after a possible diminution of the Covid-19 threat.

What can be done about this? Some ways to get the flows going again involve monetary policy — increasing government spending, monetizing that spending, monetizing mortgages, increasing the ability of banks to create more money. But other government actions are also required including adjustments to contract obligations, transfer payments, providing actionable data on risks, encouragement and help in matching workers and businesses once the quarantines are lifted. More than monetary policy alone will be needed to counteract the contraction of the flow of economic activity. We need to counteract each of the impediments identified above in order to restore the economic flow.

1. Income support policies to counteract unbalanced flows
In all private companies and families there is a limit to the financial losses that they can sustain. After the limit is reached, the company is bankrupt, and must suspend its payment of debt. It may have to stop its operations if its revenues aren’t sufficient to cover its operating expenses. As we seek to curtail the spread of the virus by limiting travel and large gatherings, many businesses will leak from the circular flow and sustain losses.

It is important to distinguish systemic risks to the economy from other risks. A systemic risk is one that threatens a large part of economic activity. In this crisis, the suspension of large gatherings touches almost every business and threatens the systemic stability of the economy. In such a case, it falls to a source of funding from outside the stream—i.e., the public sector, which can draw on future taxes to finance current spending—to replace that income and provide those services or the recuperative powers of the economy may be permanently damaged.

Further, it is apparent that usually prudent actions by individuals—to avoid sick days and excessive medical tests for fear of the loss of income or the costs involved—are perverse in the case of a pandemic. The public sector should assume these costs immediately.

With so many widespread declines in economic activity, from travel, sports, manufacturing, restaurants, and many others, a good way to approach this loss of income is to provide immediate income support to individuals, especially those with low incomes and wealth, who face significant hardships if their income is interrupted. Emergency provision of Medicaid, food stamps, and other government benefits to a much broader population would be especially helpful. Extended unemployment
benefits too will be important for people who exit the flow of economic activity through job loss.

Another component of maintaining the economy’s capacity to function would be to provide guarantees for new debt offerings by businesses, especially those industries hit by the quarantine, going forward. Such guarantees need to be carefully designed to provide the right incentives for businesses to expand when demand for services are revived, to help them rejoin the flow of economic activity.

2. Monetary policies to address prices and expectations

Governmental policy is crucial in guiding expectations of participants in markets. This is clear in many venues. An example of the need for coordination are the actions of governments in shutting down schools, and reopening them; that coordination allows whole populations to plan for their child-care and family meals. More broadly, if private agents’ pessimism and liquidity constraints lead to prices that portend future disaster, the government can assist society by reassuring the public that, at a minimum, it will provide goods and services in the future, and will avert disaster.

Some of these actions can be done through the central bank. Last week, for example, the Federal Reserve announced its willingness to lend in large amounts against Treasury collateral to private broker-dealers on favorable terms to support the borrowers’ business in dealing in Treasury securities. The market for Treasury securities is one of those traffic signals—an important one—that assist in moderating the flow in financial markets.
Accommodative monetary policies will be needed to reassure people that they can borrow on favorable terms now. To support that belief, the Fed should restart the program to purchase mortgage-backed securities (MBS) guaranteed by Fannie Mae and Freddie Mac. Furthermore, because of the uncertain value of many loans now on the books of banks, the Fed should also restart the Term Auction Facility, which provides longer-term financing to banks against the collateral of bank loans. That will support the willingness of banks to lend more freely. Those programs should be seen in the light of the confidence and guidance they convey to the public, just as much as they function directly on interest rates and amounts lent.

The Fed has an important role in keeping the financial flows moving; if the financial flow is impeded the flow of economic activity is also disrupted. But the Fed must ensure that nonfinancial firms can receive loans, even if the private financial system is in disarray. It should restart the Commercial Paper Funding Facility, which lends to nonfinancial firms directly against firms’ new issuances of commercial paper—short term borrowing by firms. So long as that commercial paper is rated highly, the Fed should help support the flow of credit to nonfinancial firms; again, this policy is, at least in part, to instill confidence that firms can borrow in the future if needed, as much as it is to funnel needed funds to firms now.

Other monetary policy moves are needed for the economy that is diminished by the leakage from the circular flow. Interest rates should be lowered to their effective zero lower bound. Purchases of Treasuries should be expanded. There are novel policies that will be required to address problems that are not yet apparent.
3. Mediation and debt workouts to address contractual rigidities

The administration has announced a temporary waiver of payments of interest on student loans held by federal agencies. Such contractual flexibility is an example of what is likely to be needed on a much broader scale by workers and companies whose jobs and business are interrupted and removed from the circular flow of economic activity. While a widespread Jubilee of debt forgiveness may be neither feasible nor effective, delaying interest payments, writing down principal amounts, and other compromises by debtors and creditors can be very effective in keeping debtors from defaulting while maintaining the long-term viability of debts.

Banking supervisory policy is important in allowing banks to continue to finance debt that is in arrears, so it is important for bank supervisors to provide and to implement guidance to banks that relax some of the strict rules on classifying debt as delinquent. Fiscal policy to provide alternative sources of income to debtors to assist them in meeting their obligations is vital.

4. Grants and data to address rejoining the stream

In addition to fiscal support to people and businesses that have been excluded from the stream of economic activity by the threat of Covid-19, fiscal support will be needed to assist in financing some the activities necessary to get people back into the flow of economic life. The longer economic activity is interrupted, the more important will be this part of the policy response. Policies to sponsor job fairs, advertising
them, and providing grants to businesses to reopen businesses may prove very beneficial in assisting the restart of economic activity.

To reopen a business, an owner must have the confidence that its activity won’t endanger its customers, and similarly, in going back to work, a worker must have the confidence that by doing so, she is not threatening her family with an infection of Covid-19. To be blunt, providing such confidence will require real data on the prevalence of the virus, necessitating widespread testing for it; it will not be provided by self-congratulatory pronouncements from glad-handing government officials. This should be a key policy by governments at all levels.

The Covid-19 crisis has quickly drained much of the dynamic activity from the circular flow of the economy into a still pond of isolation, worry, and expense. Our government is needed to supply income and promises of future support throughout the economy to combat this systemic stop in activity and to lay the foundation for a resumption of the normal flow of economic activity. Carefully designing policies to ameliorate rigid contract terms in debt and other contracts, to guide expectations, assist markets to function and to avoid excessive pessimism, to provide income, food, and medical support to those made destitute by the crisis, and to build ramps for everyone to rejoin the flow of economic participation is of utmost importance for us to emerge from this crisis with a strong economy.

[1] TNB USA Inc. and Wharton Financial Institutions Center. In
this essay, I confine myself to general economic and financial policy responses to prevalence and threat of Covid-19. We must aggressively work to contain the spread of the virus itself, in large part to protect the capacity of the medical system to function in its role to treat patients afflicted with Covid-19 and other diseases. I will focus in this essay of economic and financial policies, and not address the important public health issues involved.