

THE NEW MONETARY POLICY

REIMAGINING
DEMAND MANAGEMENT
AND PRICE STABILITY
IN THE 21ST CENTURY

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Modern Money
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Public Money Action

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ABOUT PUBLIC MONEY ACTION

Public Money Action, Ltd., is a new, federally-recognized 501(c)4 organization, advocating for legislation, regulation, and general policymaking that promotes social justice through the power of public money.

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EDITOR'S NOTE (FEB 9, 2022)

This version of the report includes minor alterations to the original publication. Spencer Veale is recognized in the acknowledgements. On page 1, "economists and journalists" replaced "progressive commentators." On page 2, "U.S. government liabilities to zero, except where interest-bearing governments instruments may serve public purposes" replaced "all U.S. government liabilities to zero." On page 9, "For example, the recent price increases in housing and health care markets (which form substantial subcomponents of consumer price indices) are driven by cost increases for firms passed on to consumers and revisions to profit margins." replaced "That being said, we have recently seen price increases in housing and health care markets (which form substantial subcomponents of consumer price indices) that are driven in some degree by a failure to adequately meet consumer demand." On page 34, footnote 108 was added to cite Tcherneva (2002), subsequent footnotes were adjusted, and Tcherneva (2002) was added to the references.

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EXECUTIVE SUMMARY

For the past 40 years, there has been a global macroeconomic consensus that monetary policy—and specifically interest rate management policy and financial asset purchase/sale policy—should take the lead in stabilizing the domestic economy. As a factual matter, this consensus has accompanied rising inequality, weak nominal wage growth and intensifying ecological devastation. In this framework, fiscal policymakers have been told to focus on balancing the federal budget, based on the alleged failure of fiscal policy or that interest rate policy would simply “react” and eliminate any possible positive effects of increasing spending. This assignment of roles has handicapped fiscal policy and has contributed to the reluctance of policymakers to propose fiscal solutions to policy problems. Only the global recession following the Great Financial Crisis of 2007–2008 has fractured this policy consensus, and only because of the limited ability of monetary policymakers to respond.

As this low interest rate environment persisted, more and more proposals for expansionary fiscal policy proliferated. Even commentators like Larry Summers began speaking about “secular stagnation” and the need for an extended period of expansionary fiscal policy. Nevertheless, prior to the pandemic, economists and journalists continued to premise their case for expansionary fiscal policy on the basis of historically low interest rates.¹ And even through the pandemic, the argument for the emergency fiscal response was still made on the basis of persistently low interest rates.² Whether intentionally or not, conditioning arguments for expansionary fiscal policy on low interest rates without changing our governing monetary policy framework ties progressive commentators to this past macroeconomic policy consensus, effectively keeping the Federal Reserve in the driver’s seat of US macroeconomic policy.

If the Fed decides fiscal policy is okay, as it has through the pandemic (so far), it will deem to allow it. However, if it raises interest rates, the justification for those fiscal programs disappears. As of the time of this writing, elevated measured inflation has led the Federal Reserve to move up its time table for raising interest rates. This is true despite plentiful signs that recent price pressures are concentrated in a few sectors and associated with supply chain strains caused by the global pandemic that would not obviously be eased through demand restraint. If this cycle of interest rate increases by the Federal Reserve goes far enough, it will close off the policy path for further expansionary fiscal policy as long as proposals remain within the boundaries of the macroeconomic consensus.

Stepping outside those boundaries is especially critical for climate centered fiscal policy proposals. We should not settle for treating the use of fiscal policy as an extraordinary special case, permitted by our betters. It is long past time for fiscal policy to respond to climate change in a sustained and sizable manner. In this report, Public Money Action’s (PMA) debut publication, Nathan Tankus argues that

1 Paul, Fremstad, & Mason (2019). Weller, Estep, & Hendricks (2019).

2 Paul & NoiseCat (2020).

we not only need tools for a new era, but a new way of looking at the role of non-fiscal policy in budgeting, with mission-oriented financial regulation at the core of the new approach. This means turning away from interest rate management and instead toward financial regulation as a direct, more sophisticated toolkit for managing the demand-driven aspects of price stability in the context of broader macroeconomic policy goals, including an equitable and sustainable recovery from the pandemic-depression and a green economic transition to respond to climate change.

The proposed toolkit includes *direct qualitative and quantitative credit regulation* of financial institutions and *leverage and liquidity regulations* of non-financial corporations. Direct qualitative credit regulation entails setting minimum standards for the quality of the loans that firms originate. It also means requiring they hold those loans on their balance sheet (rather than distribute the risk to securities investors). These standards can include regulatory criteria based on the *quality of borrower*, *quality of activity*, and *quality of sector*. Direct quantitative credit regulation imposes limits on the credit creation that banks and other financial institutions may engage in for a specific type of lending, or overall. Unlike interest rate management policy on its own, direct credit regulations can both stabilize aggregate demand and be used to reduce demand in specific sectors of the economy.

The report's proposed "Build Back Better" program focuses on demand stabilization via consumer credit regulation. As the Biden administration considers the design and execution of its industrial policy, this suggests a novel way to more directly mitigate retail demand pressures where it may exist (compared to the blunt approach of traditional interest rate management), which would allow clearer consideration of fiscal and other policy tools for addressing (the presently more relevant) supply chain and corporate-driven price pressures.

The report's Green New Deal (GND) program proposes a set of monetary policy and financial regulation tools to complement expansionary fiscal policy as part of a comprehensive green industrial policy. Financial regulation on non-green or "gray" sectors should serve as "non-fiscal pay-fors" to offset any inflationary pressure from expanding green sectors, which must continue to grow to reconstruct the economy in a more sustainable manner. Ideally, this kind of mission-oriented regulation not only reduces emissions directly, but curbs corporate power and encourages democratization of production. Rather than attempting to stabilize prices by prematurely slowing a global effort to manage climate crises, policymakers concerned that fiscally-driven "green growth" would increase aggregate demand to the point of causing widespread shortages in needed goods, services, or physical inputs, could turn to our GND toolkit.

Critically, the GND program entails the elimination of the Fed's discretion over interest rate policy. The interest rate on government liabilities has been and remains a policy choice, and ultimately one that Congress, whether directly or indirectly, should be consciously making. The discretion granted to the Federal Reserve Board was never intended to lead policymakers to fear every substantial appropriation might trigger "fiscal unsustainability." By statutorily requiring the Fed to set the interest rate on U.S. government liabilities to zero, except where interest-bearing governments instruments may serve public purposes, and sharing the Board's burden of price stability with additional agencies, the proposal advances the discourse of fiscal and industrial policy beyond the entangled, intransigent fights surrounding interest rate management and the national debt. These debates have hamstrung fiscal expansion for decades and must be superseded to accomplish the green transition. Removing the political conundrum of interest rate management from the equation clarifies

that Congress will spend what is necessary and appropriate for the general welfare and that the government will deploy a suite of alternative regulatory tools to manage aggregate demand, inflation, and financial stability.

Part I of this report provides a historical overview of U.S. economic policymaking and how the orthodox consensus came to be dominant. Part II defines monetary policy and financial regulation from a Modern Monetary Theory (MMT)-informed perspective. Part III introduces direct credit regulation as an alternative policy tool for mission-oriented price stability. Part IV provides policy recommendations on how direct credit regulation could be used for President Biden's Build Back Better economic program and a Green New Deal industrial policy. Part V concludes with reflections on the implications of the proposed program.

INTRODUCTION: AN ECONOMIC POLICY REORIENTATION

The United States currently uses an outdated macroeconomic policy framework that is ill-suited for the actual challenges facing 21st century society. In the aftermath of World War II, there was a vibrant policy debate in the United States over how macroeconomic stabilization policy should work, as well as the attendant responsibilities of various administrative entities.³ After the Federal Reserve Treasury Accord of 1951 (Fed-Treasury Accord), however, this debate rapidly subsided, and over the next two decades, what we now understand as “orthodox” monetary policy (broadly defined)⁴ gained ascendancy. The Federal Reserve Board was ostensibly granted control of macroeconomic stabilization via discretion over the purchase and sale of Treasury securities (and thus interest rates). This meant that it was the Board’s responsibility to adjust its policy tools in order to ensure that total output and employment were at a high and stable level without causing inconsistent and large price increases for currently produced goods and services. Fiscal policy, by contrast, was relegated to a supporting role centered around fiscal automatic stabilizers⁵ and ad hoc discretionary countercyclical fiscal policy driven by Congress.⁶

Over a generation, this led to shrinking macroeconomic policy expertise within Congress and other administrative agencies, ending in the controversy over President Nixon’s impoundment of appropriated funds and the Congressional Budget and Impoundment Control Act of 1974, which created the Congressional Budget Office

3 Bach (1949), Bach (1950), Roosa (1951), Roosa (1952).

4 Given the conceptual vagueness of the term “monetary policy” this report will henceforth use the more specific terms “interest rate policy”, “asset purchase/sale policy”, “credit regulation”, “microprudential financial regulation” and “macroprudential financial regulation”. This usage highlights that there is not anything inherently economically inferior about granting some of these powers to other agencies in order to manage aggregate demand. Subsuming these various contending policy tools under the term “monetary policy” without regularly highlighting their distinctiveness and modularity has the danger of leaving the impression that monetary policy is simply whatever central banks have the authority and choose to do.

5 Automatic fiscal policies are tax, expenditure, and payment policies, which change in size because of changes in external socioeconomic variables such as private sector incomes, employment status, and measured poverty, rather than because of statutory changes to fiscal policy or administrative determinations (whether mandatory or discretionary) by government agencies. For example, unemployment insurance payments that rise because unemployment insurance claims rise (and without changes to the criteria for qualification) are an example of automatic fiscal policy. Automatic fiscal policies serve as economic stabilizers when they move countercyclically relative to income and unemployment; that is, when they rise (fall) in response to falls (rises) in income and employment. Tax expenditures are generally examples of procyclical automatic fiscal policy because more companies and households qualify for them when employment and income rises and the size of payments tends to grow with the size of the economy.

6 See next section for more discussion of this point.

(CBO).⁷ By deemphasizing fiscal policy's effect on output and focusing instead on internally generated projections of future interest expense, the CBO institutionalized legislative amnesia about fiscal policy's countercyclical role. Macroeconomic stabilization policy has thus become the almost complete purview of the Federal Reserve System (Fed).

This policy consensus warrants reconsideration for multiple reasons. One key reason is that it has not been very successful at generating good labor market outcomes, despite full employment being a central goal of macroeconomic policy (alongside price stability). In the 1980s, for instance, Paul Volcker famously "shocked" the economy by raising short term interest rates to nearly 20%, which caused a downturn in labor force participation around the world. This episode, like other contractionary episodes, permanently reduced the percentage of employees who were union members, and led to sustained periods of weak nominal wage growth and increasingly precarious working conditions. Income inequality has since skyrocketed: when wages at the peripheries of the market fail to rise, pay dispersion grows accordingly. From an MMT-informed perspective, Volcker fought the illness of inflation by "killing the patient."⁸ This was not only tragic, but unnecessary, as organized labor can and should be an active partner in the project of achieving macroeconomic stability and a just economy.⁹

The lack of serious engagement with macro-oriented policymaking outside the Federal Reserve has led to a stunted debate and confusion over the size of output gaps,¹⁰ the relationship between financial reform and fiscal policy,¹¹ and the proper role of fiscal automatic stabilizers.¹² This is regrettable, as macroeconomic stabilization is complex and difficult to accomplish even with the proper framework and toolkit. It is relatively easy to increase or decrease aggregate demand to some degree, but far more challenging to predictably do so at roughly the levels required to generate and maintain macroeconomic stability. Furthermore, the time lags between policy implementation and impact make it hard to ascribe causality in any specific situation with a high degree of confidence.

The limits and flaws of the contemporary theoretical framework are highlighted in the CBO's current approach to forecasting the economic effects of new budget proposals. According to the CBO, government borrowing by definition permanently raises long term interest rates, reducing private investment and slowing down the economy. As James Galbraith famously observed, this premise led the CBO to project that the American Recovery and Reinvestment Act of 2009 (ARRA) was actually going to *decrease* GDP in the medium term, despite reducing unemployment and raising overall spending.¹³ In other words, the CBO presumes budget deficits necessarily cause interest rates to rise, reducing overall potential output by decreasing profitability and thus investment over time. However, in making this assumption, the CBO does not even attempt to define the "transmission mechanism" between higher budget deficits and higher interest rates—for instance, it fails to substantiate

7 Grey (2020).

8 See also Keynes (1936).

9 Most importantly, unions can facilitate regulatory oversight of business in the pursuit of price stability.

10 Mason (2017).

11 Galbraith (2010).

12 Fullwiler (2007).

13 Galbraith (2018).

whether its model assumes the Fed will choose to react to expansionary fiscal policy with contractionary monetary policy (i.e. that higher rates are a policy choice) or that some other external market force will push rates to increase. Moreover, the CBO's framework completely ignores the potentially positive effects of expansionary fiscal policy on private investment, which can create a positive productivity feedback loop that reduces real resource and demand-side constraints in the medium- to long-term. In the context of the response to the Global Financial Crisis (GFC), this flawed modeling approach directly contributed to a decade of sustained underinvestment, anemic recovery, and significantly elevated unemployment rates.¹⁴

More generally, the presumption that the Federal Reserve can maintain price stability purely via discrete interest rate management has atrophied policymakers' understanding of how price setting works in the real economy, perniciously segregating the laws governing regulated industries, especially antitrust reform, from macroeconomic policymaking.¹⁵ In particular, the dearth of macroeconomic expertise in the legislative branch has led to a recurrence of incoherent, anxious forecasts of spikes in healthcare costs and sustained overall inflation, which never actually come to pass.¹⁶

Simultaneously, knowledge regarding the very purpose of taxation in modern macroeconomic policymaking has collapsed.¹⁷ In the process of planning for World War II, U.S. Treasury economists came to understand that the purpose of taxation was not to “find the money” to fund expenditures, but to reduce private sector spending in order to disemploy physical resources, which could then be redeployed by public spending.¹⁸ In other words, the important conversion process occurred in the physical economy and money was treated as a means to an end. Rather than thinking of budgeting as simply finding one dollar of revenue to match each dollar of spending—an overly simplistic and misguided approach that in recent years has been revived and institutionalized by the CBO—World War II-era Treasury economists came to recognize that some taxes were more effective at reducing private spending per dollar collected than others.

Of critical importance to this report, they also commented on financial regulatory policies that could serve what we now call a “macroprudential” function: reducing private sector spending without collecting any revenue.¹⁹ From their point of view, the budgeting process necessarily involves more than simply increasing or decreasing spending and taxes. Regulatory policies can serve to stimulate or reduce the private sector's propensity to buy, sell, save, lend, or invest. In other words, in the mid-20th century, the government could deploy “non-fiscal stimulus” and point to “non-fiscal pay-fors” to offset increases in demand from new public spending.²⁰

14 Over the same decade, the CBO also consistently overestimated the path trajectory of interest rates by significant orders of magnitude. DiVito & Konczal (2021).

15 Greeley (2019), Paul & Tankus (2019). For a classic statement on this issue, see Means (1959).

16 Follette & Sheiner (2008), Galbraith (2010).

17 Grey & Tankus (2017).

18 The most sophisticated of Treasury economists was Albert Hart, who articulated this point very clearly. See e.g. Hart (1942A), (1942B), (1951) and (1953). See Levey (2019) for a detailed overview of World War II Treasury thinking.

19 Hart articulated this point especially well throughout his work. See, e.g., Hart (1942A) (“The writer does not mean, of course, that federal powers over the monetary situation are confined to taxation. Not to mention credit controls, a government borrowing program which stimulates saving can do a good deal to check inflation.”).

20 See Listokin (2019) for more discussion of this point from a New Keynesian perspective.

This war-time consensus culminated in the popularization of the work of Beardsley Ruml, who was not only deeply involved in New Deal and World War II macroeconomic policymaking, but designed our modern “pay-as-you-go” income tax.²¹ Immediately following the war, Ruml now-famously declared that “Taxes for Revenue Are Obsolete” for a sovereign government with a domestically inconvertible currency and a central bank.²² This meant that “the prime consideration in the imposition of taxes has become the inevitable social and economic consequences of the taxes that are imposed.”²³ For Ruml, this meant that the valuation of individual taxes should center social considerations as opposed to the sort of simple arithmetic now utilized by the CBO. For instance, Ruml writes:

“...the estate and gift taxes have little or no significance, as tax measures, for stabilizing the value of the dollar. Their purpose is the social purpose of preventing what otherwise would be high concentration of wealth and income at a few points, as a result of investment and reinvestment of income not expended in meeting day-to-day consumption requirements. These taxes should be defended and attacked in terms of their effects on the character of American life, not as revenue measures.”

These and similar ideas remained influential throughout the 1950s, and helped maintain focus on developing and strengthening fiscal automatic stabilizers such as unemployment insurance, income taxation, and health care spending.²⁴ However, by the time the CBO was established in the 1970’s, they had fallen out of vogue and been largely forgotten.

This turn away from a multi-dimensional, multi-tool inflation management framework, towards one centered around a single agency, operating primarily with a single tool or narrow set of tools, was a categorical mistake. In order to properly address and mitigate the inflationary potential of emerging industrial policy priorities, whether they be Biden’s Build Back Better program or a Green New Deal, the post-war inflation framework must be rediscovered, relearned and retrofitted to the modern context.

Joining other progressive legal and economic experts, this report calls for a more integrated administrative state, attuned to common macroeconomic goals across all agencies and policy silos. We should reform the budgeting process so that the inflationary implications of Congressional legislation are clearer. This in turn necessitates a fully-funded administrative agency conducting detailed sector-by-sector forecasting of both potential output and price indices.²⁵ Such efforts are, among other things, a critical aspect of planning a “just transition” away from fossil fuels.

21 Ruml was inspired by the problems he saw in the retail department store business. See, e.g., Collins (1981); See also, *Donelan Phelps & Co. v. United States*, 876 F.2d 1373, 1374–1375 (8th Cir. 1989) (explaining the origins of the current system of taxation, where the funds are withheld from the employee’s paycheck).

22 Ruml (1945).

23 Ruml (1950).

24 Costantini (2018).

25 It is beyond the scope of this report to critically evaluate the theoretical economic concept of “potential output”. For the purposes of this report, what is most relevant is that the “potential output” of the economy overall is an important *policy* concept, and thus cannot be completely ignored. That said, it is worth noting that measurements of potential output tend to become more coherent and precise the more one disaggregates closer to the point of production (which eventually ends with a single product line). On this issue, input-output economics has a lot to offer.

DEFINING MONETARY POLICY AND FINANCIAL REGULATION

Conventional economic wisdom grossly simplifies the relationship between aggregate demand and inflation by approaching the latter as simply “too much money chasing too few goods,” implying all inflation is rooted in excess demand. In reality, when demand is high in a particular sector and goods or services production falls short, companies effectively issue “rainchecks” to each other, or a dominant firm absorbs the orders of other firms.²⁶ “Order backlogs” form an underemphasized “non-price” microeconomic process for aggregate demand management. If order backlogs become too voluminous (in terms of the months or years it would take to fulfill outstanding orders), they may grant companies more latitude to raise prices. However, backlogs can also merely increase wait times and have no perceptible effect on prices at all, especially if the engorged backlogs are perceived as temporary.²⁷

Notably, even this conventional framework recognizes that central banks can ostensibly “pay” for legislative spending in the short term by raising interest rates and thus reducing private investment, thereby lowering aggregate demand and offsetting any increased demand generated by additional public spending. Indeed, in theory, the ability to adjust interest rates infinitely means monetary policy can handle any and all inflationary capacity, limited only by operational constraints like the the zero lower bound (ZLB) or effective lower bound (ELB) at the bottom end and by public policy considerations at the upper end (i.e., the social impact of a recession, e.g., Volcker in 1979). However, the potential to use contractionary monetary policy as a fiscal “pay-for” has been largely subsumed by concerns that higher interest rates will increase debt-service expenditure on the national debt, thereby increasing aggregate demand in other offsetting ways, and potentially precipitating a long-term fiscal crisis. In this respect, the equation of monetary policy writ large with one subset of administrative tools—interest rate adjustments—is overly reductive and prevents monetary policy-makers from considering the full scope of options available to them to mitigate the inflationary risk of fiscal spending.

By contrast, shifting to a mission-oriented financial regulation framework would create a clear role for contractionary monetary policy, unencumbered by fears of fiscal crisis induced by increasing the rate of interest paid on government debt or other public liabilities. Importantly, by emphasizing the potential of “non-fiscal pay-fors” to reduce aggregate demand, we do not intend to claim that most price increases are currently caused by order backlogs from high demand nor that managing aggregate demand is sufficient for preventing generalized annual price increases (i.e. inflation). Persistent cost increases for firms can translate into higher prices for consumers.

26 See, e.g., Blinder, Canetti, Lebow, & Rudd (1998) and Ghemawat & McGahan (1998).

27 Nevertheless, a prudent macroeconomic policy framework would endeavor to limit increases in the median wait time for delivery of intermediate and final outputs.

Similarly, periodic revisions to profit margins in different markets may cause consumer price indices to experience secular increases even if no particular market experiences rising prices continuously.²⁸

For example, the recent price increases in housing and health care markets (which form substantial subcomponents of consumer price indices) are driven by cost increases for firms passed on to consumers and revisions to profit margins.²⁹ But even these price increases have a social geography, and should not be confused with a generalized and uniform rise in prices. With housing, what appears to be broad based rental inflation at the aggregate level is in reality particular dynamics appearing in specific metropolitan areas. Likewise, health care pricing issues are often particular to specific regions and states and their particular policies, such as the degree of state financing for hospitals or accepting the Medicaid expansion.

Understanding monetary policy

Today, monetary policy is typically defined as “interest rate policy and asset purchase/sale policy.”³⁰ Interest rate policy itself generally refers to the setting of short term interest rates at which banks and other financial institutions obtain publicly issued liquidity in the form of central bank-issued settlement balances. “Asset purchases and sales policy” refers to the government’s sale and purchase of specific financial assets, undertaken in order to affect the liquidity and/or price of that class of financial assets.³¹ Theoretically, the government can buy and sell privately-issued financial assets in order to affect private credit markets directly. In practice, however, the dominant Anglo-American tradition since the 1930s has been to buy and sell government securities and expect that this will indirectly influence private credit markets through changing the “risk-free” interest rate.³² Recently, the Federal Reserve exercised this authority to conduct “quantitative easing” (QE), or the persistent purchase of large quantities of long maturity government securities and government insured mortgage backed securities to reduce the interest rates on those bonds and thus indirectly affect private credit markets. QE generated widespread skepticism about the effectiveness of asset purchase and sale policy that is not being conducted to defend an explicit interest rate target.³³

Historically, when people refer to the Fed targeting “the risk-free interest rate,” they were referring to one key rate: the Federal Funds Rate, which refers to the rate that banks charge to lend settlement balances to each other.³⁴ Since the advent of QE, the relevant interest rate policy has shifted from the federal funds rate to the interest on reserve balances (IORB) rate (i.e., the rate of interest paid on master accounts at the Federal Reserve) and the overnight reverse repurchase agreement (ON RRP) offering rate. These different rate targets implicate non-bank financial actors as well.

28 Blinder, Canetti, Lebow & Rudd (1998), Lee (1999).

29 Baker (2019), Laugeson (2016).

30 Monnet (2018).

31 Melton (1985).

32 Recent Eurozone purchases of corporate bonds are a move back towards this kind of policy. See, e.g., Belsham, Rattan & Maher (2017), Campiglio, Dafermos, Monnin, Ryan-Collins, Schotten, & Tanaka (2018), and Monnin (2018).

33 See, e.g., Fullwiler & Wray (2010) and Jayadev & Mason (2015).

34 See, e.g., Demiralp, Preslowsky, & Whitesell (2006).

From a legal perspective, central banks are able to engage in these practices because they have been granted the authority to issue settlement balances and physical currency.³⁵ Settlement balances are essentially checking account deposits that the Treasury, banks, and foreign governments maintain with the central bank. In more simple terms, provisions of these accounts is an important way in which central banks act as “banks for banks” and execute the authority to “create money.”³⁶ The existing financial system is a legal creation built on top of the government’s power to create money which has been franchised to commercial banks and subfranchised to a variety of financial institutions and financial markets.

People often think banks are limited by reserves or settlement balances. In actuality, banks are limited by their cost of financing and their quantity of settlement balances. At the beginning of the pandemic, the Federal Reserve eliminated reserve requirements entirely, clarifying to the public that they are a policy variable rather than an essential limiting factor. Canada has operated without reserve requirements, and oftentimes without net settlement balances being in the banking system at all.³⁷

Further, while it is commonly believed that “shadow banking” and “shadow money” (i.e., money issued by corporate entities without some sort of license) stand apart from the “conventional” banking system, this is not the case. In the GFC, shadow money was often being generated, and thus supported, by bank holding companies (BHCs), and any formal limitations on inter-affiliate support (i.e., Section 23A of the Federal Reserve Act) was quickly abandoned. As Cornell Law Professor Saule Omarova has astutely pointed out:

The implosion of the shadow banking system in 2007 unexpectedly brought section 23A to the forefront of the [Federal Reserve] Board’s interpretive activity. Shifting into full wartime mode, the Board aggressively used its exemptive authority under section 23A as an integral part of its response to the unfolding financial crisis...[D]uring the crisis, the Board effectively rendered section 23A irrelevant by repeatedly allowing depository institutions to provide financing to their affiliated securities firms, derivatives dealers, money market funds, and even automotive companies, in order to prevent potentially disastrous effects of their failure on the financial system and the broader economy. Crisis containment and systemic risk considerations consistently prevailed over the statutory purpose of preventing the leakage of the federal subsidy outside the depository system. In effect, the Board dismantled the entire section 23A regime in order to make an emergency transfusion of the federal subsidy into the shadow banking system and beyond.³⁸

Even entities beyond BHCs benefited from BHC liquidity being extended to markets like the asset-backed commercial paper market. Liquidity in our current financial system is essentially endlessly sub-franchised from the top until it suffuses the financial system and appears innate to financial markets, rather than properly understood as the end product of a complex legal and governmental process centered around public money creation. As this report outlines, this process can be lim-

35 Known in the United States as “reserve balances.” See, e.g., Demiralp, Preslopsky & Whitesell (2006) and Fullwiler (2005).

36 Hockett & Omarova (2016), Ricks (2016), Wray (2011).

37 Lavoie (2019).

38 Omarova (2011).

ited and reversed by limiting the activities that BHCs can engage in and the loans they can make to non-bank financial institutions. If there is a public purpose to publicly-guaranteed credit being provided to specific financial markets and specific financial entities, then the central bank can and should provide it directly, with public and congressional oversight on pre-arranged terms.

While interest rate policy and asset purchase/sale policy are generally associated with central banks, the Treasury also plays a key role in the implementation of monetary policy through deciding what type of securities it issues.³⁹ Monetary policy experts generally emphasize cooperation between the Treasury and the Fed for this and other reasons.⁴⁰ However, Congress could just as easily grant different or additional administrative agencies or instrumentalities authority to accomplish or facilitate the goals of monetary policy. There is no reason to believe that the current arrangement is the only feasible one, yet alone that it is efficient or ideal.

The near-universal dominance of monetary policy in the contemporary macroeconomic policy framework does not mean that fiscal policy has not played an historically important role. Fiscal policy contributed to demand stabilization primarily through the post World War II design of automatic stabilizers in the context of much larger federal budgets and tax systems,⁴¹ rather than through granting of discretionary authority to an administrative agency⁴² (although serious proposals for such a design were considered in the United States).⁴³ Even a brief examination of tools used by the Fed before the rise of the current monetary policy consensus demonstrates how narrowly the modern Fed approaches its mandate. Most importantly, during the 1930s, throughout the World War II and Korean War mobilizations and well into the 1950s, the Federal Reserve relied on forms of direct credit regulation—the main topic of this report—to preserve macroeconomic financial stability. Following the Fed-Treasury Accord, they slowly receded from policy discourse and were deprioritized as part of the orthodox macroeconomic research agenda.⁴⁴ As a result, the viability of these alternative policy tools and their importance to these two major war mobilizations has been forgotten, and that amnesia treated as a substantive and permanent rejection of that approach, even if that is not actually what happened historically. In addition, the conventional wisdom now ignores the successful implementation of financial regulation to regulate demand in other countries, most notably France.⁴⁵ Indeed, in many other jurisdictions, financial regulation was traditionally considered the primary lever in the monetary policy toolkit.⁴⁶

39 Treasury departments have also historically engaged in financial asset purchase policies. See, e.g., Kinley (1910), Goodhart (1969), and Cohen (1971).

40 See, e.g., Hart (1951), Bach (1949), Bach (1950), and Beckworth (2019).

41 See, e.g., Minsky (1986), Collins (1981), and Costantini (2018).

42 Arguably secular shortfalls in demand over the immediate post-war period were handled by secular increases in defense spending. See Barker (2019).

43 Roosa (1951), Bach (1951), Hart (1949), Hart (1950), Collins (1981), Costantini (2018).

44 Hetzel & Leach (2001)

45 See, in particular, Monnet (2018).

46 *Id.* See also Bezemer et al. (2018), Haggard, Lee, & Maxfield (1993).

Understanding financial regulation

Defining financial regulation begins with the distinction between “microprudential” and “macroprudential” financial regulation. *Microprudential regulation* aims to preserve microeconomic stability. In other words, the microprudential approach analyzes financial activity at the level of the individual financial balance sheet to identify “unsafe” levels of debt and/or illiquidity that will cause problems for individual actors regardless of the state of the macroeconomy. The goal is to determine if individual private financial units have insufficient “precautionary” liquid assets and/or “margins of safety” to meet obvious and predictable financial contingencies.

By contrast, the goal of *macroprudential regulation* is to prevent practices that induce larger macroeconomic fluctuations and can cause widespread financial distress and bankruptcy for households, firms, and financial institutions even if sensible microprudential policies are followed. In essence, macroprudential regulation is intended to address the whole, beyond the sum of its parts. Macroprudential financial regulation has historically been used to regulate fluctuations in various macroeconomic aggregates (e.g., aggregate demand, inflation, unemployment), even if the regulated entities are not the financial units suffering from distress associated with volatility in those aggregates. That is to say, when we’re experiencing inflation and want to affect demand by restricting how much credit the banking system extends, the banks’ profitability or their customers’ well-being may not be actually negatively impacted by the inflation happening in a specific area of the economy.

In practice, however, microprudential and macroprudential overlap substantially. For example, sensible microprudential mortgage regulation would have also largely prevented the build up of household private debt and housing price inflation that led to the GFC. Systematic mortgage fraud by lenders is not generally considered beneficial for borrowing households regardless of the state of the macroeconomy. Similarly, margin requirements for stock market purchases both prevent unsafe levels of “exposure” to stock price fluctuations and prevent aggregate stock price inflation.

Microprudential and macroprudential regulation also overlap in the manner in which they prevent or fail to prevent discrimination. At the microeconomic level, it is well known that individuals and households need special protection against financial predation on the basis of race, gender, sexual orientation, religion, and other aspects of their identity. What is less focused on is that financial regulation is an area where income and wealth inequalities between groups are ameliorated or worsened. This is properly viewed as a part of macroeconomics. The most obvious example is the pervasive housing discrimination that was built into our system of mortgage origination by the federal government during the New Deal. This policy led to extraordinary discrimination against Black people at the individual level, which dramatically worsened and perpetuated the racial wealth gap.

What is happening to marginalized people also serves as a gauge for what is happening in the wider financial market. Emma Coleman Jordan has persuasively shown that mortgage predation on Black people provided a robust signal for what was going on more widely in the mortgage market, which directly contributed to the GFC.⁴⁷ She convincingly argues that Federal Reserve officials completely ignored racial discrimination in the mortgage market and this is a key reason they missed the

extent and severity of the mortgage crisis before it occurred. It is important to keep in mind how much microeconomic and macroeconomic motivations overlap in the area of prudential financial regulation as it makes the task of using these tools easier overall. Nonetheless, the distinction still remains useful. Next, we explore some existing prudential regulatory requirements.

LIQUIDITY AND RESERVE REQUIREMENTS

Liquidity requirements require an entity to hold some amount of financial assets deemed by regulators to be liquid. To mitigate the risk that some entities may hold fewer precautionary balances than they actually need - leading to undesirable consequences for their counterparties, their business sector, or the entire economy - liquidity requirements force entities to maintain precautionary financial balances such that even large outflows can be satisfied for a significant period of time.

In principle, liquidity requirements can be imposed on any legal entity, but in practice the focus of this regulation has historically been banks, and to a lesser extent, non-bank financial institutions. Liquidity requirements may require banks to hold a certain nominal amount of financial assets, but most regulators mandate institutions maintain a certain ratio of liquid assets to total non-equity liabilities (primarily deposits) or some other measure of how many payments the entity will need to make over a defined period of time. For example, the Liquidity Coverage Ratio from Basel III (the most recent set of global financial regulatory standards produced by the Basel Committee on Banking Supervision) is a ratio of “high quality liquid assets” to “anticipated net cash outflows” over a 30 day period.⁴⁸

As mentioned previously, central bank settlement balances are liabilities of the central bank held in what are essentially “checking accounts” for banks and other major institutional players. Since these liabilities are used by banks to make direct payments to the government or other banks, they are considered the highest quality form of liquidity available.⁴⁹

Some think of reserve and liquidity requirements as a form of quantitative credit regulation. This is based on the traditional argument that banks are limited in how much they can lend by their quantity of “reserve balances” and physical cash. However, this is not the case. Because central banks have a commitment to preserving *at par clearing* between retail bank payments, central banks have no choice but to provide settlement balances on demand, at some price.⁵⁰ In other words, central

48 Basel III's requirements are specifically designed to give central banks some decision-making time to respond to events that stress system liquidity.

49 Formally, Treasury securities are also “high quality liquid assets” for the purposes of Basel III regulations with no discount applied to them relative to central bank settlement balances. This is a unique property of this type of liquidity requirement as the conventional liquidity requirement—reserve requirement—can only be satisfied with physical cash and central bank settlement balances. See also, however, a mixture of Resolution Liquidity Adequacy Planning which “adds on” a “maturity mismatch” measure and thus increases liquidity requirements when a bank enters into repurchase agreements and informal bank examiner pressure to prefer settlement balances to treasury securities recently led to a shortage of settlement balances.

50 See, e.g., Moore (1988), Lavoie (2005), Fullwiler (2005), (2006), and (2013), Bindseil (2014), Bindseil & König (2013). These points have recently been acknowledged by the Bank of England (McLeay, Radia, & Thomas (2014)) and have received some mainstream attention (Carpenter & Demiralp (2012)).

banks fix the *price* of settlement balances, but must necessarily let the *quantity* of settlement balances float.⁵¹

A more valid way of looking at liquidity requirements is that they function as a kind of “quasi-tax” that can indirectly reduce the amount of demand that a firm directly or indirectly generates. That is, requirements to hold more liquid (and likely less profitable) assets than firms would hold of their own volition is a non-reciprocal obligation, which reduces a financial institution’s immediate profitability and operational flexibility. This thus reduces the growth of bonuses, dividend payments and/or capital (and thus balance sheet expansion) over time.⁵² That said, this is not a very restrictive way of regulating financial institutions.⁵³

CAPITAL REQUIREMENTS

Capital requirements are regulations that require some entity, whether it be a bank, non-bank financial institution, or a non-financial corporation, to maintain a certain level of net worth in order to engage in some approved activity or to maintain a particular legal status. As with liquidity requirements, capital requirements can be applied to any entity, but in practice they are usually applied to financial institutions - particularly chartered banks. Regulators may mandate a discrete dollar figure for capital, but more often demand compliance of a ratio between (unweighted or weighted) assets and total equity. Whereas liquidity requirements are aimed at stress arising from the liability side of the balance sheet, capital requirements establish a “margin of safety” to protect an institution from insolvency when realizing losses on their assets. The more leveraged an institution is, the less it is ‘insured’ against small changes in default rates across its assets. Thus, the hope of imposing capital requirements is that an institution will either slow down the rate of growth of its assets or improve its net worth by issuing equity liabilities or cutting dividends.⁵⁴

There are two main types of capital requirements: “leverage-based” and “risk-based” capital requirements. *Leverage-based capital requirements* impose a strict maximum ratio between net worth. As is commonly remarked upon, this means treating Treasury securities as having the same level of uncertainty embedded in them as private IOUs.⁵⁵ Policymakers worry that high capital requirements curtail the rate of asset growth, driving banks to even riskier assets to preserve a given rate of return. Overly strict leverage-based capital requirements also discourage market-making

51 More generally, because financial institutions have the ability to create financial liabilities and the requirement constraint only binds when an institution has payment outflows that must be covered with higher forms of money, reserve and liquidity requirements tend to bind broader commercial credit creation only in the context of a broader financial crisis. As Hyman Minsky famously observed, in that context, there would already be pressure for the central bank to act as lender of last resort and validate formally unbacked, insufficiently liquid (and possibly overleveraged) financial institutions. In short, liquidity requirements can serve the limited purpose Basel III envisions for them, but they are not effective quantitative credit regulation in a meaningful sense.

52 See Whittlesey (1953) and (1959a). See also Roosa (1959) and Whittlesey (1959b) for the former’s comment and the latter’s reply. See also Fullwiler (2017).

53 This isn’t to say that very high liquidity requirements couldn’t make a financial institution unprofitable.

54 It is important to note that net worth is defined as assets subtracted by non-equity liabilities so by definition converting some liabilities to equity liabilities or acquiring assets by selling equity liabilities increases an entity’s net worth.

55 Warren & Brown (2020).

activities that involve expanding one's balance sheet substantially on low-risk transactions and inventory accumulations. But "pure" leverage-based capital requirements are rarely imposed anymore. The second type of capital requirements, *risk-based capital requirements*, tries to fix this problem by weighting bank assets by their riskiness. For instance, risk-free short maturity treasury securities issued by OECD countries were weighted at zero in Basel I.⁵⁶

However, risk-based capital requirements present their own set of problems. For example, it is difficult to provide accurate risk assessments, especially in a changing world in which financial institutions behave differently in part because of the "risk weighting" regulators impose. Under Basel II, regulators adopted a practice of "regulation-by-proxy" through adopting bank's internal risk models for assessing riskiness of various assets.⁵⁷ Traders, loan officers, and other bank employees were thus incentivized to find deals that were profitable to incur but evaded the limits imposed by their own internal models.⁵⁸ This happens because these "internal risk models", once encoded into regulation, become a constraint that it can be profitable to evade rather than a guide to prudent policy. Executives may also incentivize taking on "unmodeled risk" once they become a part of the regulatory apparatus where before they would disincentivize and punish evading risk controls. Each additional unmodeled risk that a financial institution takes on effectively lowers the financial institution's "risk based" capital requirements, the main constraint on financial institution activity. Most notoriously, Basel II exacerbated an explosion of poorly underwritten and outright fraudulent mortgage credit, which was predicted to be profitable based on a history of rising national average home prices.⁵⁹

These particular models were built without the understanding that since the creation of a national mortgage market in 1995, local housing markets had synchronized and thus the accelerating national average home prices were going to be followed by a nationwide housing recession.⁶⁰ That is, since these models didn't recognize that housing markets in different regions were becoming increasingly correlated, they underestimated how much of the current rise in national average prices were driven by increasingly shared factors that, when reversed, would see more dramatic national price decreases than in the past. When housing markets were more uncorrelated, downturns in one region would be mitigated by upturns or booms in other regions. Synchronization made that "safety net" disappear. Nor did they detect the financial instability layered on top of this already unstable environment by the proliferation of innovative but risky financial instruments, such as Collateralized Debt Obligations (CDOs) and Credit Default Swaps (CDS), which vastly multiplied the potential losses from rising defaults in the U.S. mortgage market.

CDS were contracts that, in exchange for premium payments, promised a lump sum if an underlying "reference" instrument, such as a mortgage, experienced a "credit event" (i.e. a missed payment or default). Because these contracts were not regulated as insurance, they were sold in amounts far greater than the underlying value of the "reference" instrument and even sold to entities with no financial interest in the underlying instruments. As has often been remarked, this is analogous to

56 Goodhart (2011), Tooze (2018).

57 Goodhart (2011), Tankus (2013), O'Neil (2016).

58 *Id.*

59 Tooze (2018).

60 Sansom (2017) and (2020).

strangers being able to take out fire insurance contracts on your home which are worth many multiples of the value of your home.

Moreover, the multiplying counterparty risks were not captured by Basel II “risk weighted” capital requirements. In fact, the Basel II arrangement suggested that these unregulated insurance products lowered the premium payer’s net risk. Banks further hid risks and lowered capital requirements by spinning off “Structured Investment Vehicles” to hold portfolios of CDS and repackaged mortgage-backed securities, for which they provided undervalued “guarantees.” These legal innovations expanded bank leverage to even more dizzying heights and were key ingredients of the Global Financial Crisis of 2007–2008.

Since this widely recognized failure of financial regulation, there has been another wave of financial regulatory changes. In 2014, the Fed, Federal Deposit Insurance Corporation (FDIC), and Office of the Comptroller of the Currency (OCC) introduced the “supplementary leverage ratio” (SLR), which is a traditional leverage-based capital requirement that specifically applies to the largest banking institutions and reinforces the modified risk-based capital requirements already applied to banks.⁶¹ Companies identified by the Financial Stability Oversight Council (FSOC) as being “Systemically Important Financial Institutions” (SIFI) have an “enhanced supplementary leverage ratio” (E-SLR) above and beyond the baseline. Importantly, the SLR also includes so-called “off balance sheet” assets.

Since the GFC, regulators have also adjusted the risk weighting of assets, especially by constraining (and in some cases eliminating) the use of internal bank models in the relevant assessments. Most notably, mortgages no longer have a flat risk weight but instead have adjusted risk weights based on the loan to value ratio (i.e. the value of the property relative to the debt of the borrower).⁶² This adjustment arises from the painfully learned lesson that the *quality* of the mortgage affects its riskiness. Thus, Basel III has incorporated some *limited* aspects of qualitative credit regulation into its risk weighting. However, banks still originate assets below the quality standards implied by risk weighting.

THE DIRECTIONALITY OF FINANCIAL REGULATION (OR LACK THEREOF)

Liquidity requirements and capital requirements have been the main focus of financial regulation for the past 50 years at least.⁶³ Along with interest rate targeting, they comprise a monetary policy framework geared toward indirect influence over financial institutions rather than more conspicuous steering of the economy. However, indirect financial regulation is far easier to circumvent than more direct regulations on financial institutions, which is why indirect regulations form the background context for Hyman Minsky’s analysis of endogeneity of financial instability to modern finance

61 Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation & Office of the Comptroller of the Currency (2014).

62 This is mainly adjusted by the size of the down payment required by the borrower. In other words, just as banks are presumed to be more safe when they have more net worth relative to the value of their assets, so are homeowners.

63 However, as noted above, that was not always the case. See also Minsky (1986), Kregel (2013), Wray (2011).

capitalism.⁶⁴ Whether it's taking on more uncertainty, originating lower quality loans, or finding alternative sources of liquidity or capital, financial institutions are much more incentivized by indirect regulation to engage in activities that are profitable, but outside the bounds of avowedly surgical regulatory inventions.

Putting aside the question of whether orthodox capital and liquidity regulations are capable of preserving financial stability, it is clear that, as currently designed, they do little to improve the allocation of physical resources or labor power in accordance with broader public purposes, such as distributive justice and environmental sustainability. Despite Basel III and Dodd-Frank financial reforms, credit is still allocated on a preferential basis to sectors like the fossil fuel industry due to its perceived profitability, despite the uncertainties of climate change and a potential political move to banning fossil fuel extraction in the next 5–25 years.⁶⁵ In reality, there is no “price” that regulators could set that would sufficiently disincentivize originating these kinds of investments, especially if banks are able to immediately sell off loans they originate to non-banks and thus evade regulatory restrictions focused on the health of their own balance sheet.

This lack of clear normative social (i.e. non-pecuniary) goals when shaping the directionality of private investment and credit activity is arguably the central failure of the orthodox approach to financial regulation. There is a pervasive belief that private commercial actors do a better job of allocating resources and engaging in risk taking than the public sector and that the purpose of financial regulation is simply to “internalize” the presently undervalued costs on third parties that arise from the behavior of the financial sector.⁶⁶ The legally derived privileges afforded by a bank charter—including direct access to public monetary powers of the lender of last resort—are presumed in this framework to be “counterbalanced” by capital and liquidity regulations such that the public doesn’t “bear the burden” on a day-to-day basis, or outside of crisis moments. But this is a fiction. In reality, there is no way to compensate the rest of society for the permanent harms resulting from the suboptimal or outright socially perverse allocation of resources when the power to create money is predominantly franchised to banks and other private, for-profit financial institutions.⁶⁷

We incur deep social costs from the existing financial system, regardless of whether financial regulation is narrowly successful at preventing bailouts. Financial institutions regularly allocate public money and private credit toward socially and environmentally destructive ends, as well as less directly harmful but nevertheless still suboptimal investments that use up “fiscal space” (by generating inflationary pressure), that could otherwise be deployed elsewhere. A mission-oriented approach to financial regulation—whether that mission be those of a Green New Deal, or President Biden’s more moderate Build Back Better agenda—requires making explicit normative judgments about resource allocation that are different from the ostensibly “technical” or “risk-focused” judgments regulators make now.⁶⁸ It also requires reeval-

64 *Id.*

65 This is referred to in the academic literature as the “stranded assets” problem.

66 Malherbe (2020), Gelzinis (2020).

67 Hockett & Omarova (2016), Ricks (2016), Wray (2011). This resource allocation isn’t just limited to bank holding companies however. By generating liquidity in certain financial markets and providing credit lines to certain non-bank financial institutions, the power to create money is essentially sub-franchised to non-bank financial institutions. See Wray (2015b) and Mazzucato & Wray (2015).

68 Short (2012).

uating whether bank loans are, in fact, the best way to mobilize the majority of real economic resources, including human labor, or whether it is preferable to mobilize a greater share directly via public spending and social investment.⁶⁹ In other words, we again need mission-oriented financial regulation that complements a broader mission-oriented macroeconomic policy.⁷⁰ This includes, but is not limited to, re-embracing financial regulation as a viable budgetary “pay-for” capable of offsetting or “cooling down” the inflationary pressure generated by expansionary fiscal policy.⁷¹

69 Paul & Tankus (2019).

70 Mazzucato (2014).

71 While the focus of this report is monetary policy and financial regulation, it is worth mentioning that public money tends to be a better tool for building the society we want than publicly-guaranteed credit, because it allows for greater oversight over project administration, and ensures public investments remain mission-oriented rather than profit-oriented. Tankus, Bernal, & Carrillo (2019); Paul & Tankus (2019).

AN ALTERNATIVE POLICY TOOL: CREDIT REGULATION AS “NON-FISCAL PAY-FORS”

MR. VOLCKER: The Federal Reserve has a long history with operating credit controls.

MS. FOX: From war time.

MR. VOLCKER: And they went on for 10 years more after the war. Mortgage & consumer credit controls went on for quite a long while. We should still have them. [Laughter]⁷²

What might financial-regulation-as-budgetary-pay-for look like? We propose two tools: (1) direct *qualitative* credit regulation and (2) direct *quantitative* credit regulation. Direct qualitative credit regulation entails setting minimum standards for the quality of the loans that financial institutions originate and requiring them to hold those loans on their balance sheet (rather than distribute the risk to securities investors).⁷³ Direct quantitative credit regulation expressly and overtly limits the overall amount of credit and purchasing power banks and other financial institutions are authorized to create in order to achieve specific social purposes.⁷⁴ Direct quantitative credit regulation also has the potential to contain the endlessly expanding financialization of different aspects of daily life—an often ignored ingredient in financial stability.

Direct qualitative credit regulation

Direct qualitative credit regulation has been largely confined to muted discussions among practical policymakers (rather than the loud, public pronouncements of macroeconomic theorists) for decades. As a result, the different elements of direct qualitative credit regulation have not been adequately theorized and delineated. We move towards correcting this problem here by introducing three new terms for conceptually distinct (but somewhat overlapping) forms of direct qualitative credit regulation.

⁷² Volcker (2008).

⁷³ Dodd-Frank has a “skin in the game” provision requiring some portion of originated loans to be held on its balance sheet, but this doesn’t change the incentive to securitize enough.

⁷⁴ Direct quantitative credit regulation can be contrasted with tools that attempt to limit the quantity of credit indirectly, such as capital or liquidity regulations, which for reasons discussed above and elsewhere are relatively ineffective and potentially troublesome in encouraging regulatory evasion and arbitrage.

First, there are **“quality of borrower” regulations**, which set minimum standards for the financial health of entities to which banks (and other financial institutions) extend credit. These can include, but are not limited to:

- The quality of collateral the borrower has to offer
- The level and consistency of the borrower’s income payments
- The borrower’s net worth
- A rate keyed to a specific asset (such as a mortgage loan to value ratio associated with a specific home—a globally popular form of effective “quality of borrower” regulation is the use of minimum “loan to value” ratios which regulate the percentage of an asset the borrower must purchase with “cash on hand.”)

While quality of borrower regulations do not have a strong effect on the quality of output, they do serve both microprudential and macroprudential roles. First, by restricting credit available to borrowers who are less likely to repay, they reduce the likelihood and prevalence of personal overindebtedness, which can significantly impact the broader economy in periods of broader crisis or stagnation.⁷⁵ They can also serve a macroprudential role by restricting demand. For instance, the housing crisis of the 2000s illustrates that poor and deteriorating quality of borrower regulation can greatly increase aggregate demand and cause high levels of asset price inflation.

Second, **“quality of sector” regulations** regulate credit extension to certain industries either based on mesoeconomic judgments about future adverse shifts in that industry or macroprudential judgments about the economic desirability of extending credit to that industry. For example, a sector with a lot of excess productive capacity may be denied credit through qualitative sectoral credit regulations in order to speed the restructuring of the sector and protect bank balance sheets by preventing them from “throwing good money after bad.” Basel regulations could also be said to establish a weak form of “quality of sector” regulation by, for example, favoring weighted mortgages over other kinds of loans. In a Green New Deal context, one obvious use of this tool would be to regulate the availability of bank credit to the fossil fuel industry.⁷⁶

Finally, **“quality of activity” regulations** would not focus on the financial health of the borrower or the sector the borrower is “classed” in, but would rather look at the activity that the borrower intends to finance with credit. One very obvious activity that regulators should curtail in the context of achieving environmentally sustainable full employment (i.e. in the context of a Green New Deal) is merger and acquisition credit. As discussed further below, increases in concentration may lead to increases in market power and thus price inflation driven by profit mark-ups.

Another important target for “quality of activity” regulations is the banking system itself. Notoriously, removal of earlier restrictions on what activities bank holding companies could engage in during the 1990’s led to an explosion of proprietary

75 However, this restriction in credit can unduly impact the welfare of people with low incomes or low net worth. As such, a just economic policy must rely on spending, grants, or reparations to fill in the “gap” opened up by this kind of microprudential regulation.

76 We should probably also extend qualitative credit regulation to the non-bank financial system (i.e. the “shadow banking” sector), even as the question of whether this sector should exist at all remains open. At a very minimum, if non-bank financial institutions are not going to be subject to the same regulations as bank holding companies, they should not be allowed to sub-franchise liquidity from commercial banks.

trading. It is not clear what public purpose it serves for bank holding companies to engage in such activities. More generally, quality of activity regulations will be key to simplifying bank balance sheets and returning banks to their core role of doing proper underwriting to ensure the borrower's likelihood of repayment.⁷⁷ Quality of activity regulations can also be used to encourage credit for certain activities such as financing weatherization of buildings.

TYPES OF CREDIT REGULATION

QUALITY OF BORROWER

Set minimum standards of the financial health of entities to which banks can extend credit

Example: The quality of collateral the borrower has to offer

QUALITY OF SECTOR

Set standards based on macroeconomic judgements about future adverse shifts in an industry or the economic desirability of extending credit to that sector

Example: Restricting credit extended by banks to the fossil fuel industry

QUALITY OF ACTIVITY

Set standards on the activity that the borrower intends to finance with credit

Example: Restricting credit extending for mergers and acquisitions to address the price inflation driven by market concentration

DIRECT QUANTITATIVE

a.k.a. Credit Ceiling

Limiting the dollar value of deposits originated by banks (either in absolute terms or relative to credit outstanding)

⁷⁷ This may reduce liquidity in markets that financial institutions, especially Systemically Important Financial Institutions, operate in. In some of these markets, generating liquidity has actually been an undesirable byproduct of expanding the purview of a bank charter. In others, there may be public purpose in producing liquidity in those markets. See below for a proposal to expand the Federal Reserve's collateral schedule and the entities that can access Federal Reserve funding.

Direct quantitative credit regulations

Direct quantitative credit regulations limit the dollar value of deposits or other money-equivalents created by individual banks or bank-like financial institutions, either in absolute terms or in relation to total or average credit outstanding. If applied today, they would certainly involve limiting how much credit is *originated* rather than held (sometimes referred to as a “credit ceiling”) to prevent regulatory avoidance through selling loans. This allows for more precise control over aggregate lending than direct qualitative credit regulations, which ensures the macroprudential goal of stabilizing the level of demand consistent with full employment and price stability (thereby preventing either demand side inflation or unemployment) can be effectively realized. Such regulatory precision also matters because it facilitates the microprudential goal of preventing individual banks from taking too many risks and potentially becoming undercapitalized. Direct quantitative credit regulation also reduces the need to rely on interest rate policy to modulate investment activity. This was especially true historically in the context of fixed exchange rate regimes, where interest rate policy played an international role and needed to be somewhat separated from the macroprudential role of stabilizing demand.⁷⁸

MISSION-ORIENTED POLICY RECOMMENDATIONS

In the following section, we lay out two programs for how exactly we should replace conventional interest rate adjustment-based monetary policy with a framework centered around a “permanent zero” policy rate of interest, with monetary policy-based stabilization conducted instead via direct credit regulation. One is a more minimal program, which essentially regulates business and household access to credit in lieu of the existing indirect interest rate management mechanism. The other is a more expansive approach that seeks to greatly shrink access to credit for non-financial business and limits investment flows that are not financed by government grants or public procurement contracts.

Our proposals here are “mission-oriented” in that they orient monetary policy and financial regulation as “non-fiscal pay-fors” in the service of the specific requirements and goals of the governing coalition’s industrial policy, whether that be President Biden’s Build Back Better agenda or a future Green New Deal regime. We believe the size and scope of the latter approach (henceforth the “Green New Deal program”) is preferable in the context of a more comprehensive and just industrial policy. However, even the more minimal program of focusing narrowly on regulating consumer credit (henceforth the “Build Back Better program”) illustrates how policymakers can and would benefit from shifting away from interest rate-centric macroeconomic stabilization policy even if they do not deploy contractionary financial regulation to the fullest extent possible.

For example, with Congress currently considering multi-trillion dollar public spending to enact Biden’s Build Back Better agenda, it is critical to consider how liquidity and leverage regulations on non-financial corporations can manage the risk of government spending setting off a Minskyan “positive feedback loop” where speculative investment spending rises in anticipation of increases in government spending and overwhelms conventional demand stabilization policies.⁷⁹ More generally, macroeconomic policymakers are free to mix-and-match different aspects of this proposed framework as suits their needs and political constraints. For example, macroeconomic policymaking would be greatly improved by switching to a regime of permanent zero interest rates for government liabilities, even if this move was accompanied by only a modest reliance on contractionary financial regulation to offset the inflationary impact of expansionary fiscal policy. Alternatively, policymakers who are unwilling to abandon discretionary interest rate policy may still benefit from incorporating direct credit regulation and other forms of contractionary financial regulation into their toolkit. In our view, any shift to greater reliance on direct credit regulation would be a positive step forward relative to the status quo.

Build Back Better monetary policy and financial regulation

The “minimal” approach, a.k.a. the “Build Back Better program,” refrains from embracing the full suite of credit regulation tools, and instead focuses on demand stabilization primarily by **regulating consumer credit**, i.e., personal debt to finance household goods and services, such as housing, cars, education, etc. In practice, this would look like the “selective credit controls” of the 1950s, as well as regulating credit cards since these have replaced and grown far beyond the role installment credit had at the time.⁸⁰ “Selective credit controls” was a term that referred to several basic qualitative and quantitative limitations on extending credit for specific consumer purchases, preventing households from spending beyond what their income and wealth allowed.⁸¹

This approach, while not as flexible and versatile as the more expansive approach detailed below, would nonetheless serve as a more-than-adequate replacement for interest rate adjustments in the contemporary aggregate demand management framework. The motivation for this shift is that interest rate policy, to the extent that it does currently work, is primarily thought to work in policy circles as a regulator of household credit, especially mortgage credit. It is not commonly argued (outside of a class of abstract theoretical models) that moderate changes in interest rates have very significant direct effects on business investment spending or that exchange rate appreciation reduces demand in the U.S. very reliably or predictably.⁸² Direct quantitative and/or qualitative credit regulation policies (even if they were limited to regulating household credit) would be a substantial improvement over our current reliance on largely insensitive fine-tuning of interest rate policy.

It is commonly noted in the United States that “housing is the business cycle.”⁸³ Residential investment may not be a major percentage of overall GDP, but with few exceptions, a significant housing market downfall has preceded most recessions in the United States. This happens because as residential investment falls, it reduces the rate of growth of overall demand, which causes a fall in household durable goods purchases and then non-residential business investment. In the mission-oriented framework, the knock-on effect from restricting privately financed residential investment is not likely to have a comparable impact on consumer durable purchases due to the countervailing impact of generously expansionary fiscal policy.

Designing a macroprudential and credit regulation policy framework for regulating aggregate demand is complicated by the fact that credit only indirectly finances demand for current goods and services, and even then only does so to varying degrees. Obviously, many households use credit cards to finance current expenditures. Home equity loans finance new residential investment updating the housing stock and current consumption expenditures. Credit for purchasing appliances and

80 Chandler (1952).

81 It is beyond the scope of this report to contend with the variety of criticisms leveled against “selective credit controls” at the time. That said, it is important to point out that in our current environment which doesn’t have any general limitations on the forms and quantity of credits that are made by banks, there is little reason to be concerned that financial institutions will simply “replace” credit to businesses for credit to households in the way some claimed was happening in the 1950s. Indeed, the Great Financial Crisis is a great test case for this claim in a modern context as the collapse in credit to households led to lower overall credit growth rather than being replaced with credit to businesses.

82 Krugman (2014).

83 Leamer (2007) and (2015).

cars are by definition tied to the purchase of specific consumer durables. However, outside of these high profile and very particularized forms of household credit, the relationship between generalized credit extension and aggregate demand for current goods and services loosens. As the experience of accelerating housing price inflation before the GFC showed, current housing investment doesn't expand in direct proportion to total credit growth, which is why the vast majority of mortgages go to buying existing houses, and thus only indirectly affect housing investment. Consequently, it can be effective to focus macroprudential regulatory efforts more precisely on a small number of highly salient lending channels, such as housing and consumer spending, rather than targeting aggregate credit levels in the hope it will "trickle down" to the relevant sectors. In this respect, our proposed surgically targeted credit regulation approach is reminiscent of monetary policy before the Fed-Treasury Accord, where regulation of "installment credit" and "real estate credit" were the main elements of what was referred to as "selective controls."⁸⁴

In this framework, non-fiscal pay-fors wouldn't be explicitly brought into the budgetary process (or included in CBO scores), but there would be a clear understanding that the Fed and financial regulators would stabilize demand by restricting credit. Thus, this way of approaching non-fiscal pay-fors would mean not "paying for" spending (in the conventional sense). But given existing budget rules like PAYGO and the Byrd rule, this would require either the ability to pass laws without a neutral effect on the deficit (and thus demand), or by directing the CBO to assume the Fed and financial regulators will offset fiscal policy without raising interest rates.

In the context of a deadlocked Congress, the executive may avail itself of wide latitude to reframe how financial regulatory tools are used. However, the existing division of responsibilities and statutory directives makes such reframing cumbersome and awkward, making the outer limits of a more minimal approach apparent. A more explicit legislatively-enacted framework would give a clearer mandate and guidelines on how to pursue this kind of financial regulation, reorganize agencies' responsibilities, as well as outline clearer limitations on their discretion. Legislation could put some tools solely in the Federal Reserve's hands for macroprudential purposes or, as discussed below, create a new inter-agency board of existing regulators with a mandate to coordinate with the Fed (and/or an independent fiscal authority) specifically mandated to make decisions in real time (i.e., on the scale of weeks to months rather than years).

Green New Deal monetary policy and financial regulation

The GND entails the use of expansionary fiscal policy to ensure full employment while transitioning our energy, housing, and production system towards a decarbonized green economy. In our view, it is problematic for GND advocates to invoke extraordinarily low interest rates to justify GND expenditures as being economically viable or "worth it." We fear that as long as central banks are assigned the task of aggregate demand stabilization and have discretion over interest rate policy, they will use it first and foremost in ways that render the viability of ongoing GND investments sub-

ject to an effective veto by way of their decision to raise interest rates. As explained, according to the circular logic of orthodox economic policy assumptions, inflation can always ultimately be stabilized because the central bank can always offset any inflationary pressure with higher interest rates.⁸⁵

But there are macroeconomic reasons for understanding why interest rate policy is an inappropriate monetary policy tool for price stability under a GND. Consistently raising interest rates would also increase *private debt burdens* in an economy that already has large quantities of private debt and thus threaten financial stability.⁸⁶ Raising interest rates would over time also counteract the contractionary effects of interest rate policy on private debt and credit extension by increasing interest payments to savers (an expansionary dynamic within an ostensibly contractionary process).⁸⁷ Interest rate policy is a “blunt” tool: it is difficult to see how it could provide the sort of clarity needed to target emission-intensive sectors for contraction. Competitors in clean energy and carbon avoidant sectors may even be more severely affected by interest rate hikes, to the benefit of the fossil fuel industry.

The international dimension of interest rate policy is also critical. In a world economy dominated by dollar denominated debt, raising interest rates is globally contractionary and has adverse consequences for other countries.⁸⁸ These interest rate increases cause rapid increases in debt service burdens on international dollar debtors for two mutually reinforcing reasons. First, the increase in dollar interest rates causes the dollar exchange rate to appreciate, increasing the burden of the existing dollar debts. Second, the increase in dollar interest rates causes debts to be refinanced at higher interest rates, raising their debt burden. These two combined effects have been shown to lead to substantial global contraction in economic activity.⁸⁹ The balance of payments pressure and contraction caused by both rising dollar interest rates and the rising dollar exchange rate that would follow such high and rising dollar interest rates would have negative effects on the move to decarbonization worldwide.⁹⁰

For now, even if we assume that traditional monetary policy can credibly and justly “offset” the expansionary demand effects of the GND, we are still left with a pressing political issue: without mobilizing alternative monetary policy tools, the Fed’s main tool to “offset” the expansionary demand effects of a GND would be interest rate management, as discussed. Thus, if there were not sufficient fiscal and financial regulatory “pay-fors”⁹¹ built into GND legislation (or the Fed disagreed with Congress and

85 See Kelton (2021).

86 Fullwiler (2016), Mason (2018).

87 Fullwiler (2007) and (2016), Mason & Jayadev (2018), Tankus (2018).

88 Beltran, Garud, & Rosenblum (2017), Lee, Rosenkranz, Ramayandi, & Pham (2021), Hui, Lo, & Chau (2018).

89 Avdjiev, Bruno, Koch, & Shin (2019).

90 This is part of why we think it is wrongheaded to suggest that a Permanent Zero Interest Rate for Government policy is an “America first policy” (Epstein (2019)). These critics are making the classic mistake of confusing the difference between *change* of interest rates and the *level* of interest rates. There are many reasons to think that lowering interest rates causes asset price inflation and can cause cross-border financial flows. There is little reason to think that a low level of interest rates necessarily leads to a permanent higher rate of asset price inflation relative to a higher level of interest rates. Nor is there reason to think that a higher level of interest rates leads to less crossborder financial instability. However, there is a lot of reason to think that *discretion* over interest rates stokes asset price cycles and crossborder financial instability. These critics also ignore that PZIRG is invariably proposed along with tight financial regulation, as this report is devoted to doing.

91 The most relevant one to the Green New Deal conversation being contractionary environmental regulation, though antitrust may have a role to play in disemploying resources.

other agencies about the sufficiency of the existing pay-fors), the Fed would likely raise interest rates in order to suppress aggregate demand. The CBO would then project (indeed, already assumes) that higher rates would cause an unsustainable increase in the national debt, potentially undermining the GND political coalition.⁹² Our framework here is meant to avoid such eventualities by transitioning the federal government to non-interest rate monetary policy tools. If interest rate policy's presumed effectiveness can successfully be shown not to be the case, agencies like the CBO will be forced to abandon their assumption that the Board has absolute power to control inflation. It will instead have to forecast prices within indices like the Consumer Price Index (CPI) and the possible demand effects on individual parts (or "sub-components") of price indices.

The more expansive Green New Deal program proposed below is more radical than the Build Back Better program above in the sense that it more comprehensively regulates the financial system (and even non-financial business) for the purposes of reducing aggregate demand by aggressively encouraging non-financial businesses to de-leverage and even encouraging them to accumulate immobilized financial assets. Thus, it provides a larger non-fiscal pay-for for fiscal policy. It also works to shrink the resource use of the financial sector itself by reducing the number of employees and the physical space the financial system uses.

REQUIRE BUSINESSES AND HOUSEHOLDS TO SAVE

An uncommonly discussed policy tool available for increasing the propensity of households and businesses to save that can form part of a new mission-oriented approach is **to place liquidity requirements on non-financial entities**.⁹³ The tool works by imposing a requirement that a certain amount or fraction of the actors' total balance sheet be held in the form of liquid, cash or cash-like assets, and thus prevented from being otherwise deployed for consumption or investment. This has the effect of directly regulating the balance sheets—and through them, the economic behavior—of actors that economic policy is interested in inducing more or less spending from. It is also an example of how monetary policy, when creatively deployed, can begin to resemble fiscal policy in effect.

Indeed, there is already a fiscal analog for imposing liquidity requirements on non-financial entities: compulsory savings policies. For example, John Maynard Keynes famously proposed compulsory savings to draw down aggregate demand by allowing individual consumers to build up financial wealth while preventing them from translating that wealth into increased consumption or investment.⁹⁴ Randall Wray and Yeva Nersisyan recently proposed a similar policy to mitigate potential inflationary

92 This is especially the case if advocates of the Green New Deal attempt to justify its present fiscal cost by pointing to how interest rates are extraordinarily low. This kind of political advocacy essentially gives the Federal Reserve, under current institutional arrangements, an absolute veto power over the Green New Deal.

93 Tankus (2020a).

94 Keynes (1940).

pressures from the Green New Deal.⁹⁵ Compulsory savings policies reduce demand in a manner similar to conventional taxation—indeed, Keynes even described his proposal as a “tax”—except that individuals who pay the tax are provided with a *deferred savings* asset equal to their “tax payments” that they are then free to re-invest or spend in the future when the inflationary pressure has subsided and it converts back into cash.⁹⁶

In contrast to compulsory savings policies that are structured in the form of a “tax,” liquidity requirements preserve private ownership of assets at the cost of additional monitoring costs. Compulsory saving policies tend to be more convenient when applied to households since, due to the sheer size and diversity of the sector, it is difficult for regulators to closely monitor each household’s balance sheet and allocation of financial assets in live time. Conversely, liquidity regulations are more appropriate for non-financial corporate entities that already have extensive balance sheet reporting requirements. Moreover, when compared to conventional corporate taxes, liquidity requirements are likely to engender less opposition due to them being perceived as temporary, as well as the fact non-financial corporations will eventually end up with a higher level of financial assets in the long term, when liquidity requirements are finally eased. Liquidity requirements can also be designed to apply even to firms with limited retained earnings, through imposing use-based restrictions or a “freeze” on any (unencumbered) financial assets that the firm owns or acquires. This is, again, more subtle and less overtly threatening than an equivalent automatically adjusting corporate tax rate, which would inevitably be viewed as naked confiscation and strenuously resisted.⁹⁷

REGULATE CREDIT AND THE LIQUIDITY, RESERVES, AND CAPITAL REQUIREMENTS OF NON-FINANCIAL AND FOREIGN CORPORATIONS

The GND program includes all the household credit tools of the BBB program but also includes **direct quantitative credit regulation of credit provided to non-financial corporations**. As above, we propose direct qualitative credit regulations on non-financial business lending, in lieu of modulating the composition of bank balance sheets through indirect liquidity and capital regulations. In addition, the GND program proposes **winding down and/or breaking up the non-bank subsidiaries of bank holding companies** and **gradually phasing out commercial bank credit provided to non-commercial bank financial institutions**. Further, **liquidity regulations on non-financial corporations** should be strongly considered, especially as a tool that gains importance as credit becomes increasingly tight over time.

95 In Keynes’ time, this type of fiscal policy was not popular but in the last number of decades, the rise of employment-based insurance and retirement saving programs have made compulsory saving fiscal policy an important aspect of overall fiscal policy. Counting compulsory saving fiscal policies, American workers are some of the highest taxed in the world. See Nersisyan & Wray (2019) for more. For a contemporaneous view, see Hart (1942B).

96 Social Security is arguably a form of “compulsory saving,” except it is over a much longer time horizon than war time and is not a lump sum payment. Payments are also much more loosely connected to tax receipts because of how payments are indexed, statutory changes to retirement ages, and other formula complexities. See Hart (1942B).

97 This isn’t to say that policies should be avoided simply because companies resist them. Instead, we think it is important to lay out policy options which provide a path of less resistance to accomplish the same goals. The Coronavirus experience also provides us with more narrow policy reasons to support corporations accumulating financial assets which are only disgorge in emergencies.

What remains is potential foreign sources of financing. Foreign entities could be required to **acquire a domestic bank license to engage in domestic lending**. Still, there is the concern regarding non-financial corporations issuing equity or debt securities, which can be accessed by foreign entities. The clear answer is **to directly regulate the quantities of such securities that non-financial corporations can issue and to restrict new issuances to domestic purchasers**. This would deal with the issue of foreign sources of credit without pursuing a policy that would be overly disruptive to cross-border financial transactions. That is, foreign investors would still have a large market of previously issued securities to choose from.

Direct financial regulation of non-financial corporations has recently become more of a mainstream proposition. In response to the pandemic-depression, the Fed created emergency liquidity facilities to provide credit to U.S. non-financial corporations: the Primary Market Corporate Credit Facility and the Secondary Market Corporate Credit Facility.⁹⁸ Many institutions that enjoyed access to these facilities would otherwise have struggled to issue debt or otherwise convert existing assets into liquid funds. The combination of (1) the extraordinary interventions to provide the U.S. corporate sector a comprehensive financial safety net, and (2) the relative inability of traditional financing mechanisms to fill the funding gap when revenues collapse, has made liquidity and leverage regulations on these corporations necessary and commonsensical. If we are going to provide them a safety net, why shouldn't they have to put aside a generous amount of savings for a "rainy day"?

One might view this as a great expansion of the role of government in financial markets. However, we argue that our proposal rather illustrates the degree of lax supervision and regulation U.S. financial markets are presently subject to, given the enormous powers allocated to private financial institutions by our contemporary legal and monetary regime. The provisioning of liquidity to non-bank financial institutions and financial markets is an exercise of public monetary powers granted to chartered franchises. It could even be argued that by restricting the scope of chartered banks' interaction with the rest of the financial system (including with other subsidiaries of bank holding companies), state intervention into financial markets is reduced.

This proposal can also be justified on a more fundamental basis: just as the ability to create monies receivable in payment of taxes and court-ordered payments is a franchised power of the United States legal system, the legal right to coordinate economic activity within the territorial jurisdiction of the U.S. is a franchised power of the United States legal system. These "economic coordination rights" are franchised largely, but not exclusively, by antitrust law. Professor Sanjukta Paul's pathbreaking work on this topic has shown that although we naturalize coordination within a firm and stigmatize inter-firm coordination, these are legally contingent choices. Some legal systems do not sanction certain forms of intra-firm coordination. As a result, it is legitimate to reallocate coordination rights or make a certain set of coordination rights conditional on an explicit (rather than an implicit) franchising process. To do so, Professor Paul recommends federal chartering of non-financial corporations with specific stipulated requirements.⁹⁹ For the purpose of price stability, this should include compliance with credit regulation and liquidity, reserve, and capital requirements.

98 Tankus (2020B).

99 Paul (2022).

The idea of federal chartering is not new in the United States; indeed there was a concerted push to pass a federal chartering statute which only narrowly failed at the beginning of the 20th century. Similar proposals also emerged from heterodox economists Gardiner Means and Alfred Eichner who, in their case, were concerned with controlling the flow of investment spending while managing and overseeing price administration by corporations. But in Paul's framework, this is not an intervention into the private sector's domain but the use of public powers which must be used in some fashion, whether implicit or explicit. Professor Paul's point is reinforced by the recent interventions by the Federal Reserve which treat the corporate sector of the United States as a public infrastructure as a whole.

EXPAND THE FEDERAL RESERVE'S COLLATERAL SCHEDULE AND DISCOUNT WINDOW

To avoid financial instability from such a transition towards restricting bank credit to the shadow banking system and short term money markets, **the Fed should expand its collateral schedule and allow non-banks access to Fed borrowing.** This is in essence what has already happened when these entities rely (directly or indirectly) on commercial bank-provisioned liquidity, except the terms are set indirectly by other actors rather than directly via the Federal Reserve (although the outer boundaries of these terms remain subject to federal law). Following Hyman Minsky's proposals for reformulating the discount window, the Fed should open these entities' books and scrutinize their balance sheets, requiring balance sheet shrinkage and higher qualitative borrower standards for the duration they access the window. Our proposal shares some similarity to Mervyn King's proposal¹⁰⁰ to make central banks "pawnbrokers of all seasons" except we think it should be opened up to any entity that has the appropriate collateral, on an *ex ante* basis, and come with stringent direct quantitative and qualitative balance sheet regulations.¹⁰¹

Expanding the collateral schedule and discount window of the Federal Reserve, but putting borrowers under stringent direct credit regulations (if they are not already a chartered entity regulated in that way) would be effective at cracking down on non-bank sources of credit and defending the effectiveness of the direct credit regulations we propose should be applied to bank lending decisions.¹⁰² A further way of dealing with this problem would be to forcibly require entities which are funding very significant holdings of long maturity financial assets with short maturity obligations to obtain bank charters. In the interim, they could still access the Federal Reserve's balance sheet, thanks to its expanded collateral schedule, in order to avoid any financial instability issues that could emerge without such access. Given that either way, these so-called shadow banks would be subject to direct credit regulations, the pri-

100 King (2016).

101 As with other proposals we make here, we are relying on public law to impose "conditionalities" but a weaker form of this proposal which may still be very effective would merely make direct credit regulations a requirement for accessing the Federal Reserve's balance sheet.

102 Arguably any chartered utility, whether they be an energy utility, telecom utility, or otherwise, should also be subject to bank-style regulations of their balance sheet as the liabilities they have authority to impose on people can give some degree of moneyness on their own liabilities in a way similar to banks. See Haskell & Tankus (2020).

mary function of this requirement would be to make explicit what their legal status and role is with respect to banks and the rest of the financial system.

REGULATE CREDIT EXTENDED BY FINANCIAL NET WORTH POOLS

There is still the remaining issue of what Zoltan Poszar calls “money pools” and what we call “Financial Net-Worth Pools.” These entities do not expand their balance sheet to finance the activities of others, but instead manage liquid funds that they transfer to borrowers or sell in order to reinvest elsewhere. The main financial net-worth pools are pension funds, endowment funds, and insurance companies, followed to a lesser extent by some non-financial corporations. As the first three categories explicitly exist to promote the public interest, it is not very difficult to make the case for direct regulation of their activities. This means **applying qualitative and quantitative lending regulations to their asset choices**. This way, these institutions would reflect the public interest in terms of what activities are financed and wouldn’t undermine the overall stance of this mission-oriented monetary policy. While this may reduce the expected rate of return on assets for institutional investors, that may be more apparent than real because the types of investments such regulations would restrict investment into are also the kind of investments that institutional investors have suffered losses and disappointing returns on. In fact, the guiding motivation behind many of the riskiest investments among institutional investors for the past decade is to avoid lowering projected rates of returns far into the future.

The current antiquated approach to pension accounting requires the accumulation of assets sufficient to cover 50 years of benefits if the associated institutions were liquidated tomorrow, even if that institution is a state, county or city. Thus anything that reduces the projected rate of return of assets increases a phantom “pension liability” by large amounts which is the accumulated shortfalls from that 50 years of lower returns. This “pension liability” is a phantom liability, because it is not an asset that any other entity owns. A pension fund’s balance sheet recognizes the obligation to pay future pension benefits regardless of this theoretical level of “underfunding.” Thus, such regulations may actually improve returns over the long term even if they cause a minor problem upon implementation. One solution would be for public **institutional investors to shift closer to a “pay as you go” strategy, in which fixed income payments are made primarily out of existing revenues rather than returns generated from previously accumulated financial assets**. Another would be to **nationalize these benefits** (perhaps via an expansion of Social Security) or **provide institutional investors access to special institutional investor Federal Reserve accounts**, which would pay a special institutional investor interest rate, as described below. With asset-side regulations on institutional investors and shadow bankers pushed towards the discount window and brought inside banking law, the U.S. financial system becomes much more constrained.

To the extent that these institutional investors serve a public purpose and, for whatever reason, cannot be democratized or otherwise restructured, they could **gain access to specially designed Institutional Investor Accounts, provided by the Fed and keyed to a special “Institutional Investor Interest On Reserves” (IIIOR) rate**. This interest rate would provide sufficient returns for these institutional investors and make the kind of asset-side regulations discussed below economically (or politically) viable for them. In this way, IIIOR could reinforce the financial regulatory policy

proposed throughout this report and prevent financial instability that could emerge through the more intensive regulation of institutional investors.¹⁰³

ESTABLISH PERMANENT ZERO INTEREST RATES FOR GOVERNMENT (PZIRG)

In light of the preceding set of policy recommendations to achieve price stability, we propose that the **short term interest rate target of the Federal Reserve be permanently set at zero**. Additionally, we think that **negotiable government securities should be put “on tap” at a fixed price across the yield curve and that yield curve should be flattened by pegging the interest rates on those government securities to zero**.¹⁰⁴

This proposal does not mean that there is no potential place for interest bearing government instruments. However, we think such instruments should be carefully designed to fit specific purposes. For example, the issuance of non-negotiable saving bonds or semi-illiquid interest bearing accounts targeted at non-wealthy households who would be inclined to increase their propensity to save if they had access to such an instrument should certainly be considered as a potential lever in the new monetary policy toolkit. This is similar in objective, though weaker in effect, to the liquidity regulations on non-financial entities and compulsory saving fiscal policies discussed above. However, there should be a strict ceiling on how high interest rates on these instruments can go to minimize the risk that it simply becomes a vehicle for

103 It is beyond the scope of this report to fully outline what Institutional Investor central bank accounts would look like but this short description is sufficient to illustrate the principle of designing instruments for specific purposes and how the usual concerns with permanent zero interest rate policy can be handled. It is also beyond the scope of this report to do a full analysis of the Shadow Banking issues related to our proposed approach to using contractionary financial regulation as a non-fiscal pay-for for the Green New Deal. However, a few comments can be made at this stage. We are in general agreement with Zoltan Poszar that the two central drivers of the demand for “shadow money” are the demand for safe assets and the demand for *safer* assets that provide a benchmark rate of return. The first driver can be alleviated by any number of proposals, whether it be Poszar’s proposal for setting a price for government securities and allowing their quantity to float, Morgan Ricks proposal for “central bank accounts for all” or Rohan Grey’s proposal for digital fiat currency. The second driver is more complicated to respond to. In the spirit of Poszar’s solution to the first driver, two contributors to this report (Rohan Grey and Nathan Tankus) have been developing an as-of-yet unpublished proposal for Institutional Investor Interest on Reserves, as discussed above. This would provide adequate returns while ensuring that institutional investors like pension funds and insurance companies didn’t provide demand for shadow money. If there is a public purpose in providing interest bearing instruments to alleviate their asset-liability mismatches, the government should issue those instruments directly. This report is focused on the comprehensive regulation of the financial system and eliminating the subsidy of public money provided to it. However, if regulations on institutional investors are unpalatable, this facility could be a “carrot” which attracts institutional investors away from risky investments. Like the discount window, this facility could set conditions for access to it. Nonetheless we prefer to avoid reliance on contract-based conditionality.

To handle the remaining financial net-worth pools, Poszar recommends “progressive taxation” in the form of corporate, estate, and wealth taxes. While we are not against this proposal, we think liquidity regulations on financial net-worth pools can also serve this purpose.

104 It is beyond the scope of this report to write out a full proposal for how this would work ideally. Albert Hart long ago proposed replacing Treasury securities with Federal Reserve securities and providing the Treasury with an unlimited overdraft at the Federal Reserve. This can also be accomplished by allowing the Mint to mint high value coins (such as the “platinum” coin) or “digital” coins which the Treasury either deposits with the Federal Reserve or spends directly into circulation. See Grey (2020) for more. Representative Rashida Tlaib proposes relying on Federal Reserve Securities and High Value Platinum Coin Seigniorage in order to support direct cash payments to households in her “ABC” Act.

exacerbating existing income and wealth inequality between the middle and working classes.

Critics of Permanent Zero Interest Rates for Government (PZIRG) claim that the resulting market environment would have adverse effects on institutional investors, such as insurance companies or pension funds.¹⁰⁵ This implies that existing positive interest rates serve as a hidden or “submerged” subsidy to these entities. As stated previously, if there is a genuine public purpose in providing interest-earning safe assets to institutional investors, this subsidy should be made explicit and come with tighter portfolio regulations of these institutions.

In mainstream economic policy discussions, PZIRG is characterized as an “excessively loose” monetary policy. However, this ignores monetary policy beyond interest rate management. We must look beyond the short term interest rate target or the yield curve of government liabilities in order to determine whether monetary policy is “loose” or “tight.”¹⁰⁶ In other contexts, commentators recognize that very restrictive credit regulation is a tight constraint on financial institutions. Some go as far as to claim these restrictions will hamper “economic growth” and cause a recession. By that same token, monetary policy, *net* of financial regulation, is contractionary in such circumstances, notwithstanding zero interest rates for government. For instance, the *net* contractionary monetary policy we are proposing is justified by what we see as the appropriately large discretionary expansionary fiscal policy that the GND must entail.

REFORM THE CONGRESSIONAL BUDGET OFFICE

As discussed, we need to **upgrade or obviate the CBO’s current approach to federal budgeting and “paying for” spending.** The budgetary process should explicitly consider impacts on inequality, greenhouse gas emissions, and other environmental indicators. Balancing production and our climate budget is more important than balancing the federal budget. Rather than worrying about narrow budgetary outcomes, federal budgeting should be re-oriented around managing overall demand, demand in specific sectors, and ensuring that there is a necessary and adequate infrastructure for physically allocating the most essential inputs for continued production. More concretely, this means considering potential “pay-fors” impact on demand and, as discussed above, considering “non fiscal pay-fors” in addition to fiscal pay-fors. In this way, we can limit demand-based inflation while still pursuing necessary fiscal policies.

As it stands, the status quo does not make budgeting more sound: it only corrodes and corrupts Congressional intent and legibility. Moreover, we need to abandon obsolete rules like “PAYGO” and the Byrd rule that force them to “find the money” for new programs or cut funding for old ones. This is the same as saying, “I’m going to take a dollar out of the economy for every dollar I plan to put in.” As it stands, when the CBO publishes its annual budget outlook, they’re only telling half the story. They report the government’s current (and projected) financial balance, but they don’t bother to point out what it implies for the broader public or the planet. They supply the data—big scary deficit numbers—that politicians and pundits use to terrorize the

105 Daly (2015).

106 Jayadev & Mason (2015).

population, but they make no attempt to show how those deficits necessarily impact the economy or the balance sheets of other actors that comprise it. So, the public is bombarded with one-sided coverage that only looks at fiscal deficits from one vantage point.

As Stephanie Kelton argues in *The Deficit Myth*, given the power to make pronouncements like some Greek oracle, the CBO has the power to make or break with a word. But when it comes to its analyses and predictions, the CBO has a pretty poor track record. Financial muckracker David Dayen has referred to the CBO as “Congress’s Biggest Obstacle.”¹⁰⁷ Both the House and Senate are required to seek a budget score from agencies like the CBO or the Joint Committee on Taxation before lawmakers can even vote on major legislation. A poor CBO score can literally stop a bill in its tracks.

But the CBO itself is a creature of Congress. Accordingly, Congress has the power to suspend or modify any self-imposed constraint (e.g., PAYGO, Byrd rule, debt ceiling, 302(a) allocation, no overdraft, etc.) that might otherwise prevent lawmakers from appropriating funding or stop the Federal Reserve from clearing authorized payments as the fiscal agent of the Treasury. Even the CBO itself could be dissolved or instructed to follow new protocols. Because its constraints were imposed by Congress, they can all be waived or suspended by Congress. In other words, the CBO’s actions are binding only if Congress wants them to bind. Congress can, and frequently does, rewrite the playbook. We want agencies like the CBO helping to evaluate new legislation for potential inflation risk before Congress commits to funding new programs so that the risks can be properly preemptively mitigated.

For GND spending, MMT would have us begin by asking if it would be macroeconomically sound for Congress to authorize the proposed amount of new spending without offsets.¹⁰⁸ A careful analysis of the economy’s existing (and anticipated) slack would guide lawmakers in making that determination. If the CBO and other independent analysts concluded it would risk pushing inflation above some desired inflation rate, then lawmakers could begin to assemble a menu of tailored options to identify the most effective ways to mitigate that risk. Perhaps one-third, one-half, or three-fourths of the spending would need to be offset. It’s also possible that none would require offsets. Or perhaps the economy is so close to its full employment potential that we should turn to the other tools discussed in this report. The point is, Congress should work backward from detailed empirical analysis in order to arrive at such an answer, rather than beginning with the axiomatic presumption that every new dollar of spending needs to be fully offset. This would in fact be a more granular and surgical approach to protecting the economy from unwarranted and undesired inflation in the sectors where we do not want to see it than exists today. It would ensure that there is always a legal check on the inflationary risk of any new spending. After all, the best way to fight inflation is before it happens.

107 Dayen (2020).

108 Tcherneva (2002).

ESTABLISH AN INTER-AGENCY COUNCIL ON PRICE STABILITY

Finally, while a full treatment of this proposal is beyond the scope of this report, we would like to iterate our support for **the creation of an inter-agency council responsible for managing price stability**, similar to the Financial Stability Oversight Council (FSOC). Such a committee would work together on monitoring, managing, and responding to cost increases throughout the economy, along with shifts in profit margins in various markets to ensure market stability and fair prices. Since price increases usually stem from sources that are distinct from overall demand conditions, this council would primarily focus on other institutional sources of price increases and possible price instability. Such a division of labor would free individual agencies such as the Federal Reserve, which focus on overall demand conditions, from the burden and expectation to respond to price pressure that emerges because of forces unrelated to their mandate, such as broader supply chain issues or non-financial firm mark-up pricing decisions.

If, for example, port capacity¹⁰⁹ were a major binding constraint to current output, the Department of Transportation (DOT) and Federal Maritime Commission (FMC) could coordinate its activities with other agencies on the council and, with an action plan in place, keep demand authorities from responding to port-related bottlenecks by tightening monetary or fiscal policy. If price increases in telecommunications¹¹⁰ and pharmaceuticals are raising measured inflation, the Federal Communications Commission (FCC), Federal Trade Commission (FTC), and Food and Drug Administration (FDA) can be tasked with responding to, and even rolling back, these price increases. This council doesn't necessarily require any agency being handed substantial new powers in order to preserve price and supply chain stability.¹¹¹ Instead, it can serve as a clearinghouse for ideas that help each agency see the bigger picture and lead agencies besides the Federal Reserve to reassess their policies in light of the responsibility to manage price increases and preserve macroeconomic stability.

At the time of writing, the United States is currently experiencing problems emerging just from not having such an inter-agency council. The FTC, DOT, and other agencies that deal with supply chain issues and business conduct are responding to current circumstances without any reference or interaction with Federal Reserve policy and even, seemingly, without much coordination with each other. Meanwhile, the Federal Reserve is in the process of prematurely tightening policy out of concern for being seen as not being responsive enough to inflation, despite recognizing that its policy tools are ill-equipped to respond to current price increases. Without something like a Price Stability Oversight Council, policymakers are responding reactively, rather than proactively, to price and supply chain issues, while pressure mounts for an aus-

109 Williams (2021).

110 Greeley (2019).

111 That said, it may be the case that Green New Deal policies would be greatly facilitated by cracking down on price leadership as a private form of market governance and instead encourage other forms of governing markets, particularly prices, which are more amenable to oversight and regulation. Price leadership, whereby one powerful firm sets a price and other smaller and/or higher cost firms follow it, is a form of market organization predisposed to concentrating power. Organizing markets around explicit price coordination, where democratic oversight can ensure fair prices, would make the work of a GND far easier. If an administrative agency could more cleanly separate price stability arising from bottlenecks in specific sectors, as opposed to other sources of inflation, this would be of tremendous benefit to policymakers. See Tankus & Herrine (2021) for more.

terity response, which will hurt the most vulnerable. We don't even have clarity over the balance between cost pressures and target profit margin changes in current price increases, which increases confusion and rancor in deciding what government policy should be.¹¹² With a significant but not exorbitant budget and dedicated, competent personnel, a Price Stability Oversight Council could bring clarity and insight to these debates and help create a unified and coordinated government policy approach to inflation and price stability.

CONCLUSION

To summarize, the GND program proposal is a comprehensive use of financial regulation across the financial system and even on non-financial corporations to make explicit where franchised public money is being allocated and to limit (and if possible, eliminate) the sub-franchising of liquidity, which would otherwise support the issuance, distribution, and safety of unlicensed dollar deposits. In addition to this, the proposal regulates the asset allocation of institutional investors so that their pre-existing accumulation of financial net-worth cannot undermine the stance of direct credit regulation. Shadow banks would be pushed into the hands of the Fed, which would become a “pawn-broker of first resort” and their reliance on public money would be made explicit (ideally “euthanizing” the shadow banking sector).

By comprehensively reorganizing the financial system in this fashion, the connection between specific extensions of bank credit and specific allocations of physical resources to specific purposes would be rendered much more obvious to the public. This would facilitate public discussion and debate about the normatively appropriate balance between reliance on chartered bank loans versus reliance on grants in the use of public money. The ability to tie specific financing activities to specific purchases or investments would also facilitate distinguishing qualitatively between different loan purposes. Without a financial market to sub-franchise liquidity, there is much less chance financial players can launder financing meant for one activity to another activity (for instance, a green activity to a grey activity). The administration of non-fiscal pay-fors for spending proposals would also be clarified relative to a system where liquidity is constantly sub-franchised and it becomes difficult to connect any specific expenditure to any specific expansion of finance.

Over time, as private debt levels shrink relative to GDP, and regulators impose greater restrictions on credit extensions, there would be little scope for using yet more restrictive direct credit regulation. At that point, policymakers will have to choose between relying more on liquidity regulations on non-financial corporations and transitioning more fully to fiscal policy stabilization tools. As discussed in an earlier section, the line between liquidity regulations on non-financial actors and taxes varies depending on the specific structure of the tax or the liquidity regulation. Thus, even though this is certainly a monetary policy tool, its viability for macroeconomic stabilization in a low-private debt economy comes from liquidity regulations on non-financial corporations being more similar to conventional taxation.

This limitation may seem like a downside to some. However, if we reach the point where the paucity of private debt becomes “a problem,” GND monetary policy will have accomplished its job. Policymakers would have been able to mostly avoid demand driven inflation without raising taxes substantially on the vast majority of the working population during the first phases of a just transition.¹¹³ In the scenario

113 For our purposes here we’re ignoring one time replacements of one type of non-reciprocal obligation for another, such as health care insurance being replaced by payroll taxes. See Saez & Zucman (2019) and Nersisyan & Wray (2019).

where we have successfully implemented the first stage of the GND, tax increases will no longer be as politically charged an issue as they are today. This is insofar as fear of taxes comes in large part from fear of deprivation and an effective GND that was operating for a decade or more would have hopefully dealt with economic and social deprivation by that point.

Finally, it must also be said that such an outcome, while treated as a negative in terms of pursuing non-fiscal tools for reducing demand, is actually a feature not a bug from a traditional financial regulatory perspective. Limiting the extension of credit and the growth of bank balance sheets reduces financial sector leverage and sensitivity to illiquidity shocks.¹¹⁴ Instead, low levels of private debt and small financial institution balance sheets reflect a financial sector that has been successfully shrunk and deemphasized in the structuring of the economic system.¹¹⁵ Consequently, sustaining low levels of private debt makes the emergence of financial crises much less likely. Shrinking the financial system also facilitates its deconcentration, which is a necessary part of a more comprehensive approach to democratizing finance.

As the US recovers from the pandemic and policymakers begin to re-embrace coordinated industrial planning, now is a key moment to set out new paradigms of monetary policy and financial regulation. While a full GND regime may still be further on the horizon, credit regulation policies allow for alternative modes of “paying for” public spending—managing inflation via targeting credit allocation to certain sectors, activities, and borrowers—while simultaneously clarifying the franchised nature of the public monetary system. The Biden administration and Congressional Democrats need not fully embrace the alternative macroeconomic paradigm articulated in this report to realize the pragmatic benefits of such policies today. And as GNDers continue building their preferred industrial policy toolkit and the political power to enact it, they would be wise to take stock of the potential for monetary policy and financial regulation to complement the expansionary fiscal policy of a rapid green transition, as outlined here. Indeed, the viability of such a project (and thus organized life itself) may hinge on clearly centering “non-fiscal pay-fors” as the strategy to decouple public spending from intransigent taxation debates.

114 This approach, of indirectly targeting financial stability by directly regulating the qualitative and quantitative extension of bank credit, stands in contrast to the conventional approach, which focuses more on managing the instability that relatively unrestricted private credit and investment activity creates.

115 As a result, it becomes less urgent to demand banks pre-accumulate assets to meet liquidity demands and/or insure against losses on assets (which is not to say we should not continue to do so as well).

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