

FEDERAL RESERVE

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Money is the essential unit of measure for the voluntary exchanges that constitute the market economy. Stable money allows people to work freely, helps businesses grow, facilitates investment, supports saving for retirement, and ultimately provides for economic growth. The federal government has long made policy regarding the nation's money on behalf of the people through their elected representatives in Congress.¹ Over time, however, Congress has delegated that responsibility first to the Department of the Treasury and now to the quasi-public Federal Reserve System.

The Federal Reserve was created by Congress in 1913 when most Americans lived in rural areas and the largest industry was agriculture. The impetus was a series of financial crises caused both by irresponsible banks and other financial institutions that overextended credit and by poor regulations. The architects of the Federal Reserve believed that a quasi-public clearinghouse acting as lender of last resort would reduce financial instability and end severe recessions. However, the Great Depression of the 1930s was needlessly prolonged in part because of the Federal Reserve's inept management of the money supply. More recessions followed in the post-World War II years.

In the decades since the Federal Reserve was created, there has been a downturn roughly every five years. This monetary dysfunction is related in part to the impossibility of fine-tuning the money supply in real time, as well as to the moral hazard inherent in a political system that has demonstrated a history of bailing out private firms when they engage in excess speculation.

Public control of money creation through the Federal Reserve System has another major problem: Government can abuse this authority for its own advantage

by printing money to finance its operations. This necessitated the original Federal Reserve's decentralization and political independence. Not long after the central bank's creation, however, monetary decision-making power was transferred away from regional member banks and consolidated in the Board of Governors.

The Federal Reserve's independence is presumably supported by its mandate to maintain stable prices. Yet central bank independence is challenged in two additional ways. First, like any other public institution, the Federal Reserve responds to the potential for political oversight when faced with challenges.² Consequently, its independence in conducting monetary policy is more assured when the economy is experiencing sustained growth and when there is low unemployment and price stability—but less so in a crisis.³ Additionally, political pressure has led the Federal Reserve to use its power to regulate banks as a way to promote politically favorable initiatives including those aligned with environmental, social, and governance (ESG) objectives.⁴

Even formal grants of power by Congress have not markedly improved Federal Reserve actions. Congress gave the Federal Reserve greater regulatory authority over banks after the stock market crash of 1929. During the Great Depression, the Federal Reserve was given the power to set reserve requirements on banks and to regulate loans for the purchase of securities. During the stagflation of the 1970s, Congress expanded the Federal Reserve's mandate to include “maximum employment, stable prices, and moderate long-term interest rates.”⁵ In the wake of the 2008 global financial crisis, the Federal Reserve's banking and financial regulatory authorities were broadened even further. The Great Recession also led to innovations by the central bank such as additional large-scale asset purchases.

Together, these expansions have created significant risks associated with “too big to fail” financial institutions and have facilitated government debt creation.⁶ Collectively, such developments have eroded the Federal Reserve's economic neutrality.

In essence, because of its vastly expanded discretionary powers with respect to monetary and regulatory policy, the Fed lacks both operational effectiveness and political independence. To protect the Federal Reserve's independence and to improve monetary policy outcomes, Congress should limit its mandate to the sole objective of stable money.

This chapter provides a number of options aimed at achieving these goals along with the costs and benefits of each policy recommendation. These recommended reforms are divided into two parts: broad institutional changes and changes involving the Federal Reserve's management of the money supply.

BROAD RECOMMENDATIONS

- **Eliminate the “dual mandate.”** The Federal Reserve was originally created to “furnish an elastic currency” and rediscount commercial paper so that the supply of credit could increase along with the demand for money

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and bank credit. In the 1970s, the Federal Reserve's mission was amended to maintain macroeconomic stability following the abandonment of the gold standard.⁷ This included making the Federal Reserve responsible for maintaining full employment, stable prices, and long-term interest rates.

Supporters of this more expansive mandate claim that monetary policy is needed to help the economy avoid or escape recessions. Hence, even if there is a built-in bias toward inflation, that bias is worth it to avoid the pain of economic stagnation. This accommodationist view is wrong. In fact, that same easy money causes the clustering of failures that can lead to a recession. In other words, the dual mandate may inadvertently contribute to recessions rather than fixing them.

A far less harmful alternative is to focus the Federal Reserve on protecting the dollar and restraining inflation. This can mitigate economic turmoil, perhaps in conjunction with government spending. Fiscal policy can be more effective if it is timely, targeted, and temporary.⁸ An example from the COVID-19 pandemic is the Paycheck Protection Program, which sustained businesses far more effectively than near-zero interest rates, which mainly aided asset markets and housing prices. It is also worth noting that the problem of the dual mandate may worsen with new pressure on the Federal Reserve to include environmental or redistributionist “equity” goals in its policymaking, which will likely enable additional federal spending.⁹

- **Limit the Federal Reserve's lender-of-last-resort function.** To protect banks that over lend during easy money episodes, the Federal Reserve was assigned a “lender of last resort” (LOLR) function. This amounts to a standing bailout offer and encourages banks and nonbank financial institutions to engage in reckless lending or even speculation that both exacerbates the boom-and-bust cycle and can lead to financial crises such as those of 1992¹⁰ and 2008¹¹ with ensuing bailouts.

This function should be limited so that banks and other financial institutions behave more prudently, returning to their traditional role as conservative lenders rather than taking risks that are too large and lead to still another taxpayer bailout. Such a reform should be given plenty of lead time so that banks can self-correct lending practices without disrupting a financial system that has grown accustomed to such activities.

- **Wind down the Federal Reserve's balance sheet.** Until the 2008 crisis, the Federal Reserve never held more than \$1 trillion in assets, bought largely

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to influence monetary policy.¹² Since then, these assets have exploded, and the Federal Reserve now owns nearly \$9 trillion of mainly federal debt (\$5.5 trillion)¹³ and mortgage-backed securities (\$2.6 trillion).¹⁴ There is currently no government oversight of the types of assets that the Federal Reserve purchases.

These purchases have two main effects: They encourage federal deficits and support politically favored markets, which include housing and even corporate debt. Over half of COVID-era deficits were monetized in this way by the Federal Reserve's purchase of Treasuries, and housing costs were driven to historic highs by the Federal Reserve's purchase of mortgage securities. Together, this policy subsidizes government debt, starving business borrowing, while rewarding those who buy homes and certain corporations at the expense of the wider public.

Federal Reserve balance sheet purchases should be limited by Congress, and the Federal Reserve's existing balance sheet should be wound down as quickly as is prudent to levels similar to what existed historically before the 2008 global financial crisis.¹⁵

- **Limit future balance sheet expansions to U.S. Treasuries.** The Federal Reserve should be prohibited from picking winners and losers among asset classes. Above all, this means limiting Federal Reserve interventions in the mortgage-backed securities market. It also means eliminating Fed interventions in corporate and municipal debt markets.

Restricting the Fed's open market operations to Treasuries has strong economic support. The goal of monetary policy is to provide markets with needed liquidity without inducing resource misallocations caused by interfering with relative prices, including rates of return to securities. However, Fed intervention in longer-term government debt, mortgage-backed securities, and corporate and municipal debt can distort the pricing process. This more closely resembles credit allocation than liquidity provision.

The Fed's mortgage-related activities are a paradigmatic case of what monetary policy should *not* do. Consider the effects of monetary policy on the housing market. Between February 2020 and August 2022, home prices increased 42 percent.¹⁶ Residential property prices in the United States adjusted for inflation are now 5.8 percent above the prior all-time record levels of 2006.¹⁷ The home-price-to-median-income ratio is now 7.68, far

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above the prior record high of 7.0 set in 2005.¹⁸ The mortgage-payment-to-income ratio hit 43.3 percent in August 2022—breaking the highs of the prior housing bubble in 2008.¹⁹ Mortgage payment on a median-priced home (with a 20 percent down payment) jumped to \$2,408 in the autumn of 2022 vs. \$1,404 just one year earlier as home prices continued to rise even as mortgage rates more than doubled. Renters have not been spared: Median apartment rental costs have jumped more than 24 percent since the start of 2021.²⁰ Numerous cities experienced rent increases well in excess of 30 percent.

A primary driver of higher costs during the past three years has been the Federal Reserve's purchases of mortgage-backed securities (MBS). Since March 2020, the Federal Reserve has driven down mortgage interest rates and fueled a rise in housing costs by purchasing \$1.3 trillion of MBSs from Fannie Mae, Freddie Mac, and Ginnie Mae. The \$2.7 trillion now owned by the Federal Reserve is nearly double the levels of March 2020. The flood of capital from the Federal Reserve into MBSs increased the amount of capital available for real estate purchases while lower interest rates on mortgage borrowing—driven down in part by the Federal Reserve's MBS purchases—induced and enabled borrowers to take on even larger loans.²¹ The Federal Reserve should be precluded from any future purchases of MBSs and should wind down its holdings either by selling off the assets or by allowing them to mature without replacement.

- **Stop paying interest on excess reserves.** Under this policy, also started during the 2008 financial crisis, the Federal Reserve effectively prints money and then “borrows” it back from banks rather than those banks’ lending money to the public. This amounts to a transfer to Wall Street at the expense of the American public and has driven such excess reserves to \$3.1 trillion, up seventyfold since 2007.²² The Federal Reserve should immediately end this practice and either sell off its balance sheet or simply stop paying interest so that banks instead lend the money. Congress should bring back the pre-2008 system, founded on open-market operations. This minimizes the Fed’s power to engage in preferential credit allocation.

MONETARY RULE REFORM OPTIONS

While the above recommendations would reduce Federal Reserve manipulation and subsidies, none would limit the inflationary and recessionary cycles caused by the Federal Reserve. For that, major reform of the Federal Reserve’s core activity of manipulating interest rates and money would be needed.

A core problem with government control of monetary policy is its exposure to two unavoidable political pressures: pressure to print money to subsidize

government deficits and pressure to print money to boost the economy artificially until the next election. Because both will always exist with self-interested politicians, the only permanent remedy is to take the monetary steering wheel out of the Federal Reserve's hands and return it to the people.

This could be done by abolishing the federal role in money altogether, allowing the use of commodity money, or embracing a strict monetary-policy rule to ward off political meddling. Of course, neither free banking nor allowing commodity-backed money is currently being discussed, so we have formulated a menu of reforms. Each option involves trade-offs between how effectively it restrains the Federal Reserve and how difficult each policy would be to implement, both politically for Congress and economically in terms of disruption to existing financial institutions. We present these options in decreasing order of effectiveness against inflation and boom-and-bust recessionary cycles.

Free Banking. In free banking, neither interest rates nor the supply of money is controlled by the government. The Federal Reserve is effectively abolished, and the Department of the Treasury largely limits itself to handling the government's money. Regions of the U.S. actually had a similar system, known as the "Suffolk System," from 1824 until the 1850s, and it minimized both inflation and economic disruption while allowing lending to flourish.²³

Under free banking, banks typically issue liabilities (for example, checking accounts) denominated in dollars and backed by a valuable commodity. In the 19th century, this backing was commonly gold coins: Each dollar, for example, was defined as about 1/20 of an ounce of gold, redeemable on demand at the issuing bank. Today, we might expect most banks to back with gold, although some might prefer to back their notes with another currency or even by equities or other assets such as real estate. Competition would determine the right mix of assets in banks' portfolios as backing for their liabilities.

As in the Suffolk System, competition keeps banks from overprinting or lending irresponsibly. This is because any bank that issues more paper than it has assets available would be subject to competitor banks' presenting its notes for redemption. In the extreme, an overissuing bank could be liable to a bank run. Reckless banks' competitors have good incentives to police risk closely lest their own holdings of competitor dollars become worthless.²⁴

In this way, free banking leads to stable and sound currencies and strong financial systems because customers will avoid the riskier issuers, driving them out of the market. As a result of this stability and lack of inflation inherent in fully backed currencies, free banking could dramatically strengthen and increase both the dominant role of America's financial industry and the use of the U.S. dollar as the global currency of choice.²⁵ In fact, under free banking, the norm is for the dollar's purchasing power to rise gently over time, reflecting gains in economic productivity. This "supply-side deflation" does not cause economic busts. In fact,

by ensuring that cash earns a positive (inflation-adjusted) rate of return, it can prevent households and businesses from holding inefficiently small money balances.

Further benefits of free banking include dramatic reduction of economic cycles, an end to indirect financing of federal spending, removal of the “lender of last resort” permanent bailout function of central banks, and promotion of currency competition.²⁶ This allows Americans many more ways to protect their savings. Because free banking implies that financial services and banking would be governed by general business laws against, for example, fraud or misrepresentation, crony regulatory burdens that hurt customers would be dramatically eased, and innovation would be encouraged.

Potential downsides of free banking stem from its greatest benefit: It has massive political hurdles to clear. Economic theory predicts and economic history confirms that free banking is both stable and productive, but it is radically different from the system we have now. Transitioning to free banking would require political authorities, including Congress and the President, to coordinate on multiple reforms simultaneously. Getting any of them wrong could imbalance an otherwise functional system. Ironically, it is the very strength of a true free banking system that makes transitioning to one so difficult.

Commodity-Backed Money. For most of U.S. history, the dollar was defined in terms of both gold and silver. The problem was that when the legal price differed from the market price, the artificially undervalued currency would disappear from circulation. There were times, for instance, when this mechanism put the U.S. on a de facto silver standard. However, as a result, inflation was limited.

Given this track record, restoring a gold standard retains some appeal among monetary reformers who do not wish to go so far as abolishing the Federal Reserve. Both the 2012 and 2016 GOP platforms urged the establishment of a commission to consider the feasibility of a return to the gold standard,²⁷ and in October 2022, Representative Alexander Mooney (R-WV) introduced a bill to restore the gold standard.²⁸

In economic effect, commodity-backing the dollar differs from free banking in that the government (via the Fed) maintains both regulatory and bailout functions. However, manipulation of money and credit is limited because new dollars are not costless to the federal government: They must be backed by some hard asset like gold. Compared to free banking, then, the benefits of commodity-backed money are reduced, but transition disruptions are also smaller.

The process of commodity backing is very straightforward: Treasury could set the price of a dollar at today’s market price of \$2,000 per ounce of gold. This means that each Federal Reserve note could be redeemed at the Federal Reserve and exchanged for 1/2000 ounce of gold—about \$80, for example, for a gold coin the weight of a dime. Private bank liabilities would be redeemable upon their issuers. Banks could send those traded-in dollars to the Treasury for gold to replenish their

vaults. This creates a powerful self-policing mechanism: If the federal government creates dollars too quickly, more people will doubt the peg and turn in their gold to banks, which then will turn in their gold and drain the government's gold. This forces governments to rein in spending and inflation lest their gold reserves become depleted.

One concern raised against commodity backing is that there is not enough gold in the federal government for all the dollars in existence. This is solved by making sure that the initial peg on gold is correct. Also, in reality, a very small number of users trade for gold as long as they believe the government will stick to the price peg. The mere fact that people *could* exchange dollars for gold is what acts as the enforcer. After all, if one is confident that a dollar will still be worth 1/2000 ounce of gold in a year, it is much easier to walk about with paper dollars and use credit cards than it is to mail tiny \$80 coins. People would redeem en masse only if they feared the government would not be able control itself, for which the only solution is for the government to control itself.

Beyond full backing, alternate paths to gold backing might involve gold-convertible Treasury instruments²⁹ or allowing a parallel gold standard to operate temporarily alongside the current fiat dollar.³⁰ These could ease adoption while minimizing disruption, but they should be temporary so that we can quickly enjoy the benefits of gold's ability to police government spending. In addition, Congress could simply allow individuals to use commodity-backed money without fully replacing the current system.

Among downsides to a commodity standard, there is no guarantee that the government will stick to the price peg. Also, allowing a commodity standard to operate along with a fiat dollar opens both up for a speculative attack. Another downside is that even under a commodity standard, the Federal Reserve can still influence the economy via interest rate or other interventions. Therefore, at best, a commodity standard is not a full solution to returning to free banking. We have good reasons to worry that central banks and the gold standard are fundamentally incompatible—as the disastrous experience of the Western nations on their “managed gold standards” between World War I and World War II showed.

K-Percent Rule. Under this rule, proposed by Milton Friedman in 1960,³¹ the Federal Reserve would create money at a fixed rate—say 3 percent per year. By offering the inflation benefits of gold without the potential disruption to the financial system, a K-Percent Rule could be a more politically viable alternative to gold.

The principal flaw is that unlike commodities, a K-Percent Rule is not fixed by physical costs: It could change according to political pressures or random economic fluctuations. Importantly, financial innovation could destabilize the market's demand for liquidity, as happened with changes in consumer credit patterns in the 1970s. When this happens, a given K-Percent Rule that previously delivered stability could become destabilizing. In addition, monetary policy when

Friedman proposed the K-Percent Rule was very different from monetary policy today. Adopting a K-Percent Rule would require considering what transitions need to take place.

Inflation-Targeting Rules. Inflation targeting is the current de facto Federal Reserve rule.³² Under inflation targeting, the Federal Reserve chooses a target inflation rate—essentially the highest it thinks the public will accept—and then tries to engineer the money supply to achieve that goal. Chairman Jerome Powell and others before him have used 2 percent as their target inflation rate, although some are now floating 3 percent or 4 percent.³³ The result can be boom-and-bust cycles of inflation and recession driven by disruptive policy manipulations both because the Federal Reserve is liable to political pressure and because making economic predictions is very difficult if not impossible.

Inflation and Growth-Targeting Rules. Inflation and growth targeting is a popular proposal for reforming the Federal Reserve. Two of the most prominent versions of inflation and growth targeting are a Taylor Rule and Nominal GDP (NGDP) Targeting. Both offer similar costs and benefits.

Economists generally believe that the economy's long-term real growth trend is determined by non-monetary factors. The Fed's job is to minimize fluctuations around that trend nominal growth rate. Speculative booms and destructive busts caused by swings in total spending should be avoided. NGDP targeting stabilizes total nominal spending directly. The Taylor Rule does so indirectly, operating through the federal funds rate.

NGDP targeting keeps total nominal spending growth on a steady path. If the demand for money (liquidity) rises, the Fed meets it by increasing the money supply; if the demand for money falls, the Fed responds by reducing the money supply. This minimizes the effects of demand shocks on the economy. For example, if the long-run growth rate of the U.S. economy is 3 percent and the Fed has a 5 percent NGDP growth target, it expands the money supply enough to boost nominal income by 5 percent each year, which translates into 3 percent real growth and 2 percent inflation. How much money must be created each year depends on how fast money demand is growing.

The Taylor Rule works similarly. It says the Fed should raise its policy rate when inflation and real output growth are above trend and lower its policy rate when inflation and real output growth are below trend. Whereas NGDP targeting focuses directly on stable demand as an outcome, the Taylor Rule focuses on the Fed's more reliable policy levers.

The problem with both rules is the knowledge burden they place on central bankers. These rules state that the Fed should neutralize demand shocks but not respond to supply shocks, which means that it should “see through” demand shocks by tolerating higher (or lower) inflation. In theory, this has much to recommend it. In practice, it can be very difficult to distinguish between demand-side

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destabilization and supply-side destabilization in real time. There also are political considerations: Fed officials may not be willing to curb unjustified economic booms and all too willing to suppress necessary economic restructuring following a bust.

Either rule likely outperforms a strict inflation target and greatly outperforms the Fed's current pseudo-inflation target. While NGDP targeting and the Taylor Rule have much to commend them, they might be harder to explain and justify to the public. Inflation targeting has an intelligibility advantage: Voters know what it means to stabilize the dollar's purchasing power. Capable elected officials must persuade the public that the advantages of NGDP targeting and the Taylor Rule, especially in terms of supporting labor markets, outweigh the disadvantages.

MINIMUM EFFECTIVE REFORMS

Because Washington operates on two-year election cycles, any monetary reform must take account of disruption to financial markets and the economy at large. Free banking and commodity-backed money offer economic benefits by limiting government manipulation, inflation, and recessionary cycles while dramatically reducing federal deficits, but given potential disruption to the financial system, a K-Percent Rule may be a more feasible option. The other rules discussed (inflation targeting, NGDP targeting, and the Taylor Rule) are more complicated but also more flexible. While their economic benefits are significant, public opinion expressed through the lawmaking process in the Constitution should ultimately determine the monetary-institutional order in a free society.

The minimum of effective reforms includes the following:

- **Eliminate “full employment” from the Fed’s mandate, requiring it to focus on price stability alone.**
- **Have elected officials compel the Fed to specify its target range for inflation and inform the public of a concrete intended growth path.** There should be no more “flexible average inflation targeting,” which amounts to ex post justification for bad policy.
- **Focus any regulatory activities on maintaining bank capital adequacy.** Elected officials must clamp down on the Fed’s incorporation of environmental, social, and governance factors into its mandate, including by amending its financial stability mandate.
- **Curb the Fed’s excessive last-resort lending practices.** These practices are directly responsible for “too big to fail” and the institutionalization of moral hazard in our financial system.

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- **Appoint a commission to explore the mission of the Federal Reserve, alternatives to the Federal Reserve system, and the nation's financial regulatory apparatus.**
- **Prevent the institution of a central bank digital currency (CBDC).** A CBDC would provide unprecedented surveillance and potential control of financial transactions without providing added benefits available through existing technologies.³⁴

AUTHOR'S NOTE: The preparation of this chapter was a collective enterprise of individuals involved in the 2025 Presidential Transition Project. All contributors to this chapter are listed at the front of this volume, but Alexander Salter, Judy Shelton, and Peter St Onge, deserve special mention. The chapter reflects input from all the contributors, however, no views expressed herein should be attributed to any specific individual.

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ENDNOTES

1. U.S. Constitution, Article 1, Section 8, <https://www.law.cornell.edu/constitution> (accessed January 23, 2023).
2. For example, Alexander Salter and Daniel Smith (2019) show that Federal Reserve Chairs become more favorable toward monetary discretion once they are confirmed compared to previous stances. Alexander William Salter and Daniel J. Smith, “Political *Economists* or *Political* Economists? The Role of Political Environments in the Formation of Fed Policy Under Burns, Greenspan, and Bernanke,” *Quarterly Review of Economics and Finance*, Vol. 71 (February 2019), pp. 1–13.
3. Sarah Binder, “The Federal Reserve as a ‘Political’ Institution,” *American Academy of Arts and Sciences Bulletin*, Vol. LXIX, No. 3 (Spring 2016), pp. 47–49, https://www.amacad.org/sites/default/files/bulletin/downloads/bulletin_Spring2016.pdf (accessed January 23, 2023). See also Charles L. Weise, “Political Pressures on Monetary Policy During the US Great Inflation,” *American Economic Journal: Macroeconomics*, Vol. 4, No. 2 (April 2012), pp. 33–64, https://www.haverford.edu/sites/default/files/Department/Economics/Weise_Political_Pressures_on%20Monetary_Policy.pdf (accessed January 23, 2023).
4. The Federal Reserve’s financial stability mandate is poorly defined. The Fed has taken advantage of the statutory vagueness and proceeded as if it has the authority to engage in these activities, although it is highly questionable whether this is permissible.
5. 12 U.S.C. § 225a, <https://www.law.cornell.edu/uscode/text/12/225a> (accessed January 23, 2023).
6. See Peter J. Boettke, Alexander William Salter, and Daniel J. Smith, *Money and the Rule of Law: Generality and Predictability in Monetary Institutions* (Cambridge, UK: Cambridge University Press, 2021).
7. George Selgin, William D. Lastrapes, and Lawrence H. White, “Has the Fed Been a Failure?” *Journal of Macroeconomics*, Vol. 34, No. 3 (September 2012), pp. 569–596, <https://www.sciencedirect.com/science/article/abs/pii/S0164070412000304> (accessed January 24, 2023).
8. This includes federal programs that automatically provide for adjustments as the economy contracts (for example, unemployment insurance or the Supplemental Nutrition Assistance Program).
9. Mark Segal, “Fed to Launch Climate Risk Resilience Tests with Big Banks,” *ESG Today*, September 30, 2022, <https://www.esgtoday.com/fed-to-launch-climate-risk-resilience-tests-with-big-banks/> (accessed January 23, 2023).
10. Kenneth J. Robinson, “Savings and Loan Crisis 1980–1989,” Federal Reserve Bank of St. Louis, Federal Reserve History, November 22, 2013, <https://www.federalreservehistory.org/essays/savings-and-loan-crisis> (accessed January 23, 2023).
11. Russell Roberts, “Gambling with Other People’s Money: How Perverted Incentives Caused the Financial Crisis,” Mercatus Center at George Mason University, May 2010, <https://www.mercatus.org/system/files/RUSS-final.pdf> (accessed January 24, 2023).
12. Board of Governors of the Federal Reserve System, Credit and Liquidity Programs Balance Sheet Data Series, 2007–2022, https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm (accessed January 24, 2023).
13. Board of Governors of the Federal Reserve System, U.S. Treasury Securities Data Series (TREAST), 2004–2022, <https://fred.stlouisfed.org/series/TREAST> (accessed January 24, 2023).
14. Board of Governors of the Federal Reserve System, Mortgage-Backed Securities Data Series (WSHOMCB), 2004–2022, <https://fred.stlouisfed.org/series/WSHOMCB> (accessed January 24, 2023).
15. Board of Governors of the Federal Reserve System, Total Assets (Less Eliminations from Consolidation) Data Series (WALCL), 2004–2022, <https://fred.stlouisfed.org/series/WALCL> (accessed January 24, 2023).
16. Federal Reserve Bank of St. Louis, “S&P Dow Jones Indices LLC, S&P/Case–Shiller U.S. National Home Price Index (CSUSHPINSA),” <https://fred.stlouisfed.org/series/CSUSHPINSA> (accessed January 24, 2023). The Case–Shiller Home Price Index tracks home prices given a constant level of quality. See S&P Dow Jones Indices, “Real Estate: S&P CoreLogic Case–Shiller Home Price Indices,” <https://www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller/sp-corelogic-case-shiller-composite/#overview> (accessed January 24, 2023).
17. Federal Reserve Bank of St. Louis, “Real Residential Property Prices for United States (QUSR628BIS),” <https://fred.stlouisfed.org/series/QUSR628BIS> (accessed January 24, 2023).
18. Longterm Trends, “Home Price to Income Ratio (US & UK): Home Price to Median Household Income Ratio (US),” <https://www.longtermtrends.net/home-price-median-annual-income-ratio/> (accessed January 24, 2023).

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19. Federal Reserve Bank of Atlanta, “Metro Area Home Ownership Affordability Monitor (HOAM) Index,” October 2022, <https://www.atlantafed.org/center-for-housing-and-policy/data-and-tools/home-ownership-affordability-monitor.aspx> (accessed January 24, 2023).
20. Apartment List Research Team, “Apartment List National Rent Report,” January 4, 2023, <https://www.apartmentlist.com/research/national-rent-data> (accessed January 24, 2023).
21. Primary drivers of rising real estate prices nationally also include government subsidies and government guarantees through government-sponsored enterprises (GSEs)—namely, Fannie Mae and Freddie Mac. “The unpriced implicit guarantee, which reduced interest rates for mortgage borrowers, helped cause more of the economy’s capital to be invested in housing than might otherwise have been the case.” Congressional Budget Office, “Transitioning to Alternative Structures for Housing Finance: An Update,” August 2018, p. 7, <https://www.cbo.gov/system/files/2018-08/54218-GSEupdate.pdf> (accessed January 24, 2023).
22. Board of Governors of the Federal Reserve System, Reserves of Depository Institutions Data Series (TOTRESNS), 1960–2022, <https://fred.stlouisfed.org/series/TOTRESNS> (accessed January 24, 2023).
23. George A. Selgin, *The Theory of Free Banking: Money Supply Under Competitive Note Issue* (Totowa, NJ: Rowman & Littlefield, 1998). See also Alexander William Salter and Andrew T. Young, “A Theory of Self-Enforcing Monetary Constitutions with Reference to the Suffolk System, 1825–1858,” *Journal of Economic Behavior & Organization*, Vol. 156 (December 2018), pp 13–22.
24. Reforms should also strengthen the incentives of bank depositors (customers) and bank shareholders (owners) to monitor bank portfolios. Deposit insurance undermines the former, as even President Franklin Roosevelt recognized. Bailouts and last-resort lending undermine the latter.
25. Under the current system, banks are supplying the U.S. dollars. Legislation would be needed that includes a mechanism for supplying the correct number of U.S. dollars along with their own notes.
26. F. A. Hayek, *Denationalization of Money: An Analysis of the Theory and Current Practice of Concurrent Currencies* (London, UK: Institute of Economic Affairs, 1976).
27. Kate Davidson, “GOP Platform Includes Proposal to Study Return to Gold Standard,” *The Wall Street Journal*, July 20, 2016, https://www.wsj.com/articles/gop-platform-includes-proposal-to-study-return-to-gold-standard-1469047214?mod=article_inline (accessed January 24, 2023).
28. H.R. 9157, To Define the Dollar as a Fixed Weight of Gold, and for Other Purposes (Gold Standard Restoration Act), 117th Congress, introduced October 7, 2022, <https://www.congress.gov/117/bills/hr9157/BILLS-117hr9157ih.pdf> (accessed January 24, 2023).
29. Judy Shelton, “Gold and Government,” *Cato Journal*, Vol. 32, No. 2 (Spring/Summer 2012), pp. 333–347, https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/2012/7/v32n2-9.pdf?mod=article_inline (accessed January 24, 2023).
30. Lawrence H. White, “Making the Transition to a New Gold Standard,” *Cato Journal*, Vol. 32, No. 2 (Spring/Summer 2012), pp. 411–421, <https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/2012/7/v32n2-14.pdf> (accessed January 24, 2023).
31. Juha Kilponen and Kai Leitemo, “Model Uncertainty and Delegation: A Case for Friedman’s k -Percent Money Growth Rule?” *Journal of Money, Credit and Banking*, Vol. 40, No. 2/3 (March–April 2008), pp. 547–556.
32. Adam Shapiro and Daniel J. Wilson, “The Evolution of the FOMC’s Explicit Inflation Target,” Federal Reserve Bank of San Francisco, *FRBSF Economic Letter* No. 2019–12, April 15, 2019, <https://www.frbsf.org/wp-content/uploads/sites/4/el/2019-12.pdf> (accessed January 24, 2023).
33. WSJ Pro, “Research Says a 3% Fed Inflation Target Could Boost Job Market,” *The Wall Street Journal*, August 18, 2021, <https://www.wsj.com/articles/research-says-a-3-fed-inflation-target-could-boost-job-market-11629308829#:~:text=Research%20Says%20a%203%25%20Fed%20Inflation%20Target%20Could%20Boost%20Job%20Market,-Aug.&text=Two%20former%20high%20level%20Federal,help%20bolster%20the%20job%20market> (accessed January 24, 2023). See also Oliver Blanchard, “It Is Time to Revisit the 2% Inflation Target,” *Financial Times*, November 28, 2022, <https://www.ft.com/content/02c8a9ac-b71d-4cef-a6ff-cac120d25588> (accessed January 24, 2023).
34. Alexander William Salter, “CBDC in the USA: Not Now, Not Ever,” American Institute for Economic Research, December, 13, 2022, <https://www.aier.org/article/cbdc-in-the-usa-not-now-not-ever/> (accessed February 1, 2022).

