the CATO JOURNAL

AN INTERDISCIPLINARY JOURNAL OF PUBLIC POLICY ANALYSIS

ARTICLES

VOLUME 40 NUMBER 1 • PUBLISHED BY THE CATO INSTITUTE • WINTER 2020

Real and Pseudo Gold Price Rules

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If central bankers today were required to adopt a gold price rule, their jobs would be easier and their performance—along with that of major economies—would improve considerably. Such a rule would anchor policy in the objective features of history's most famous and durable money. A gold price rule also could foster an efficient transition to an ideal, feasible, and durable international monetary regime. In these and other respects, it outperforms other rules and no rules at all.

In monetary history, the regime of greatest efficiency, simplicity, stability, and longevity was the classical gold standard (1821–1914). In that regime, major monies were defined as a weight of gold and thus were stable against each other. Money was uniform globally, finance served economic more than political purposes, and central banks (to the extent they existed) played only a minor/supporting role.[1]

Over the past century, in contrast, countries that have resorted to ever-greater levels of spending, taxation, regulation, and borrowing have co-opted money and banking systems to facilitate the funding of political activity. One good reason to impose rules on today's central

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https://www.cato.org/sites/cato.org/files/2020-02/cj-v40n1-6.pdf

Cato Journal, Vol. 40, No. 1 (Winter 2020). DOI:10.36009/CJ.40.1.6.

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[1]For a fuller discussion of the classical gold standard, see Bloomfield (1959), Bordo (1981), Bordo and Schwartz (1984), and Gallarotti (1995).

banks—as an alternative to leaving them unconstrained or instead abolishing them altogether—is to make them less dependent politically (see Dorn 2019). However, to the extent central banks exist primarily to finance politics and politicize finance, few of them will bother obeying rules. If their one rule is to serve ruling elites and their clients, they will prefer to be left unconstrained by rules.

Rulers without Rules

Most central banks in contemporary times attempt monetary central planning without a clear or coherent plan, consulting an eclectic array of measures without focus. In effect, they rule without rules. Political economists once strenuously debated "rules versus authorities," but no longer.[2] Discretion won the day—seemingly by default. By now, economists are reluctant to recommend rules that central banks are neither motivated nor required to adopt and would drop in haste in the heat of the next crisis. Much monetary policymaking now embodies the subjective preferences of policymakers and their clients: overleveraged states.

Given the distinction between an objective monetary standard (gold) and a subjective one (fiat), it was no coincidence that debate about rules versus discretion began soon after the United States abandoned the gold bullion standard in 1933 (Simons 1936). If after decades of gold-based money, nations' monies were to be severed from gold, yet also centrally planned, then planners had to know what to do—whether to adopt a new rule, a mix of rules, or none at all. If there was no denying the validity of central planning per se, the debate had to shift to determining how the central planners should operate. In subsequent decades, the more that monetary policy became authoritarian, arbitrary, and unconstrained constitutionally, the more economists searched for alternative monetary constitutions, to no avail (see Yeager 1962; White, Vanberg, and Kohler 2015; Dorn 2017). The problem was not that economists were inept or unable to specify rules, whether real or contrived. Central banks naturally resist being constrained or accountable.

[2]For contemporary exceptions, consisting largely of neoliberals, see Buchanan (1983), Christ (1983), Dorn (2019), Plosser (2017), Selgin (2017), Sumner (2017), and Taylor (1999, 2017).

The decades-long slide toward full discretion in monetary policy has been apparent since at least 1971, when most remaining monetary links to any sort of gold standard were severed and currencies were left to float, fluctuate, or (more often) sink in value (see Timberlake 2017). But arbitrary discretion has intensified since the crisis of 2008–09. Major central banks now operate with few real constraints, whether institutional or methodological. During the crisis, they copied the unconventional policies adopted by Japan in the 1990s: massive money creation, zero (or negative) interest rates, and debt monetization. Despite an economic expansion that is now a decade old, these supposedly temporary, crisis-specific policies persist. The unconventional has become conventional.

By now it is conventional wisdom that we must have central banks. But this is unwise. Central banking is central planning applied to money and banking, not a "fix" for supposed "market failures." The efficient and stable provision of financial services by free-market actors motivated by profit and subject to anti-fraud laws has a long and venerable history (see Salsman 1990, 1995). Central banking's history is very different indeed. Stated succinctly years ago by Paul Volcker, former head of the Federal Reserve Board, central banks were "not exactly the harbingers of free market economies," were not "at the cutting edge" of capitalist finance, were "almost entirely a phenomenon of the twentieth century," and were mainly "created as a means of financing the government" (Volcker 1990). Even when certain central banks did not originate as servants tasked with satisfying the demands of a fiscally needy state (to borrow a lot and cheaply), they evolved to play just such a role (Selgin and White 1999; Salsman 2017).

Historically, the pressing needs of wartime finance made obvious central bankers' servile role as fiscal enablers. As public bond issuance skyrocketed, central banks dutifully purchased most of it, hoping to keep interest rates low. In peacetime, the fiscal role of central banks seemed less clear, because peace typically meant less deficit spending, and policymakers stated their real aim as "maximum employment" and "price stability." Theoretically at least, that has been the Federal Reserve's main charge since 1978, but the law requiring it includes a third, less-stressed mandate pertinent to fiscal affairs: "moderate long-term interest rates" (see Domitrovic 2011). Today, as public debt skyrockets even in peacetime, most central bankers feel justified enacting unconventional policies not merely to mute financial crises and "stimulate" economies but to facilitate cheap public borrowing.

Distinguishing Targets, Tools, and Rules

A crucial benefit of a gold price rule is its capacity to clarify and delimit the policy menu. At various times in recent decades, the Federal Reserve Board and the Federal Open Market Committee (FOMC) have claimed that policy is conducted according to some rule or another, but it has never been clear why, how, or for how long any rule has been adopted. Economists, markets, and Fed overseers are left guessing. Moreover, the distinction between targets, tools, and rules becomes blurred. Policy becomes sloppy. The Fed may try to promote maximum employment, price stability and moderate levels of interest rates, but those are targets, not tools or rules. Its tools may include changes in quantities (bank reserves or some measure of money supply) or in yields (the federal funds rate), but neither of these constitute a rule, nor can such tools do the job. A target is best conceived as an *end* (goal), while a tool is the *means* of attaining that end. A rule ensures proper tool use. If one's goal is dental health, a good tool for that goal is a toothbrush, while a good rule is "brush thrice a day." Central bankers should be as clear about what they are doing as are tooth-brushers.

The skepticism and eclecticism common to monetary central planners appears in a recent report by the Federal Reserve Board of Governors (2017). Addressing rules, the Board explains that:

> FOMC policymakers discussed prescriptions from monetary policy rules as long ago as 1995 and have consulted them routinely since 2004. The materials that FOMC policymakers see also include forecasts of how the federal funds rate and key macro indicators would evolve, under each of the rules, several years into the future. Policymakers weigh this information, along with other information bearing on the economic outlook. Different monetary policy rules often offer quite different prescriptions for the federal funds rate; moreover, there is no obvious metric for favoring one rule over another. While monetary policy rules often agree about the direction (up or down) in which policymakers should move the federal funds rate, they frequently disagree about the appropriate level of that rate. Historical prescriptions from policy rules differ from one another and differ also from the Committee's target for the federal funds rate. . . . Moreover, the rules sometimes prescribe setting short-term interest rates well below zero—a setting that is not feasible [Federal Reserve Board of Governors 2017: 39].

Observe how the Fed is committed to its federal funds (policy) rate as a tool, yet reluctant to adopt a rule to guide its use. The Fed also denies that its policy rate can be made negative, even though other central banks do so with their own rates. Conceding that various rules differ on policy advice, the Fed believes none are any better than others, since "there is no obvious metric." This may be true of course, but the tragic result (for a free society) is a powerful, public monetary ruler that rules without a rule (or set of rules)—the essence of arbitrary, capricious governance.

A genuine gold price rule can fix (or at least mitigate) this governance failure and usher in an ideal, futuristic system that embodies the integrity and efficiency of the classical gold standard.

A Genuine Gold Price Rule

For decades, major central banks have operated mainly through "open market operations" in the sovereign securities of their sponsoring states, continuously entering markets to buy, sell, trade, and hold the securities for purposes of altering short-term policy rates. As a byproduct (target) of changes in policy rates, central banks hope to influence bank lending, money creation, inflation, employment, and economic growth. They have tools (means) and targets (ends) but no rule linking them, no objective guide to ensure disciplined adherence to proper tool usage, and no credible commitment to achieve chosen ends. More problematic, being central planners with sovereign sponsors as main clients, central bankers are unlikely to care to identify any tools and targets that ignore the rule of politics. By their nature, central banks cannot be independent of politics, so they also cannot be made dependent on (or obey) any objective rule that serves only economic ends.

The case for a gold price rule begins with abundant historical evidence showing that when currencies were defined as a fixed weight of gold and freely convertible in coin, the common consequence, with rare exceptions, was full employment, price stability, moderate interest rates, and robust economic growth. This was evident during the century-long period of the classical gold standard, lasting from the end of the Napoleonic Wars (1815) to the start of World War I (1914).[3] Of course, more than monetary integrity and stability

[3]For some of the evidence, see Bordo (1981), Bordo and Schwartz (1984), Salsman (1990), and Gallarotti (1995).

contributed to the economic prosperity: free trade, minimal regulation, light taxation, and minor public borrowing also contributed. Each element reflected a materially lesser economic role for government. But the more constitutional, less-political, gold-based monetary regime of the 19th century also helped constrain governments in their power and capacity to impose undue fiscal burdens on economies.

One reason gold has served so well and universally as money is its unique property of maintaining its real purchasing power in a relatively narrow range over long periods, relative to alternatives (other commodities or fiat monies). Although gold's purchasing power has never been truly constant (as nothing is), it has been more nearly so than any other commodity or monetary medium (see Jastram and Leyland 2009). Markets converged on gold as money over the centuries in part because of this stability feature, which pertains and persists even today and should continue doing so in the future, since new gold supplies, unlike that of other commodities, are accumulated instead of consumed. New gold supplies are a minor (and necessarily diminishing) share of above ground gold stock; the gold money supply grows at the kind of low and steady rate which anti-gold monetarists can only dream of.

A gold price rule warrants still further support because it most closely resembles the constrained role played by the handful of important central banks operating under the classical gold standard. Those banks focused on preserving the fixed, legal gold content of their sponsor's currency, by directly buying and selling gold. They did not need to hold abundant gold reserves, to the extent their convertibility commitment was credible. Meanwhile, private banks issued and managed their own currencies, if these too were reliably convertible into gold at a fixed rate. The maintenance and enforcement of currencies' fixed gold content was not government "price fixing" but a legal recognition of the evolution of monetary units, in both name and kind—as definitive weights of specie. Enforcement of fixed definitions of monies was akin to enforcing weights and measures. A gold standard and gold price rule alike sanctify money as a numeraire.

Operationally, if a central bank today obeyed a gold price rule (whether by choice or legal-legislative compulsion), it would buy and sell gold in spot markets, using its own currency, to maintain and preserve the currency's fixed gold content (defined as the reciprocal of the currency-gold price at the time of adoption). For example, today's

U.S dollar, at $1,500 per ounce of gold, has an implied gold content of 1/1,500ths an ounce of gold (per single dollar). The gold content of the currency is *implied* because a gold price rule does not require a central bank to *redeem* its currency in gold, as was required under the classical gold standard. Nor does a gold price rule require central banks to maintain some minimal level of gold reserves. A gold price rule also does not preclude the private sector from trading gold or issuing gold-convertible media of exchange. For such a rule to work credibly, legal tender laws must be repealed. Government cannot mandate that the private sector use its money; its acceptability must be earned.[4]

With a gold price rule, a central bank's direct purchase and sale of gold suffices to preserve the fixed ratio of gold to currency. The rule permits currencies to reflect the underlying, stable, real value exhibited by gold itself. The demand for money is endogenous, determined by the commercial needs of markets, not the fiscal needs of states. If a currency's gold price rises (i.e., its gold content decreases), indicating an excessive supply of money relative to demand for it, the central bank sells gold to reduce (maintain) the ratio (price). If instead a currency's gold price declines (i.e., its gold content increases), reflecting insufficient supply of money relative to demand for it, the central bank buys gold to raise (maintain) the initial ratio (price). To bolster its long-term credibility, a central bank on a gold price rule also must buy and sell gold *futures* at prices that maintain the fixed ratio.[5] It also transparently reports its operations and holdings.

A genuine gold price rule has central banks operating *directly* and *solely* in gold markets (both spot and futures). They cease open market operations in sovereign securities (and other attempts to alter interest rates) and conduct open market operations in gold only. They divest their vast holdings of government securities, perhaps initially devoting some proceeds to purchases of gold, to facilitate the buying and selling that a gold price rule requires. Central banks on a gold price rule leave interest rates free to reflect natural,

[4]To further constrain central bank discretion, it will be necessary to cease discount window lending (which will encourage private sector banks to better manage their liquidity), repeal the "too-big-to-fail" policy (which will encourage private-sector banks to maximize their profits instead of their assets), and phase out the cheap, public provision of deposit insurance (which will encourage private-sector banks to boost their capital adequacy).

[5]See Miles (1984) on the value of a central bank commitment to currency stability by using gold futures.

equilibrating forces, without political manipulation; yields should be moderate and relatively stable—as they were under classical gold standard—reflecting the stability of money.

To the extent gold-based money precludes political fiat money (in part by ending its legal tender status), it curtails the conflict of interest whereby central banks deal in government securities, manipulate interest rates, and accentuate business cycles. An independent treasury system becomes possible, as existed in the United States in the decades before it adopted central banking in 1913. If the Federal Reserve is so curtailed in its powers that it is left only to buy and sell gold, the routine function can be executed as easily and credibly by the Treasury Department. Treasury currency can replace Federal Reserve currency. The private sector already holds vast sums of liquid treasury bills, so it should be comfortable holding gold-based Treasury currency.

Just as there exist real versus pseudo monetary rules (Selgin 2017) and real versus pseudo gold standards (Friedman 1961, Salerno 1983), so there exist real versus pseudo gold price rules. Since a real (genuine) gold price rule has central banks dealing *directly* and *immediately* in gold, it's fair to classify a pseudo gold price rule as one that has them acting *indirectly* and *distantly*, necessitating near-omniscient forecasting and targeting. Instead of serving as a rule, gold serves as a target; worse, the power and capriciousness of contemporary central banking remains.

Under a pseudo gold price rule, central banks still conduct open market operations in the securities of their government, and thus still manipulate interest rates, but with an eye to targeting the gold price, to keep it in a narrow range, which purportedly yields desirable economic results. The approach is chimerical yet common among proponents of gold-based rules.[6] The worthy aim of keeping the gold

[6]See Laffer and Kadlec (1981), Mundell (1981), Wanniski (1981), Reynolds (1983), and Johnson and Keleher (1996). Laffer and Kadlec argued that "the purpose of a gold standard is not to turn every dollar bill into a warehouse receipt for an equivalent amount of gold, but to provide the central bank with an operating rule that will facilitate the maintenance of a stable price level." They expected interest rate manipulation to persist and did not require an end to open market operations in government securities. Shelton (1994), in contrast, defends a monetary regime closer to the genuine gold price rule I defend. Lewis (2007, 2013, 2017) defends the classical gold standard and believes that it can (and should) be adopted in contemporary times. Greenspan (1981) once argued that a safe return to a gold standard was possible only if central banks could so improve their inflation performance that they would replicate the results of a gold standard; but if so, a gold standard would be unnecessary.

price in a narrow band, while crucial to a real gold price rule, is, under a pseudo gold price rule, infeasible and indeterminate. The presumed relationships and lags are long, uncertain, and variable. Critiques of pseudo gold price rules are moot—akin to fallacious "straw man" arguments.[7] To reject a genuine gold price rule requires much more. Its main defect may be that it must be maintained and operated by central banks, which by now have lost considerable credibility; but the real defect is central banking, not gold-based money, and the defect undermines even more the case for rules that are complex, historically untested, and easily evaded.

Oddly enough, since a genuine gold price rule does not require gold convertibility, it should be classified as a pseudo gold standard. But proponents of a gold price rule need not pretend that it is a real (classical) gold standard; strictly speaking, that standard is more compatible with free banking than with central banking.[8] Yet a gold price rule can prove valuable as a viable monetary regime lying half-way between current regimes and an ideal one (Salsman 2013a). Unlike other rules, a gold price rule is compatible with movement toward a classical gold standard. It does not *guarantee* but makes *possible* an eventual adoption of an ideal, objective monetary system. Along the way, it can make central banks behave better, by means and methods that are measurable and enforceable.

[7]The fallacy appears in critiques by Lastrapes and Selgin (1996) and Selgin (2019). The authors also cite financial-economic data from periods dominated by central bank discretion to critique how a pseudo gold price rule might work had it been followed. The methodological error is common in monetary rule analysis, as James Buchanan has explained:

> The error lies in using empirical data accumulated in a history when there existed no policy rule as evidence for or against the efficiency of such a rule, had such a rule been in existence. Do we really want to assume that individual behavior would remain invariant as between two quite distinct monetary regimes? . . . If we do assume that behavior would have been invariant, it is always possible to demonstrate that no rule could possibly have worked so well as an ideally omniscient authority [Buchanan 1983: 143].

[8]I defend a system of free banking on a classical gold standard in Salsman (1990) and Salsman (1995), as does White (1989). See also Dowd (1992) for the empirics of free banking and Selgin (1988), White (1989), and Dowd (1993) on its theory. White defends free banking on a gold coin standard without a central bank (as do I), while Selgin defends a system without gold, to include free bank note issuance convertible into an arbitrarily frozen sum of inconvertible central bank fiat money.

Conclusion

A genuine gold price rule is a worthy rival to the dominant rules of recent decades, including monetarist rules (money supply targeting and, *in extremis*, QE, or "quantitative easing") and Keynesian rules (interest-rate targeting and, *in extremis*, ZIRP, or "zero interest-rate policy"). In truth, these are targets or tools, not real rules. Together with Taylor-type rules, inflation targeting, and nominal GDP targeting (see Sumner 2017), they are infeasible and ineffective. Nor do they diminish current central bank power or capriciousness. Granted, adoption of a genuine gold price rule would require much: a rejection of the eclecticism and skepticism that permeate modern monetary analysis, forecasting, and policymaking (and preclude central bank accountability), plus a political and institutional commitment to restoring monetary objectivity and integrity. But the rule is no chimera, given the long and venerable history of gold-based monetary regimes and the prosperity they fostered. Why not a rule that central banks once obeyed for long periods and with great results? What central banker today would not desire a simpler job?

Unless prominent political economists become more critical of state intervention and monopolized money and more supportive of free-market capitalism and constitutional money, it will be difficult for reformers today to approximate the monetary integrity last seen under the classical gold standard.[9] But if such a restoration is possible, it can best be realized by an interim regime that materially improves the current (flawed) one and ushers in the next (better) one. Other proposed monetary rules have the virtue of seeking at least some constraint on politicized money and banking, but the complexity of their rules and their root presumption that centrally planned money is viable diminish the likelihood of achieving a free monetary regime. Only a genuine gold price rule can improve monetary affairs today and make possible a freer, less political monetary system tomorrow.

[9]As Buchanan (1983: 145) has argued, "The central issue is not one of 'rules versus authority'; the central issue is one of 'alternative monetary constitutional regimes versus unconstrained monopoly.' Let us first agree that genuine constitutional reform is needed before wasting our energies in arguing with each other as to merits of this or that regime."

References

Bloomfield, A. (1959) *Monetary Policy under the Gold Standard, 1880–1914*. New York: Federal Reserve Bank of New York.

Bordo, M. (1981) "The Classical Gold Standard: Some Lessons for Today." *Federal Reserve Bank of St. Louis Review* (May): 2–17.

Bordo, M., and Schwartz, A. (eds.) (1984) *A Retrospective on the Classical Gold Standard, 1821–1931*. Chicago: University of Chicago Press.

Buchanan, J. M. (1983) "Monetary Research, Monetary Rules, and Monetary Regimes." *Cato Journal* 3 (1): 143–46.

Christ, C. (1983) "Rules vs. Discretion in Monetary Policy." *Cato Journal* 3 (1): 121–41.

Domitrovic, B. (2011) "The Secret Term in the Fed's Triple Mandate: A Critical History." The Laffer Center for Supply-Side Economics.

Dorn, J. A. (ed.) (2017) *Monetary Alternatives: Rethinking Government Fiat Money*. Washington: Cato Institute.

__________ (2019) "Why the Fed Needs a Monetary Rule to Protect Its Independence." *Alt-M*: www.alt-m.org (September 4).

Dowd, K. (ed.) (1992) *The Experience of Free Banking*. New York: Routledge.

__________ (1993) *Laissez-Faire Banking*. London: Routledge.

Federal Reserve Board of Governors (2017) "Monetary Policy Rules and Their Role in Federal Reserve Policymaking." *Monetary Policy Report* (July 7): 36–39.

Friedman, M. (1961) "Real and Pseudo Gold Standards." *Journal of Law and Economics* 4: 66–79.

Gallorotti, G. (1995) *The Anatomy of an International Monetary Regime: The Classical Gold Standard, 1880–1914*. New York: Oxford University Press.

Greenspan, A. (1981) "Can the U.S. Return to a Gold Standard?" *Wall Street Journal* (September 1).

Jastram, R., and Leyland, J. (2009) *The Golden Constant: The English and American Experience, 1560–2007*. Northhampton, Mass.: Edward Elgar.

Johnson, M., and Keleher, R. (1996) *Monetary Policy: A Market Price Approach*. Westport, Conn.: Quorum Books.

Laffer, A., and Kadlec, C. (1981) "The Point of Linking the Dollar to Gold." *Wall Street Journal* (October 13): 32.

Lastrapes, W., and Selgin, G. (1996) "The Price of Gold and Monetary Policy." Manuscript. Available at https://pdfs.semanticscholar.org/c5d5/77dd46e898781bfeff704436a483b6ac72db.pdf.

Lewis, N. (2007) *Gold: The Once and Future Money*. New York: John Wiley.

__________ (2013) *Gold: The Monetary Polaris*. New Berlin, N.Y: Canyon Maple Publishing.

__________ (2017) *Gold: The Final Standard*. New Berlin, N.Y: Canyon Maple Publishing.

Miles, M. (1984) *Beyond Monetarism: Finding the Road to Stable Money*. New York: Basic Books.

Mundell, R. (1981) "Gold Would Serve Into the 21st Century." *Wall Street Journal* (September 30): 33.

Plosser, C. (2017) "Commitment, Rules, and Discretion." In J. A. Dorn (ed.), *Monetary Alternatives: Rethinking Government Fiat Money*: 105–14. Washington: Cato Institute.

Reynolds, A. (1983) "Why Gold?" *Cato Journal* 3 (1): 211–32.

Salerno, J. (1983) "Gold Standards: True and False." *Cato Journal* 3 (1): 239–67.

Salsman, R. (1990) *Breaking the Banks: Central Banking Problems and Free Banking Solutions*. Great Barrington, Mass: American Institute for Economic Research.

__________ (1995) *Gold and Liberty*. Great Barrington, Mass: American Institute for Economic Research.

__________ (2013a) "A Gold-Price Rule as a Middle-Ground Path to a Genuine Gold Standard." *Alt-M*: www.alt-m.org (May 7).

__________ (2013b) "The End of Central Banking." *The Objective Standard* 8 (1): 13–29.

__________ (2017) *The Political Economy of Public Debt: Three Centuries of Theory and Evidence*. Northampton, Mass.: Edward Elgar.

Selgin, G. (1988) *The Theory of Free Banking: Money Supply under Competitive Note Issue*. Totowa, N.J.: Rowman & Littlefield.

__________ (2017) "Real and Pseudo Monetary Rules." In J. A. Dorn (ed.), *Monetary Alternatives: Rethinking Government Fiat Money*, 115–32. Washington: Cato Institute.

__________ (2019) "On Targeting the Price of Gold." *Alt-M*: www.alt-m.org (August 29).

Selgin, G., and White, L. H. (1999) "A Fiscal Theory of Government's Role in Money." *Economic Inquiry* 37: 154–65.

Shelton, J. (1994) *Money Meltdown: Restoring Order to the Global Currency System*. New York: Free Press.

Simons, H. (1936) "Rules versus Authorities in Monetary Policy." *Journal of Political Economy* 44: 1–30.

Sumner, S. (2017) "Nominal GDP Targeting: A Simple Rule to Improve Fed Performance." In J. A. Dorn (ed.), *Monetary Alternatives: Rethinking Government Fiat Money*, 143–66. Washington: Cato Institute.

Taylor, J. B. (ed.) (1999) *Monetary Policy Rules*. Chicago: University of Chicago Press.

__________ (2017) "Legislating a Rule for Monetary Policy." In J. A. Dorn (ed.), *Monetary Alternatives: Rethinking Government Fiat Money*, 133–42. Washington: Cato Institute.

Timberlake, R. (2017) "From Constitutional to Fiat Money: The U.S. Experience." In J. A. Dorn (ed.), *Monetary Alternatives: Rethinking Government Fiat Money*, 79–92. Washington: Cato Institute.

Volcker, P. (1990) "The Role of Central Banks." In *Central Banking Issues in Emerging Market Economies*, A Symposium Sponsored by the Federal Reserve Bank of Kansas City. Kansas City, Mo.: Federal Reserve Bank of Kansas City.

Wanniski, J. (1981) "A Job Only Gold Can Do." *New York Times* (August 27): A31.

White, L. (1989) "Free Banking and the Gold Standard." In *Competition and Currency: Essays on Free Banking and Money*, 148–66. New York: New York University Press.

White, L., Vanberg, V., and Kohler, E. (eds.) (2015) *Renewing the Search for a Monetary Constitution*. Washington: Cato Institute.

Yeager, L. (ed.) (1962) *In Search of a Monetary Constitution*. Cambridge: Harvard University Press.