



THE FEDERAL RESERVE AND THE RULE OF LAW

BY LAWRENCE H. WHITE

Subcommittee on Monetary Policy and Trade
House Committee on Financial Services

September 11, 2013

Chairman Campbell, Ranking Member Clay, and members of the Subcommittee, thank you for inviting me to testify. Much of what I am going to say today draws on my previous research, which is cited below.¹

The principle of *the rule of law*—as opposed to the arbitrary rule of those in authority—would have helped us to properly resolve the financial crisis of 2007–10, and can help us to avoid future financial crises. As David Hume said more than two hundred years ago, the benefits of consistently adhering to rule of law greatly outweigh any short-term convenience from ad hoc measures.

The approach of Federal Reserve and Treasury officials during the crisis, unfortunately, was to consider every possible remedy but following the rule of law. Fed chairman Ben Bernanke was quoted by the *New York Times* as declaring in 2008, at a strategy meeting with other Fed and Treasury officials, “There are no atheists in foxholes and no ideologues in financial crises.”² The implication was that anything goes in a crisis: the Fed can ignore durable principles and its own statutory limits.

Most notoriously, the Fed at its own initiative

1. Created an unprecedented special-purpose vehicle (called “Maiden Lane LLC”) to protect the bondholders of the failed investment house Bear Stearns by taking \$30 billion of the firm’s most doubtful assets off of its books, thereby sweetening an acquisition deal for JP Morgan Chase to take over the remainder of the firm’s assets and liabilities;
2. Declined to do the same for the investment house Lehman Brothers; and
3. Created two other vehicles—Maiden Lane II and Maiden Lane III—to buy and hold bad assets from the failed insurance company AIG.

There was no precedent, and no apparent legal authority in the Federal Reserve Act, for such special-purpose funding operations. The Fed abandoned the rule of law, which requires those in authority to execute the law as written, predictably, and in accordance with established precedent.

The Fed’s established monetary policy role as “lender of last resort” directs it to inject cash into the system to keep the

1. Much of what follows draws on Lawrence H. White, “The Rule of Law or the Rule of Central Bankers?” *Cato Journal* 30 (Fall 2010), and White, “Federal Reserve Policy and the Housing Bubble,” *Cato Journal* 29 (Winter 2009).

2. Peter Baker, “A Professor and a Banker Bury Old Dogma on Markets.” *New York Times*, 20 September 2008.

broader money stock from shrinking, *not* to inject capital into failing firms by overpaying for assets or lending at subsidized rates, actions that put taxpayers at risk. The Fed's statutory authority to lend is limited and was never meant to encompass the sort of capital injections that the Fed undertook in 2008 through the special purpose vehicles. While the Dodd-Frank Act of 2010 properly places new limits on the Fed's discretion to conduct such bailout operations, it unfortunately ratifies the Fed's discretion in other respects. Dodd-Frank also enshrines the "too big to fail" doctrine, the application of which inherently requires arbitrary judgments. It thereby erodes the rule of law, increases the probability of future taxpayer-funded bailouts, and weakens market discipline between risk and reward.

THE RULE OF LAW

At the core of the rule of law concept is the constitutional principle of *nondiscretionary* governance, in contrast to *arbitrary* or *discretionary* governance by those currently in executive positions. In common parlance, either we have the rule of law or we have the *rule of authorities*. Under the rule of law, government agencies faithfully enforce statutes already on the books, and only such statutes.³ Under the rule of authorities, those in positions of executive authority can make up substantive new decrees as they go along and forgo enforcing statutes on the books.

It is of course true that laws must be executed by people in authority. We also know that the referees in a football match will be people. But they can either be referees who impartially enforce the rules of the sport as they were known at the outset of the match—that is, referees who follow the rule of law—or they can be pseudo-referees who arbitrarily enforce rules against one team but not the other, or (even worse) who penalize or favor one team with novel interventions that they have improvised mid-contest.

The rule of law concept has deep historical roots. David Hume's classic *History of England*, written more than two centuries ago, famously emphasizes the value of establishing the rule of law in place of the unconstrained discretion of government officials. Hume acknowledges that it is not always *convenient* in the short run to forgo ad hoc measures. He writes that "some inconveniences arise from the maxim of adhering strictly to law," but Hume affirms the lesson of history that in the long run we are better off from adhering to the rule of law. According to Hume, "It has been found that . . . the advantages so much overbalance" the inconveniences that we should salute our ancestors who established the principle.

Consistent adherence to the rule of law has the great advantage, as the economics Nobel laureate F. A. Hayek has noted, that "government in all its actions is bound by rules fixed and announced beforehand—rules which make it possible to foresee with fair certainty how the authority will use its coercive powers in given circumstances and to plan one's individual affairs on the basis of this knowledge."⁴

In this way, the rule of law allows a society to combine freedom, justice, and a thriving economic order.⁵ To the extent that they can predict the actions of their government's executive branch, Americans can confidently plan their lives and businesses, and they can coordinate their plans with one another through the market economy. Taxpayers need not fear being burdened (by being arbitrarily placed on the hook for bailing out failed businesses, for example) by executive branch agencies acting without authorization by their representatives in Congress.

THE FEDERAL RESERVE'S TRADITIONAL "LENDER OF LAST RESORT" ROLE

As a historian of antiquarian monetary institutions, let me take you back to what now seems like the distant past: the five decades from 1958 to 2008. In 1958, Congress finally repealed a 1934 Depression-era amendment to the Federal Reserve Act ("Section 13(b)") that had authorized the Fed to make loans to non-banking businesses under certain circumstances. The praiseworthy idea behind the repeal, as economist Marvin Goodfriend has put it, was that "credit policies should not be carried out by an independent central bank because credit allocation is inherently political and has the potential to degrade the central bank's independence."⁶ Then-Federal Reserve Chairman William McChesney Martin, when a bill

3. If a statute authorizes an agency to fix and announce specific rules toward a general end, and the agency does so according to public procedures called for in the statute, we may consider enforcement of such rules as enforcement of the statute.

4. Friedrich A. Hayek, *The Road to Serfdom: The Definitive Edition*, vol. 2 of *The Collected Works of F. A. Hayek*, ed. Bruce Caldwell (Chicago: University of Chicago Press, 2007), 112.

5. See Randy Barnett, *The Structure of Liberty: Justice and the Rule of Law* (Oxford: Clarendon Press, 1998).

6. Marvin Goodfriend, "The Elusive Promise of Independent Central Banking" (IMES Discussion Paper Series 2012-E-9, Bank of Japan Monetary and Economic Studies, Tokyo, 2012), 40.

before Congress in 1957 proposed that the Fed contribute financing to regional development corporations, thoughtfully commented, “It is good government as well as good central banking for the Federal Reserve to devote itself primarily to the objectives set for it by Congress, namely, guiding monetary and credit policy so as to exert its influence toward maintaining the value of the dollar and fostering orderly economic progress.” Therefore “it is undesirable for the Federal Reserve to provide the capital and participate in management functions” of lending institutions.⁷

The Federal Reserve System thereafter largely returned to playing the traditional central banking roles of conducting monetary policy and (on very rare occasions, like the day after 9/11) acting as a “lender of last resort.” Monetary policy means controlling the quantity of money in pursuit of economic objectives. Acting as a lender of last resort is, in modern economic understanding, an aspect of monetary policy. It means injecting cash into the commercial banking system to prevent the broader quantity of money from shrinking—and thereby to protect the economy’s income and payment flows from disruption—when there is an unusual hoarding of cash by banks or the public.⁸

The “lender” part of “lender of last resort” has long been an anachronism. Although the Federal Reserve *can* inject cash by making a loan to a particular bank, it need not do so. As it discovered many decades ago, the Fed can better provide cash to the market as a whole *without* lending, namely, by purchasing securities in the open market. By purchasing securities from bond dealers at the going market price, the Fed supports the broader money stock while avoiding the danger of favoritism associated with making loans to specific banks on non-market terms.⁹ By purchasing only US Treasury securities, as the Fed typically did before 2008, it avoids the potential for favoritism in purchasing some private-sector securities over others. At the end of 2007, the amount of loans that the Fed had outstanding to commercial banks through its “discount window” was trivial: less than \$0.5 billion on a balance sheet of \$800 billion.

Loans to *nonbank* institutions were, appropriately, zero at the end of 2007. There had been occasions after 1958 when the Fed was asked to lend to nonbanks. Fortunately, because such an action is properly understood as *fiscal* policy outside the Fed’s remit, the Fed consistently directed the requests to Congress. In 1970, as a chronology by David Fetting of the Federal Reserve Bank of Minneapolis relates, “The Nixon administration asked for [Fed] discount window assistance in response to the financial problems of Penn Central Railroad. This request stalled in Congress.”¹⁰ In 1975 the Fed properly declined to provide “emergency credit” to New York City, and Congress took up the matter. In 1991, when the FDIC sought a loan from the Fed to replenish its depleted insurance fund, the Fed directed the head of the FDIC to go to Congress, which properly made the Treasury, and not the Fed, the provider of a credit line. In 2001, with the airline industry reeling following the 9/11 attacks, emergency loans from the Federal Reserve were suggested, but the Fed refrained.

Less fortunately, the Fed was not consistent in following prudent guidelines for its loans to banking institutions. As noted, the modern understanding of the Fed’s lender of last resort role is that of preventing shrinkage in the broad money supply. This is sometimes described less clearly as providing the market with adequate “liquidity.” Lending liquidity does not mean subsidizing, papering over inadequate net worth, or delaying the resolution of an insolvent institution. The lender of last resort role has nothing to do with providing insolvent firms with capital injections or loans at below-market rates. The Fed in the 1958–2008 period unfortunately did not consistently avoid lending to insolvent banks. Two especially egregious cases stand out.

- In 1974 the Federal Reserve lent \$1.75 billion to the Franklin National Bank. Later that year, the bank was recognized to be insolvent and the FDIC placed it in liquidation.

7. “Statement of William McChesney Martin, Jr., Chairman, Board of Governors of the Federal Reserve System, before the Subcommittee on Small Business of the Senate Banking and Currency Committee, June 20, 1957,” *Federal Reserve Bulletin* 43 (July 1957): 767–9.

8. By “cash,” I mean what economists call the monetary base of M0, the Federal Reserve’s monetary liabilities, equal to the sum of currency held by the public plus bank reserves. By “the broader quantity of money,” I mean an aggregate like M1 or M2 that includes currency plus bank deposits held by the public.

9. Marvin Goodfriend and Robert G. King, “Financial Deregulation, Monetary Policy, and Central Banking,” in William S. Haraf and Rose Kushmeider, eds., *Restructuring Banking and Financial Services in America* (Washington: American Enterprise Institute, 1988).

10. David Fetting, “The History of a Powerful Paragraph,” *Banking and Policy Issues Magazine* (June 2008): 33–34, http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3485.

- In 1984 the Fed joined with the FDIC to nationalize (rather than liquidate) the failed Continental Illinois Bank. The bank was later re-privatized at a loss to taxpayers of about \$1.1 billion.

More broadly, the well-known monetary economist Anna Schwartz found that the Federal Reserve lent frequently to small-to-medium-sized failing banks. Between January 1985 and May 1991, 530 banks failed within three years of first borrowing funds from the Fed. Of those, 437 had the worst CAMEL (soundness) rating given by the Fed's own examiners, and 51 had the second worst rating; 60 percent of them failed while still owing money to the Fed.¹¹ The Fed discount window managers knew these ratings, so it is clear that the Fed chose to ignore the traditional central banking rule of lending only to illiquid and not to insolvent banks.

The FDIC Improvement Act of 1991 (FDICIA) aimed to avoid a repeat of the FDIC's insurance fund becoming depleted. But it also, in Fetting's words, "amended Section 13 [of the Federal Reserve Act] to allow the Fed to lend, in essence, directly to securities firms during financial emergencies."¹² As amended in 1991, and before it was re-amended by Dodd-Frank in 2010, the language of section 13(3) authorized the Fed's Board of Governors, "in unusual and exigent circumstances," which prevail "during such periods as the said board may determine," to "discount . . . notes, drafts, and bills of exchange" for "any individual, partnership, or corporation" it chooses (not just for commercial banks, as before 1991).

Critics of the amendment worried that such authority, expanded beyond traditional lender-of-last-resort powers, would foster favoritism and moral hazard. Schwartz warned that "the provision in the FDIC Improvement Act of 1991 portends expanded misuse of the discount window," that is, use of the Fed's lending authority for bailouts rather than for monetary policy objectives. Walker F. Todd, an attorney then with the Federal Reserve Bank of Cleveland, wrote, "Ironically, while the principal thrust of FDICIA was to limit or reduce the size and scope of the federal financial safety net, this provision effectively *expanded* the safety net," and with it moral hazard.¹³ These criticisms were prescient.

THE FEDERAL RESERVE'S LIMITED STATUTORY AUTHORITY UNDER SECTION 13(3) OF THE FEDERAL RESERVE ACT

In 2008 the Fed gave itself the new role of selectively channeling credit in directions it favored. It began to lend funds to, and purchase assets from, an array of financial institutions it deemed worthy, no longer limited to commercial banks or participants in the payment system, including investment banks, primary dealers, and broker-dealers. These funds were not allocated to it by Congress, but created by the Fed itself out of thin air and in amounts it decided. The total of new Fed credits outstanding (the Federal Reserve's self-financed credit programs) stood by the end of 2008 at \$1.7 trillion, more than double the size of the Treasury's \$700 billion bailout authority.

Beginning in the spring of 2008, the Fed repeatedly claimed authority in its press releases for these unorthodox lending programs under the "unusual and exigent circumstances" provisions of section 13(3) of the Federal Reserve Act.¹⁴ But Section 13(3) never conveyed unlimited authority. The Fed's authority to discount "notes, drafts, and bills of exchange" for a financial or other firm is not the authority to purchase just any assets, and it is not the authority to overpay for assets in order to recapitalize a firm. Thus one can doubt that adequate statutory author-

11. Anna J. Schwartz, "The Misuse of the Fed's Discount Window." *Federal Reserve Bank of St. Louis Review* 74 (Sept./Oct. 1992): 58–59. As an economist at the Federal Reserve Bank of San Francisco spells it out, "The acronym 'CAMEL' refers to the five components of a bank's condition that are assessed: Capital adequacy, Asset quality, Management, Earnings, and Liquidity. A sixth component, a bank's Sensitivity to market risk, was added in 1997; hence the acronym was changed to CAMELS." Jose A. Lopez, "Using CAMELS Ratings to Monitor Bank Conditions," FRBSF Economic Letter, June 11, 1999, <http://www.frbsf.org/economic-research/publications/economic-letter/1999/june/using-camels-ratings-to-monitor-bank-conditions/>.

12. David Fetting, "Lender of More Than Last Resort," *The Region* (December 2002), http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3392

13. Schwartz, "Discount Window"; Walker F. Todd, "FDICIA's Emergency Liquidity Provisions," *Federal Reserve Bank of Cleveland Economic Review* (Fall 1993), 16–23..

14. For citation of 13(3) as authority for the creation of the Maiden Lane LLC's, see the footnotes to the Fed's statements of "Factors Affecting Reserve Balances," *Federal Reserve Statistical Release*, Sept. 5, 2013, www.federalreserve.gov/releases/h41/current.

ity existed for the Fed's actions in the Bear Stearns and AIG cases. Walker Todd commented frankly in 2008 that "much less of [the Fed's recent] lending is based on clear statutory authority than one might prefer if one cared about the rule of law." It is difficult to disagree with economist Edward Kane in his judgment that the Fed in 2008 "exercised discretion it was never given."¹⁵

THE BEAR STEARNS OPERATION IN MORE DETAIL

Whether it recognized that it would be venturing onto thin ice for the Federal Reserve Bank of New York (FRBNY) itself to buy bad assets from Bear Stearns for the benefit of JPMorgan Chase, or for some other reason, the FRBNY created a wholly owned *special-purpose subsidiary* to do so.

The Federal Reserve describes what it did for JPMorgan Chase (JPMC) on its website:

JPMC was concerned about its ability to absorb a portion of Bear Stearn's [*sic*] mortgage trading portfolio, given the uncertainty about the scale of potential losses facing the financial system at the time and strained credit markets.

To facilitate a prompt acquisition of Bear Stearns by JPMC, the FRBNY created a limited liability company, Maiden Lane LLC, to acquire that set of assets of Bear Stearns. The FRBNY extended credit to the LLC, which would then manage those assets through time to maximize the repayment of credit extended to the LLC and to minimize disruption to financial markets. Maiden Lane LLC purchased approximately \$30 billion in assets from Bear Stearns with a loan of approximately \$29 billion from the FRBNY.¹⁶

The Dodd-Frank Act of 2010 placed some constraints on the Fed's discretion to make such deals for single institutions in the future. As an FRBNY web page explains, special Fed lending must now meet some additional criteria:

The Dodd-Frank Act changes the Federal Reserve's authority for lending under unusual and exigent circumstances. Reserve Banks can no longer extend credit to an individual, partnership, or corporation other than through a "program with broad-based eligibility." Such emergency facilities can only be created with prior approval of the Treasury Secretary and must be for the purposes of providing liquidity to the financial system and not to aid a failing financial company.¹⁷

I can applaud this change, but I am compelled to point out that this is not enough to reinstate the rule of law. Elsewhere Dodd-Frank ratifies the Fed's discretion to allocate credit through lending programs with "broad-based eligibility" and fails to constrain the Fed to limit its focus to monetary policy (including modern lender-of-last-resort responsibility) alone. It allows the Fed to arbitrarily direct this much credit to investment banks, that much to broker-dealers, and that much to money-market mutual funds. Such allocation decisions are not monetary policy but rather fiscal policy. They should be considered as falling within the purview of Congress, not the Fed, or better yet, left to the competitive financial marketplace.

If the statute law allows the Fed a wide range of discretionary actions with so little constraint that its future actions cannot be predicted, then we have not the rule of law but the rule of central bankers. Hayek explained the difference in the following terms:

The fact that someone has full legal authority to act in the way he does gives no answer to the question whether the law gives him power to act arbitrarily or whether the law prescribes unequivocally how he

15. Walker Todd, "The Tyranny of the Fed," American Institute for Economic Research Commentaries, April 3, 2008. Bill Bergman, "How the Federal Reserve Contributes to Crises: Interview with Ed Kane, Martin Mayer, and Walker Todd," *Global Research*, Sept. 7, 2009, www.globalresearch.ca/index.php?context=va&aid=15094.

16. Board of Governors of the Federal Reserve System, "Bear Stearns, JPMorgan Chase, and Maiden Lane LLC," Regulatory Reform, last updated Aug. 2, 2013, http://www.federalreserve.gov/newsevents/reform_bearstearns.htm

17. Federal Reserve Bank of New York, "The Discount Window," *Fedpoint*, March 2011, <http://www.newyorkfed.org/aboutthefed/fedpoint/fed18.html>

has to act. . . . If the law says that such a board or authority may do what it pleases, anything that board or authority does is legal—but its actions are certainly not subject to the Rule of Law. By giving the government unlimited powers, the most arbitrary rule can be made legal.¹⁸

THE RULE OF CENTRAL BANKERS

The rule of law clearly does not yet prevail in our current monetary and financial system. We do not have, again to use Hayek's words, "government in all its actions . . . bound by rules fixed and announced beforehand."¹⁹ Not when participants in financial markets hang on every word of the central banker's press conference statements, trying to guess the central banker's future policy actions.

Defenders of the rule of law, who generally decry the arbitrary rule of authorities, should be concerned to prevent the arbitrary credit-allocation powers of the Federal Reserve Board, however well-meaning members of the Board undoubtedly are.

Discretion in monetary policy and financial regulatory policy does not give us better results. It is today widely recognized that inflation is inadvertently fostered by the discretion of central banks, where "discretion" means the absence of precommitment to any fixed policy rule.²⁰ It should be equally widely recognized that discretionary central bank policy can create housing and other asset bubbles, as the record since 2001 has shown. When Fed Chairman Alan Greenspan held interest rates so low that the real fed funds rate (the nominal rate minus the contemporary inflation rate) was negative for two and a half years, he was exercising discretion, not faithfully executing any rule on the books. Chairman Bernanke exercises the same discretion today, and his successor will as well—unless Congress acts.

FOLLOWING THE RULE OF LAW IN A FINANCIAL CRISIS

What is the alternative? What does the rule of law tell monetary and regulatory authorities to do when large financial firms are insolvent? The first thing it says is: Do not practice discretionary forbearance, turning a blind eye in the vain hope that a failing firm's red ink will happily turn to black, that a zombie institution will come back to life, that toxic assets will detoxify themselves. Do not arbitrarily rescue or bail out an insolvent firm at taxpayer expense. Instead, resolve the insolvency. If nobody wants to buy the firm as a going concern without subsidy, follow bankruptcy law. If a special bankruptcy law applies to financial institutions, follow that. In the United States, the FDIC Improvement Act of 1991 mandates that the FDIC (Federal Deposit Insurance Corporation) resolve banks on the edge of insolvency swiftly and at least cost to taxpayers. The authorities have been ignoring this statutory mandate. (Instead, the Treasury "injected capital" into failing banks when it forcibly purchased preferred shares.)

Enacting a "prepackaged bankruptcy" law to swiftly resolve future failures of nonbank financial institutions would be a good idea, but in its absence, Congress should insist that the Fed follows the laws that are on the books.

The rule of law in bankruptcy means not only making shareholders accept that they have been wiped out but also consistently making creditors and counterparty institutions take the losses that are theirs. Creditors divide up the remaining assets without discretionary authorities sheltering them from losses with taxpayer funds. Under the rule of law, Bear Stearns bondholders would not have been bailed out. Consequently, the decision not to bail out Lehman Brothers would not have been a shock to the financial market because it would have been fully expected.

The alternative to leaving the losses with Bear Stearns' and Lehman's stakeholders was arbitrarily shifting the losses onto taxpayers, either through loss-covering handouts to those who deliberately took great risks of loss to enjoy the upside of great gains, or through nationalization. Viewed in a long-run perspective rather than in the heat of the moment, both alternatives are worse than resolving major financial institutions that have reached insolvency. Both are inconsistent with the rule of law because they cannot possibly be applied consistently. Not every

18. Hayek, *Road to Serfdom*, 119.

19. *Ibid.*, 112.

20. Finn E. Kydland and Edward C. Prescott, "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy* 85 (June 1977).

failed business in a country can be bailed out and kept on life support indefinitely—there is not enough money in the Treasury. Not every firm can be nationalized—the economy will cease to function.

Consistently enforcing the rules that require insolvent firms to exit the market promptly would remove the kind of uncertainty that followed the Lehman collapse and provide greater clarity to financial markets. It was inconsistency on this front—from abrogation of the rule of law in the Bear Stearns case—that created the situation where the authorities faced the choice between an ugly Lehman failure and the even uglier options of nationalization or open-ended bailouts.

The prospect of bailouts and other favors, in violation of the rule of law, creates moral hazard. We have learned the hard way that letting only shareholders bear losses while protecting creditor and counterparties at taxpayer expense, as was done in the case of Bear Stearns, is not enough to control moral hazard. After Bear Stearns was rescued, Lehman Brothers increased its leverage and its exposure to risky mortgage assets. If creditors and counterparties think that they can count on government protection, they will be willing to lend copiously and cheaply, enabling a borrowing firm like Lehman to hold a highly leveraged portfolio of risky assets. From the viewpoint of the shareholders in an intermediary, the higher return on capital from “leveraging up”—relying heavily on borrowed funds—makes it a profitable strategy when lenders supply funds with very low risk premiums. From the viewpoint of the taxpayers now on the hook, the firm takes on an overly leveraged portfolio of overly risky assets. The most stunning examples of this over-leveraging phenomenon were Fannie Mae and Freddie Mac, but investment houses like Lehman and Bear Stearns exhibited it as well.

If everyone knows that the rule of law will be followed, because the Fed is strictly constrained to do so, such that nobody will get bailed out, the incentive for imprudence disappears along with the hook into taxpayers. This does not mean that no financial firm will ever act imprudently but rather that there won’t be system-wide bad incentives producing an epidemic of imprudence. If it is known that nobody is “too big to fail,” or too well connected to fail, then lenders will not let financial firms leverage up cheaply in the belief that they will be protected. Dodd-Frank in its current state unfortunately codifies the notion that some firms are “systemically important financial institutions,” that is, too big to fail.

It cannot be denied that without bailouts and with consistent resolution of insolvent firms, in Hume’s words, “some inconveniences arise.” But it should be recognized that the advantages “much overbalance” the inconveniences for the good reason that pulling the plug on failed firms is consistent with the logic of the market economy. Those who stand to gain when their financial strategies succeed must also stand to lose when they fail. Nationalization and bailouts are failed policies because they are inconsistent with the logic of a market economy.

Thank you again for inviting me here today. I would be happy to answer any questions.

ABOUT THE AUTHOR

Lawrence H. White is a senior scholar at the Mercatus Center and a professor of economics at George Mason University, where his research focuses on the theory and history of monetary and banking systems. He is the author of *The Theory of Monetary Institutions* (Blackwell, 1999) and *Competition and Currency* (NYU Press, 1989) and the editor of *The Crisis in American Banking* (NYU Press, 1993). His work has appeared in the *American Economic Review*, the *Journal of Economic Literature*, the *Journal of Money, Credit, and Banking*. Dr. White earned his PhD from the University of California, Los Angeles, and his AB from Harvard University. He has been a visiting scholar at the Federal Reserve Bank of Atlanta and a visiting lecturer at the Swiss National Bank.

ABOUT THE MERCATUS CENTER

The Mercatus Center at George Mason University is the world’s premier university source for market-oriented ideas—bridging the gap between academic ideas and real-world problems. A university-based research center, Mercatus advances knowledge about how markets work to improve people’s lives by training graduate students, conducting research, and applying economics to offer solutions to society’s most pressing problems.

Our mission is to generate knowledge and understanding of the institutions that affect the freedom to prosper and to find sustainable solutions that overcome the barriers preventing individuals from living free, prosperous, and peaceful lives. Founded in 1980, the Mercatus Center is located on George Mason University’s Arlington campus.

www.mercatus.org