

II. *Should Increasing Bank Capital or Reserve Requirements be Used Instead of Interest Rates to Lower Inflation?*

A. Introduction

The Bureau of Labor Statistics reported a peak inflation rate of 9.1 percent in June 2022.¹ The Federal Reserve (“Fed”) responded with eighteen consecutive interest rate increases from early 2022 to August 2023.² As consumers and businesses continue to strain under the weight of steep prices, inflation has emerged as a contested topic in national conversations regarding politics and economics. In particular, many voices have begun to question whether the Fed’s longstanding practice of manipulating interest rates is the most effective way to counter inflation. Alternative mechanisms—specifically reserve and bank capital requirements—may be superior.

B. Interest Rates

The Federal Reserve System was founded in 1913 to stabilize the banking system in response to the financial panics of the 19th century.³ Over the course of the following century, the Fed increasingly relied on the interest rate theory to craft their monetary policy, primarily by targeting and manipulating the federal funds rate to curb inflation.⁴

¹ U.S. BUREAU OF LABOR STATISTICS, <https://www.bls.gov> (last visited Jan. 29, 2024).

² Statista Research Department, *Monthly inflation rate and Federal Reserve interest rate in the U.S. 2018-2023*, STATISTA (Nov. 6, 2023), <https://www.statista.com/statistics/1312060/us-inflation-rate-federal-reserve-interest-rate-monthly/#statisticContainer> (last visited Jan. 29, 2024). (“In August 2023, the Federal Reserve interest rate reached its highest value in the observed period, standing at 5.33 percent. The Federal Reserve had commenced a series of frequent rate increases at the beginning of 2022, with the increase in August marking the 18th consecutive rise.”).

³ *Making Sense of the Federal Reserve: The History and Responsibilities of the Federal Reserve*, FED. RESRV. BANK OF ST. LOUIS, <https://www.stlouisfed.org/in-plain-english/history-and-purpose-of-the-fed#:~:text=A%20particularly%20severe%20panic%20in,to%20address%20these%20banking%20panics>. (last visited Mar. 19, 2024).

⁴ Iwan Morgan, *Monetary Metamorphosis: The Volcker Fed and Inflation*, 24 J. of Pol’y Hist. 545, 549 (2012). (“In the inflationary 1970s [the Fed] it began manipulating the federal funds rate (the interest regular banks charge each other

To summarize the interest rate theory, an increase in the federal funds rate cools down the economy by making borrowing more expensive, while a decrease in the rate makes borrowing cheaper and spurs economic growth with new credit.⁵

Some scholars argue that there are good theoretical and empirical reasons to doubt the veracity of the interest rate theory. In a 2022 article published in the *International Journal of Finance & Economics*, researchers evaluated the theory using macroeconomic data from nineteen industrialized and emerging economies.⁶ They found that interest rates were not negatively, but positively, correlated with economic growth in virtually all of the countries they examined.⁷ Furthermore, the data suggests that the causal relationship runs from growth to interest rates, and not the other way around.⁸ Other scholars argue that interest rates are appropriate for dealing with only certain kinds of inflation.⁹ On balance, the contrast between these theoretical arguments and the accompanying empirical data behind each argument suggest that the Fed should look beyond interest rates. Instead, reserve requirements and bank capital requirements may serve as viable alternatives looking forward.

for overnight loans and the main guidepost for general rates) to exercise some control over money growth.”).

⁵ Tightening Monetary Policy and Patterns on Consumption, Juan M. Sánchez & Olivia Wilkinson, FED. RSRV. BANK OF ST. LOUIS (Feb. 09, 2023), <https://www.stlouisfed.org/publications/regional-economist/2023/feb/tightening-monetary-policy-patterns-consumption>. (last visited Apr. 4, 2024) (“When the Fed increases interest rates, it is said to be “tightening” monetary policy. A higher interest rate may help control high inflation because, the theory suggests, access to credit becomes more expensive (i.e., financial conditions tighten), which reduces consumption and investment. In turn, firms adjust prices and inflation falls.”).

⁶ Kang-Soek Lee & Richard A. Werner, *Are lower interest rates really associated with higher growth? New empirical evidence on the interest rate thesis from 19 countries*, INT’L J. OF FIN. & ECON. (June 3, 2022), <https://onlinelibrary.wiley.com/doi/10.1002/ijfe.2630>.

⁷ *Id.* (“[T]he correlation between economic growth and interest rates is not negative but positive in virtually all countries examined over most time periods.”).

⁸ *Id.* (“[W]hen significant, the majority of evidence suggests that the causal link does not run from interest rates to economic growth, but more likely from economic growth to interest rates . . .”).

⁹ *See generally* Joseph E. Stiglitz & Ira Regmi, *The Causes of and Responses to Today’s Inflation*, ROOSEVELT INSTITUTE (Dec. 6, 2022), <https://rooseveltinstitute.org/publications/the-causes-of-and-responses-to-todays-inflation/>.

C. Reserve and Capital Requirements

Reserve requirements operate by increasing or decreasing the amount of cash that banks can lend to consumers and businesses.¹⁰ Bank capital requirements mandate how much capital banks need to have on hand, specifically as a percentage of its risk-weighted assets.¹¹ The goal behind these requirements is to create a shock absorber to protect the assets of depositors and creditors during a financial crisis.¹² Reserve and bank capital requirements are usually considered “indirect” mechanisms of curbing inflation.

1. *Reserve and Capital Requirements, Historically*

The first reserve requirements were implemented by state governments in the 1800s “to ensure that state-chartered banks had sufficient liquidity . . . to redeem circulating bank notes and to meet deposit withdrawals.”¹³ The National Bank Act of 1863 set reserve requirements at a staggering 25 percent for nationally chartered banks, chiefly to ensure that national bank notes would prevail as the dominant medium of exchange.¹⁴ However, “[w]ith the view that the presence of

¹⁰ See Generally Evan Tarver et al., *What happens if the Federal Reserve lowers the reserve ratio?*, INVESTOPEDIA (Aug. 10, 2021), <https://www.investopedia.com/ask/answers/071415/what-happens-if-federal-reserve-lowers-reserve-ratio.asp#:~:text=If%20the%20Federal%20Reserve%20decides,and%20the%20rate%20of%20inflation>.

¹¹ James Chen, *Capital Requirements: Definition and Examples*, INVESTOPEDIA (Oct. 31, 2023), <https://www.investopedia.com/terms/c/capitalrequirement.asp>.

¹² *Id.* (“These regulations are constantly evolving in a way to allow banks to operate profitably while keeping customers safe.”).

¹³ Elliot et al., *The History of Cyclical Macprudential Policy in the United States*, Fin. and Econ. Discussion Series, The Fed. Rsrv. Board, (May 15, 2013), <https://www.federalreserve.gov/pubs/feds/2013/201329/index.html> (“The first reserve requirements were introduced by some state governments during the 1800s to ensure that state-chartered banks had sufficient liquidity (typically gold or other specie) to redeem circulating bank notes and to meet deposit withdrawals.”).

¹⁴ James Chen et al., *Reserve Requirements: Definition, History, and Example*, INVESTOPEDIA (Mar. 10, 2023) <https://www.investopedia.com/terms/r/requiredreserves.asp#:~:text=Subsequently%2C%20the%20National%20Bank%20Act>,

an official lender of last resort lessened the need for individual bank reserve requirements, Congress eased those requirements in the Federal Reserve Act in 1913.”¹⁵ Then, with the Banking Act of 1935, Congress delegated the authority to set reserve requirements to the Federal Reserve.¹⁶ The clear purpose of the Banking Act was to provide the Board with another means of addressing credit conditions.¹⁷ After raising reserve requirements for the first time in 1936, the central bank clarified that the Banking Act “places responsibility on the Board . . . not only to restrict and minimize an injurious credit expansion or contraction after it has developed, but to anticipate and prevent such an expansion or contraction.” After holding reserve requirements steady during World War II, the Board tightened rates three times in 1948 and adjusted it nine more times between 1949 and 1951.¹⁸ In the 1960s and 1970s, as banks developed new funding instruments to evade the requirements, the Fed broadened the scope of reserve requirements to cover a greater range of liabilities and funding sources.¹⁹ For example, it introduced marginal requirements on certain overseas transactions, and applied existing requirements to new instruments like repurchase agreements.²⁰ In 1980, as part of its anti-inflation program, the Fed imposed unprecedented reserve requirements in the consumer sector, covering “credit cards, other forms of unsecured revolving credit, and personal loans, but not mortgages, home improvement loans, and

as a medium of exchange. (last visited Jan. 29, 2024) (“Subsequently, the National Bank Act of 1863 imposed 25% reserve requirements for banks under its charge. Those requirements and a tax on state banknotes in 1865 ensured that national bank notes replaced other currencies as a medium of exchange.”).

¹⁵ Elliot, *supra* note 13.

¹⁶ *See id.*

¹⁷ *See id.*

¹⁸ *Id.* (“The Federal Reserve eased reserve requirements three times in 1942, held them steady through the war, and tightened three times in 1948 back to the statutory caps; between 1949 and 1951, it adjusted the requirements nine times, easing in 1949 and tightening in 1951.”).

¹⁹ *Id.* (“Reserve requirements were subject to regulatory arbitrage throughout the 1960s and 1970s In response, the Federal Reserve began to impose reserve requirements on these instruments as well.”).

²⁰ *Id.* (“Also in 1969, to address the use by some banks of their overseas branches to skirt reserve requirements by borrowing Eurodollars, the Board set a 10 percent marginal reserve requirement on new bank borrowings from overseas branches and on sales of assets by member banks to their overseas branches.”).

automobile loans.”²¹ Another feature was the first ever reserve requirement on money market funds.²² However, a lack of clarity about the program led to a widespread decline in consumer credit activity, and the Board removed the restrictions by August of the same year.²³ Two years later, Vice Chairman of the Board Preston Martin said to Congress:

Our experience with the administration of controls for a brief period in 1980 amply demonstrated the difficulties encountered in the application of credit controls The ability of credit controls applied in this country to achieve their intended effects over any extended period is limited, and the costs to borrowers, lenders, and society as a whole from attempts to use controls to combat inflation or unemployment could become quite sizable.²⁴

This statement portrays the skepticism felt by many about the merits of centralized regulatory policies, but Martin also highlights some specific challenges that come with implementing such controls:

[C]redit activity tends to shift to unregulated lenders; the administration of controls demands a substantial bureaucracy, rulemaking authority, and enforcement mechanisms; and controls create “distortions in resource allocation and inefficiencies that inevitably result when

²¹ *Id.* (“The measure aimed to address inflation specifically in the consumer sector: like the coterminous Special Credit Restraint Program, the special reserve requirement covered credit cards, other forms of unsecured revolving credit, and personal loans, but not mortgages, home improvement loans, and automobile loans.”).

²² *Id.* (“Second, the central bank imposed the only reserve requirement it has ever applied to money market funds.”).

²³ *Id.* (“It was surprised at the size and speed of the response among borrowers and lenders. Uncertainty about the program led to a broad-based decline in credit activity, in consumer credit as well as in autos and mortgages.”).

²⁴ *A Bill to Reduce Interest Rates, Control Inflation, Ensure the Availability of Credit for Productive Purposes, and Promote Economic Recovery by Extending the Credit Control Act: Hearing on H.R. 6124 Before the Consumer Aff. & Coinage Subcomm. of the H. Comm. on Banking*, 97th Cong. (1982) (statement of Preston Martin, Vice Chairman, Board of Governors of the Federal Reserve System).

regulatory mandate is substituted for market decisions.”²⁵

The Fed has also targeted reserve balance practices without manipulating the imposed percentage. For example, the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank”) affected reserve practices, from the time of its implementation in 2010 until it was significantly rolled back in 2018.²⁶ Similarly, the Federal Reserve System Open Money Account (“SOMA”) has played a central role in the Fed’s attempt to influence reserve balances, particularly with regard to the buying and selling of securities from regulated banks on the open market.²⁷

Before the 1980s, capital requirements for nationally chartered banks were set in terms of dollar amounts, and capital adequacy was evaluated “on a case-by-case basis and subject to subjective judgment.”²⁸ Minimum capital ratios were introduced in the 1980s by the Basel Accord, “which set the first international capital standard for banks.”²⁹ Under Basel I and II, as adopted in the United States, the assets of financial institutions are categorized into five tiers of risk.³⁰ “Each tier must be of a certain minimum percentage of the total regulatory capital and is used as a numerator in the calculation of regulatory capital

²⁵ Elliot, *supra* note 13.

²⁶ Nola Nallengara, *First Major Dodd-Frank Reform Bill Signed Into Law*, (May 25, 2018), SHEARMAN & STERLING, <https://www.shearman.com/en/perspectives/2018/05/first-major-dodd-frank-reform-bill>.

²⁷ *System Open Market Account Holdings of Domestic Securities*, FED. RESRV. BANK OF N.Y., <https://www.newyorkfed.org/markets/soma-holdings> (last visited Jan. 29, 2024).

²⁸ Elliot, *supra* note 13 (“Prior to the 1980s, nationally chartered commercial banks had capital requirements set in dollar terms but not as a ratio to total assets; capital adequacy was evaluated by examiners on a case-by-case basis and subject to subjective judgment.”).

²⁹ *Id.* (“Bank regulators introduced minimum capital ratios in the 1980s, culminating in the first Basel Accord, which set the first international capital standard for banks.”).

³⁰ James Chen, *Basel Accords: Purpose, Pillars, History, and Member Countries*, INVESTOPEDIA (Apr. 27, 2022) https://www.investopedia.com/terms/b/basel_accord.asp (“The capital adequacy risk (the risk that an unexpected loss would hurt a financial institution), categorizes the assets of financial institutions into five risk categories—0%, 10%, 20%, 50%, and 100%.”).

ratios.”³¹ Basel III then served to update and strengthen the Accords following the financial crisis of 2008, for example by adding minimum requirements for common equity and a minimum liquidity ratio.³² It also imposes safeguards for “financial institutions that are considered ‘too big to fail.’”³³ Under the current regulatory framework, “capital requirements are in part determined by the supervisory stress test results.”³⁴ The Fed conducts these stress tests on an annual basis by applying various measures to ensure that large banks are adequately liquid to absorb losses during a recession or economic downturn.³⁵

D. Discussion

Reserve requirements are thought to decrease inflation by increasing the amount of cash that banks are required to keep on hand; this prevents bankers from engaging in excessive lending that would increase inflation.³⁶ In addition to reducing loan volume, researchers have speculated that increased reserve requirements will decrease the percentage of risky investments in banking portfolios.³⁷ There is, however, ample research pointing in the opposite direction.³⁸ In a piece published in 2021, Glocker provides an explanation for the latter:

³¹ *Id.* (“Each tier must be of a certain minimum percentage of the total regulatory capital and is used as a numerator in the calculation of regulatory capital ratios.”).

³² *Id.* (“For example, Basel III requires banks to have a minimum amount of common equity and a minimum liquidity ratio.”).

³³ *Id.* (“Basel III also includes additional requirements for what the Accord calls ‘systemically important banks,’ or those financial institutions that are considered ‘too big to fail.’ In doing so, it got rid of tier 3 capital considerations.”).

³⁴ *Large Bank Capital Requirements*, BD. OF GOVERNORS OF THE FED. RESRV. SYS., (2023), <https://www.federalreserve.gov/publications/files/large-bank-capital-requirements-20230727.pdf> (“Under the Federal Reserve Board’s capital framework for bank holding companies, covered savings and loan holding companies, and U.S. intermediate holding companies with \$100 billion or more in total consolidated assets, capital requirements are in part determined by the supervisory stress test results.”).

³⁵ *Id.*

³⁶ Christian Glocker, *Reserve Requirements and Financial Stability*, 71 J. INT’L FIN. MKTS., INSTS. & MONEY, (2021).

³⁷ *Id.*

³⁸ *Id.*

Higher reserve requirements raise costs as only a part of the stock of deposits can be used for investment purposes. Banks try to counterbalance these higher costs by financing assets with a higher success return. These assets, however, are characterised by a higher probability of default, which in turn increases the probability of bank failure. Hence, there is a composition effect which exacerbates the risk exposure of the asset portfolio.³⁹

However, Glocker goes on to say that capital requirements could be less likely to promote risk-taking compared to reserve requirements:

While both requirements affect loan supply and the lending rate in the same way, reserve requirements promote risk-taking, whereas capital requirements (mostly) mitigate risk-taking. The main rationale underlying this concerns the implications for banks' risk taking decisions and the corresponding change in the exposure of their own funding. Due to limited liability and the access to secured deposits, banks have an incentive to choose risky projects which ultimately raises the probability of bank failure. Increasing the percentage of the risky investment funded by banks' inside resources, that is, by own capital, ameliorates banks' risk taking behaviour. This effect is, however, absent in the case of reserve requirements.⁴⁰

Therefore, while reserve and capital requirements are useful tools for decreasing the total volume of loans, capital requirements may be superior in terms of risk exposure.⁴¹ This does not automatically make reserve requirements the inferior tool, since it is unclear to what extent risk-avoidance is optimal. For example, many argue that economic growth has historically relied on the success of businesses that were once considered especially risky investments. If true, capital requirements could involve the cost of disincentivizing investment bankers from funding the next revolutionary technology or business, but

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

these kinds of investments are typically outside of the scope of depository institutions contemplated by capital requirements.

Such restrictions on the money supply may also promote stability in currency exchange markets and reduce the incidence of speculative trades against the currency. Furthermore, reserve requirements ensure that there is sufficient liquidity available in the event that a significant number of depositors withdraw funds at the same time. As financial panics of the last century have shown, failure to honor withdrawal requests can turn bad situations into catastrophes. Additionally, increasing the public's faith that banks will remain solvent during economic downturns has the potential to increase the amount of money that the public is willing to deposit with the bank. Critics, seeing this, might argue that the rule works against the intentions of policy makers to cool down economic activity. Proponents would say that this amount is likely negligible, and in any case it could simply be anticipated and accounted for when deciding how much to increase reserve rates.

Another potential issue with these mechanisms is that they are inherently less flexible and manageable than interest rate theory-driven monetary policy from the perspective of policymakers, who might need to react quickly to economic catastrophes. Interest rate manipulation has a very direct and immediate effect on economic activity because it imposes a cost of borrowing that takes effect instantly. Reserve requirements, by contrast, work by altering incentives that play out over a longer period of time. If policymakers are not able to step in quickly when action is required, short-term economic hardship could be exacerbated.

An increased reliance on reserve and bank capital requirements has the potential to create winners and losers along questionable lines. Perhaps the most obvious beneficiaries of a shift to reserve and bank capital requirements would be banks with strong capital positions or balances, as these institutions could more easily react to changing rules for how much cash they need to have on hand. On the other hand, banks operating with relatively thin capital balances might need to completely revamp their operating standards in order to bolster their reserves and ensure compliance with existing regulations. The pressure to comply with these regulations may force these banks to raise capital from unorthodox means, for example by issuing equity at a discount. Another group of potential winners would be banks that engage in relatively less risky investments, since they would be required to keep less cash on hand. By contrast, banks with riskier investment strategies might need

to revise their methods or engage in alternative fundraising, similarly to banks with thinly capitalized funds.

One troubling possibility is that reserve and capital requirements could benefit dishonest actors in the banking industry, since the banks would have greater control over reporting their compliance. Bookkeeping is also subjective to some extent, and these gray areas provide room for questionable categorization; for example, accountants could be pressured into categorizing illiquid assets as cash equivalents. By contrast, interest rates are only within the control of actors to the extent that they are negotiable in the process of procuring the loaned funds.

On the other hand, banks would likely be more selective about their lending decisions, and would likely infer that borrowers with good credit histories have demonstrated financial trustworthiness. Therefore, such a policy shift could reward individuals who possess what many would consider a fundamentally positive character trait. However, raising the bar for loans could have far-reaching consequences for individuals and small businesses who fall below the elevated standard contemplated by the policy shift. restricting the availability of credit would severely disadvantage small entrepreneurs in favor of large conglomerates. Moreover, poor credit histories are a suspect indicator of moral desert. Financial illiteracy, for example, may be a better explanation for bad credit compared to carelessness or deceitfulness.

E. Conclusion

While manipulating interest rates is the dominant method employed by the Fed and other government entities around the world to curb inflation, there are good theoretical and empirical reasons to believe that other tools should have a more central role in curbing inflation. However, there are good arguments both for and against utilizing reserve and bank capital requirements to a greater extent, and it is unclear whether they should replace interest rates or play a supplemental role.

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