Abolish the Inflation Tax on the Poor and Middle Class

John Plecnik
Cleveland State University, j.plecnik@csuohio.edu

Follow this and additional works at: https://engagedscholarship.csuohio.edu/fac_articles

Part of the Tax Law Commons

How does access to this work benefit you? Let us know!

Original Citation
John Plecnik, Abolish the Inflation Tax on the Poor and Middle Class, 29 Quinnipiac Law Review 925 (2011)

This Article is brought to you for free and open access by the Faculty Scholarship at EngagedScholarship@CSU. It has been accepted for inclusion in Law Faculty Articles and Essays by an authorized administrator of EngagedScholarship@CSU. For more information, please contact research.services@law.csuohio.edu.
ABOLISH THE INFLATION TAX ON THE POOR & MIDDLE CLASS

John T. Plecnik*

INTRODUCTION

The year is 1989, and Sam is an assembly line worker at Chrysler's Mount Elliot Tool and Die plant in Detroit, Michigan. He lives in the Dearborn suburbs with his wife, Susanne, and his seventeen-year-old daughter, Tina. Each day on the line is taxing, but Sam works overtime to eke out a middle class existence for his family and save a little for his daughter's education. Up until a few months ago, Sam kept the family nest egg in his checking account at First Dearborn Federal Association. However, after First Dearborn and dozens of other savings and loan associations closed their doors, Sam became leery of financial institutions and started to stash his pay in a wall safe. Sam is generally aware that inflation is a problem and prices are rising—CBS Evening News saw to that. However, Sam questions whether the government

* Assistant Professor of Law, Cleveland-Marshall College of Law, Cleveland State University. B.A., Belmont Abbey College, 2003; J.D., Duke University School of Law, 2006; LL.M. in Taxation, New York University School of Law, 2009. I thank Tom Arnold, Monu Bedi, Jim Chen, Adam Chodorow, Mirit Eyal-Cohen, Deborah Geier, Andy Grewal, Jonathan Grossberg, Browne Lewis, Jessica Marine, David Michaels, Michael Munger, Benjamin Rajotte, Dave Rifkin, Marc Roark, Richard Salsman, Ryan Vacca, Jonathan Witmer-Rich, and Amy Yeung. I am also grateful to Leandra Lederman for helpful discussions on the subject matter of this Article. Lastly, I thank my research assistant, Michael Tangry, and the editors of the Quinnipiac Law Review, for their invaluable work. Any errors in this Article are my own, and the conclusions do not necessarily represent the views of any other individual.

1. Located at 3675 East Outer Drive, Detroit, Michigan, the Mount Elliot Tool and Die plant was built in 1938 by Briggs and purchased by Chrysler in 1956. Mount Elliott Tool & Die (Outer Drive Stamping / Manufacturing Technology Center), ALLPAR.COM, http://www.allpar.com/corporate/factories/mt-elliott.html (last visited Sept. 3, 2011).


3. See, e.g., Lloyd Grove, The Video Presidency: For Bush, a TV Tune-Out; Thus Far.
will continue to honor its pledge to insure deposits. From his perspective, losing a fraction of his nest egg to inflation is preferable to risking it all.

After two years of junior college, Tina followed in her father’s footsteps to become an assembly line worker at the same plant in Detroit. Twenty years later, Chrysler offered Tina an early retirement package worth $75,000.4 Chrysler’s market share contracted substantially in the years leading up to its bankruptcy and restructuring in 2009.6 Fearing that Chrysler’s condition would only worsen, Tina decided to take the buyout rather than stick around and risk a layoff.7 Like her father, Tina is generally aware that the dollar is weakening and that many economists are predicting higher inflation in the future. However, Tina is afraid to put the money from her retirement package in anything riskier than a United States Treasury Bill.

This intergenerational story underscores the very real problem that inflation poses for the poor and middle class.8 Inflation erodes the purchasing power of money and distorts some income tax liabilities upward.9 When inflation is caused by the central bank “printing” money

---


8. This Article adopts a working definition of the poor and middle class without attempting to resolve the many nuances of social strata in the United States. Under this definition, taxpayers in or below the twenty-five percent marginal tax bracket with net worths that do not exceed the upper limit of that bracket are members of the poor and middle class. In 2011, this would encompass individuals with both taxable incomes and net worths less than or equal to $83,600 ($139,350 for married couples). See discussion infra Part IV.B.2.b. These limits should include any reasonable definition of the poor, but not the truly wealthy. Id. However, irrespective of whether these limits comport with one’s sense of a normative definition, there are many built-in advantages, discussed below, to keying off the marginal tax brackets under Code section 1. Id.

9. See infra Part III.C.
ABOLISH THE INFLATION TAX

to fund deficit spending, it results in a transfer of real wealth from the holders of dollars or assets denominated in dollars to the government and, in normative terms, may be conceptualized as a tax.10 The effect of the so-called inflation tax is regressive11 because low-income taxpayers often lack the sophistication or liquidity to invest in hedges against inflation.12 Instead, they are left to choose between saving their income in low-yield investments and consuming their income before inflation erodes its value.13 As a result, inflation not only undermines the progressivity14 of the federal income tax system, but also discourages savings and investment.15

Following the double-digit inflation of the late 1970s and early 1980s, the U.S. Treasury Department and a host of legal scholars proposed sweeping reforms to comprehensively index16 the Internal Revenue Code (Code) for inflation.17 However, their proposals were never enacted into law.18 Instead, Congress chose to respond to the widely perceived injustices caused by inflation on a case-by-case basis.19 Many of those responses afford relief to the wealthy, but do little to help the Sams and Tinas of the world.20 For instance, the preferential rate for capital gains has been justified on the grounds that it would be improper

10. Id.
11. "Under a regressive income tax, [the average tax rate, i.e.,] the percentage of income paid to the government falls as income rises . . . ." Joseph Bankman & Thomas Griffith, Social Welfare and the Rate Structure: A New Look at Progressive Taxation, 75 CALIF. L. REV. 1905, 1908 (1987). Thus, the poor and middle class pay a greater percentage of their income in taxes than the wealthy.
12. See infra Part III.C.
13. Id.
14. Under a progressive income tax, the average tax rate rises as income rises. Bankman & Griffith, supra note 11, at 1907. Thus, the wealthy pay a greater percentage of their income in taxes. The concept of progressive taxation is supported by the welfarist theories of distributive justice, such as utilitarianism, "which judges the welfare of a society according to the unweighted sum of the utilities of its individual members," and the Rawlsian leximin, "which judges the welfare of a society according to the well-being of its least well off member." Id. at 1915–16. However, one need not accept welfarist theory or progressive taxation to reject regressive taxation, which violates the proportionate justice principle embraced by flat tax advocates. See, e.g., ROBERT E. HALL & ALVIN RABUSHKA, THE FLAT TAX 27 (2d ed. 1995) ("The principle of equity embodied in the flat tax is that every taxpayer pays taxes in direct proportion to his income.").
15. See infra Part III.C.
17. See infra Part IV.A.
18. Id.
19. Id.
20. See infra Part II.
to tax phantom gains attributable to inflation.\textsuperscript{21} Other changes, such as indexing the rate brackets, afford relief to those who earn more because of inflation, but do not help those whose money buys less, while remaining in the same marginal tax bracket.\textsuperscript{22}

To counter the pernicious effects of inflation and to make the Code more equitable to all taxpayers, this Article proposes an inflation tax credit for the poor and middle class. Under the proposal, taxpayers in or below the twenty-five percent marginal tax bracket would be allowed to elect between (i) substantiating the average balance of their bank deposits and Treasury Bills to receive a credit based on that balance, and (ii) taking a standard credit based on their gross income.

This Article consists of four parts. Part I discusses hedges against inflation as well as the savings and investment of the poor and middle class. Part II compares and contrasts the savings and loan (S&L) crisis of the 1980s and 1990s with today’s credit crisis and concludes that higher inflation is probable in the near future. Part III discusses how inflation may be conceptualized as a tax within the normative framework of the Haig–Simons definition of income. It also discusses the Fisher equation—which illustrates the relationship between interest rates and inflation—to explain why the nominal interest rates paid to low-income taxpayers often lag behind the actual inflation rate. Part IV outlines the prior legislative proposals to index the Code for inflation. It also details a proposal to enact an inflation tax credit for the poor and middle class.

I. REDISTRIBUTIVE INJUSTICE & THE SAVINGS OF THE POOR & MIDDLE CLASS

The redistributive impact of inflation is regressive because hedges against inflation, such as land, equities, commodity futures, fine art, gold, and ivory, are disproportionately held by the well-to-do and wealthy.\textsuperscript{23} This impact is compounded by the fact that the Code protects...
these hedges from the tax distortions caused by inflation. The capital gain on the sale of these hedges is generally taxed at preferential rates under Code section 1(h), which is justified, in part, as an ad hoc correction for inflation.\(^\text{24}\) Therefore, the wealthy are protected from the economic cost of inflation by investing in hedges, and the tax cost of inflation by the Code itself. But what of the poor and middle class?

In general, low-income taxpayers park their modest savings in cash and cash equivalents or low-interest-bearing instruments and accounts.\(^\text{25}\) They do so for any number of socioeconomic reasons; most notably, because they lack (i) the sophistication to seek out or design investment vehicles that hedge against inflation, and (ii) the liquidity to invest in those vehicles. The interest-bearing instruments and accounts that low-income taxpayers tend to hold are demand deposits, such as checking and savings accounts.\(^\text{26}\) Those accounts meet their need for liquidity and, like Treasury Bills,\(^\text{27}\) are characterized by low or zero default risk and low yields.\(^\text{28}\)

For many low-income taxpayers, even demand deposits are out of the question. Banks often charge their smallest customers the largest
fees. Minimum balance fees, ATM fees, overdraft charges, and a panoply of other penalties can make checking and savings accounts an expensive proposition for someone trying to save a few hundred dollars. In addition, some low-income taxpayers anticipate that their consumption will equal or exceed their income over the course of a year, and thus, choose to keep their savings in cash for the sake of convenience. Still more distrust the banking system—particularly in periods of financial turmoil—and choose to keep their savings in cash to avoid losing their nest egg if the bank goes broke. Cash, in particular, is vulnerable to inflation-induced erosion because it yields no return, but all of these common mediums of savings and investment are characterized by low returns that often lag behind the inflation rate.

In periods of price stability, the effect of inflation may seem trivial. Interest rates are likely to exceed the inflation rate and holders of demand deposits and Treasury Bills enjoy a positive return on their investment. Even holders of cash hardly notice a decline in their purchasing power. For them, inflation may be less costly than the bank

---


30. Nearly eight percent of U.S. households, representing seventeen million adults, are unbanked, i.e., contain no one who has a checking or savings account, and low-income and minority populations are disproportionately represented among those households. See Fed. Deposit Ins. Corp., FDIC NATIONAL SURVEY OF UNBANKED AND UNDERBANKED HOUSEHOLDS 10–11, 21 (2009), available at http://www.fdic.gov/householdsurvey/full_report.pdf. Approximately twenty percent of low-income U.S. households (defined as those earning less than $30,000 per year) are unbanked. Id. at 18. Approximately twenty percent of African American households, twenty percent of Hispanic households, and fifteen percent of Native American households are unbanked. Id. at 16.

31. See generally id.


charges involved in maintaining a demand deposit. However, the phenomenon of inflation outstripping interest rates is a recurring problem in the United States and around the world. In those periods, the interest rates on demand deposits and Treasury Bills are insufficient to compensate for inflation, and the savings invested in those mediums decline in value along with the purchasing power of money. Even low-income taxpayers who perceive the inflation-induced erosion to their savings are powerless to stop it. Hedging against inflation requires a degree of sophistication and liquidity that low-income taxpayers are unlikely to possess.

Off hand, some might argue that inflation is either (i) irrelevant to low-income taxpayers, because they have little or no savings, or (ii) beneficial to them, because they tend to be debtors and inflation erodes the value of what they must repay. However, this argument is based on the conventional wisdom that few, if any, low-income taxpayers save or maintain a positive net worth. In fact, over a third of low-income taxpayers save, and both the median net worth and mean net worth of low-income taxpayers are positive. Moreover, nearly half of low-income taxpayers have no debt whatsoever. Intuition and conventional wisdom aside, the conclusion that inflation poses a real problem for a significant number of low-income taxpayers is inescapable.

34. See infra note 123 and accompanying text.
35. In 2007, 33.7% of U.S. households in the lowest income quintile, and 45.1% of U.S. households in the second lowest income quintile engaged in saving. Bucks et al., supra note 25, at A5 tbl.1; see generally CARASSO & MCKERNAN, supra note 25.
36. In 2007, the median and mean net worth of U.S. households in the lowest income quintile were $8,100 and $105,200, respectively. Bucks et al., supra note 25, at A11 tbl.4; see generally CARASSO & MCKERNAN, supra note 25. For the same year, the median and mean net worth of U.S. households in the second lowest income quintile were $37,900 and $134,900, respectively. Bucks et al., supra note 25, at A11 tbl.4; see generally CARASSO & MCKERNAN, supra note 25. Although these net worth figures show that low-income taxpayers have modest savings compared to the wealthy, it would be overly simplistic to conclude that any inflation-induced erosion of those savings would be similarly modest, and hence, insignificant to them. It is a truism that the marginal utility of a dollar is greater the less one has. See, e.g., Bankman & Griffith, supra note 11, at 1947 (explaining the economic principle of the declining marginal utility of money); Steven P. Croley & Jon D. Hanson, The Nonpecuniary Costs of Accidents: Pain-and-Suffering Damages in Tort Law, 108 HARV. L. REV. 1785, 1794 (1995) (same); Alan Schwartz, Proposals for Products Liability Reform: A Theoretical Synthesis, 97 YALE L.J. 353, 363–68 (1988) (same).
37. In 2007, only 51.7% of U.S. households in the lowest income quintile, and only 70.2% of U.S. households in the second lowest income quintile had any type of debt. Bucks et al., supra note 25, at A40 tbl.13.B; see generally CARASSO & MCKERNAN, supra note 25.
II. Mammon Shrugged: A Tale of Two Crises

As the United States approaches what may be another period of high inflation, the need to counter its pernicious effects on the poor and middle class is more pressing than ever. Already, legal scholars, economists, and the media alike are drawing parallels between the S&L crisis and today's credit crisis. The S&L crisis resulted in the most severe collapse of financial institutions in the United States since the Great Depression. From 1986 to 1995, the predecessors-in-interest to the Federal Deposit Insurance Corporation (FDIC) placed 1043 failed S&Ls with total assets of $519 billion dollars in receivership. Although this collapse had a multitude of underlying causes, inflation and the mismatch it caused between short- and long-term interest rates were particularly damaging to the S&L business model. Before the crisis, S&Ls borrowed short to lend long. They profited so long as their spread—the excess of the interest earned on outstanding loans over the interest paid on deposits—exceeded their overhead. During the double-digit inflation of the late 1970s and early 1980s, the interest

38. See infra notes 52-61 and accompanying text.
39. See generally SAMUELSON, supra note 33. In fact, some economists have gone a step further and compared the credit crisis to the Great Depression. Three Top Economists Agree 2009 Worst Financial Crisis Since Great Depression: Risks Increase if Right Steps are Not Taken, REUTERS, Feb. 27, 2009, available at http://www.reuters.com/article/pressRelease/idUS193520+27-Feb-2009+BW20090227 ("Nouriel Roubini, professor of economics and international business at New York University, Kenneth Rogoff, professor of economics and public policy at Harvard University, and Nariman Behravesh, chief economist and executive vice president for IHS Global Insight, all agreed that [the credit crisis] is the worst financial crisis since the Great Depression.").
41. See id. at 26. “From 1986 to 1989, the Federal Savings and Loan Insurance Corporation ... closed or otherwise resolved 296 S&Ls with total assets of $125 billion.” Id. From 1989 to 1995, the Resolution Trust Corporation closed or otherwise resolved an additional 747 S&Ls with total assets of $394 billion. Id.
42. Curry & Shibut, supra note 40, at 27.
43. Jeffrey R. Gleit, Note, The Reports of the Demise of the D'Oench Doctrine Have Been Greatly Exaggerated: The Continuing Coexistence of the D'Oench Doctrine and Section 1823(e), 28 HOFSTRA L. REV. 225, 232 (1999) ("In the late 1970s, high interest rates and record inflation seriously damaged many savings and loans, which were stuck with lower yielding mortgages.").
45. Id.
earned on the long-term fixed-rate mortgages held by S&Ls was significantly lower than the prevailing interest rates for deposits. This mismatch destroyed the industry’s profitability and ended the era of the S&L.

The credit crisis has resulted in a similar collapse of financial institutions. From the start of the credit crisis in the summer of 2007 through August of 2011, the FDIC reported the failure of 393 banks, a total that does not include the collapse of the multi-billion dollar investment banks Bear Stearns and Lehman Brothers. This figure alone invites comparisons to the S&L crisis, and many scholars and commentators have argued that government regulation (or lack thereof) is the common thread between the two crises.

Others compare the costs of the S&L “cleanup” to the mounting costs of the bank “bailouts.” However, the strongest parallel is not

46. Patricia A. McCoy, Andrey D. Pavlov & Susan M. Wachter, Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure, 41 CONN. L. REV. 1327, 1336 (2009) (“[Higher inflation rates] altered the ability of depositories to fund long term, fixed rate mortgages: inflation pushed up nominal interest rates and required higher returns on deposits while asset returns were fixed at the low levels of historical fixed rates on long term mortgages which made up most of the thrift industry portfolios.”).

47. See id.


51. See, e.g., U.S. TREASURY DEP’T, TROUBLED ASSET RELIEF PROGRAM: TWO YEAR RETROSPECTIVE 4-5 (2010), available at http://www.aba.com/NR/rdonlyres/03BDA3D5-54B2-41E4-8745-302C9E6C405A/69331/TARPTwoYearRetrospective_100510 transmitmalletter.pdf (comparing the estimated cost (as a percentage of the gross domestic product) of the “bank bailouts” (less than one percent) to the cost of the S&L “clean up” (2.4%)).
between the crises themselves, but rather, between the period leading up to the S&L crisis and the wake of the credit crisis. The present bears an “eerie resemblance” to the years that preceded the double-digit inflation of the late 1970s and early 1980s, and loose monetary policy is the common thread. 52 During the 1970s, the government engaged in deficit spending to stimulate the economy, which caused the money supply to skyrocket.53 Although the Federal Reserve Board progressively tightened its monetary policy and hiked the federal funds rate54 in the late 1970s to reduce available credit, those steps were insufficient to prevent double-digit inflation. 55 Today, the government is racking up record deficits to stimulate the economy, preserve entitlement programs, and fund two wars.56 The rate of increase in the money supply is even higher than it was during the 1970s.57 In addition, unlike in the late 1970s, the Federal Reserve Board has actually loosened its monetary policy. Not only has the Federal Reserve Board engaged in an aggressive series of cuts to the federal funds rate, which now stands

52. SAMUELSON, supra note 33, at 203–48.
55. The Federal Reserve Board began raising the federal funds rate in 1977, from 5.05% to 5.54%, and continued to raise that rate until 1981, when it reached a high of 16.39%. Selected Interest Rates: Annual Federal Funds Effective Rate, FED. RES. BOARD, http://www.federalreserve.gov/datadownload/Output.aspx?rel=H15&series=c7ca9f58d350a500bb83e30e208cf9b&lastObs=&from=&to=&filetype=csv&label=include&layout=seriescolumn (last visited Sept. 4, 2011).
below one percent, but it has also taken the controversial step of "printing" nearly two trillion dollars and using the proceeds to purchase Treasury Bills in order to increase the money supply and stimulate the economy. Taken together, these facts suggest that higher inflation in the near future is not only possible, but probable.

58. Selected Interest Rates: Annual Federal Funds Effective Rate, supra note 55.

59. The process whereby a central bank creates money to buy financial assets in order to increase the money supply and stimulate the economy is known as quantitative easing. See BANK OF ENG., QUANTITATIVE EASING EXPLAINED 8 (1996), available at http://www.bankofengland.co.uk/monetarypolicy/pdf/qe-pamphlet.pdf. Typically, a central bank will cut interest rates to increase the availability of money and boost spending in the economy. Id. However, when interest rates are at or near zero percent, some central banks use quantitative easing to inject money directly into the economy and boost spending. Id. It should be noted that quantitative easing in the United States and England seldom entails the literal printing of money to purchase financial assets; instead, the central bank electronically credits the bank account of the seller. Id.; Alan Bush, Quantitative Easing and Treasury Note Futures, INSIDE FUTURES (Apr. 3, 2009), http://www.insidefutures.com/article/99132/Quantitative%20Easing%20and%20Treasury%20Note%20Futures.html.

In response to the credit crisis, the Federal Reserve Board has engaged in two rounds of quantitative easing. Fed has Awakened Bond Vigilantes Who Fear Inflation, INVESTMENT NEWS, Nov. 15, 2010, at 10, 10. The first round of quantitative easing, known by the acronym QE1, lasted from December 2008 to March 2010. Id. During this period, the Federal Reserve Board bought $1.7 trillion of Treasury Bills and mortgage-backed securities. Id. The second round of quantitative easing, known by the acronym QE2, lasted from November 2010 to June 2011. During this period, the Federal Reserve Board bought $600 billion of Treasury Bills. Michael Baron, 'Operation Twist' Looks Like Fed’s Next Move, THE STREET (Sept. 14, 2011, 7:30 PM), http://www.thestreet.com/story/ll249198/l/operation-twist-looks-like-feds-next-move.html.

60. Anticipating inflation, rather than deflation, is "a reasonable assumption given the United States' post-war experience." Shuldiner, supra note 16, at 538 n.1. According to the U.S. Department of Commerce's Bureau of Economic Affairs, the economy has not experienced deflation over the course of any year in the past four decades. See Table I in Appendix. And, according to the U.S. Department of Labor's Bureau of Labor Statistics, the economy has only experienced deflation once during that period. See id.

61. An increasing number of economists have predicted that the unprecedented increase in the money supply since 2008 will result in higher inflation rates than in the 1970s. See, e.g., Rich Miller, Bernanke Bet on Keynes Has Meltzer Seeing 1970s-Style Inflation, BLOOMBERG.COM (Apr. 12, 2009, 7:00 PM), http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a8tdE7Z.B.d.u (describing how Professor Allan Meltzer predicts that inflation "will get higher than it was in the 1970s" as a result of the increase in the money supply). Moreover, the inflation rate in the United Kingdom spiked to four percent in January 2011 after its central bank engaged in similar rate cutting and quantitative easing. Myra Butterworth, Savers Lose £400 a Year due to Inflation, TELEGRAPH (Feb. 15, 2011, 12:03 PM), http://www.telegraph.co.uk/finance/personalfinance/8325569/Savers-lose-400-a-year-due-to-inflation.html; UK Inflation Rate Rises ‘Hitting Savers,’ BBC NEWS (Feb. 15, 2011, 7:03), http://www.bbc.co.uk/news/business-12466074; see also News Release: Bank of England Maintains Bank Rate at 0.5% and the Size of the Asset Purchase Programme at £200 Billion, BANK OF ENG. (Feb. 10, 2011), http://www.bankofengland.co.uk/publications/news/2011/005.htm.
III. INFLATION TAX

A. Haig–Simons Definition of Income

This Article adopts the classic Haig–Simons definition of income\textsuperscript{62} to establish a normative framework in which to discuss the effect of the so-called inflation tax on the poor and middle class, as well as a refundable tax credit to ameliorate that effect. Under this definition, income equals “the algebraic sum of (1) the market value of rights exercised in consumption and (2) the change in the value of the store of property rights between the beginning and end of the period in question.”\textsuperscript{63} The operation of the definition with respect to interest income is demonstrated by the following example:

$T$'s total wealth at the beginning of 2011 is $150,000, comprised entirely of a cash balance of $150,000 in her savings account. During 2011, $T$ earns $15,000 in interest from her savings account, and she spends $14,000 on food, medicine, and household expenses.

Assuming no inflation, $T$'s Haig–Simons income is $15,000,\textsuperscript{64} because she consumed $14,000, which represents the amount she spent on food, medicine, and other household expenses, and increased her

\begin{align*}
62. \text{German legal scholar Georg von Schanz is generally credited for being the first to advocate that the proper measure of economic income is the sum of an individual's consumption and change in wealth. Georg Schanz, } \textit{Der Einkommensbegriff und die Einkommensteuergesetze}, \textit{FINANZ-ARCHIV}, no. 1, 1896 at 1. However, his theory of income is commonly known as the Haig–Simons definition of income, because it was further developed and popularized by American economists Robert M. Haig and Henry C. Simons in the 1920s and 1930s. See ROBERT MURRAY HAIG ET AL., \textit{THE FEDERAL INCOME TAX} (Robert Murray Haig ed., 1921); HENRY C. SIMONS, \textit{PERSONAL INCOME TAXATION: THE DEFINITION OF INCOME AS A PROBLEM OF FISCAL POLICY} (1938). Professor Haig defined income as "the money value of the net accretion to one's economic power between two points of time." Robert M. Haig, \textit{The Concept of Income—Economic and Legal Aspects}, in THE FEDERAL INCOME TAX, supra, at 7 (emphasis omitted). Professor Simons restated Professor Haig's definition as follows:}

Personal income may be defined as the algebraic sum of (1) the market value of rights exercised in consumption and (2) the change in the value of the store of property rights between the beginning and end of the period in question. In other words, it is merely the result obtained by adding consumption during the period to "wealth" at the end of the period and then subtracting "wealth" at the beginning.

\textit{SIMONS, supra}, at 50.

63. \textit{SIMONS, supra} note 62, at 50. Stated as an equation, the Haig–Simons definition of income is:

\begin{align*}
i = c + \Delta w
\end{align*}

where $i$ is income, $c$ is consumption, and $\Delta w$ is change in wealth. See id.

64. $15,000 = 14,000 + 1,000$. 
wealth by $1,000,\textsuperscript{65} which represents the amount by which her interest exceeded her consumption.

However, assuming an inflation rate of 10%, T’s Haig–Simons income is $0.\textsuperscript{66} The Haig-Simons definition of income measures “the command over real goods and services”—not fluctuations in nominal dollar amounts.\textsuperscript{67} Although T’s interest from her savings account increased her nominal wealth by $15,000, it left her real wealth unchanged. The 10% nominal interest rate was cancelled out by a 10% inflation rate. After inflation, the $165,000 sum of her principal and interest at the end of 2011 has the same real value that her $150,000 of principal had at the beginning of 2011.

In contrast, T’s gross income under Code section 61\textsuperscript{68} is the same regardless of the inflation rate. Regardless of inflation, T’s gross income is $15,000, which represents her interest. In addition, T’s gross income would be adjusted by various credits, deductions, exemptions, and exclusions to compute her taxable income.\textsuperscript{69}

Although the federal income tax system derives its general normative principles from the Haig–Simons definition of income,\textsuperscript{70} it

\textsuperscript{65} $1,000 = $15,000 - $14,000.
\textsuperscript{66} $0 = $14,000 - $14,000.
\textsuperscript{68} See I.R.C. § 61(a) (2010) (“[G]ross income means all income from whatever source derived . . .”).
\textsuperscript{70} At first glance, it may not seem obvious that the federal income tax system derives from the Haig–Simons definition:

If you have filled out a federal income tax return, you know that you do not calculate your taxable income by adding up your consumption expenditures and net wealth increases for the year. Instead, the [administrative difficulties of tracking consumption and net wealth increases (or decreases) on an annual basis] have forced the adoption of a system in which you compute your [Haig–Simons] income \textit{indirectly} by totaling your includible receipts [i.e., your gross income under Code section 61] and subtracting your allowable deductions. This indirect system is based on the proposition that when your includible receipts for the year are limited to items that are available for consumption and saving, and your allowable deductions are limited to costs that are \textit{neither} consumption \textit{nor} additions to saving, then the subtraction of allowable deductions from includible receipts tells you the amount that you did, in fact, consume and/or add to savings during the year, i.e., your [Haig–Simons] income.
departs from the definition in several significant ways.\footnote{71} The Code generally (i) assesses income in nominal dollar amounts\footnote{72} and (ii) defers taxing the appreciation in property until a sale or exchange.\footnote{73} As discussed more fully below, this first deviation—the decision to tax nominal dollars—creates significant hardships for the poor and middle class and should be reconsidered.

\textbf{B. Working Definition of Inflation}

To understand the distortions caused by inflation and to adjust our

\begin{footnotesize}
\begin{enumerate}
\item[71.] The expansive definition of gross income adopted by the U.S. Supreme Court in Comm'r v. Glenshaw Glass Co., 348 U.S. 426, 429–31 (1955), approximates the Haig–Simons definition of income. See Gross, supra note 69, at 928 ("[T]he general normative principles of federal income taxation are derived from the Haig-Simons definition of income...."); Terrence Chorvat & Elizabeth Chorvat, Income Tax as Implicit Insurance Against Losses from Terrorism, 36 IND. L. REV. 425, 428 (2003) ("The definition of income in the Internal Revenue Code is essentially equivalent to the Haig–Simons definition."). In Glenshaw Glass, the U.S. Supreme Court held that punitive damages are taxable income under Code section 22(a) (the predecessor to current Code section 61), because its "broad phraseology" indicates "the intention of Congress to tax all gains except those specifically exempted." 348 U.S. at 429–31 (citing Comm'r v. Jacobson, 336 U.S. 28, 49 (1949); Helvering v. Stockholms Enskilda Bank, 293 U.S. 84, 87–91 (1934)). The U.S. Tax Court also recognized the similarity between the Glenshaw Glass and Haig–Simons definitions of income in Bealor v. Comm'r, 72 T.C.M. (CCH) 730 (1996), where it held that "[g]enuine income represents economic gain, whether calculated under the Haig–Simons definition or as expansively adumbrated by the Supreme Court in Commissioner v. Glenshaw Glass Co."
\item[72.] See, e.g., Hellermann v. Comm'r, 77 T.C. 1361, 1364 (1981) (upholding Congress's authority to tax nominal gains).
\item[73.] See I.R.C. § 1001(c) (2010) ("[T]he entire amount of the gain or loss, determined under this section, on the sale or exchange of property shall be recognized."); see also Cottage Sav. Ass'n v. Comm'r, 499 U.S. 554, 559 (1991) ("Rather than assessing tax liability on the basis of annual fluctuations in the value of a taxpayer's property, the Internal Revenue Code defers the tax consequences of a gain or loss in property value until the taxpayer 'realizes' the gain or loss. The realization requirement is implicit in § 1001(a) of the Code, 26 U.S.C. § 1001(a), which defines the gain [or loss] from the sale or other disposition of property as the difference between the amount realized from the sale or disposition of the property and its 'adjusted basis.' (alteration in original)); Helvering v. Horst, 311 U.S. 112, 115 (1940) ("[N]ot all economic gain of the taxpayer is taxable income. From the beginning the revenue laws have been interpreted as defining realization of income as the taxable event, rather than the acquisition of the right to receive it."). The realization doctrine is arguably the "largest difference" between the definition of income in the Code, and the Haig–Simons definition. Chorvat & Chorvat, supra note 71, at 428 ("The largest difference between the definition in the Internal Revenue Code and the Haig–Simons definition is attributable to the 'realization' doctrine."); David M. Schizer, Realization as Subsidy, 73 N.Y.U. L. REV. 1549, 1551 (1998) (stating that the realization doctrine is "is the foundational timing rule of our tax system") (footnote omitted)).
\end{enumerate}
\end{footnotesize}
tax system to compensate for those distortions, we must first understand what the word “inflation” means. The scholarly debate over the most accurate definition of inflation is contentious, and “[n]o single theory of inflation is accepted by all economists.” Professor N. Gregory Mankiw, a New Keynesian economist, defines inflation as “an increase in the overall level of prices in the economy.” However, adherents to the so-called Austrian School of Economics claim that rising prices are merely a symptom of inflation. Instead, they define inflation as an increase in the supply of money that is not offset by an increase in demand, which causes a corresponding decline in the purchasing power of money. Stated in more simple terms, the Austrian School’s


75. N. GREGORY MANKIW, PRINCIPLES OF MACROECONOMICS 13 (5th ed. 2008). Most laymen, politicians, and economists would agree with Professor Mankiw. See, e.g., Harvey, supra note 74, at 69 (“[A] layman would define inflation as a persistent rise in the general level of prices.”); Edwin Vieira, Jr., The Forgotten Role of the Constitution in Monetary Law, 2 TEX. REV. L. & POL. 78, 78 (1997) (“To most, ‘inflation’ simply imports general increases in the prices of goods and services, without specifying the reason for those increases.”); see also RON PAUL, END THE FED 182 (2009) (“Most economists and politicians insist on defining inflation as a rising price level.”).

76. The Austrian School of Economics is “[a] group of economists . . . [who] employ an economic method that emphasizes the roles of uncertainty, entrepreneurial discovery, and subjectivism of economic value, largely in contradistinction to the form of neoclassical economics that has achieved primacy in economic thought over the last century.” John M. Czarnetzky, Time, Uncertainty, and the Law of Corporate Reorganizations, 67 FORDHAM L. REV. 2939, 2944 (1999) (footnote omitted). The label “Austrian” is derived from the predominantly Austrian founders and early supporters of the Austrian School. Id. at 2946–51; Randall G. Holcombe, Introduction: The Austrian School Past and Present, in 15 GREAT AUSTRIAN ECONOMISTS v, v–xii (Randall G. Holcombe ed., 1999). However, by the 1960s, the Austrian School was centered in the United States, and few modern Austrian economists are natives of Austria. Czarnetzky, supra, at 2944 n.28 (citing KAREN I. VAUGHN, AUSTRIAN ECONOMICS IN AMERICA: THE MIGRATION OF A TRADITION 10 (1998)). Adherents to the Austrian School still refer to themselves as Austrians, however, see, e.g., About the Mises Institute, LUDWIG VON MISES INST., http://mises.org/about.aspx (last visited Sept. 4, 2011), and the label remains in use in both economics literature and legal scholarship. Czarnetzky, supra, at 2944 n.28.

77. Austrian economist and Nobel laureate Ludwig von Mises defined inflation as any increase in the quantity of money “not offset by a corresponding increase in the need for money . . . so that a fall in the objective exchange-value of money must occur.” LUDWIG VON MISES, THE THEORY OF MONEY AND CREDIT 240 (H. E. Batson trans., 1971); see also WEBSTER’S NEW WORLD COLLEGE DICTIONARY 732 (4th ed. 1999) (describing inflation in accord with the Austrian School’s definition as “an increase in the amount of money and credit in relation to the supply of goods and services”). Professor Mises claimed that defining inflation in terms of rising prices, rather than a decline in the purchasing power of money, was a “deliberate and mischievous” attempt to confuse the public about the true definition of inflation. PAUL, supra note 75, at 182. His view is shared by Congressman Ron Paul, who has popularized the Austrian School and became its most public face. Id. Though a
definition of inflation roughly comports with the adage that “inflation is too many dollars chasing too few goods.”

Politicians tend to focus less on formal definitions, and both parties enjoy bashing high inflation. However, politicians disagree on whether government is the solution or the problem. During his concession speech at the 1980 Democratic National Convention, Senator Ted Kennedy advocated using the “full power of government” to master inflation. In contrast, President Ronald Reagan implied that the “oppressive hand of government” was responsible for causing inflation.

Politician, Congressman Paul is arguably one of the most prolific members of the Austrian School, having authored eight books, including two New York Times best sellers. Congressman Paul also serves as a distinguished counselor to the Ludwig von Mises Institute, which was founded in 1982 as the research and educational center of classical liberalism, libertarian political theory, and the Austrian School of Economics. About the Mises Institute, supra note 76.

78. But see JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST, AND MONEY (1936). British economist Lord John Maynard Keynes famously advocated the government’s use of deficit spending and other inflationary policies to end recessions. Id. As a result, Lord Keynes and Keynesians are sometimes accused of supporting inflation and ignoring monetary policy as its root cause. See, e.g., HENRY HAZLITT, THE FAILURE OF THE “NEW ECONOMICS”: AN ANALYSIS OF THE KEYNESIAN FALLACIES 180 (1959); PAUL, supra note 75, at 182. However, in his earlier works, even Lord Keynes acknowledged that inflation can (i) “overturn[] the existing basis of society,” and (ii) result from a decline in the purchasing power of money caused by “printing paper money.” See JOHN MAYNARD KEYNES, A TRACT ON MONETARY REFORM 41 (Prometheus Books 2000) (1924) [hereinafter KEYNES, TRACT ON MONETARY REFORM] (“A Government can live for a long time . . . by printing paper money. That is to say, it can by this means secure the command over real resources—resources just as real as those obtained by taxation. . . . A Government can live by this means when it can live by no other. It is the form of taxation which the public finds hardest to evade and even the weakest Government can enforce, when it can enforce nothing else.”); JOHN MAYNARD KEYNES, THE ECONOMIC CONSEQUENCES OF THE PEACE 235–36 (1920) [hereinafter KEYNES, THE ECONOMIC CONSEQUENCES OF THE PEACE] (“Lenin is said to have declared that the best way to destroy the Capitalist System was to debase the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. . . . There is no subtler, no surer means of overturning the existing basis of society than to debase the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose.”). It should be noted that the passage attributed to Vladimir Illyich Lenin in Lord Keynes’s The Economic Consequences of the Peace has no independent source outside of the book.

SAMUELSON, supra note 33, at 21.

79. Ted Kennedy: 1980 Democratic National Convention Address, AM. RHETORIC, http://174.132.193.190/~eiden/mp3clips/politicalspeeches/tedkennedy1980dnc112.mp3 (last visited Sept. 5, 2011) (“To all those who see the worth of their work and their savings taken by inflation, let us offer new hope for a stable economy. We must meet the pressures of the present by invoking the full power of government to master increasing prices. In candor, we must say that the federal budget can be balanced only by policies that bring us to a balanced prosperity of full employment and price restraint.”).
during the signing ceremony for the Tax Reform Act of 1986. Congressman Ron Paul, chairman and longtime member of the House Subcommittee that oversees the Federal Reserve Board and domestic monetary policy, goes further. In his second New York Times best seller, he squarely places the blame for inflation on the government’s monetary policy and likens inflation to “counterfeiting” and “taxation.”

This Article does not attempt to resolve the scholarly or political debate over the most accurate definition of inflation. However, this

80. President Ronald Reagan, Remarks on Signing the Tax Reform Act of 1986, RONALD REAGAN PRESIDENTIAL LIBR., http://www.reagan.utexas.edu/archives/speeches/1986/102286a.htm (last visited Sept. 5, 2011) (“As government’s hunger for ever more revenues expanded, families saw tax cuts—or taxes, I should say, cut deeper and deeper into their paychecks; and taxation fell most cruelly on the poor, making a difficult climb up from poverty even harder. Throughout history, the oppressive hand of government has fallen most heavily on the economic life of the individuals. And more often than not, it is inflation and taxes that have undermined livelihoods and constrained their freedoms. We should not forget that this nation of ours began in a revolt against oppressive taxation. Our Founding Fathers fought not only for our political rights but also to secure the economic freedoms without which these political freedoms are no more than a shadow.”).


83. Paul, supra note 75, at 134 ("When you think about it, debasing a currency is counterfeiting. It steals value from every dollar earned or saved. It robs the people and makes them poorer. It is the absolute enemy of the working man. Inflation is the most vicious and regressive of all forms of taxation. It transfers wealth from the middle class to the privileged rich. The economic chaos that results from a policy of central bank inflation inevitably leads to political instability and violence. It’s an ancient tool of all authoritarians.").

84. Even Professor Keith S. Rosenn, author of the leading legal treatise on inflation, declined to settle this debate. Instead, his definition of inflation incorporates both the price-and money-focused definitions of inflation. Professor Rosenn defines inflation as a rise in prices and a corresponding decline in the purchasing power of money:

The term “inflation” is often used loosely in English to mean anything from pomposity to increases in money, income, and profits. For the purposes of this book, inflation is used to refer either to a sustained rise in an economy’s general level of prices or to a corresponding fall in the domestic purchasing power of an
Article assumes that an increase in the money supply is at least one cause (or form) of inflation. This particular assumption is as uncontroversial as it is obvious. Even British economist Lord John Maynard Keynes, who was roundly criticized by the Austrian School for supporting inflationary policies, acknowledged that inflation may result from "printing paper money." And his intellectual successor Professor Mankiw agrees.

By extension, since the government controls the money supply the economy's currency. This working definition implies that inflation is a dynamic process in which the aggregate level of prices is moving upward over time while the purchasing power of money is in corresponding decline. It does not mean that all prices are moving upward uniformly, nor even that all prices are moving upward. It does mean that an economy is undergoing inflation when it presently costs more to purchase a representative sample of goods than it cost in the past.

Keynes, supra note 78, at 41; see The Economic Consequences of the Peace, supra note 78, at 235–36.

Like Lord Keynes, Professor Mankiw acknowledges that creating money causes inflation:

What causes inflation? In almost all cases of large or persistent inflation, the culprit is growth in the quantity of money. When a government creates large quantities of the nation's money, the value of money falls. In Germany in the early 1920s, when prices were on average tripling every month, the quantity of money was also tripling every month. Although less dramatic, the economic history of the United States points to a similar conclusion: The high inflation of the 1970s was associated with rapid growth in the quantity of money, and the low inflation of more recent experience was associated with slow growth in the quantity of money.
through the Federal Reserve Board, the government may cause or reduce inflation. In this sense, Senator Kennedy, President Reagan, and Congressman Paul were all correct. Fiat currency, like the dollar, is a creature of the state. Its value is only as stable as the monetary policy behind it. Government, therefore, is both the solution and the problem. As a result, this Article takes the position that the government’s power over inflation is accompanied by the responsibility to protect the savings of the poor and middle class from inflation-induced erosion.

C. The Inflation Tax

This Article defines the inflation tax as the sum of all the ways that inflation increases the real wealth of government at the expense of the real wealth of taxpayers. As discussed below, this conception of the inflation tax is equal to the sum of (i) the decline in the purchasing power of money caused by inflation, and (ii) the increase in income tax liability caused by inflation’s distortions of the rate structure and tax base of the federal income tax system.

1. Decline in the Purchasing Power of Money

No Code provision imposes a tax based on the inflation rate. However, inflation, in and of itself, may be conceptualized as a tax within the normative framework of the Haig–Simons definition of income. Aside from generating a profit from the sale of goods or services, a government has only three means to finance its expenditures:

---

88. Fiat currency is defined as “[m]oney that is not intrinsically useful and is valued only because it is used as money.” GREGORY MANKIW, MACROECONOMICS 529 (5th ed. 2003).

89. The rate structure is “defined to include the real value of all nominal quantities in the Internal Revenue Code, most notably personal exemptions and dollar-limited credits, the standard deduction, the low-income allowance, the refundable credit on earnings, and the size of the income brackets to which the personal income tax applies.” Henry J. Aaron, Inflation and the Income Tax: An Introduction, in INFLATION AND THE INCOME TAX, supra note 67, at 1, 5.

90. The tax base is defined as “the measure[] of current-dollar . . . personal income from which personal exemptions and deductions are subtracted and to which personal . . . income tax rates are applied in order to compute tax liabilities.” Id.

91. See generally INTERNAL REVENUE CODE OF 1986, as amended.

92. Jeff Strnad, Deflation and the Income Tax, 59 TAX L. REV. 243, 277 (2006) (“It is important to keep in mind as context to any discussion of taxing money holdings that inflation itself may be conceptualized as a tax.”).
(i) taxing, (ii) borrowing, and (iii) "printing" money. The proceeds from the third are referred to as seigniorage, \(^9\) or the inflation tax, because "printing" money increases the money supply, causing a rise in prices and a corresponding decline in the purchasing power of money. \(^9\)

During the Great Depression, Lord Keynes famously noted that "printing paper money . . . is the form of taxation which the public finds hardest to evade and even the weakest government can enforce." \(^9\) The inflation tax is easy to enforce, because it requires no collection activity and may go unnoticed for a time. \(^9\) However, printing money or otherwise increasing the money supply is not a costless way to finance the government. \(^9\) Much like the issuance of new shares of corporate stock dilutes the value of preexisting shares, printing new dollars dilutes the value of preexisting dollars held by the public. \(^9\) Printing new dollars

\(^9\) For example, if X Corporation has 50 shares of common stock outstanding and A holds all 50 shares, then A owns 100% of X Corporation. If X Corporation subsequently issues another 50 shares of common stock to B, then A owns only 50% of X Corporation. While A still holds the same number of shares, the value or ownership interest imbued in those shares has fallen by half. Cf. Eisner v. Macomber, 252 U.S. 189, 207–19 (1920) (holding a proportionate stock dividend is not income). In much the same way, the value of preexisting dollars falls when the government prints new dollars or otherwise expands the money supply. A traditional tax collects nominal dollars from taxpayers, whereas the inflation tax transfers

\(^9\) Id. ("A traditional point from undergraduate economics texts is that the government may fund expenditures by printing money ('seigniorage') as well as through tax revenues or borrowing."); Adam H. Rosenzweig, Imperfect Financial Markets and the Hidden Costs of a Modern Income Tax, 62 SMU L. Rev. 239, 277–78 (2009) ("Of course, raising taxes is not the only option available to the government. Rather than raise taxes, the government could print money to pay the obligation, which would result in large increases in the money supply and thus significant inflation—effectively a tax on all consumption. Another option would be for the government to borrow to fund the shortfall, which would merely shift the burden onto future taxpayers. Regardless of which alternative the government turns to, however, the implicit subsidy problem remains; the only difference would be upon which base the costs would be shifted.").

\(^9\) Seigniorage is defined as:

\[ \text{The revenue collected by the government as a result of its monopoly power to print money. Printing money is virtually without cost, and the bills and coins can be exchanged for goods and services. Thus, seigniorage may be measured as the purchasing power of the money put into circulation in a given period . . . .} \]


\(^9\) As discussed supra Part III.B, this Article assumes that increasing the supply of money causes inflation. See also Aaron, supra note 89, at 26 ("[G]overnments can increase tax collections by expanding the money supply excessively, thereby causing inflation and avoiding the political chore of increasing tax rates.").

\(^9\) See KEYNES, TRACT ON MONETARY REFORM, supra note 78, at 41.

\(^9\) See id.

\(^9\) Strnad, supra note 92, at 277 ("Printing money is not a costless way to finance government.").
also dilutes the value of any preexisting savings or debt that is
denominated in dollars, such as the balance of a checking account or the
face amount of a Treasury Bill. Under the Haig–Simons definition, this
dilution may be conceptualized as a tax because it represents a transfer
of real wealth from the holders of dollars, or assets denominated in
dollars, to the government. This transfer of wealth is the heart of the
inflation tax.

2. Distortion of Income Tax Liabilities

In addition to eroding the purchasing power of money, inflation
distorts income tax liabilities in two distinct ways that may be
conceptualized as a tax.\(^\text{100}\) Inflation distorts (i) the rate structure of the
federal income tax system and (ii) the tax base to which the rate
structure is applied.\(^\text{101}\)

a. Rate Structure

Inflation distorts the rate structure of the federal income tax system
by decreasing the real value of fixed dollar amounts in the Code, such as
rate brackets, deductions, and exemptions, which are applied to our tax
base to calculate taxable income.\(^\text{102}\) The most common example of this
structural distortion is “bracket creep,” whereby taxpayers are subjected
to higher marginal income tax rates by virtue of their inflated incomes
even though their real incomes have not increased.\(^\text{103}\) In 1981,\(^\text{104}\)

the real value of nominal dollars and assets denominated in nominal dollars from taxpayers to
the government.

\(^\text{100}\) See Gilbert Y. Steiner, Foreword to INFLATION AND THE INCOME TAX, supra note
67, at vi; Aaron, supra note 89, at 5; Joel Mick, Comment, A Proposal for the Indexation of

\(^\text{101}\) See supra note 100.

\(^\text{102}\) Aaron, supra note 89, at 20–21; Shuldiner, supra note 16, at 541–42 (“[T]he
structure of an income tax becomes sensitive to inflation when it diverges from a strictly
proportional tax. Thus, for example, when an income tax has features such as floors, ceilings,
deductions, exemptions and brackets that are specified in fixed dollar amounts, the structure
of the tax is sensitive to inflation. For example, assume that a taxpayer is subject to a 20%
income tax, but is permitted a $2,000 exemption. The exemption will always be worth $400 in
nominal terms. Thus, if there is 10% inflation, the real value of the $400 reduction in tax will
decline by approximately 10%. The real value of the exemption can be maintained by
indexing the exemption amount so that when prices rise by 10%, the exemption increases by
10% from $2,000 to $2,200 and the tax savings increases by 10% from $400 to $440.”
(footnotes omitted)).

\(^\text{103}\) See, e.g., David Altig & Charles T. Carlstrom Bracket Creep in the Age of Indexing:
Congress indexed the principal features of the Code, including the rate brackets and personal exemptions. In 1986, Congress extended indexing to the standard deduction and the earned income tax credit. Thus, although significant features of the Code have yet to be indexed,

104. Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, 95 Stat. 172; see also Altig & Carlstrom, supra note 103, at 3 ("Indexation of the personal tax code formally commenced in 1985 under provisions of ERTA. Ad hoc indexation, in the form of infrequent adjustments of nominal tax brackets, personal exemption levels, and so on, was periodically legislated prior to 1985, but ERTA represented the first time that regular, ongoing inflation adjustments were codified in the tax laws.").


106. Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085. Altig & Carlstrom, supra note 103, at 4 ("Although the indexing provisions of ERTA were in effect for only two years before being superseded by TRA86, the new legislation extended the ERTA indexing scheme with only minor modifications. The first of these modifications arose because TRA86 eliminated the zero-bracket amount of taxable income. To compensate, personal exemption levels, the standard deduction level, and the earned-income tax credit for low-income taxpayers were increased. In conjunction with these changes, TRA86 also extended inflation indexing to the standard deduction and the earned-income credit." (footnote omitted)).

107. See I.R.C. §§ 32(j), 63(c) (2010).

108. As Professor Reed Shuldiner notes, since Congress is well aware of structural distortions and how to eliminate them, "the failure to index perhaps is more properly regarded as a political measure designed to phase out a particular benefit." Shuldiner, supra note 16, at 544. By extension, perhaps the failure to index is sometimes an intentional measure to automatically increase taxes without "the political chore of increasing tax rates." Aaron, supra note 89, at 26. Arguably, Congress's repeated failure to index the alternative minimum tax (AMT) under section 55 is more about a reluctance to sacrifice a growing revenue source than public policy. Congress originally enacted the AMT to prevent wealthy taxpayers with substantial economic income from using exclusions, deductions, and credits to avoid all of their tax liability. Congress amended the present minimum tax provisions applying to individuals with one overriding objective: no taxpayer with substantial economic income should be able to avoid all tax liability by using exclusions, deductions and credits. Although these provisions provide incentives for worthy goals, they become counterproductive when individuals are allowed to use them to avoid virtually all tax liability. The ability of high-income individuals to pay little or no tax undermines respect for the entire tax system and, thus, for the incentive provisions themselves. Therefore, Congress provided an alternative minimum tax which was intended to ensure that, when an individual's ability to pay taxes is measured by a broad-based concept of income, a measure which can be reduced by only a few of the incentive provisions, tax liability is at least a minimum percentage of that broad measure. The only deductions allowed, other than costs of producing income, are for important personal or unavoidable expenditures (housing interest, medical expenses and casualty losses) or for charitable contributions, the deduction of which is already limited to a percentage of adjusted gross income.

STAFF OF J. COMM. ON TAXATION, 97TH CONG., GEN. EXPLANATION OF THE REVENUE PROVISIONS OF THE TAX EQUITY AND FISCAL RESPONSIBILITY ACT OF 1982 17-18 (Comm. Print 1982). In 1970 approximately 20,000 individuals were subject to the add-on minimum
structural distortions do not significantly affect the taxation of interest-bearing instruments and accounts for the poor and middle class.

b. **Tax Base**

Inflation distorts the tax base by increasing taxpayers' nominal income and expenses, causing them to pay a different amount of tax than they would in the absence of inflation. In the case of debt, inflation distorts the tax base by increasing interest rates, which results in higher interest income and expense. In line with the Haig–Simons definition of income, this Article adopts the position that only real—not nominal—interest should be taxed.

i. **Real Interest and the Time Value of Money**

Interest is the price of money, and the real interest rate is the portion of that price which reflects the time value of money. Even in
the absence of inflation, a dollar today is worth more than a dollar tomorrow, and lenders should charge borrowers for real interest. For example, in a world without inflation or taxes, if an individual can lend $100 today in exchange for $105 next year, then the premium on today’s money in terms of next year’s money is $5, and the real interest rate is 5%.

ii. Inflation and the Fisher Equation

The Fisher equation, named for American economist Irving Fisher, estimates the relationship between nominal and real interest rates under inflation. If inflation is expected, then lenders should charge borrowers nominal interest, which is equal to the real interest rate plus the expected inflation rate. Since inflation erodes both principal and interest, the nominal interest rate should theoretically follow the equation:

\[ r_{\text{nominal}} = r_{\text{real}} + i_e + (r_{\text{real}} \times i_e) \]

where \( r_{\text{nominal}} \) is the nominal interest rate, \( r_{\text{real}} \) is the real interest rate, and \( i_e \) is the expected inflation rate. For example, if the real

---


112. As Professor Fisher explains, a dollar today is worth more than a dollar tomorrow, and a rate of interest is charged to reflect that premium, because of the subjective preference for present over future goods (which he calls “time preference” or “human impatience”) and the objective opportunity cost of forgoing other investments (which he calls “investment opportunity”). See id. at 61–98, 150–77; see also Chen, supra note 23, at 1380 (“Wholly independent of inflation, any rational person values a promise to pay a dollar next year less than a promise to pay a dollar right away. Wimpy’s offer to Popeye—‘I would gladly pay you Tuesday for a hamburger today’—is always a bad deal, which may explain why Popeye never accepted the bargain.”).

113. For the sake of simplicity, this Article ignores the effect of credit risk on interest rates.

114. MANKIW, supra note 88, at 89–90.

115. FISHER, RATE OF INTEREST, supra note 110, at 257–88 (analyzing the relationship between interest rates and inflation); FISHER, THEORY OF INTEREST, supra note 110, ch. II, § 4, at 42–44 (same); see also BREALEY & MYERS, supra note 110, at 558–61 (discussing and applying the Fisher equation); Yoram Margalioth, Note, The Case for Tax Indexation of Debt, 15 AM. J. TAX POL’Y 205, 239–43 (1998) (same); Shuldiner, supra note 16, at 619–21, 634–41 (same). One way to interpret this equation is to think of the amount represented by the first term, \( r_{\text{real}} \), as payment for the use of the principal, the amount of the second term, \( i_e \), as payment for the inflation-induced erosion to the principal, and the amount of the third term, \( (r_{\text{real}} \times i_e) \), as payment for the inflation-induced erosion to the real interest. Shuldiner, supra note 16, at 619 n.302.
interest rate is 5% and the expected inflation rate is 4%, then the nominal interest rate is: \( r_{\text{nominal}} = 0.05 + 0.04 + (0.05 \times 0.04) = 0.092 = 9.2\% \). If the rates of real interest and expected inflation are small, their product \((r_{\text{real}} \times i_{\text{e}})\) is negligible and can be ignored. This results in the classic Fisher equation:

\[
r_{\text{nominal}} = r_{\text{real}} + i_{\text{e}}
\]

For example, if the real interest rate is 5% and the expected inflation rate is 4%, then the nominal interest rate is: \( r_{\text{nominal}} = 0.05 + 0.04 = 0.09 = 9\% \). Based on this nominal rate, an individual can lend $100 today in exchange for $109 next year, which represents $100 of nominal principal and $9 of nominal interest. However, of this $9, only $5 is real interest. The remaining $4 actually constitutes an expected return of principal, because $104 is the expected real value of $100 in one year.

### iii. Income Taxes and the Tax-Adjusted Fisher Equation

In an economy like that of the United States, where inflation is expected and nominal interest income is subject to taxation, lenders should also charge borrowers a premium or gross-up to compensate for the income taxes they must pay on their nominal interest. To take taxes into account, the classic Fisher equation is divided by \((1 - t)\), where \(t\) is the lender’s marginal income tax rate. This results in the tax-adjusted Fisher equation:

\[
r_{\text{nominal}} = (r_{\text{real}} + i_{\text{e}})/(1 - t)
\]

For example, if the real interest rate is 5%, the expected inflation

---

116. In the previous example, the product of \(r_{\text{real}}\) and \(i_{\text{e}}\) is 0.002 or 0.2%. It should also be noted that if rates of real interest and expected inflation are compounded continuously, then the classic Fisher equation is exactly correct. See Fisher, Rate of Interest, supra note 110, app. V, § 3, at 361 ("At the limit, when the rates of interest and appreciation are reckoned continuously, the last term vanishes and the formula becomes simply \( j = i + a \).")

117. Id. at 360–61; Shuldiner, supra note 16, at 619–20.

118. \( S5 = 0.05 \times $100 \).

119. \( S104 = S100 \times (1 + 0.04) \).

120. See Fisher, Rate of Interest, supra note 110, at 257–88 (analyzing the relationship between interest rates and inflation); Fisher, Theory of Interest, supra note 110, ch. II, § 4, at 42–44 (same); Brealey & Myers, supra note 110, at 558–61 (discussing and applying the Fisher equation); Margalioth, supra note 115, at 239–43 (same); Shuldiner, supra note 16, at 634–41 (same).
rate is 4%, and the relevant marginal income tax rate is 25%, then the tax-adjusted nominal rate is: $r_{\text{nominal}} = (0.05 + 0.04)/(1 - 0.25) = 0.12 = 12\%$.\footnote{121}

\textit{iv. Who Bears the Burden of the Inflation Tax with Respect to Debt?}

If lenders and borrowers already adjust interest rates upward to reflect the cost of inflation and taxes as the Fisher equation suggests, then borrowers—not lenders—bear the burden of the inflation tax with respect to debt, such as interest-bearing instruments and accounts.\footnote{122} Every increase in the inflation rate should result in an equal and opposite increase in the nominal interest rate, and thus, preserve the lender’s principal and return.\footnote{123} However, experience tells us this is not the case. Negative interest rates, i.e., nominal interest rates below the inflation rate, have recurred in the United States and around the world.\footnote{124} If the rates of inflation and nominal interest were perfectly correlated, then the occurrence of negative interest rates would be virtually impossible.\footnote{125} Even hyperinflation would not result in negative interest rates; it would merely cause a corresponding spike in the nominal interest rate.

Professor Fisher himself acknowledged that the rates of inflation

\begin{footnotesize}
\begin{footnote}
 Note how the tax-adjusted nominal rate (12%) is higher than the nominal rate (9%) in these examples. Assuming a positive marginal income tax rate below 100%, the tax-adjusted nominal rate will always be higher than the nominal rate.
\end{footnote}
\begin{footnote} 
 Under the classic Fisher equation, the nominal interest rate increases by one percent for every one percent increase in the expected inflation rate. \textit{See supra} Part III.C.2.b.ii. This increase reflects an inflation premium to compensate the lender for the inflation-induced erosion of principal. \textit{Id.} Under the tax-adjusted Fisher equation, the nominal interest rate increases by more than one percent for every one percent increase in the expected inflation rate. \textit{See supra} Part III.C.2.b.iii. This greater increase reflects both an inflation premium and a gross-up for the income taxes a lender must pay on that premium. \textit{Id.}
\end{footnote}
\begin{footnote} 
 Under the tax-adjusted Fisher equation, the nominal interest rate increases by more than one percent for every one percent increase in the expected inflation rate. \textit{See supra} Part III.C.2.b.iii. This greater increase reflects both an inflation premium and a gross-up for the income taxes a lender must pay on that premium. \textit{Id.}
\end{footnote}
\begin{footnote} 
 See \textit{FISHER, RATE OF INTEREST}, supra note 110, ch. XIV, §§ 5–8, at 270–80. Fisher cited negative interest rates in London, New York, and Japan as support for the proposition “that money-interest was not adequately adjusted to the changes in purchasing power of money.” \textit{Id.} at 279; see also \textit{FISHER, THEORY OF INTEREST}, supra note 110, ch. II, § 4, at 43–44 (citing negative interest rates in the United States and Germany).
\end{footnote}
\begin{footnote} 
 If the rates of inflation and nominal interest were perfectly correlated, then negative interest rates could only occur if the time value of money were negative. A negative discount rate implies that a dollar tomorrow is worth more than a dollar today, which not only offends the fundamental principles of economics but common sense as well. Since negative discount rates are “always a bad deal” for lenders, they are rare in the real world. \textit{See Chen, supra note 23, at 1380} (explaining that negative discount rates are “always a bad deal” for lenders, while acknowledging that “[a]lthough most irrational, human beings on occasion appear to apply negative discount rates”).
\end{footnote}
\end{footnotesize}
and nominal interest are not perfectly correlated. Instead, he maintained that the nominal interest rate follows—and lags behind—the inflation rate. Professor Fisher attributed this lag to a “lack of foresight” on the part of lenders and borrowers, who underestimate the inflation rate, and hence, fail to sufficiently adjust the nominal interest rate. This reasoning is squarely on point with respect to low-income taxpayers, who are not in the business of estimating the inflation rate, let

126. Professor Fisher asserted that the rates of inflation and nominal interest are directly correlated, but he acknowledged that—particularly in the short-term—adjustments to the nominal interest rate lag behind inflation:

Three general facts have now been established: (1) Rising and falling prices and wages are directly correlated with high and low rates of interest; (2) The adjustment of interest to price-movements is inadequate; (3) This adjustment is more nearly accurate for long than for short periods.

These facts are capable of a common explanation expressing the manner in which the adjustment referred to takes place. Suppose an upward movement of prices begins. Business profits (measured in money) will rise; for profits are the difference between gross income and expense, and if both these rise, their difference will also rise. Borrowers can now afford to pay higher “money interest.” If, however, only a few persons at first see this, the interest will not be fully adjusted, and borrowers will realize an extra margin of profit after deducting interest charges. This raises an expectation of a similar profit in the future and this expectation, acting on the demand for loans, will raise the rate of interest. If the rise is still inadequate, the process is repeated, and thus by continual trial and error the rate approaches the true adjustment.

When a fall of prices begins, the reverse effects appear. Money profits fall. Borrowers cannot afford to pay the old rates of interest. If, through miscalculation, they still attempt to do this, it will cut into their real profits. Discouraged thus for the future, they will then bid lower rates.

Since at the beginning of an upward price-movement the rate of interest is too low, and at the beginning of a downward movement it is too high, we can understand not only that the averages for the whole periods are imperfectly adjusted, but that the delay in the adjustment leaves a relatively low interest at the beginning of an ascent of prices, and a relatively high interest at the beginning of a descent. And this is what we find to be true. That the adjustment is more perfect for long periods than for short seems to be because, in short periods, the years of non-adjustment at the beginning occupy a larger relative part of the whole period.

FISHER, RATE OF INTEREST, supra note 110, ch. XIV, § 11, at 284–85 (footnote omitted); see also FISHER, THEORY OF INTEREST, supra note 110, ch. II, § 4, at 43–44 (analyzing the correlation between the rates of inflation and interest).

127. FISHER, THEORY OF INTEREST, supra note 110, ch. II, § 4, at 43.

When the cost of living is not stable, the rate of interest takes the appreciation and depreciation into account to some extent, but only slightly and, in general, indirectly. That is, when prices are rising, the rate of interest tends to be high but not so high as it should be to compensate for the rise; and when prices are falling, the rate of interest tends to be low, but not so low as it should be to compensate for the fall.

Id.

128. Id. at 43–44; FISHER, RATE OF INTEREST, supra note 110, ch. XIV, § 11, at 284–85.
alone estimating it with any precision. Although the government publishes several indices that calculate past inflation rates, these measures of inflation "languish in obscurity," and we can hardly expect the average American to use them to estimate future inflation rates.\textsuperscript{129}

In addition, there is a second reason why certain nominal interest rates lag behind inflation. Some groups of lenders are so diffuse that they simply lack the market power to demand a higher interest rate to compensate them for the inflation tax. Low-income taxpayers who hold savings and checking accounts are lenders with respect to the multi-million and multi-billion dollar bank holding companies that maintain their accounts, but they have virtually no leverage to bargain for a higher interest rate on their savings. Even if low-income taxpayers expect inflation, they often lack the sophistication to seek out or design investment vehicles to hedge against it. And even if those taxpayers are aware of hedges against inflation, they often lack the liquidity to invest in them. Sometimes a checking account or Treasury Bill with a negative interest rate is their best available option.

Therefore, some lenders—in particular, those who lack the sophistication to predict inflation and the market power to demand a higher interest rate—bear the burden of the inflation tax. A majority of low-income taxpayers likely fall into this category. For them, the Fisher equation is a mere illustration of what they should—but cannot—charge borrowers.

\textit{v. Using the Ex Post Fisher Equation to Calculate Haig–Simons Interest Income}

Different versions of the Fisher equation are used in the ex ante and ex post analysis of interest rates.\textsuperscript{130} The ex ante Fisher equation, discussed above, looks forward to predict the nominal interest rate that a lender should charge given the expected inflation rate, whereas the ex post Fisher equation looks backward to calculate the real interest rate that a lender in fact charged given the actual inflation rate.\textsuperscript{131} Using the ex post Fisher equation, we can decompose the nominal interest rate into (i) the real interest rate, which represents Haig–Simons income, and (ii)
the actual inflation rate, which represents a return of principal. The equation becomes:

\[ r\text{[nominal]} = r\text{[real]} + i \]

or

\[ r\text{[real]} = r\text{[nominal]} - i \]

where \( r\text{[nominal]} \) is the nominal interest rate, \( r\text{[real]} \) is the real interest rate, and \( i \) is the actual inflation rate.\(^{132}\) For example, if the nominal interest rate is 9% and the actual inflation rate is 4%, then the real interest rate is: \( r\text{[real]} = 0.09 - 0.04 = 0.05 = 5\% \). Based on these rates, an individual who lends $100 for one year would receive $100 of nominal principal and $9 of nominal interest in return. However, of this $9, only $5 is Haig–Simons income.\(^{133}\) The remaining $4 is merely an inflation premium that constitutes a return of principal, because $104 is the expected real value of $100 in one year.\(^{134}\) Negative real interest rates occur when the actual inflation rate exceeds the nominal interest rate. For example, if the nominal interest rate is 9% and the actual inflation rate is 10%, then the real interest rate is: \( r\text{[real]} = 0.09 - 0.10 = -0.01 = -1\% \). Based on these rates, an individual who lends $100 for one year and receives $109 in exchange would actually have a loss of $1 under the Haig–Simons definition of income.

To calculate the real interest rate and determine a lender’s Haig–Simons interest income, the rates of nominal interest and actual inflation must be known. Since financial institutions and the government already report nominal interest to the IRS on the Form 1099-INT, Interest Income, requiring them to include the nominal interest rate on the same form would be virtually costless. The nominal interest rate is a known quantity. However, the actual inflation rate is harder to determine even with the benefit of hindsight.

There is no perfect measure of inflation. However, two federal agencies publish indices designed to measure the actual inflation rate in past periods.\(^{135}\) First, the U.S. Department of Labor’s Bureau of Labor

\(^{132}\) Id.

\(^{133}\) $5 = 0.05 \times 100.$

\(^{134}\) $104 = 100 \times (1 + 0.04).$

\(^{135}\) The private sector also publishes measures of inflation. One such measure is the Economist’s Big Mac Index, which compares the price of the McDonald’s Big Mac in many different countries. See The Big Mac Index, ECONOMIST (Dec. 22, 2001), http://www.economist.com/node/917156?story_id=E1_JTSTVG. Using data from the Big
Statistics computes the Consumer Price Index (CPI) on a monthly basis. The CPI is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. The broadest version of the CPI is the CPI for All Urban Consumers (CPI-U), which measures the change in the prices of all goods and services purchased by urban households. Second, the U.S. Department of Commerce's Bureau of Economic Affairs computes the Implicit Price Deflator (IPD) on a quarterly basis from its measurement of the Gross Domestic Product (GDP). Since the IPD is derived from the GDP, it tracks inflation with respect to the entire United States economy. In contrast, the CPI-U is a narrower measure that only tracks inflation with respect to the goods and services purchased by urban households. As a result, the IPD is the more accurate measure of inflation, but the CPI-U more closely approximates the inflation rate experienced by urban households, which only purchase a segment of the goods and services produced by the United States economy.

A quick comparison of the actual inflation rate from 1970 to 2010—as measured by either the CPI-U or IPD—with the interest rate paid on three-month Treasury Bills reveals that inflation

Mac Index, the Economist measures inflation by comparing the change in price of the popular hamburger from year to year. See id. This “Big Mac price inflation rate” is then compared to the CPI to determine whether it under- or over-reported the inflation rate. See The McFlation Index: Lies, Flame-Grilled Lies and Statistics, ECONOMIST (Jan. 27, 2011), http://api.economist.com/node/18014576; The Big Mac Index, supra. In addition, Google has announced its plans to use its vast database of web shopping data to publish a daily measure of inflation, called the Google Price Index or GPI. Robin Harding, Google to Map Inflation Using Web Data, FIN. TIMES (Oct. 11, 2010, 10:31 PM), http://www.ft.com/cms/s/2/deeb985e-d55f-1ldf-8e86-00144feabcd0.html#axzz1Cuw0Fwr.

136. MANKIW, supra note 75, at 226.
137. Id.
139. The Bureau of Economic Analysis computes both a “nominal” GDP in today’s dollars and a “real” GDP in inflation-adjusted dollars using a base year for reference. Id. The IDP is calculated by dividing the nominal GDP by the real GDP for the same period, and multiplying the quotient by 100. Id.
140. For a comprehensive analysis and comparison of the CPI and IPD see id. at 1402–29.
142. Table 1.1.9: Implicit Price Deflators for Gross Domestic Product, BUREAU ECON. ANALYSIS, http://www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=13&Freq=Qtr&FirstYear=2008&LastYear=2010 (last modified Sept. 29, 2011).
represented a substantial portion of the nominal interest rate in the United States over the past four decades. In fact, from 1970 to 2010, the CPI-U and IPD inflation rates represented an average of eighty percent and seventy percent, respectively, of the three-month Treasury Bill interest rate. During the same period, the CPI-U and IPD both showed that holders of three-month Treasury Bills experienced negative real interest rates thirteen times. Since demand deposits typically yield less interest than longer-term Treasury Bills, this data suggests that holders of those deposits experienced even lower real interest rates.

IV. ABBOLISH THE INFLATION TAX ON THE POOR AND MIDDLE CLASS

Calls to abolish the inflation tax have come in two forms. First, some politicians and taxpayers have labeled the tax as "unconstitutional." Politicians appear to do so as a means to raise awareness and drum up support for repealing the inflation tax, whereas taxpayers actually litigate the constitutionality of the inflation tax in the federal courts. Second, a diverse group within the tax bar—including the U.S. Treasury Department and prominent legal scholars—

144. See Table I in Appendix.
145. Id.
146. Id.
147. See, e.g., RON PAUL, GOLD, PEACE, AND PROSPERITY 41 (1981) ("Not only is inflation the result of the political demands of special interest groups, the career desires of politicians, and the ill-conceived motives of economists, it is also clearly unconstitutional."); PAUL, supra note 75, at 164–78.
148. There is "a seemingly endless series of tax cases challenging the federal monetary system." Birkenstock v. Comm'r, 646 F.2d 1185, 1186 (7th Cir. 1981). However, the argument that Congress lacks the constitutional authority to measure taxable income in nominal dollars without adjusting for inflation has been unanimously rejected by the federal courts. See, e.g., id. at 1186–87; Mathes v. Comm'r, 576 F.2d 70, 71 (5th Cir. 1978); Hellermann v. Comm'r, 77 T.C. 1361, 1364 (1981); Warren v. Comm'r, 45 T.C.M. (CCH) 240 (1982). The reasoning in Hellerman is representative. Relying on U.S. Supreme Court precedent that Congress has the constitutional authority to make treasury notes a legal tender, Legal Tender Cases, 79 U.S. 457, 529–54 (1870), abrogated on other grounds by Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302 (2002), and to establish a "uniform monetary system" for the payment of all debts, Norman v. Baltimore & O.R. Co., 294 U.S. 240, 316 (1935), the U.S. Tax Court upheld "the well-established doctrine that Congress has the power and authority to establish the dollar as a unit of legal value with respect to the determination of taxable income, independent of any value the dollar might also have as a commodity." Hellermann, 77 T.C. at 1364.
has repeatedly put forward legislative proposals to partially or fully index the Code to counter the effect of the inflation tax. As many scholars have noted, the inflation tax is undesirable because it is regressive and discourages savings and investment.

A. Legislative Proposals to Index the Code

The double-digit inflation of the late 1970s and early 1980s was followed by a slew of proposals to partially or fully index the Code. In response to President Reagan’s State of the Union address in January 1984, the U.S. Treasury Department, led by Secretary Donald T. Regan, published a report on tax simplification and reform in November 1984 that came to be colloquially known as “Treasury I.” This report proposed a comprehensive scheme to index debt, capital assets, depreciable property, and inventories. With respect to cash and cash

150. See, e.g., Chen, supra note 23, at 1385.
151. Inflation “discourages households . . . from holding assets in the form of cash or demand deposits and encourages them to hold other assets or to increase consumption.” Aaron, supra note 89, at 2; see also TREASURY I, supra note 149, at 111 (noting that “saving is discouraged” during an inflationary period). Since the inflation tax is regressive, it disproportionately discourages savings among the poor and middle class. While this suggests that the problem is small, because the savings of low-income taxpayers are substantially less than their wealthier peers, this effect is especially pernicious. Discouraging savings among low-income taxpayers not only reduces upward mobility in our society, but it reinforces bad spending habits that may persist when those taxpayers reach a higher marginal tax bracket. At a time when the government is trying to encourage a higher savings rate among private citizens, the need to address this distortion is more pressing than ever.
152. TREASURY I, supra note 149. President Reagan publicly asked Secretary Regan for a plan to simplify the Code in his State of the Union Address:

   To talk of meeting the present situation by increasing taxes is a Band-Aid solution which does nothing to cure an illness that has been coming on for half a century, to say nothing of the fact that it poses a real threat to economic recovery . . . .

   There is a better way: Let us go forward with an historic reform for fairness, simplicity and incentives for growth. I am asking Secretary Don Regan for a plan for action to simplify the entire tax code so all taxpayers, big and small, are treated more fairly. . . . I have asked that specific recommendations, consistent with those objectives, be presented to me by December 1984.

   Id. at iii (omissions in original). Proposals to adjust the Code for inflation predate the double-digit inflation of the late 1970s and Treasury I. For a collection of earlier proposals to index the Code see INFLATION AND THE INCOME TAX, supra note 67.
ABOLISH THE INFLATION TAX

equivalents, Treasury I proposed no reform to counter the effect of inflation. But with respect to debt, such as interest-bearing instruments and accounts, Treasury I proposed to exclude a fraction of interest receipts from income and to deny a deduction for a corresponding fraction of interest payments as "a rough surrogate for an exact inflation adjustment." The exclusion rate for interest income and expense was to be recalculated each year by the government according to the following equation:

\[ e = \frac{i[p]}{(i[p] + r[e][real])} \]

where \( e \) is the exclusion rate, \( i[p] \) is the past inflation rate over the previous year as measured by the CPI, and \( r[e][real] \) is the government’s estimate of the real interest rate. For example, if the past inflation rate is 2% and the government estimates that the real interest rate is 6%, then the exclusion rate is: \( e = \frac{0.02}{0.02 + 0.06} = 0.25 = 25\% \). Based on this exclusion rate, if taxpayer \( T \) receives $10 of interest from X Corporation, then \( T \) is entitled to exclude $2.50 of that interest from income. Likewise, X Corporation would be denied a deduction for the same $2.50 of interest paid.

Ultimately, Treasury I’s comprehensive scheme to index the Code was never enacted into law. Instead, the Tax Reform Act of 1986 built on the more targeted reforms of the Economic Recovery Tax Act of 1981. Collectively, the two Acts indexed the rate brackets, personal exemptions, standard deduction, and earned income tax credit. In each case, Congress was responding to a widely perceived injustice.

154. Id. at 114. Treasury I acknowledged that “[p]erfect adjustment of debt or interest for inflation would require that lenders receive an annual deduction for each outstanding loan equal to the product of the inflation rate and the principal of the loan.” Id. It rejected this approach, however, for being “extremely complicated.” Id.
155. $2.50 = 25\% \times $10.
156. This example uses a corporation as the borrower, because Treasury I only proposed to deny a fraction of the deduction for interest expense for individuals to the extent that their deduction exceeded the sum of their mortgage interest paid on their principal residence and $5000. Treasury I, supra note 149, at 114. Therefore, if the example used an individual as the borrower and that individual paid no more than ten dollars of interest that year, then none of the ten dollars would be subject to the exclusion rate because ten dollars is less than $5000.
158. See I.R.C. § 1(f) (2010).
160. See I.R.C. § 63(c) (2010).
Most notably, distortions to the rate structure of the Code were so commonly known and decried that the term "bracket creep" entered the common vernacular.

In response to Congress's failure to index the entire Code for inflation, a host of legal scholars called for sweeping reforms that were similar to the proposals in *Treasury I*. Professor Reed Shuldiner's article, *Indexing the Tax Code*, remains the most thorough articulation of these proposed reforms, and later articles relied heavily on his work. Like *Treasury I*, Professor Shuldiner discussed the implications of indexing debt, capital assets, depreciable property, and inventories.

With respect to cash and cash equivalents, Professor Shuldiner reached the same conclusion as *Treasury I*, and proposed no reform to counter the effect of inflation. Although Professor Shuldiner acknowledged that "[i]n theory, cash should be indexed in the same manner as any other asset," he argued that the "administrative difficulty of tracking and indexing cash holdings" makes indexing cash undesirable. He also argued that indexing cash is unnecessary because "taxpayers can protect themselves against inflationary losses from holding cash by reducing their cash balances."

With respect to debt, such as interest-bearing instruments and accounts, Professor Shuldiner proposed an annual inflation adjustment equal to the product of the actual inflation rate and the principal of each loan:

\[ a = i \times p \]

where \( a \) is the annual inflation adjustment, \( i \) is the actual inflation rate, and \( p \) is the principal amount of the loan in question. This inflation

---

162. Shuldiner, supra note 16.
163. See, e.g., Margalioth, supra note 115, passim (citing to Professor Shuldiner's works repeatedly); see also Mick, supra note 100, at 2051 n.† (thanking Professor Shuldiner for his guidance and support).
164. Shuldiner, supra note 16, at 548-66, 617-41. Professor Shuldiner also discusses the prospect of indexing wages and rent, and concludes in each case that they are current payments that are properly measured in current dollars and require no inflation adjustment. *Id.* at 588-95.
165. *Id.* at 587-88.
166. *Id.*
168. Professor Shuldiner briefly discussed whether the CPI or IPD is the more appropriate measure of the actual inflation rate for purposes of indexing the Code and concluded that the "choice of index does not seem critical." *Id.* at 547-48.
169. *Id.* at 617-41.
adjustment would effectively be a deduction to the lender and income to the borrower. For example, if the actual inflation rate is 2% and taxpayer $T$ receives $10 of interest on a $100 deposit with X Bank for one year, then $T$ is entitled to exclude $2 of that interest from income.\footnote{170} Likewise, X Bank would be denied a deduction for that same $2 of interest paid. In the event of negative interest rates, the inflation adjustment would exceed the amount of nominal interest. For instance, if the actual inflation rate in the above example were 12% instead of 2%, the inflation adjustment would be $12 while the amount of nominal interest remains only $10.\footnote{171} In that case, Professor Shuldiner posited that the "correct approach" would be to treat the lender as having zero interest income and a $2 loss, and the borrower as having zero interest expense and $2 of income.\footnote{172}

Despite Professor Shuldiner's influential proposals and the articles that followed, Congress has yet to adopt a comprehensive scheme to index the Code. Instead, it continues to adopt a piecemeal approach to counter the effect of inflation. There are three likely reasons for this rejection of comprehensive indexation. First, indexing the entire Code would be a major legislative feat that would require consensus on a legion of controversial issues. Should certain features of the Code be exempt from indexing? What measure of the actual inflation rate should be used in each case? What transitional and grandfather rules, if any, should apply? These and many more questions would need to be answered. If Congress were successful in passing comprehensive indexation, the result would be comparable to the sea changes in 1954 and 1986, which both resulted in an entirely new Code.\footnote{173} Second, indexing the entire Code is administratively complex. Although comprehensive indexation would result in a more accurate measure of income under the Haig–Simons definition, the administrative costs could outweigh that benefit for some assets and liabilities. Third, not all indexing is taxpayer-favorable, and special interests vehemently oppose

\footnote{170} $2 = 2\% \times 100$.  
\footnote{171} $12 = 12\% \times 100$.  
\footnote{172} See Shuldiner, supra note 16, at 621. Conceptually, inflation has reduced the principal of the loan, which is properly recognized as a loss to the lender and a gain to the borrower. \textit{See id.} As an alternative to his preferred approach, Professor Shuldiner posited that the excess of the annual inflation adjustment over the current amount of interest income and expense could be deferred until the final repayment of the loan, at which time, the deferred gain and loss could be recognized by the borrower and lender. \textit{Id.}  
indexing certain portions of the Code. In an inflationary environment, indexing deductions reduces those deductions and effectively increases income taxes. Few, if any, politicians are eager to draw the ire of their constituents by slashing popular deductions. The mortgage interest deduction is arguably the most notable of these sacred cows, and even Treasury I proposed to exempt that deduction from indexation.

For these reasons, this Article does not advocate a comprehensive scheme to index the Code along the lines of Treasury I or Professor Shuldiner’s proposals. Rather, this Article advances a narrow proposal in the spirit of the targeted reforms that succeeded in 1981 and 1986.

B. The Need for a Refundable Tax Credit to Counter the Effect of the Inflation Tax

Treasury I and Professor Shuldiner each proposed the equivalent of a deduction to counter the effect of inflation on interest-bearing instruments and accounts, and declined to propose any adjustment to counter the effect of inflation on cash and cash equivalents. To the extent that the deductions they proposed accurately measure the amount by which inflation creates phantom interest income, those deductions would exclude that income from taxation and eliminate inflation’s distortion of the tax base of debt. However, those deductions fail to address the decline in the purchasing power of money that is caused by inflation. As the classic Fisher equation demonstrates, a lender should charge the borrower for this decline. When this is the case, a lender is fully protected from the inflation tax under Treasury I and Professor Shuldiner’s proposals. However, even Professor Fisher concedes that changes in nominal interest rates lag behind the actual inflation rate because lenders fail to charge borrowers for the full amount of the decline in the purchasing power of money. This lag is particularly pronounced when lenders, such as low-income taxpayers, lack the sophistication to predict the actual inflation rate and the market power to

175. TREASURY I, supra note 149, at 114.
176. Although Treasury I and Professor Shuldiner often referred to their proposals as exclusions or inflation adjustments, those proposals are the mathematical equivalent of deductions.
177. In that case, the borrower would bear the burden of the inflation tax.
178. See FISHER, THEORY OF INTEREST, supra note 110, ch. XVIII, § 13, at 451.
demand a higher nominal interest rate. The problem of inflation-induced erosion is even more evident with respect to cash. As cash yields no return, holders of cash always bear the full cost of the decline in the purchasing power of money.

If inflation-induced erosion were akin to a natural disaster that harms an individual to the benefit of no one, then Treasury I and Professor Shuldiner’s proposals would be the appropriate response to inflation under the Haig–Simons definition of income. Their proposals eliminate inflation’s distortion of the tax base by recognizing the loss caused by inflation and giving taxpayers the equivalent of a deduction for that loss.

However, when inflation-induced erosion is caused by the government through loose monetary policy and deficit spending, that erosion represents a transfer of real wealth from the holders of dollars or assets denominated in dollars to the government. Today, the government is racking up record deficits to stimulate the economy and the money supply is skyrocketing. Whether this represents sound public policy remains to be seen. However, if the progressive nature of the federal income tax system is to be preserved, then the government cannot fund its stimulus via an inflation tax on the poor and middle class. Therefore, this Article takes the position that the government should do more than give the poor and middle class a deduction for losses caused by inflation—it should reimburse them for those losses with a refundable tax credit.

1. Refundable Versus Nonrefundable Tax Credits

However calculated, an inflation tax credit that is targeted to the poor and middle class should be structured as a refundable tax credit. Refundable tax credits allow a refund to the taxpayer when the amount of the credit exceeds her income tax liability, whereas nonrefundable tax credits are limited to reducing or eliminating that liability. Unless a tax credit is refundable, it is of little or no use to persons with little or no income tax liability. For this reason, the earned income tax credit

---

179. See supra notes 56–57 and accompanying text.
181. Gitterman, Gorham & Dorrance, supra note 180, at 246 n.2.
(EITC) is refundable.\textsuperscript{182} The EITC is designed to reduce poverty and incentivize participation in the workforce.\textsuperscript{183} If the EITC were nonrefundable, it would be ineffective as to both objectives, because the poor it targets often have no income tax liability.\textsuperscript{184} Likewise, if an inflation tax credit is nonrefundable, it would fail to fully compensate the poor and middle class for inflation. As a result, it would also fail to mitigate the inflationary disincentive to savings and investment among the poor and middle class. Empirical research has shown that the EITC is effective at incentivizing participation in the workforce.\textsuperscript{185} This Article hypothesizes that a refundable tax credit for inflation would be similarly effective in incentivizing savings and investment.

2. Inflation Tax Credit (ITC) for Interest-Bearing Instruments and Accounts

a. Calculating the ITC

With respect to interest-bearing instruments and accounts, this Article proposes an inflation tax credit (ITC) that is equal to the product of (i) the actual inflation rate and (ii) the average balance of a taxpayer’s eligible loans to financial institutions and the government over the course of one year:

\[ ITC = i \times p \]

where \( i \) is the actual inflation rate as measured by the CPI-U\textsuperscript{187} and \( p \) is

\textsuperscript{182} See I.R.C. §§ 32, 6401(b), 6402(a) (2010).


\textsuperscript{184} See id. at 28–29, 52–53.


\textsuperscript{186} Note how the tax credit is calculated in the same manner as Professor Shuldiner’s deduction. See supra Part IV.A.

\textsuperscript{187} This Article proposes to use the CPI-U as the measure of actual inflation for purposes of calculating the ITC. Although the IPD is the more accurate measure of inflation, the CPI-U more closely approximates the inflation rate experienced by urban households. Since the goal of the ITC is to ameliorate the effect of inflation on the poor and middle class,
the principal or average balance of the eligible loans. For example, if the actual inflation rate is 2% and taxpayer $T$ deposits $100 with X Bank for one year, then the ITC is: $\text{ITC} = 0.02 \times 100 = 2$. It should be noted that there is no need to gross-up the ITC for income taxes. While the tax-adjusted Fisher equation demonstrates that lenders should charge borrowers a gross-up to compensate for the income taxes that they must pay on the inflation premium they charge, a refundable tax credit—unlike nominal interest—generally does not increase income tax liabilities. If $T$ was paid $10 of interest in the above example, in both real\textsuperscript{188} and nominal\textsuperscript{189} terms, she has $10 of income and should be taxed on that amount.

b. Limitations on the ITC

The ITC for interest-bearing instruments and accounts is designed to counter the effect of inflation on the poor and middle class, much like the EITC is designed to reduce poverty among the working poor. As with the EITC, eligibility for the ITC must be restricted to maximize the dollar-for-dollar efficiency of the credit. Moreover, since the ITC provides a benefit to the recipient of interest without imposing a detriment on the payor, an unrestricted ITC could present considerable opportunities for tax arbitrage.\textsuperscript{190} To address these concerns, this Article proposes three limits on the ITC for interest-bearing instruments and accounts.

i. Eligible Tax Bracket

Only taxpayers in or below the twenty-five percent marginal tax bracket should be eligible for the ITC.\textsuperscript{191} In 2011, this would restrict the
ITC to individuals with taxable incomes less than or equal to $83,600 ($139,350 for married couples). Although the definitions of poor and middle class remain fluid and contentious, this restriction should include any reasonable definition of the poor while not extending the credit to the truly wealthy. In addition, using the marginal tax brackets under Code section 1 has several built-in advantages. First, the brackets are already indexed for inflation, so there is no need to revisit the appropriate cutoff for the ITC each year. Second, the brackets already contemplate what income levels should be treated as equivalent between individuals, married couples, and heads of household. Third, the brackets are based on taxable income, which means that they contemplate all of Congress’s public policies in granting various groups of taxpayers other credits, deductions, exemptions, and exclusions.

**ii. Eligible Amount of Loan Principal**

The average balance of eligible loans used to calculate the ITC should be limited to the lesser of (i) the actual average balance or (ii) the upper limit of the twenty-five percent marginal tax bracket. This limit

---

193. This limit is well above the poverty thresholds determined by the U.S. Department of Commerce’s Census Bureau. See Preliminary Estimate of Weighted Average Poverty Thresholds for 2010, U.S. CENSUS BUREAU (Jan. 14, 2011), http://www.census.gov/hhes/www/poverty/data/threshld/index.html (providing preliminary estimates of poverty thresholds for 2010: one person, $11,136; two people, $14,220; three people, $17,378; and four people, $22,314). For the poverty guidelines determined by the U.S. Department of Health and Human Services, see Annual Update of HHS Poverty Guidelines, 76 Fed. Reg. 3637, 3638 (Jan. 20, 2011), available at http://aspe.hhs.gov/poverty/11fedreg.shtml (setting poverty levels for persons in the continental United States at follows: one person, $10,890; two people, $14,710; three people, $18,530; and four people, $22,350). However, this limit is well below the unofficial threshold for the middle class set by President Barack Obama during his 2008 presidential campaign, when he promised not to raise taxes on U.S. households “making less than $250,000 a year.” Lori Montgomery & Shailagh Murray, Senate Republicans Criticize Taxes in Health-Care Bill; Finance Committee’s Measure Would Break Obama Campaign Vow, They Say, WASH. POST, Oct. 2, 2009, at A3.
would prevent a taxpayer with a low income, but high net worth, from abusing the ITC. Presumably, such a taxpayer is already sophisticated and liquid enough to adapt her behavior to inflation. Moreover, this limit would enjoy the aforementioned advantages of keying off the marginal tax brackets under Code section 1.

iii. Eligible Loans

Only standard bank products, such as demand deposits and certificates of deposit, and government debt, such as Treasury Bills and excess federal income tax withholding, should constitute eligible loans and increase the average balance used to calculate the amount of the ITC. This limit has two distinct purposes. First, financial institutions and the government already report nominal interest to the IRS on the Form 1099-INT, and requiring them to track and report average balances on the same form would only be an “incremental burden.” Second, this limit would prevent the use of exotic or countercyclical investments that already compensate the holder for inflation. For example, if taxpayers were able to invest in an instrument that simulated the return on real estate or a foreign currency and also claim the ITC, then they could potentially be twice compensated for the same inflation-induced erosion.

3. Standard ITC for Cash and Cash Equivalents

Not all of the poor and middle class invest their savings in interest-bearing instruments and accounts. Some hold their savings in cash because they consume their income on a month-to-month or paycheck-to-paycheck basis. Others seek to avoid bank charges or simply distrust the financial system. Regardless of the reason, low-income taxpayers who hold their savings in cash are the most vulnerable to the inflation tax because cash yields no return. These taxpayers would be ineligible for the ITC for interest-bearing instruments and accounts.

197. In substance, excess federal income tax withholding is a loan from taxpayers to the government.
198. Shuldiner, supra note 16, at 629–30 (“From the bank’s perspective, indexing would require the incremental burden of tracking average balances.”).
199. See supra Part I.
200. Id.
201. Id.
202. Id.
because they have no eligible loans in the form of bank deposits or government debt.

Professor Shuldiner advocated against indexing cash because of the "administrative difficulty of tracking and indexing cash holdings." This Article agrees that tracking cash holdings would be prohibitively difficult from an administrative standpoint. However, this Article proposes to allow taxpayers who are otherwise eligible for the ITC for interest-bearing instruments and accounts (i.e., taxpayers who are in or below the twenty-five percent marginal tax bracket) to elect between substantiating the average balance of their eligible loans and taking a standard credit amount. Although the standard ITC could be a fixed amount, such as the standard deduction under Code section 63(c), this article proposes that the standard ITC be calculated as follows:

\[ \text{Standard ITC} = i \times \left( \frac{g_i}{12} \right) \]

where \( i \) is the actual inflation rate as measured by the CPI-U and \( g_i \) is the taxpayer's gross income under Code section 61. In essence, the standard ITC would assume that even taxpayers who deal exclusively in cash maintain an average balance of one month's worth of their gross income throughout the course of the tax year. For example, if the actual inflation rate is 10% and taxpayer \( T \)'s gross income for the year is $48,000, then \( T \)'s standard ITC is: \( \text{Standard ITC} = 0.10 \times \left( \frac{48,000}{12} \right) = \$400 \).

In sum, the ITC would reimburse the holders of interest-bearing instruments and accounts for the full economic cost of inflation, whereas the standard ITC would use a rough proxy for that cost to reimburse the holders of cash and cash equivalents who are unbanked and unable to substantiate their exposure to inflation. By limiting eligibility for the ITC to the poor and middle class, the efficiency of the credit is maximized, opportunities for tax arbitrage are limited, and the groups most vulnerable to the inflation tax are protected.

---

204. In other words, taxpayers could elect between substantiating their eligible loans and taking a standard credit amount in much the same way as they now can elect between substantiating and itemizing their deductions and taking a standard deduction under Code section 63(c).
CONCLUSION

In response to the credit crisis and the recession that followed, the Federal Reserve Board is "printing" trillions of dollars to fund deficit spending and stimulate the economy. Whether the stimulus is sound public policy remains to be seen, but increasing the money supply to finance it has increased the likelihood of higher inflation in the near future. The loose monetary policy and deficit spending of the 1970s were followed by years of double-digit inflation and the most severe collapse of financial institutions since the Great Depression. Today’s deficit spending dwarfs that of the 1970s, and the inflation that may follow could eclipse the impact of the credit crisis itself.

Inflation erodes the purchasing power of money and distorts some income tax liabilities upward, which in turn discourages savings and investment. Although the wealthy can and do relocate their savings to tax-favored investment vehicles that hedge against inflation, the poor and middle class generally cannot. Even the most sophisticated low-income taxpayer is unlikely to have the volume of wealth or liquidity required to invest in effectual hedges against inflation. As a result, the redistributive impact of inflation is regressive.

In the age of central banks and fiat currency, inflation is no longer the equivalent of a natural disaster for which the government should allow a casualty loss deduction. When inflation is caused by loose monetary policy and deficit spending, it results in a transfer of real wealth from the holders of dollars or assets denominated in dollars to the government and, in normative terms, may be conceptualized as a tax. Since the government causes inflation, and indeed, benefits from it, the government is directly responsible for its pernicious effects on the poor.
and middle class. Therefore, equity demands more than a deduction for inflation—it demands a refundable tax credit to reimburse the poor and middle class for the full economic cost of inflation.216

APPENDIX

TABLE I: INTEREST RATES AND INFLATION RATES SINCE 1970217

<table>
<thead>
<tr>
<th>YEAR</th>
<th>THREE-MONTH TREASURY BILL INTEREST RATE</th>
<th>CPI INFLATION RATE</th>
<th>INTEREST RATE LESS INFLATION</th>
<th>IPD INFLATION RATE</th>
<th>INTEREST RATE LESS INFLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>6.39</td>
<td>5.72</td>
<td>0.67</td>
<td>5.27</td>
<td>1.12</td>
</tr>
<tr>
<td>1971</td>
<td>4.33</td>
<td>4.38</td>
<td>-0.05</td>
<td>5.00</td>
<td>-0.67</td>
</tr>
<tr>
<td>1972</td>
<td>4.06</td>
<td>3.21</td>
<td>0.85</td>
<td>4.31</td>
<td>-0.25</td>
</tr>
<tr>
<td>1973</td>
<td>7.04</td>
<td>6.22</td>
<td>0.82</td>
<td>5.55</td>
<td>1.49</td>
</tr>
<tr>
<td>1974</td>
<td>7.85</td>
<td>11.04</td>
<td>-3.19</td>
<td>9.08</td>
<td>-1.23</td>
</tr>
<tr>
<td>1976</td>
<td>4.98</td>
<td>5.76</td>
<td>-0.78</td>
<td>5.74</td>
<td>-0.76</td>
</tr>
<tr>
<td>1977</td>
<td>5.26</td>
<td>6.50</td>
<td>-1.24</td>
<td>6.37</td>
<td>-1.11</td>
</tr>
<tr>
<td>1978</td>
<td>7.18</td>
<td>7.59</td>
<td>-0.41</td>
<td>7.02</td>
<td>0.16</td>
</tr>
<tr>
<td>1979</td>
<td>10.05</td>
<td>11.35</td>
<td>-1.30</td>
<td>8.32</td>
<td>1.73</td>
</tr>
<tr>
<td>1980</td>
<td>11.39</td>
<td>13.50</td>
<td>-2.11</td>
<td>9.12</td>
<td>2.27</td>
</tr>
<tr>
<td>1982</td>
<td>10.60</td>
<td>6.16</td>
<td>4.44</td>
<td>6.10</td>
<td>4.50</td>
</tr>
<tr>
<td>1983</td>
<td>8.62</td>
<td>3.21</td>
<td>5.41</td>
<td>3.95</td>
<td>4.67</td>
</tr>
<tr>
<td>1984</td>
<td>9.54</td>
<td>4.32</td>
<td>5.22</td>
<td>3.76</td>
<td>5.78</td>
</tr>
<tr>
<td>1985</td>
<td>7.47</td>
<td>3.56</td>
<td>3.91</td>
<td>3.03</td>
<td>4.44</td>
</tr>
<tr>
<td>1986</td>
<td>5.97</td>
<td>1.86</td>
<td>4.11</td>
<td>2.21</td>
<td>3.76</td>
</tr>
<tr>
<td>1987</td>
<td>5.78</td>
<td>3.65</td>
<td>2.13</td>
<td>2.90</td>
<td>2.88</td>
</tr>
<tr>
<td>1989</td>
<td>8.11</td>
<td>4.82</td>
<td>3.29</td>
<td>3.78</td>
<td>4.33</td>
</tr>
<tr>
<td>1990</td>
<td>7.50</td>
<td>5.40</td>
<td>2.10</td>
<td>3.86</td>
<td>3.64</td>
</tr>
<tr>
<td>1991</td>
<td>5.38</td>
<td>4.21</td>
<td>1.17</td>
<td>3.54</td>
<td>1.84</td>
</tr>
<tr>
<td>1992</td>
<td>3.43</td>
<td>3.01</td>
<td>0.42</td>
<td>2.37</td>
<td>1.06</td>
</tr>
<tr>
<td>1993</td>
<td>3.00</td>
<td>2.99</td>
<td>0.01</td>
<td>2.21</td>
<td>0.79</td>
</tr>
<tr>
<td>1994</td>
<td>4.25</td>
<td>2.56</td>
<td>1.69</td>
<td>2.11</td>
<td>2.14</td>
</tr>
</tbody>
</table>

216. See supra Part IV.B.
217. Consumer Price Index for All Urban Consumers (CPI-U), supra note 141; Selected Interest Rates: Annual 3-Month Treasury Bill (Secondary Market), supra note 143; Table 1.1.9: Implicit Price Deflators for Gross Domestic Product, supra note 142.
### Table: Inflation Rate Comparisons

<table>
<thead>
<tr>
<th>Year</th>
<th>Three-Month Treasury Bill Interest Rate</th>
<th>CPI Inflation Rate</th>
<th>IPD Inflation Rate</th>
<th>Interest Rate Less Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>5.49</td>
<td>2.83</td>
<td>2.08</td>
<td>3.41</td>
</tr>
<tr>
<td>1996</td>
<td>5.01</td>
<td>2.95</td>
<td>1.90</td>
<td>3.11</td>
</tr>
<tr>
<td>1997</td>
<td>5.06</td>
<td>2.29</td>
<td>1.77</td>
<td>3.29</td>
</tr>
<tr>
<td>1998</td>
<td>4.78</td>
<td>1.56</td>
<td>1.13</td>
<td>3.65</td>
</tr>
<tr>
<td>1999</td>
<td>4.64</td>
<td>2.21</td>
<td>1.47</td>
<td>3.17</td>
</tr>
<tr>
<td>2000</td>
<td>5.82</td>
<td>3.36</td>
<td>2.17</td>
<td>3.65</td>
</tr>
<tr>
<td>2001</td>
<td>3.4</td>
<td>2.85</td>
<td>2.26</td>
<td>1.14</td>
</tr>
<tr>
<td>2002</td>
<td>1.61</td>
<td>1.58</td>
<td>1.62</td>
<td>-0.01</td>
</tr>
<tr>
<td>2003</td>
<td>1.01</td>
<td>2.28</td>
<td>-1.27</td>
<td>2.15</td>
</tr>
<tr>
<td>2004</td>
<td>1.37</td>
<td>2.66</td>
<td>-1.29</td>
<td>2.84</td>
</tr>
<tr>
<td>2005</td>
<td>3.15</td>
<td>3.39</td>
<td>-0.24</td>
<td>3.34</td>
</tr>
<tr>
<td>2006</td>
<td>4.73</td>
<td>3.23</td>
<td>1.50</td>
<td>3.26</td>
</tr>
<tr>
<td>2007</td>
<td>4.36</td>
<td>2.85</td>
<td>2.94</td>
<td>1.42</td>
</tr>
<tr>
<td>2008</td>
<td>1.37</td>
<td>3.84</td>
<td>-2.47</td>
<td>2.19</td>
</tr>
<tr>
<td>2009</td>
<td>0.15</td>
<td>-0.36</td>
<td>0.92</td>
<td>-0.77</td>
</tr>
<tr>
<td>2010</td>
<td>0.14</td>
<td>1.64</td>
<td>-1.50</td>
<td>0.95</td>
</tr>
</tbody>
</table>