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HES PRESIDENTIAL ADDRESS: THE GLOBAL ECONOMIC CRISIS IN LIGHT OF THE HISTORY OF INTERWAR MONETARY ECONOMICS

BY

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I. INTRODUCTION

The global financial crisis that began with the credit crunch of August 2007 and the subsequent deep economic recession in Europe and the United States shook confidence that such crises were a thing of the past, or of the developing world. It was no longer possible to assume that the growing volume of liquidity and the increasingly sophisticated understanding of financial technique and macroeconomic management had disposed of such problems (see Lo 2012 for a "Twenty-One-Book Review" of works on the crisis). *The Economist* (2009b) ran a cover showing a book entitled *Modern Economic Theory* melting away, with the caption "Where it went wrong—and how the crisis is changing it." Renegade insiders such as Paul Krugman (2009) asked "How Did the Economists Get It So Wrong?" Queen Elizabeth II, at a ribbon-cutting ceremony at the London School of Economics, tactlessly asked the economists why they had not predicted the crisis. Initial European *schadenfreude* about a peculiarly American crisis (Fannie Mae and Freddie Mac, Bear Stearns and Lehman Brothers, AIG and budget sequestration) did not survive the misfortunes of Irish, Scottish, Swiss, Icelandic, and Cypriot banks, Irish and Spanish housing bubbles, or Greek and Portuguese sovereign debt.

The shock of the global economic crisis sparked renewed interest in what past economists such as Irving Fisher, Ralph Hawtrey, Friedrich Hayek, and John Maynard Keynes had to say about crises and depressions back in the era before the possibility of such events in advanced industrial countries was (temporarily) forgotten, as well as in such pioneers of modern finance as Charles Ponzi.[1] While, to some, extant names

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[1]As early as March 2007, the Buttonwood column of *The Economist* (2007) was entitled "Ponzificating: Is the Financial System a Confidence Trick?" and cited a research note entitled "Have we arrived at a Minsky moment?" by George Magnus of UBS, a bank soon to write off more than US$50 billion of toxic assets.

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from the past are used as decoration for current positions that would be taken anyway[2] (or as mnemonics to help students remember theories), works by serious, knowledgeable scholars found readers among the general educated public. Examples include, for Keynes, Roger Backhouse's and Bradley Bateman's *Capitalist Revolutionary: John Maynard Keynes* (2011); Bateman, Toshiaki Hirai, and Maria Cristina Marcuzzo's *The Return to Keynes* (2010); Peter Clarke's *Keynes: The Rise, Fall, and Return of the 20th Century's Most Influential Economist* (2009); and Robert Skidelsky's *Keynes: The Return of the Master* (2009); while Irving Fisher has been rediscovered by *The Economist* ("Irving Fisher: Out of Keynes's Shadow," 2009) and *Bloomberg Businessweek* ("Economists Evoke the Spirit of Irving Fisher," 2012), and Nicholas Wapshott examines *Keynes Hayek: The Clash that Defined Modern Economics* (2012)—a clash also fought out in a rap video (see also Ron Paul 2009, pp. 50–52, and *The Economist* 2010b on Hayek and von Mises). Judge Richard Posner of the University of Chicago Law School and the US Court of Appeals, leader of Chicago law and economics, was driven by the crisis to the extremity of actually reading Keynes' *General Theory* (1936), and was startled to find the book intelligible, sensible, and insightful (Posner 2008, 2009a, 2009b).[3]

The discovery that the issues considered by past economists may again be important is a recurring phenomenon—although one resisted by many economists, as indicated by the sardonic title of Mark Blaug's "No History of Ideas, Please, We're Economists" (2001). The balance-of-payments crises and inflation of the late 1960s and the 1970s brought to the fore matters much studied by earlier monetary economists that had been neglected by the Keynesian "New Economics" of the 1960s. Wesley Mitchell's statistical approach to business cycles as a problem of time series analysis, without too much *a priori* theorizing, has been reborn, with more up-to-date statistical techniques, in Christopher Sims' vector autoregressions. Sometimes, early insights, even well-known ones, lacked influence until some way was found to render them analytically tractable: Paul Krugman (1990, p. 4) holds that "The long dominance of Ricardo over Smith—of comparative advantage over increasing returns—was largely due to the belief that the alternative was necessarily a mess. In effect, the theory of international trade followed the perceived line of least mathematical resistance." The decreasing role of money in transactions[4] led Michael Woodford to adopt the book title *Interest and Prices* (2003) in recognition of Knut Wicksell's analysis of a pure credit economy in his *Interest and Prices* (1898)—and in contrast to the title of Don Patinkin's *Money, Interest and Prices* (1965). Some acquaintance with the heritage of economics may serve to remind economists that the topics and approaches covered in their first year in graduate school do not constitute the entire universe of potentially relevant topics and insightful approaches. As David Laidler (2010, p. 40, n1) remarked,

[2]Citation of the classics in policy debates has often been compared to the role of cavalry in battle: to lend tone to what would otherwise be an unseemly brawl.

[3]In addition to renewed interest in what past economists such as Keynes or Hayek had to say about crises, there has also been much attention to the economic history of past crises, as with Carmen Reinhart and Kenneth Rogoff's *This Time Is Different* (2009), and Barry Eichengreen (2012).

[4]*The Economist* (2013) reports that the Bank of Japan intends to nearly double the monetary base over two years, in the hope of bringing the inflation rate up to 2% a year, a far cry from any simple linear relation between the monetary base and the price level.

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"there used to be history of thought courses where students might encounter earlier ideas that might at some time turn out to have renewed relevance at the subject's shifting frontier."

Today, I propose to look at how the writings of some interwar monetary economists resonate in the present crisis, notably Keynes' "The Consequences to the Banks of the Collapse of Money Values" (in his *Essays in Persuasion*, 1931) and Fisher's "Debt-Deflation Theory of Great Depressions" (1933),[5] and to show how historians of economic thought have contradicted the textbook caricatures of these economists—caricatures that would not offer any interest, insight, or inspiration to an economist trying to understand the present crisis or anything else—caricatures that David Laidler (2004, p. 424) has termed "the often stark contradictions between the actual history of particular ideas and modern myths about them." I will argue that the responses of central banks to the onset of the crisis in 2007 and 2008 were informed by the fact that Ben Bernanke's doctoral dissertation and Mervyn King's European Economic Association presidential address were both about the debt-deflation of the early 1930s, with attention to Fisher (1933) (see Bernanke 1981, 1983, 1995, 2000, 2007; King 1994; and *Manias, Panics and Crashes* by Bernanke's teacher Charles Kindleberger 1978). My students can tell you, as many of you already know from many past conferences, that I speak about Keynes and Fisher on even slight provocation (some of my students might say even without provocation). They can also tell you of my interest in past economists who make important contributions but have been so neglected that they are not even caricatured in textbooks; for example, the early generations of women economists such as the monetary economist Mary Theresa Rankin (1935), Keynes' leading Scottish critic, or the pre-World War I business cycle theorist Minnie Throop England (1912) (see Dimand 1999), or Canada's pioneering Keynesian, Mabel Timlin (1942) (see Dimand 2008). Historians of economic thought have produced fine scholarship on the lives, ideas, and contested legacies of Keynes, of Fisher, of Hayek, of the Chicago quantity theory tradition, of Wicksell and the Stockholm School,[6] yet many more of their contemporaries, and thus the context of their work, are neglected. Even Ralph Hawtrey, whose concept of a credit deadlock would be a relevant goad to thought about the current situation, is not even a name to most contemporary macroeconomists, despite the valuable works of Eric Davis (1980, 1981) and Patrick Deutscher (1990).[7] David Laidler (1999, 2004a) has rightly emphasized that many economists, such as D. H. Robertson (see Robertson 1926, Fletcher 2000) and Frederick Lavington

[5]In this paper, I draw on Dimand (1994a) on Fisher (1933), and Dimand (2011a) on Keynes (1931). See also Dimand, Mundell, and Vercelli, eds. (2010b).

[6]For example: Moggridge (1992) and Skidelsky (1983–2000) on Keynes; Barber (2005), Allen (1993), and Loef and Monissen (1999—especially Barber's chapter) on Fisher; Laidler (1991) on Fisher, Marshall, and Wicksell; Caldwell (2005) on Hayek; Patinkin (1981) on Chicago; and Ohlin (1981) and Patinkin (1982) on the Swedes.

[7]According to Murray Rothbard (1972, p. 159), "Ralph Hawtrey proved to be one of the evil geniuses of the 1920's" because he "advocated international credit control by Central Banks to achieve a stable price level" rather than declining prices. Recently, David Glasner has posted interesting blogs about Hawtrey in his preparation for his article on Hawtrey in the *Elgar Companion to John Maynard Keynes* (ed. Dimand and Harald Hagemann, in preparation). David Laidler (2004b) and Roger Sandilands (2010) discuss Hawtrey's concept of a credit deadlock.

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(1912), contributed in the interwar period[8] to the emergence of macroeconomics out of monetary economics and business-cycle analysis (see also my *New Palgrave* articles on the history of macroeconomics and of monetary economics in Durlauf and Blume 2008, and the extensive reprints in Dimand 2002; for example, Kalecki's writings in vol. V), but Keynes (1931, 1936, ch. 19) and Fisher (1933), Hawtrey's credit deadlock, and Hayek (1945) have particular resonance in the current impasse.

II. MR. KEYNES AND THE BANKERS

In August 1931, in the wake of the Austrian and German banking crises, a month before Britain left the gold standard, and a year and a half before the US "Bank Holiday," John Maynard Keynes (1931, pp. 168, 176, 178) wrote,

> To-day, in many parts of the world, it is the serious embarrassment of the banks which is the cause of our greatest concern. … Banks and bankers are by nature blind. Some of them have even welcomed the fall of prices towards what, in their innocence, they have deemed the just and 'natural' and inevitable level of pre-war, that is to say, the level of prices to which their minds became accustomed in their formative years. In the United States some of them employ so-called 'economists' who tell us even to-day that our troubles are due to the fact that prices of some commodities and some services have not fallen enough, regardless of what should be the obvious fact that their cure, if it could be realised, would be a menace to the solvency of their institution[9]. A 'sound' banker, alas! is not one who foresees danger and avoids it, but one who, when he is ruined, is ruined in a conventional and orthodox way along with his fellows, so that no one can really blame him.… The present signs indicate that the bankers of the world are bent on suicide.… It is necessarily part of the business of a banker to maintain appearances and to profess a conventional respectability which is more than human. Lifelong practices of this kind make them the most romantic and the least realistic of men. It is so much the stock-in-trade [of bankers] that their position should not be questioned, that they do not even question it themselves until it is too late. Like the honest citizens they are, they feel a proper indignation at the perils of the wicked world in which they live,—when the perils mature; but they do not foresee them.… So, if they are to be saved, it will be, I expect, in their own despite.

Keynes noted the incentives for herd behavior among bankers (more recently, especially investment bankers), that even a small risk of being wrong when one's peers are right outweighs the consequences of being wrong when the others are also wrong.

Reflecting in December 1930 on "The Great Slump of 1930," Keynes (1931, pp. 138–139) warned that

[8]Regarding earlier contributions, Forget and Manouchehri (1988) discuss "Keynesian" features of the late classical writings of J. S. Mill and J. E. Cairnes, and Dimand (2013) compares David Hume and Irving Fisher on the quantity theory and monetary neutrality in the short and long run. Herbert Foxwell's *Irregularity of Employment and Fluctuations of Prices* (1886) is noteworthy—especially since Knut Wicksell attended some of Foxwell's lectures at University College, London, in 1886.

[9]Benjamin M. Anderson, Jr. of the Chase National Bank was one such bank economist. His writings have been reprinted by the Liberty Fund.

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> neither the restriction of output nor the reduction of wages serves in itself to restore equilibrium.… Moreover, even if we were to succeed eventually in re-establishing output at the lower level of money-wages appropriate to (say) the pre-war level of prices, our troubles would not be at an end. For since 1914 an immense burden of bonded debt, both national and international, has been contracted, which is fixed in terms of money. Thus every fall of prices increases the value of the money in which it is fixed.… In such a situation it must be doubtful whether the necessary adjustments could be made in time to prevent a series of bankruptcies, defaults, and repudiations which would shake the capitalist order to its foundations.

Fear of a possible "series of bankruptcies, defaults, and repudiations" would lead to a scramble for liquidity and further deflation.

In his Harris Foundation Lectures at the University of Chicago on "An Economic Analysis of Unemployment" in June 1931 (Keynes 1971–89, vol. XIII, pp. 343–367), Keynes returned to the issue of inside debts fixed in money terms, to reject a proposal that had "attracted much attention" by Oliver M. W. Sprague of the Harvard Business School that "manufactured costs and prices should come down to equilibrium level with agricultural prices rather than that we should try to get agricultural prices up to an equilibrium level with the higher prices of manufactured goods" (Keynes 1971–89, vol. XIII, p. 359). Sprague, formerly economic adviser to Benjamin Strong of the Federal Reserve Bank of New York, was chief economic adviser to Montagu Norman of the Bank of England from 1930 to 1933, and then, for six months in 1933, financial adviser and executive assistant to the Acting Secretary of the US Treasury, Dean Acheson, and became president of the American Economic Association in 1937—so even if his name is not widely recognized now, his policy views were then worth debating. Keynes warned that "national debts, war debts, obligations between the creditor and debtor nations, farm mortgages, real estate mortgages—all this financial structure would be deranged by the adoption of Dr Sprague's proposal. A widespread bankruptcy, default, and repudiation of bonds would necessarily ensue. Banks would be in jeopardy. I need not continue the catalogue. And what would be the advantage of having caused so much ruin? I do not know. Dr. Sprague does not tell us that" (1971–89, vol. XIII, p. 361).

Throughout Keynes' *General Theory*, he stressed the importance of wage bargains being made in money terms. In Chapter 19, "Changes in Money-Wages," he returned to his 1930 and 1931 stress on debts fixed in money terms: "if the fall of wages and prices goes far, the embarrassment of those entrepreneurs who are heavily indebted may soon reach the point of insolvency—with severely adverse effects on investment" (1936, p. 264). Chapter 19 made clear that stability of the money wage rate was not just a simplifying assumption or empirical regularity for Keynes, but a policy recommendation. In his Cambridge lectures on "A Monetary Theory of Production," Keynes emphasized that a 30% drop in US money wages from 1929 to 1933 had not eliminated mass unemployment: "the enormous cut in money wages in the early 1930s in the United States did not have the effect on employment one would expect" (Keynes, lecture on 16 October 1933, in Rymes 1989, p. 89; see also Dimand 1988). In Chapter 2 of *The General Theory*, Keynes (1936, p. 9) held that "It is not very plausible to assert that unemployment in the United States was due either to labour obstinately refusing to accept a reduction of money-wages or to its obstinately demanding a real wage

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beyond what the productivity of the economic machine was capable of furnishing."[10] A *falling* price level is contractionary, both through the rising real value of inside debt with the associated increase in perceived risk of bankruptcy and default and through the reduced opportunity cost of holding real money balances (Keynes 1936, ch. 19; Minsky 1975, 1982; Tobin 1975, 1980), even though a *lower* price level has an expansionary wealth effect through the larger value of the small quantity of outside money (Patinkin 1965).

There used to be a fashion for proving that Keynes added nothing to macroeconomics by showing that someone else had recommended public works spending (as, indeed, Jean-Baptiste Say had urged public works to ease the transition after the Napoleonic Wars). Yet, after reading a book by A. C. Pigou in 1937, Keynes wrote to Richard Kahn: "many thanks for sending me a copy of the Prof.'s new book. As in the case of Dennis [Robertson], when it comes to practice there is extremely little between us. Why do they insist on maintaining theories from which their own practical conclusions cannot possibly follow? It is a sort of Society for the Preservation of Ancient Monuments" (1971–89, vol. XIV, p. 259). J. Ronnie Davis (1971) demonstrated that John Maurice Clark and Paul Douglas already understood the multiplier analysis in 1934 and 1935, the year before Keynes' *General Theory* was published—but neglected to mention that in their publications in 1934 and 1935, both cited Kahn (1931) and Keynes' pamphlet *The Means to Prosperity* (1933), that their understanding of what came to Keynesian economics did not go beyond the parts already in Keynes (1933), or that Clark entitled the section of his 1935 article on this analysis "The Kahn–Keynes Approach" (Davis 1971, pp. 47–60 on Douglas, pp. 65–84 on Clark; Dimand 1988, pp. 183–184; Clark reprinted in Dimand 2002, vol. II, pp. 506–512). In his foreword to Davis (1971), Gordon Tullock announced that "Davis demonstrates that there was really very little new in the book [*The General Theory*]." Basing himself on Davis (1971), Mark Blaug (1991, p. 178n) sternly rebuked Keynes for failing to acknowledge Douglas in 1934 and Clark in 1935 as having anticipated the income-expenditure theory of *The General Theory*—although Douglas and Clark did no more than use the analysis they found in Keynes' *The Means to Prosperity* (1933), which, unlike Davis (1971) or Blaug (1991), they cited.[11]

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[10]Nonetheless, David Romer's *Advanced Macroeconomics* (4th ed., 2012, p. 245), a textbook written by a leading New Keynesian economist, identifies "Keynes's Model" with the unexplained "assumption that the nominal wage is completely unresponsive to current-period developments (at least over some range)." All mainstream macroeconomics textbooks share this identification of Keynes' *General Theory* with nominal wage rigidity unexplained by anything except perhaps money illusion. These textbooks do not mention Keynes' Chapter 2 argument that concern with relative wages could produce downward stickiness of money wages without any irrational money illusion if there are staggered contracts, although they all discuss John Taylor's arguments in articles in 1979 and 1980 that concern with relative wages could produce downward stickiness of money wages without any irrational money illusion if there are staggered contracts. Fisher, not Keynes, wrote a book on *The Money Illusion* (1928). *The Economist* (2010a) was too optimistic about how the crisis has changed the teaching of macroeconomics (see also Blanchard et al. 2012 and Colander et al. 2009).

[11]See Eric Davis (1980) and Dimand (1994b) on the contributions of Kahn, Hawtrey, L. F. Giblin, James Meade, and Jens Warming to the derivation of a finite-valued multiplier with leakages into savings, taxes, and imports, and Dimand (2002, vol. II) for reprints of the relevant papers and pamphlets by Hawtrey, Giblin, Kahn, Warming, Meade, Keynes (1933), and Clark.

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The financial crisis that began in August 2007 differs in several respects from the one considered by Keynes in August 1931. Rather than most of the world's being subject to the fixed exchange rates of the gold exchange standard, which allowed transmission of monetary shocks (see Fisher 1935), exchange-rate adjustment is unavailable only among the members of the euro zone. Instead of both asset prices and the general price level's declining, only asset prices collapsed in the present crisis, as it turned out that housing prices in the US and Britain, in Ireland and Spain, had not reached, to use Irving Fisher's phrase about a comparable situation, "a permanently high plateau." The collapse of the US subprime housing market, devastating the collateral underlying Collateralized Debt Obligations (CDOs), caused a scramble for liquidity, rising risk premiums, and the freezing of some credit markets, including, until governments intervened with sweeping guarantees and credit injections, the interbank overnight market. Only massive central bank actions prevented deflation of the price level, which was widely feared, from happening—and among the central bankers, Bernanke and King were influenced by the example of the early 1930s and by what Keynes and Fisher had written then.

Backhouse and Bateman (2011), Clarke (2009), Davidson (2009), Skidelsky (2009), and many others have drawn attention to the relevance of Keynes in the present crisis, particularly *The General Theory*'s emphasis on the role of effective demand and, especially for Paul Davidson, the dependence of investment decisions on fundamental uncertainty rather than on insurable risk.[12] N. Gregory Mankiw, the New Keynesian economist who dismissed *The General Theory* (in Mankiw 1992) as an "outdated book," found (Mankiw 2008, p. B4) that "Although Keynes died more than a half-century ago, his diagnosis of recessions and depressions remains the foundation of modern macroeconomics. His insights go a long way toward explaining the challenges we now confront."[13] To this literature I would add a particular emphasis on Keynes' *Essays in Persuasion*, especially "The Consequences to the Banks of the Collapse of Money Values" and "The Slump of 1930," on his Harris Foundations Lectures in Chicago in 1931, and on Chapter 19 of *The General Theory*, as well as on his lectures at Cambridge (reconstructed in Rymes 1989 and examined in Dimand 1988).

III. FISHER AND THE CRASH

Notoriously, Irving Fisher was wrong about the stock market in 1929. His repeated statements in October 1929 that "Stock prices appear to have reached a permanently high plateau" were succinct and memorable, and were followed by an 85% decline in

[12]The distinction between risk and uncertainty is due to Frank Knight's *Risk, Uncertainty and Profit* (1921), as well as Keynes' *Treatise on Probability* (1921), Chapter 12 (on long-period expectations) of *The General Theory* (1936), and his reply to four *QJE* reviews (1937), although it was not prominent in Keynes' economic writings of the 1920s. See Truman Bewley (1998) on Knightian uncertainty. Limited knowledge is also central to Hayek (1945) and the Austrian school, although with an emphasis on the limited knowledge available to guide government intervention in the economy rather than the emphasis of Keynes and Post-Keynesians such as Davidson (1991) and Minsky on the limited knowledge available to guide investment decisions.

[13]I first encountered Mankiw's 2008 *New York Times* article in Posner (2009, p. 287).

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the Dow-Jones industrial average.[14] He made a fortune of ten million dollars in the boom, of which he then lost eleven million in the Crash. As John Kenneth Galbraith (1977, p. 192) remarked, "This was a sizable sum, even for an economics professor." These disasters, and the rise of Keynes, cost Fisher his professional audience as well as his public reputation. According to Patrick Deutscher (1990, pp. 189–194), Fisher was the most-cited monetary economist in the years from 1920 to 1930, cited in thirty English-language journal articles on subjects that would now be considered part of macroeconomics, more than three times as many as the nine articles that cited the tenth-ranked Keynes (of *A Tract on Monetary Reform*, 1923). Thanks to *A Treatise on Money* (1930), Keynes was the most-cited macroeconomist from 1931 to 1935, followed by D. H. Robertson and Hayek, with Fisher and Hawtrey tied for fourth place. By Deutscher's count, Fisher tied with Ragnar Frisch, Simon Kuznets, and Gunnar Myrdal for sixteenth most-cited macroeconomist from 1936 to 1939, with only a tenth as many citations as Keynes, and Deutscher found no citations at all of Fisher in articles in monetary economics and macroeconomics from 1940 to 1944. Even Fisher's Yale colleagues (excepting only James Harvey Rogers) lost patience with Fisher's urging of monetary expansion and "reflation" upon the Roosevelt Administration, with fifteen now-forgotten Yale professors, led by Ray B. Westerfield,[15] Fred R. Fairchild, Hudson B. Hastings, and J. E. McDonough, signing a petition for a prompt return to the gold standard, which appeared in the *New York Times* (December 16, 1933, as cited by Barber 2005, p. 53) together with a letter from Fisher making the opposite argument.

It was particularly unfortunate that Fisher lost the attention of the economics profession, the public, and even his Yale colleagues just when he had something interesting to say about what had gone wrong with his predictions and with the economy. He presented his new analysis in a series of lectures at Yale, in Congressional testimony, in his article "The Debt-Deflation Theory of Great Depressions" (1933b) in the first volume of *Econometrica* (in lieu of a presidential address to the Econometric Society), and a book for the general public on *Booms and Depressions* (1932), supported by a twenty-nine-country empirical study presented to the International Statistical Institute on "Are Booms and Depressions Transmitted Internationally through Monetary Standards?" (1935) (see Dimand 1994a, 2003). Fisher argued that the large volume of inside debt of fixed nominal value made the financial system, and that increasing

[14]In his American Statistical Association presidential address, Fisher (1933a, p. 10) claimed "with due humility" that he had predicted in September 1929 that the stock market was at its peak and there would be recession, just not how deep or lasting the recession would be. He did not mention whether he had said anything noteworthy in October 1929. The stunned incredulity of his audience was appropriate. Ellen McGrattan and Edward Prescott (2004) claim that "Irving Fisher Was Right" about stock prices in 1929, based on price/earnings ratios (with an exclamation mark at the end of the title of the NBER working-paper version). More plausibly, Kathryn Dominguez, Ray Fair, and Matthew Shapiro (1988) argue that the Great Depression following the stock crash was not predictable from any data series, even with modern econometric techniques, but resulted from unforeseeable mistakes in fiscal and monetary policy.

[15]In his 1947 *American Economic Review* obituary of Fisher, Westerfield regretted that "His liberal use of mathematics and physics not only delimited his audience but also led to many misunderstandings, for it minimized the psychological factor and his similes did not fit the facts too well" (reprinted in Dimand, ed. 2007b, vol. 3, p. 380). Except for Rogers, Fisher's Yale colleagues neither understood nor, at least from the 1920s, respected his work.

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perceived risk of bankruptcy and default had sparked a self-defeating scramble for liquidity. He backed up his argument empirically by showing that the fixed exchange rates of the gold exchange standard transmitted monetary contraction, price level declines, and depression between countries, a finding later rediscovered without knowledge of Fisher's work (e.g., Temin 1989, Eichengreen 1992).

Few economists read the *Bulletin of the International Statistical Institute* and few then read *Econometrica*. Only two economics journals bothered to review *Booms and Depressions*, both dismissively and both choosing reviewers at the very start of their careers. In a single-paragraph review in the *Economic Journal*, Harold Barger of University College, London, found the book "something of a disappointment. What little theory it contains is in no way novel, while Professor Fisher's contentment with price stability as a policy, and emphasis on over-indebtedness rather than over-investment as the root of all evil, are not encouraging." In *Economica*, Ralph Arakie, then a student at LSE, felt that Fisher's "considerations are perhaps besides the point, since a stable price level of final commodities for a 'long' period cannot be achieved by banking policy, if only for the reason that banks are not the sole controllers of the volume of effective money" (both reviews are reprinted in Dimand, ed., 2007b, vol. 3, pp. 105–106).

The recovery of Fisher's reputation within the economics profession, which received its greatest impetus from Bill Barber's 1997 edition of Fisher's works, began with *Ten Economic Studies in the Tradition of Irving Fisher* (Fellner et al. 1967),[16] nine papers by Yale professors on topics relevant to Fisher's interests (such as Herbert Scarf on the computation of general equilibrium, and James Tobin and William Brainard on asset market equilibrium and Tobin's *q* theory of investment) plus Paul Samuelson of MIT on Fisher and capital theory, but avoiding discussion of Fisher's view of booms and depressions as a "dance of the dollar." Interest in Fisher on macroeconomic stabilization was piqued by the rediscovery of Fisher (1926), reprinted in the *Journal of Political Economy* in 1973 as "Lost and Found: I Discovered the Phillips Curve—Irving Fisher." But, given vivid and painful memories of stock prices having supposedly reached a permanently high plateau, few economists or historians engaged seriously with Fisher's debt-deflation theory of Great Depressions from the 1970s to the mid-1990s (and, as far as I know, none before the 1970s). Still, the handful who paid attention to Fisher (1933b) are of interest out of proportion to their numbers, because they were Hyman Minsky (1975, 1982), Charles Kindleberger (1978), James Tobin (1980), Ben Bernanke (1983, 1995, 2000), and Mervyn King (1994), who jointly and severally fit the cliché of needing no introduction.[17]

[16]Herbert Richard Runyon (1959) wrote a University of Michigan PhD dissertation on Fisher's economics, supervised by Kenneth Boulding, but no publication resulted, and Runyon pursued a career at the Federal Reserve Bank of San Francisco rather an academic career. Runyon's aim was "to construct a Fisherian system which would encompass his writings on value, capital theory and interest" (1959, p. iv). Michael Hudson (1985, p. 38, n16) cites his own unpublished 1977 University of Leeds PhD dissertation on "Irving Fisher's plan for the stabilization of the dollar."

[17]Among Nobel laureates other than Tobin, Maurice Allais, Milton Friedman, and Paul Samuelson were also important in the revival of interest in Fisher's economics, but not with regard to the debt-deflation theory of depressions. See Brad DeLong (2000) on Fisher (1896) and Fisher with Brown (1911) as the beginnings of modern macroeconomics, works that transformed the quantity theory of money (with its long history going back to Jean Bodin and David Hume) into a tool for analyzing price, output, and interest fluctuations.

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IV. MODERN CENTRAL BANKERS AND THE PAST

Ben Bernanke (1981, 1983) wrote his doctoral dissertation at MIT about the effects of the breakdown of financial intermediation in the US that culminated in the "Bank Holiday" of March 1933. Friedman and Schwartz (1963) had examined the contraction of the US money supply by one third from 1929 to 1933, as a scramble for liquidity raised both currency/deposit and reserve/deposit ratios, and the consequences of this monetary contraction for the price level and national income. Bernanke's thesis argued that the debt-deflation process also imposed economic costs through a second channel, the freezing of the system of financial intermediation. He wrote his dissertation just after the publication of *Manias, Panics and Crashes* by MIT economic historian Charles Kindleberger (1978), a work deeply informed by the writings (not otherwise well known among mainstream economists) of Hyman Minsky (see Kindleberger 1978, pp. 17–27, 33, 86–87, on Minsky's model of systemic fragility, euphoria, and Ponzi finance): "I was helped by having Martin Mayer, the financial writer, call my attention to the work of Hyman Minsky, of Washington University in St. Louis, which I had not known, but who had published a model of economic and financial instability beautifully applicable to historical data" (Kindleberger, 1991, p. 195).

Bernanke (1995; 2000, p. 24) remarked in his Money, Credit and Banking Lecture that "the idea of debt-deflation goes back to Irving Fisher (1933b). Fisher envisioned a dynamic process in which falling asset and commodity prices created pressures on nominal debtors, forcing them into distress sales of assets, which in turn led to further price declines and financial difficulties." Because markets for financial claims are incomplete, the role of the financial sector is important, and is disrupted by debt-deflation. Bernanke (1983; 2000, pp. 42–43) acknowledged that Minsky and Kindleberger had argued "for the inherent instability of the financial system, but in so doing have had to depart from the assumption of rational behavior." In a footnote, he added, "I do not deny the possible importance of irrationality in economic life; however, it seems that the best research strategy is to push the rationality postulate as far as it will go"—a very proper sentiment for someone seeking to have a dissertation accepted at MIT and articles accepted by the *American Economic Review*.

Mervyn King (1994, p. 429) emphasized Keynes (1931): "Keynes was primarily interested in the consequences of a collapse of asset values for the process of financial intermediation. In this respect it was Keynes not Fisher who led the way in stressing the role of the cost of financial intermediation in business cycles." Nonetheless, King (1994, pp. 422, 431) chose to "not pursue in this lecture" the effect of debt -deflation on financial intermediation, but instead to argue that "It is the change in the distribution of net worth from debtors to creditors that leads to a fall in demand and output.... The key insight is that provided by Tobin (1980), namely that the marginal propensity to spend from wealth differs between debtors and creditors."

At Milton Friedman's ninetieth birthday party in 2002, Ben Bernanke, newly appointed to the board of governors of the Federal Reserve System, wittily remarked, "Regarding the Great Depression.… We did it. We're very sorry … we won't do it again" (*The Economist* 2008b, p. 83). Friedman and Anna Schwartz (1963) had held the Federal Reserve board ultimately responsible for what they termed "The Great Contraction" of the US money supply in the 1930s. Indeed, Eugene Meyer, then head of the Federal Reserve board, expressed surprise when Irving Fisher drew his attention

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to the sharp decline in currency plus demand deposits, a time series that Meyer was not in the habit of tracking (Cargill 1992). So, in August 2007, Bernanke, a year into his chairmanship of the board of governors, was acutely aware of who would be held responsible for doing it again if the "Minsky question," *Can "IT" Happen Again?* (Minsky 1982), received an affirmative answer. As Marshal Joffre said of the Battle of the Marne, "I do not know if I won it, but I know who would have been responsible if it had been lost" (Taylor 1967, p. 294). Bernanke moved promptly to keep the system of financial intermediation liquid. In contrast, Mervyn King, governor of the Bank of England, whose presidential address on debt-deflation had focused on redistribution of wealth rather than on threats to financial intermediation, did not take such action until forced to by the run on Northern Rock.[18] The different responses of Bernanke and King in August 2007 matched the different lessons they had drawn from reading Fisher (1933), Keynes, Kindleberger, Minsky, and Tobin, and thinking about the debt-deflation of the early 1930s.

Guided by Bernanke's studies of the debt-deflation of the early 1930s, the Federal Reserve acted vigorously from August 2007 to inject liquidity into the financial system to prevent any repeat of the breakdown of financial intermediation. In contrast, the European Central Bank (ECB), also guided by lessons drawn from historical trauma, actually raised the discount rate through the first year of the crisis. For all that the first three heads of the ECB have been Dutch, French, and Italian, the mindset of the ECB is that of the Bundesbank, also located in Frankfurt. The Bundesbank draws its history lessons from the German hyperinflation of the early 1920s, when the German mark fell to one trillionth of its pre-war value (see Keynes 1923, Fisher 1928), not from the Great Depression of the 1930s (see *The Economist* 2008a on the Bundesbank's historical museum and its interactive computer game demonstrating that intervention causes hyperinflation). No one blames German central bankers for the Great Depression. Bernanke and the Federal Reserve recall Eugene Meyer's failure to know that the US money supply had contracted by a third. The ECB and the Bundesbank remember in their nightmares Reichsbank president Rudolf Havenstein, alarmed by the decline in real money balances M/P (as the opportunity cost of holding money soared), promising that with thirty-eight new high-speed printing presses, the Reichsbank would print enough money to catch up with the price level. History, and the choice of lessons to draw from history, matter for how central bankers and others make decisions (Dimand 2011b; Dimand and Koehn 2010, 2012; Irwin 2013; Bernanke 2013).

V. OTHER VOICES

I have focused on how what Irving Fisher (1933) and John Maynard Keynes (1931; 1936, ch. 19) had to say in the 1930s is of interest today. Equally, I could have concentrated on Ralph Hawtrey's concept of a credit deadlock, in which high-risk

[18]The chairman of Northern Rock was the zoologist and global climate change sceptic Matt Ridley (Viscount Ridley), later the author of *The Rational Optimist: How Prosperity Evolves* (2010, p. 9): "The experience has left me mistrustful of markets in capital and assets, yet passionately in favor of markets in goods and services." In contrast, the Treasury Select Committee drew attention to Ridley's lack of "relevant financial qualifications" and his acceptance of the "reckless business strategy" undertaken by Northern Rock's executives (Grayshott 2013, p. 26).

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premia prevent borrowing even at near-zero interest rates, or on Friedrich Hayek's discussion of limited knowledge and overinvestment, or Dennis Robertson on forced saving. Much excellent scholarship has already been done on these economists, and there is more to be said about each of them. But there are also many other research subjects that have not yet been examined, and I offer here a couple of examples to suggest that some of the "lesser names" among interwar macroeconomists were interesting people.

The foremost Scottish critic of Fisher, Hawtrey, and especially Keynes on managed money and price-level stabilization between the wars was Mary Theresa Rankin, lecturer in political economy at the University of Edinburgh, where she had received her DPhil under the direction of J. Shield Nicholson. *Monetary Opinions and Policy 1924–34* (1935) collected ten of her papers, with a foreword by F. W. Ogilvie, president and vice-chancellor of the Queen's University of Belfast. Firmly opposed to "inflationists," she also opposed stabilization of the general price level as likely to impede adjustment of relative prices. Her 1935 collection includes a critique of the Macmillan Report and a response in *The Scotsman* to Keynes' *Times* articles that became *The Means to Prosperity*. She continued to engage with Keynes' ideas; for example, with a *Scotsman* article on the British and American monetary plans leading to the Bretton Woods conference (Rankin 1943). And yet, she is invisible, double-marginalized as a woman and a Scottish economist in a literature that sees the history of monetary economics in interwar Britain as bounded by the triangle of Cambridge, London, and Oxford. Of the ten papers in Rankin (1935), three were published in *The Scotsman*, two others presented to the Scottish Society of Economists, two more were lectures at the University of Edinburgh, and the others were addresses to the Insurance Society of Edinburgh, the Chartered Institute of Secretaries, and the Institute of Bankers in Scotland. In other words, as far as the history of monetary economics has been concerned, she might never have written or spoken anything about economics. A short obituary of Dr. Rankin appeared in the *Scottish Journal of Political Economy* in 1962, there is a Mary Theresa Rankin Prize in Political Economy at the University of Edinburgh, and a Brock University graduate, Chantel Mundell, has written an entry for the next edition of *A Biographical Dictionary of Women Economists*. Otherwise, her vigorous polemics against Keynes have faded away.

Mabel Timlin was the department secretary in the Economics Department of the University of Saskatchewan in 1935 when Benjamin Higgins arrived in Saskatoon from LSE in 1935 for a one-year teaching appointment, bringing a copy of Robert Bryce's summary of Keynes' lectures, which Bryce had presented in Hayek's LSE seminar. So, a year before *The General Theory* was published, Timlin began work in Saskatoon on a University of Washington PhD dissertation[19] (spending summers at the University of Washington, and one six-month leave). Her dissertation, accepted in 1940 (when she became an assistant professor at the University of Saskatchewan), became her book *Keynesian Economics* (1942), published in her fiftieth year. Franco Modigliani acknowledged the influence of Timlin (1942) on his IS-LM presentation of

[19]Her thesis was supervised by the considerably younger Raymond Mikesell. Timlin did not take any economics courses at the University of Saskatchewan, on the grounds that she had learned more economics on her own than was taught in the courses.

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Keynes (see Dimand 2008). Timlin's *Keynesian Economics* included two chapters (reprinted in Dimand 2002) that used innovative diagrams to show the "shifting equilibrium" of a dynamic version of Keynes' system, diagrams drawn to her specifications by the University of Toronto mathematician H. S. M. (Donald) Coxeter, the subject of *King of Infinte Space: Donald Coxeter, the Man Who Saved Geometry* (Reynolds 2006)[20] and a major influence on the artist M. C. Escher. Timlin went on to become a full professor, first female president of the Canadian Political Science Association (which then included economics), first woman in the humanities or social sciences elected a Fellow of the Royal Society of Canada, and a member of the executive committee of the American Economic Association, although the University of Saskatchewan (which now hosts an annual Timlin Lecture) always paid her less than her male colleagues.

VI. THE CONTRIBUTION OF HISTORIANS OF ECONOMIC THOUGHT

Although Fisher was known within the economics profession for the Fisher equation relating real and nominal interest (Fisher 1896) and the Fisher diagram showing optimal consumption-smoothing over two periods (Fisher 1907), when I came to studying the history of economics in the 1970s, textbooks represented his monetary economics by the equation of exchange MV = PT, with a constant velocity of circulation V and the price level P simply moving in tandem with the quantity of money M, and the wider public knew him only as the man who was wrong about the stock market. Even within the economics profession, when I presented a paper entitled "Irving Fisher, J. M. Keynes and the Transition to Modern Macroeconomics" (Dimand 1995) at an ASSA session of the North American Economics and Finance Association, the association wrote to Irving Fisher care of me, assuming that the unfamiliar name was my coauthor rather than part of the title of the paper and that he should buy a membership. In the early 1990s, more than one anonymous referee took the time to kindly explain to me that it pointless to write about Fisher on economic fluctuations, since all he did was assume neutrality of money and a constant velocity of circulation in MV = PT.

Ralph Hawtrey was identified with the "Treasury view" opposed to the income-expenditure theory of Keynes and Kahn. Research by Eric Davis (1980, 1981), Patrick Deutscher (1990), and David Glasner (currently in progress) reveal a much more interesting figure, a key figure in the formulation of income-expenditure theory and someone whose concept of a credit deadlock (the disruption of financial markets by increased risk premiums in a debt-deflation) is of current relevance.

A decade earlier, most economists thought of Keynes in terms of the multiplier and the Hicks–Hansen IS-LM diagram, someone whose message was important enough for policy to land him on the cover of *TIME* magazine in 1965 but trivial for economic theory (just adding an arbitrarily sticky money wage rate to the classical model), and even, Paul Samuelson asserted, someone who did not understand his own theory until

[20]So Timlin's work is at the intersection of my interests in Keynesian economics, economics in Canada, the history of women in economics, and the history of mathematicians interacting with economists and economic topics.

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he saw it translated by others into the IS-LM diagram and equations.[21] Hayek was known for his support of free markets rather than his insights into the market process. At least for these three cases, the situation has changed.

Donald Moggridge's edition of Keynes (1971–89), T. K. Rymes' reconstruction of Keynes' lectures (Rymes 1989), and William Barber's edition of Fisher (1997) made substantial selections of primary sources available to scholars. Donald Moggridge and Robert Skidelsky on Keynes, and Bruce Caldwell on Hayek, produced major intellectual biographies. Robert Loring Allen's biography of Fisher, which he did not live to complete and revise, also made a valuable contribution. Robert Clower and Axel Leijonhufvud revived theoretical re-examination of Keynes by insisting on taking seriously Keynes' claim to reject Say's Law of Markets and to show the possibility of macroeconomic coordination failure, not just slow adjustment to full employment but failure of automatic adjustment (Leijonhufvud 1968, and the papers collected in Clower 1984 and Leijonhufvud 1981). Hyman Minsky (1975, 1982) and James Tobin (1975, 1980) drew on Fisher (1933b), Keynes (1936, ch. 19), and, in Minsky's case, Keynes (1931) to argue that inside debt denominated in money could make the economy unstable in the face of large shocks and that greater wage and price flexibility would just make the system less stable. Minsky argued further that financial instability was endogenous, as prolonged stability would lead financial institutions into riskier behavior. These interpretations of Keynes remain controversial, which is a change from the consensus that Keynes' message was unambiguously known but theoretically trivial.

The global economic and financial crisis that began in August 2007 not only drew attention to the heritage of what economists had written in the past about issues and problems that turned out to be of more than antiquarian interest, enlarging the range of frameworks within which to analyze the economy, but also serves to highlight the contribution of historians of economic thought in showing that there was much more to Keynes or Fisher or Hawtrey or Hayek than the textbook caricatures—and much more remains to be done, as historians of thought move beyond the famous names.

REFERENCES

Allen, Robert Loring. 1993. *Irving Fisher: A Biography*. Malden, MA: Blackwell.

Backhouse, Roger E., and Bradley W. Bateman, eds. 2006. *The Cambridge Companion to Keynes*. Cambridge, UK: Cambridge University Press.

Barber, William J. 2005. "Irving Fisher of Yale." In Robert W. Dimand and John Geanakoplos, eds., *Celebrating Irving Fisher*. Malden, MA: Blackwell, pp. 43–55.

Bateman, Bradley W., Toshiaki Hirai, and Maria Cristina Marcuzzo, eds. 2010. *The Return to Keynes*. Cambridge, MA: Harvard University Press.

[21]It was Keynes himself who, in a lecture in December 1933, first presented a four-equation model of his theory, differing from later IS-LM models by having "the state of the news" as an explicit argument in the consumption, investment, and liquidity preference functions (Rymes 1989; Dimand 1988, pp. 181–182). Keynes did not use this formulation in *The General Theory*, either because he was dissatisfied with it or was following Alfred Marshall's advice to use mathematics as an aid to thought but then translate the results into plain English (Dimand 2007a). David Champernowne and W. Brian Reddaway, authors of the first published representations of Keynes' theory as a simultaneous equations model, had both attended and taken notes on Keynes' lecture in December 1933.

https://doi.org/10.1017/S105383721300045X Published online by Cambridge University Press

Bernanke, Ben S. 1981. "Bankruptcy, Liquidity, and Recession." *American Economic Review: AEA Papers and Proceedings* 71: 155–159.

Bernanke, Ben S. 1983. "Nonmonetary Effects of the Financial Crisis on the Propagation of the Great Depression." *American Economic Review* 73: 257–276, reprinted in Bernanke (2000).

Bernanke, Ben S. 1995. "Money, Credit and Banking Lecture: The Macroeconomics of the Great Depression: A Comparative Analysis." *Journal of Money, Credit and Banking* 27: 1–28, reprinted in Bernanke (2000).

Bernanke, Ben S. 2000. *Essays on the Great Depression*. Princeton, NJ: Princeton University Press.

Bernanke, Ben S. 2007. Interviewed in Randall E. Parker, *The Economics of the Great Depression*. Cheltenham, UK, and Northampton, MA: Edward Elgar Publishing, pp. 52–67.

Bernanke, Ben S. 2013. *The Federal Reserve and the Financial Crisis*. Princeton, NJ: Princeton University Press.

Bewley, Truman. 1998. "Knightian Uncertainty." In Donald P. Jacobs, Ehud Kalai, and Morton I. Kamien, eds., *Frontiers of Research in Economic Theory: The Nancy L. Schwartz Memorial Lectures, 1983–1997*. Cambridge, UK: Cambridge University Press, pp. 71–81.

Blanchard, Olivier J., David Romer, Michael Spence, and Joseph E. Stiglitz, eds. 2012. *In the Wake of the Crisis: Leading Economists Reassess Economic Policy*. Cambridge, MA: MIT Press.

Blaug, Mark. 1991. "Second Thoughts on the Keynesian Revolution." *History of Political Economy* 23: 171–192.

Blaug, Mark. 2001. "No History of Ideas, Please, We're Economists." *Journal of Economic Perspectives* 15: 145–164.

Bloomberg Businessweek. 2012. "Economists Evoke the Spirit of Irving Fisher: Once Disgraced, the Yale Economist Figured out the Great Depression." January 16, pp. 13–14.

Caldwell, Bruce. 2005. *Hayek's Challenge: An Intellectual Biography of F. A. Hayek*. Chicago: University of Chicago Press.

Cargill, Thomas F. 1991. "Miscellany: Irving Fisher Comments on Benjamin Strong and the Federal Reserve in the 1930s." *Journal of Political Economy* 100: 1273–1277.

Clarke, Peter. 1988. *The Keynesian Revolution in the Making, 1924–1936*. Oxford: Clarendon Press.

Clarke, Peter. 2009. *Keynes: The Rise, Fall, and Return of the 20th Century's Most Influential Economist*. New York: Bloomsbury Press.

Clower, Robert W. 1984. *Money and Markets: Essays by Robert W. Clower*. Edited by Donald A. Walker. Cambridge, UK: Cambridge University Press.

Colander, David. 2008. *The Making of an Economist Redux*. Princeton, NJ: Princeton University Press.

Colander, David, Michael Goldberg, Armin Haas, Katarina Juselius, Alan Kirman, Thomas Lux, and Brigitte Sloth. 2009. "The Financial Crisis and the Systemic Failure of the Economics Profession." *Critical Review* 21: 249–268.

Colander, David, Peter Howitt, Alan Kirman, Axel Leijonhufvud, and Perry Mehrling. 2008. "Beyond DSGE Models: Toward an Empirically Based Macroeconomics." *American Economic Review: AEA Papers and Proceedings* 98: 236–240.

Davidson, Paul. 1991. "Is Probability Theory Relevant for Uncertainty? A Post Keynesian Perspective." *Journal of Economic Perspectives* 5: 129–144.

Davidson, Paul. 2009. *The Keynes Solution*. London: Palgrave Macmillan.

Davis, Eric G. 1980. "The Correspondence between R. G. Hawtrey and J. M. Keynes on the *Treatise*: The Genesis of Output Adjustment Models." *Canadian Journal of Economics* 13: 716–724.

Davis, Eric G. 1981. "R. G. Hawtrey, 1879–1975." In D. P. O'Brien and John R. Presley, eds., *Pioneers of Modern Economics in Britain*. London and Basingstoke: Macmillan, pp. 203–233.

Davis, J. Ronnie. 1971. *The New Economics and the Old Economics*. Ames, IA: Iowa State University Press.

DeLong, J. Bradford. 2000. "The Triumph of Monetarism?" *Journal of Economic Perspectives* 14: 83–94.

Deutscher, Patrick. 1990. *R. G. Hawtrey and Modern Macroeconomics*. London: Macmillan.

https://doi.org/10.1017/S105383721300045X Published online by Cambridge University Press

Dimand, Robert W. 1988. *The Origins of the Keynesian Revolution*. Aldershot, UK: Edward Elgar Publishing, and Stanford, CA: Stanford University Press.

Dimand, Robert W. 1994a. "Irving Fisher's Debt-Deflation Theory of Great Depressions." *Review of Social Economy* 52: 92–107, revised with additions in Loef and Monissen (1999), pp. 141–156.

Dimand, Robert W. 1994b. "Mr. Meade's Relation, Kahn's Multiplier, and the Chronology of *The General Theory*." *Economic Journal* 104: 1139–1142.

Dimand, Robert W. 1995. "Irving Fisher, J. M. Keynes and the Transition to Modern Macroeconomics." In Allin Cottrell and Michael S. Lawlor, eds., *New Perspectives on Keynes*, Annual Supplement to *History of Political Economy* 27: 247–266.

Dimand, Robert W. 1999. "Minnie Throop England on Crises and Cycles: A Neglected Early Macroeconomist." *Feminist Economics* 5: 107–126.

Dimand, Robert W, Mary Ann Dimand, and Evelyn L. Forget, eds. 2000. *A Biographical Dictionary of Women Economists*. Cheltenham, UK, and Northampton, MA: Edward Elgar Publishing.

Dimand, Robert W., ed. 2002. *The Origins of Macroeconomics. Ten volumes*. London and New York: Routledge.

Dimand, Robert W. 2003. "Irving Fisher on the International Transmission of Booms and Depressions through Monetary Standards." *Journal of Money, Credit and Banking* 35: 49–90.

Dimand, Robert W. 2007a. "Keynes, IS-LM, and the Marshallian Tradition." *History of Political Economy* 39: 81–95.

Dimand, Robert W, ed. 2007b. *Irving Fisher: Critical Responses.* Three volumes. London and New York: Routledge.

Dimand, Robert W. 2008. "How Keynes Came to Canada: Mabel Timlin and *Keynesian Economics*." In Mathew Forstater and L. Randall Wray, eds., *The Continuing Relevance of the General Theory: Keynes for the 21st Century*. London: Palgrave Macmillan, pp. 57–79.

Dimand, Robert W, and Robert H. Koehn. 2010a. "How the Actions of Central Bankers Are Shaped by Past Currency Traumas," *Clio's Psyche* 16: 428–433.

Dimand, Robert W., Robert A. Mundell, and Alessandro Vercelli, eds. 2010b. *Keynes's General Theory After Seventy Years*. London and Basingstoke: Palgrave Macmillan for the International Economic Association.

Dimand, Robert W. 2011a. "'The Consequences to the Banks of the Collapse of Money Values,' 1931 and 2009." In Arie Arnon, Jimmy Weinblatt, and Warren Young, eds., *Perspectives on Keynesian Economics*. Berlin and Heidelberg: Springer Verlag, pp. 233–246.

Dimand, Robert W. 2011b. "Lessons from the 1929 Crash and the 1930s Debt Deflation: What Bernanke and King Learned, and What They Could Have Learned." In Claude Gnos and Louis-Philippe Rochon, eds., *Credit, Money and Macroeconomic Policy*. Cheltenham, UK, and Northampton, MA: Edward Elgar Publishing, pp. 33–44.

Dimand, Robert W, and Robert H. Koehn. 2012. "Central Bank Responses to Financial Crises: Lenders of Last Resort in Interesting Times." In Louis-Philippe Rochon and Salewa 'Yinka Olawoye, eds., *Monetary Policy and Central Banking*. Cheltenham, UK, and Northampton, MA: Edward Elgar Publishing, pp. 112–129.

Dimand, Robert W. 2013. "David Hume and Irving Fisher on the Quantity Theory of Money in the Short Run and the Long Run." *European Journal of the History of Economic Thought* 20: 284–304.

Dominguez, Kathryn M., Ray C. Fair, and Matthew D. Shapiro. 1988. "Forecasting the Depression: Harvard versus Yale." *American Economic Review* 78: 595–612.

Durlauf, Steven, and Lawrence E. Blume, eds. 2008. *The New Palgrave: A Dictionary of Economics.* Eight volumes. London: Stockton Press.

The Economist. 2007. "Buttonwood: Ponzificating: Is the Financial System a Confidence Trick?" (March 17): 100.

The Economist. 2008a. "Charlemagne: Don't Play Politics with the Euro: The Lessons of German History Haunt the Single Currency" (March 8): 62.

https://doi.org/10.1017/S105383721300045X Published online by Cambridge University Press

The Economist. 2008b. “1929 and All That: How Today’s Financial Crisis Resembles One that Happened Three-quarters of a Century Ago, and How It Does Not” (October 4): 83.

The Economist. 2009a. “Briefing: Irving Fisher: Out of Keynes’s Shadow” (February 14): 72–73.

The Economist. 2009b. “Leader: What Went Wrong with Economics? Briefing: The State of Economics: the Other-worldly Philosophers; Financial Economics: Efficiency and Beyond” (July 18): 11–12, 68–70, 71–72.

The Economist. 2010a. “Revise and Resubmit: The Crisis Is Changing How Macroeconomics Is Taught” (April 3): 79.

The Economist. 2010b. “Buttonwood: Taking von Mises to Pieces: Why Is the Austrian Explanation for the Crisis So Little Discussed?” (November 20): 87.

The Economist. 2013. “Briefing: Japan and Abenomics” (May 18): 24–26.

Eichengreen, Barry. 1992. *Golden Fetters: The Gold Standard and the Great Depression, 1919–1939*. New York and Oxford: Oxford University Press.

Eichengreen, Barry. 2012. “Economic History and Economic Policy.” *Journal of Economic History* 72: 289–307.

England, Minnie Throop. 1912. “Fisher’s Theory of Crises: A Criticism.” *Quarterly Journal of Economics* 27: 95–106, reprinted in Dimand (2002), Vol. II.

Fellner, William, et al. 1967. *Ten Economic Studies in the Tradition of Irving Fisher*. New York: John Wiley & Son.

Fisher, Irving. 1896. *Appreciation and Interest*. New York: Macmillan, for the American Economic Association, reprinted in Fisher (1997), Vol. 1.

Fisher, Irving. 1907. *The Rate of Interest*. New York: Macmillan, reprinted in Fisher (1997), Vol. 3.

Fisher, Irving, with Harry G. Brown. 1911. *The Purchasing Power of Money*. New York: Macmillan, reprinted in Fisher (1997), Vol. 4.

Fisher, Irving. 1926. “A Statistical Relation between Unemployment and Price Changes.” *International Labour Review* 13: 785–792, reprinted in Fisher (1997), Vol. 8, and as “Lost and Found: I Discovered the Phillips Curve—Irving Fisher,” *Journal of Political Economy* 81(1973): 496–502.

Fisher, Irving. 1928. *The Money Illusion*. New York: Adelphi, reprinted in Fisher (1997), Vol. 8.

Fisher, Irving. 1932. *Booms and Depressions*. New York: Adelphi, reprinted in Fisher (1997), Vol. 10.

Fisher, Irving. 1933a. “Statistics in the Service of Economics.” *Journal of the American Statistical Association* 28: 1–13.

Fisher, Irving. 1933b. “Debt-Deflation Theory of Great Depressions.” *Econometrica* 1: 337–357, reprinted in Fisher (1997), Vol. 10.

Fisher, Irving. 1935. “Are Booms and Depressions Transmitted Internationally Through Monetary Standards?” *Bulletin of the International Statistical Institute* 28: 1–29, reprinted in Dimand (2003).

Fisher, Irving. 1997. *The Works of Irving Fisher*. Fourteen volumes. Edited by William J. Barber, assisted by Robert W. Dimand and Kevin Foster, consulting editor James Tobin. London: Pickering & Chatto.

Fletcher, Gordon. 2000. *Understanding Dennis Robertson: The Man and His Work*. Cheltenham, UK, and Northampton, MA: Edward Elgar Publishing.

Forget, Evelyn L., and Shahram Manouchehri. 1989. “Keynes’s Neglected Heritage: The Classical Microfoundations of the *General Theory*.” *Journal of Post Keynesian Economics* 10: 401–413.

Foxwell, Herbert S. 1886. *Irregularity of Employment and Fluctuations of Prices*. Edinburgh: Co-Operative Printing Company, reprinted in Dimand (2002), Vol. I, pp. 39–137.

Friedman, Milton, and Anna J. Schwartz. 1963. *A Monetary History of the United States, 1867–1960*. Princeton, NJ: Princeton University Press for the National Bureau of Economic Research.

Galbraith, John Kenneth. 1977. *The Age of Uncertainty*. Boston: Houghton Mifflin.

Grayshott, Michael. 2013. “Short Cuts.” *London Review of Books*, March 7, p. 26.

Hawtrey, Ralph G. 1913. *Good and Bad Trade*. London: Constable.

Hawtrey, Ralph G. 1919. *Currency and Credit*. London: Longmans.

Hawtrey, Ralph G. 1932. *The Art of Central Banking*. London: Longmans.

Hawtrey, Ralph G. 1937. *Capital and Employment*. London: Longmans.

https://doi.org/10.1017/S105383721300045X Published online by Cambridge University Press

Hayek, Friedrich A. 1945. “The Use of Knowledge in Society.” *American Economic Review* 35: 519–530.

Hudson, Michael. 1985. “German Economists and the Depression of 1929–1933.” *History of Political Economy* 17: 35–50.

Irwin, Neil. 2013. *The Alchemists: Three Central Bankers and a World on Fire*. Harmondsworth: Penguin.

Kahn, Richard F. 1931. “The Relation of Home Investment to Unemployment.” *Economic Journal* 41: 173–198.

Keynes, John Maynard. 1921. *A Treatise on Probability*. London: Macmillan.

Keynes, John Maynard. 1923. *A Tract on Monetary Reform*. London: Macmillan.

Keynes, John Maynard. 1930. *A Treatise on Money*. Two volumes. London: Macmillan.

Keynes, John Maynard. 1931. *Essays in Persuasion*. London: Macmillan.

Keynes, John Maynard. 1933. *The Means to Prosperity*. New York: Harcourt Brace.

Keynes, John Maynard. 1936. *The General Theory of Employment, Interest and Money*. London: Macmillan, reprinted with same pagination in Keynes (1971–89), Vol. 7.

Keynes, John Maynard. 1937. “The General Theory.” *Quarterly Journal of Economics* 51: 209–233.

Keynes, John Maynard. 1971–1989. *The Collected Writings of John Maynard Keynes*. Thirty volumes. General editors Donald E. Moggridge and E. A. G. Robinson, volume editors Donald E. Moggridge and Elizabeth S. Johnson. London: Macmillan, and New York: Cambridge University Press, for the Royal Economic Society.

Kindleberger, Charles P. 1978. *Manias, Panics and Crashes: A History of Financial Crises*. New York: Basic Books, revised edition 1989.

Kindleberger, Charles P. 1991. *The Life of an Economist*. Cambridge, MA, and Oxford: Basil Blackwell.

King, Mervyn. 1994. “Presidential Address: Debt Deflation: Theory and Evidence.” *European Economic Review* 38: 419–445.

Knight, Frank H. 1921. *Risk, Uncertainty, and Profit*. Boston: Houghton Mifflin.

Krugman, Paul. 1990. *Rethinking International Trade*. Cambridge, MA: MIT Press.

Krugman, Paul. 2009. “How Did Economists Get It So Wrong?” *New York Times Magazine*, September 6, pp. 37–43.

Laidler, David. 1991. *The Golden Age of the Quantity Theory*. Princeton, NJ: Princeton University Press.

Laidler, David. 1999. *Fabricating the Keynesian Revolution*. Cambridge, UK: Cambridge University Press.

Laidler, David. 2004a. *Macroeconomics in Retrospect*. Cheltenham, UK, and Northampton, MA: Edward Elgar Publishing.

Laidler, David. 2004b. “Monetary Policy after Bubbles Burst: The Zero Lower Bound, the Liquidity Trap and the Credit Deadlock.” *Canadian Public Policy* 30: 330–340.

Laidler, David. 2010. “Lucas, Keynes, and the Crisis.” *Journal of the History of Economic Thought* 32: 39–62.

Lavington, Frederick. 1912. “Uncertainty in its Relation to the Net Rate of Interest.” *Economic Journal* 22: 398–409, reprinted in Dimand (2002), Vol. IV.

Leijonhufvud, Axel. 1968. *On Keynesian Economics and the Economics of Keynes*. New York: Oxford University Press.

Leijonhufvud, Axel. 1981. *Information and Coordination*. Oxford and New York: Oxford University Press.

Lo, Andrew. 2012. “Reading about the Financial Crisis: A Twenty-One-Book Review.” *Journal of Economic Literature* 50: 151–178.

Loef, Hans-E., and Hans-G. Monissen, eds. 1999. *The Economics of Irving Fisher*. Cheltenham, UK, and Lyme, NH: Edward Elgar Publishing.

Mankiw, N. Gregory. 1992. “The Reincarnation of Keynesian Economics.” *European Economic Review* 36: 561.

Mankiw, N. Gregory. 2008. “What Would Keynes Have Done?” *New York Times*, November 30, p. B4.

McGrattan, Ellen R., and Edward C. Prescott. 2004. “The 1929 Stock Market: Irving Fisher Was Right.” *International Economic Review* 45: 991–1009.

Minsky, Hyman P. 1975. *John Maynard Keynes*. New York: Columbia University Press.

https://doi.org/10.1017/S105383721300045X Published online by Cambridge University Press

Minsky, Hyman P. 1982. *Can "It" Happen Again? And Other Essays on Instability and Finance*. Armonk, NY: M. E. Sharpe.

Moggridge, Donald E. 1992. *Maynard Keynes: An Economist's Biography*. London and New York: Routledge.

Ohlin, Bertil. 1981. "Stockholm and Cambridge: Four Papers on the Monetary and Employment Theory of the 1930s." Edited by Otto Steiger. *History of Political Economy* 13: 189–255.

Patinkin, Don. 1965. *Money, Interest and Prices*. Second edition. New York: Harper & Row.

Patinkin, Don. 1981. *Essays on and in the Chicago Tradition*. Durham, NC: Duke University Press.

Patinkin, Don. 1982. *Anticipations of the General Theory? And Other Essays on Keynes*. Chicago: University of Chicago Press.

Paul, Ron. 2009. *End the Fed*. New York and Boston: Grand Central Publishing (Hachette).

Posner, Richard A. 2009a. *A Failure of Capitalism: The Crisis of '08 and the Descent into Depression*. Cambridge, MA: Harvard University Press.

Posner, Richard A. 2009b. "How I Became a Keynesian." *New Republic*, September 23, p. 34, reprinted in *The National Post*, October 5.

Posner, Richard A. 2010. *The Crisis of Capitalist Democracy*. Cambridge, MA: Harvard University Press.

Rankin, Mary Theresa. 1935. *Monetary Opinions and Policy 1924–34*. Foreword by F. W. Ogilvie. London: P. S. King & Son.

Rankin, Mary Theresa. 1943. "International Trade: British and American Monetary Plans." *The Scotsman*, May 29.

Reinhart, Carmen M., and Kenneth S. Rogoff. 2009. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton, NJ: Princeton University Press.

Reynolds, Siobhan. 2006. *King of Infinite Space: Donald Coxeter, the Man Who Saved Geometry*. Toronto: Anansi.

Ridley, Matt. 2010. *The Rational Optimist: How Prosperity Evolves*. New York: Harper.

Robertson, Dennis H. 1926. *Banking Policy and the Price Level*. London: P. S. King & Son.

Romer, David. 2012. *Advanced Macroeconomics*. Fourth edition. Boston: McGraw-Hill Irwin.

Rothbard, Murray N. 1972. *America's Great Depression*. Second edition. Los Angeles: Nash.

Runyon, Herbert Richard. 1959. *The Economics of Irving Fisher: The Theory of Value and the Capitalistic Processes*. PhD diss., University of Michigan. Ann Arbor, MI: UMI Dissertation Services.

Rymes, Thomas K., ed. 1989. *Keynes's Lectures, 1932–35: Notes of a Representative Student*. London: Macmillan, and Ann Arbor, MI: University of Michigan Press.

Sandilands, Roger J. 2010. "Hawtreyan 'Credit Deadlock' or Keynesian Liquidity Trap? Lessons for Japan from the Great Depression." In Robert Leeson, ed., *David Laidler's Contributions to Economics*, Basingstoke and New York: Palgrave Macmillan, pp. 335–369.

Skidelsky, Robert. 1983–2000. *John Maynard Keynes*. Three volumes. London: Macmillan, and New York: Viking.

Skidelsky, Robert. 2009. *Keynes: The Return of the Master*. New York: PublicAffairs.

Taylor, A. J. P. 1967. *Europe: Grandeur and Decline*. Harmondsworth, UK: Pelican.

Temin, Peter. 1989. *Lessons from the Great Depression*. Cambridge, MA: MIT Press.

Timlin, Mabel F. [1942] 1977. *Keynesian Economics*. Toronto: University of Toronto Press, Reprinted with introduction by Lorie Tarshis, Toronto: McClelland & Stewart.

Tobin, James. 1975. "Keynesian Models of Recession and Depression." *American Economic Review: AEA Papers and Proceedings* 65: 195–202.

Tobin, James. 1980. *Asset Accumulation and Economic Activity*. Oxford: Blackwell, and Chicago: University of Chicago Press.

Wapshott, Nicholas. 2011. *Keynes Hayek: The Clash that Defined Modern Economics*. New York: Norton.

Wicksell, Knut. 1898. *Interest and Prices*. Translated by R. F. Kahn with an introduction by Bertil Ohlin. London: Macmillan, 1936.

Woodford, Michael. 2003. *Interest and Prices*. Princeton, NJ: Princeton University Press.

https://doi.org/10.1017/S105383721300045X Published online by Cambridge University Press