HARVARD MEETS THE CRISIS: THE MONETARY THEORY AND POLICY OF LAUCHLIN B. CURRIE, JACOB VINER, JOHN H. WILLIAMS, AND HARRY D. WHITE

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HARVARD MEETS THE CRISIS: THE MONETARY THEORY AND POLICY OF LAUCHLIN B. CURRIE, JACOB VINER, JOHN H. WILLIAMS, AND HARRY D. WHITE

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The paper discusses the interpretation of the Great Depression and the policy decision making by four Harvard economists: Lauchlin B. Currie, Jacob Viner, John H. Williams, and Harry D. White. All were eminent scholars in the field of monetary and international economics, and were deeply involved in policy decisions during the New Deal. We will discuss how their Harvard training provided them with a common methodological and analytical perspective, and how this common perspective translated into specific policies when they moved from the academia to public service in the US administration. Their interpretation of the causes of the Great Depression and their policy proposals show the eclectic approach that these four economists had to monetary, fiscal, and economic analysis, and the points of contact with both the US monetarist tradition and the work of John Maynard Keynes. At the same time, this very eclecticism, far from making them part of the monetarist or the Keynesian schools, characterized them as a group of their own: a network of scholars who, by virtue of their studies and the evolution of their professional careers, developed a style of analysis and policy prescriptions that deeply influenced the nature of the New Deal.

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I. INTRODUCTION

In the interwar years, Harvard's economics department became one of the principal breeding grounds for economists employed in the federal administration. Was it because of an exceptionally high compatibility between Harvard's economics and the policy-making processes of Washington, DC? And, in this case, did this have to do with how economics was taught in Cambridge, MA? A witness from those years, Valdemar Carlson, a student of Frank Taussig's at Harvard in the 1920s and the author of a 1946 economics textbook in the Keynesian tradition (Carlson 1946), rejected such an hypothesis. In his opinion, Harvard became influential simply because few, if any, alternatives existed:

> Trained brain power is always a scarce commodity, and particularly during a period of social change it is difficult to find people with the requisite ability and imagination to engineer institutional adjustments. In the 1920s there were not many first-class graduate schools and those that had an outstanding reputation tended to attract the more able students. It was because outstanding students were attracted to Harvard that so many of that university's economists played such an important role in helping to fashion the New Deal reforms. (Carlson 1968, p. 112)[1]

While we are not interested in contributing to the diatribe on whether a proper "Harvard school" existed, we believe it is possible to detect certain common traits in the way Harvard economists addressed monetary matters in the interwar period and participated in the policy-making process. In this article, we will show this by focusing on four influential economists who were trained at Harvard and held important government positions in the 1930s.[2] They were Jacob Viner (1892–1970), John H. Williams (1887–1980), Harry D. White (1892–1948), and Lauchlin B. Currie (1902–1993).[3]

Although recent work based on archival sources has provided clear evidence of extensive collaboration and theoretical convergence among these four economists (Sandilands 2004; Asso and Fiorito 2009; Nerozzi 2009), no systematic study of their analysis of the Great Depression and fiscal and monetary policy proposals has yet been pursued. We will discuss the theoretical and policy views shared by Currie, Viner, White, and Williams; how they took shape during their doctoral studies at Harvard; and how they evolved throughout their careers as economists and public servants. Although the ideas of these four economists were by no means identical on many substantive issues, we will describe how their perspective on monetary, fiscal, and banking matters produced an innovative analysis of the role of money and credit in the American economy. We shall also provide some evidence as to how their approach ultimately influenced the Fed and the US administration, and informed government policies during the Depression.

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[1]For an historical analysis of Harvard's economics department before World War II, see Mason (1982).

[2]In their effort to trace the roots of the so-called Chicago monetary tradition, David Laidler and Roger Sandilands have also highlighted a Harvard approach to monetary matters. See Laidler and Sandilands (2002).

[3]On Currie and White, see Rees (1973), Boughton (2005), Sandilands (1990), and Alacevich (2005 and 2009); on Williams and Viner, see Stein (1969), Barber (1996), and Meltzer (2003).

II. A HARVARD (MINORITY) TRADITION?

Scholarly interest in Currie, Viner, White, and Williams grew in connection with the debate over the origins and nature of the so-called Chicago School of economics. According to David Laidler and Roger Sandilands (2002), the Chicago monetary tradition had important roots at Harvard, specifically in the path-breaking work of Lauchlin Currie. A student of Allyn A. Young's, Ralph G. Hawtrey's, and John H. Williams's, Currie has been considered a precursor of Milton Friedman's and Anna Schwartz's analysis of the 1929 to 1933 Depression.[4] Already in the early 1930s, he acknowledged the importance of the contraction in the money supply and blamed the Federal Reserve for having disregarded it (see especially Currie 1931a and 1934b). Laidler and Sandilands, in addition, claim that a January 1932 Harvard memorandum anticipated many of the ideas later crystallized in the 1932 manifesto of the so-called Chicago monetary tradition on the causes of the Depression. The Harvard memo was co-authored by Currie, Paul T. Ellsworth, and Harry D. White, and called for a bold program of monetary expansion and public works. John Williams, Currie's PhD supervisor, later incorporated whole parts of it in a paper presented at the conference where the Chicago manifesto was drafted (Laidler and Sandilands 2002; and Currie, Ellsworth, and White 2002).

The debate on Harvard's influence over the Chicago tradition re-emerges periodically: a few years ago, for example, James Ahiakpor disputed Laidler's and Sandilands's conclusions on the influence of the Harvard memorandum upon the "Chicago manifesto" (Ahiakpor 2010, p. 562; see also Laidler and Sandilands 2010 for a rejoinder). Ahiakpor also questioned the originality of the monetary thinking stemming from both Harvard and Chicago, as both were, according to him, a simple refashioning of the forced-saving doctrine whose origins go back to David Hume's *Of Money* (1752). The forced-saving doctrine was shared by many American economists in the 1930s.[5]

Another debated point is how radical and in fact innovative were the ideas and the policy proposals of the younger generation of Harvard economists with respect to those preached by more senior members of the faculty (Laidler and Sandilands 2002; Ahiakpor 2010, pp. 565–567). Many episodes have been recalled and provide evidence of a generational breach: in January 1934, Currie joined forces with Alan Sweezy in writing a letter to President Roosevelt, applauding the decision "not to fix the value of the dollar in terms of gold at the old ratio" and campaigning for an emergency program of fiscal expansion.[6] The initiative enjoyed the support of John H. Williams, but it

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[4]Friedman and Schwartz (1963), Karl Brunner (1968), and Thomas Humphrey (1971) were the first to acknowledge Currie's contribution. In a 1989 correspondence with Frank Steindl (Steindl 1995, p. 61), Milton Friedman acknowledged the importance of Currie's researches, recalled his early readings of him, and declared his regret for not having cited him in *Monetary History* but only in the following *Monetary Statistics of the United States* (Friedman and Schwartz 1970). Hawtrey was at Harvard in 1928–29 and, as Laidler (1993, 1999) shows, also had an influence on the Chicago School, along with Allyn Young. See Young's monetary writings reprinted in Mehrling and Sandilands (1999); in particular, Young (1929).

[5]While Laidler and Sandilands acknowledge the relevance of the classical and neoclassical monetary theory for the 1920s macroeconomic and business cycle debates, they contend that Ahiakpor fails to recognize the contribution of many diverse analyses to monetary policy, such as the real bills doctrine. See Laidler (1993), and Laidler and Sandilands (2010). Two excellent reviews of monetary thought in interwar United States are Laidler (1999) and Steindl (1995).

[6]Currie (2004, p. 200); Sweezy (1972, p. 117).

clashed with deep-rooted conservative positions of the rest of the senior faculty: those young economists who "took the more radical and intellectually coherent position … either left or were eased out" (Laidler and Sandilands 2002, p. 522). While Williams remained at Harvard for most of his career and in 1947 became the dean of the Harvard Business School, the young heretics around him were soon forced to leave. White and Currie joined the Roosevelt administration; Hart, a former undergraduate student of Currie's at Harvard, finished his PhD at Chicago and then moved to Columbia; Alan Sweezy, fired from Harvard in 1937, served in the Work Progress Administration (1938) and the Fed (1939), before returning to academia, first as associate professor at Williams College and then as full professor at Caltech (1949).

In April 1934, Jacob Viner was called to serve as special consultant to Secretary Henry Morgenthau Jr., starting a long career as adviser to the Treasury that ended only in 1945. Viner, a Harvard PhD graduate, had joined the Chicago department of economics in 1916—though his doctoral dissertation was completed only in 1922.[7] Although it was almost twenty years since he had left Harvard, his links with Harvard's younger generation were far from insignificant. When, in June 1934, Viner put together his famous "Freshmen brain trust," a group of seven young economists entrusted with advising on the most important banking and monetary issues the country faced at the time, four of them (Currie, White, Hart, and Sweezy) were recruited from Harvard.[8] With them, new ideas on central banking and monetary and fiscal policy had access to the administration's corridors.[9] In May 1933, Williams was appointed to the New York Fed, where he was vice-chairman between 1936 and 1951. His influence spread across the Treasury and other agencies. Williams and Viner, *de facto* liaison officers between the Treasury and the Fed, were not only personal friends; they also shared common views on monetary and international policy, and worked to have sympathetic colleagues in key positions within their own administrations. White was hired at the Treasury and became head of the Division of Monetary Research in 1937. In the fall of 1934, Currie

[7]It is to be noticed that to take a teaching position before earning a PhD was quite uncommon at the time, at least in Chicago. Frank Knight, John M. Clark, and Paul Douglas were hired at Chicago in the very same years, after having completed their doctoral training.

[8]Viner wrote to Taussig: "I have had a few Harvard men working for me here, Currie, Sweezy and White and have been very favorably impressed indeed with them, especially the two former" (Viner to Taussig, October 20, 1934, box 26, folder 2, Jacob Viner Papers, Seeley G. Mudd Library, Princeton University [henceforth JVP]). Quoted also by Laidler and Sandilands (2002, p. 519). Though he received an MA and began his PhD at Harvard, Hart is not mentioned because by then, following an invitation by Viner, he had moved to the University of Chicago (Hart to Taussig, March 7, 1930, Taussig Papers, HUG 4823.5, Correspondence Box 6: H 1932-K 1932, Harvard Pusey Library [henceforth TP]). Taussig, Hart's supervisor at Harvard, had encouraged Hart to spend his first PhD months at Harvard, because "Chicago offers something but in a narrow line. Before entering on that line you need more mathematical and statistical training than you have as yet had. For that you cannot do better than Crum's course which is admirably given. There are things you can do here to advantage" (Taussig to Hart, December 19, 1930, Correspondence Box 6: H 1932-K 1932, TP).

[9]This group of scholars produced many innovative reports. Viner, for example, asked Currie to draft a proposal for reforming the US banking system. Other reports included: Edward C. Simmons, "The currency system"; Benjamin Caplan, "Branch banking"; Albert G. Hart, "Federal credit institutions"; Lauchlin Currie, "Monetary control in the United States" and "Deposit insurance"; Alan R. Sweezy, "Objectives and criteria of monetary policy"; Harry D. White, "Selection of a monetary standard for the United States"; and M. H. Riley, "Bank examinations and bank reports."

became the closest economic adviser to the new chairman of the Fed, Marriner Eccles, whom he had met when he was a consultant at the Treasury.

During the first term of the Roosevelt administration, Viner, Williams, White, and Currie studied extensively the causes of the Depression and possible recovery policies. They soon became influential actors in the policy-making process that led to New Deal reforms and stabilization policies, in monetary, banking, fiscal, or international matters. Since 1932, they had urged the administration and the Fed to undertake a program of monetary and fiscal expansion and strengthen the banking system by means of wider rediscount eligibility for banking assets. Their recommendations influenced the final drafting of the *Glass–Steagall Act* and other emergency measures.[10] In 1933–34, Viner and Williams successfully opposed Irving Fisher's and George Warren's program of dollar devaluation and drastic increase in the quantity of money, and were instrumental in drafting the *Gold Stabilization Act* of January 1934.[11] In 1935, Currie was entrusted with designing the new *Banking Act*, which strengthened the powers of the Fed, provided it with new tools of monetary control, and broadened its set of policy objectives. Both Viner and Williams supported this reform in public speeches and within the administration.[12] In 1936 they urged the Fed to use its newly acquired powers to double banks' reserves to prevent a sudden inflationary spike arising from gold inflows and a reversion of the velocity of circulation.[13]

In terms of fiscal policy, Viner, Currie, and White supported budget deficits in order to speed up recovery and restore business confidence; these measures were based on a new series of statistical data on the effects of government expenditures on income, collected by Currie and Krost under the impulse of Viner.[14] These ideas inspired the bold program of deficit-financed expenditures enacted by Roosevelt after the recession of 1937–38, although Currie and White, on one side, and Viner and Williams, on the other, had different ideas on the effectiveness of the 1938 spending program.[15] In 1939 Roosevelt appointed Currie as economic adviser to the White House—the first economist to have held that position ever.

Viner, White, and Williams were committed to restore international monetary stability and cooperation. They took part in the negotiations for the September 1936 Tripartite Agreement when, for the first time since 1929, France, Great Britain, and the US committed themselves to cooperate in reintroducing more limited targets of exchange rates stability.[16] Subsequently, White, Viner, and Williams played a crucial

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[10]The influence of the Chicago Manifesto can be detected especially in the provisions that enabled the Fed to widen the range of bills eligible as collateral for lending activity, particularly treasury bills issued by federal government. Currie later criticized the *Glass–Steagall Act* provisions seeking to give the reserve administration greater control over the loans of member banks as a sign of "a complete misreading of the 1928–29 episode" (Currie 1934b, p. 176n47).

[11]On this point, see Allen (1993) and Nerozzi (2007). George Warren was an agricultural economist who influenced Roosevelt's 1933 policy of dollar devaluation.

[12]Viner (1936b) and Williams (1936).

[13]Nerozzi (2007) and Sandilands (1990).

[14]Nerozzi (2007) and Sandilands (1990). See also Sweezy (1972).

[15]On this, see Nerozzi (2007, 2009a) and Williams (1941, 1942).

[16]See Nerozzi (2011). Although Currie was also involved in international economic policy during the 1930s (see Sandilands 2004 and Currie's memos reprinted there), he did not take part in the Tripartite negotiations.

role in the debates on the postwar international monetary order. White, as is well known, would become a central figure in the negotiations that led to the Bretton Woods agreements. While Viner took some part in the refinement of the White Plan and publicly supported it, Williams proposed a different approach, known as the Key-Currency plan, based on the stabilization between the British pound and the dollar, which would help other countries peg more gradually than under White's plan. Williams's proposal was also supported by Currie (Nerozzi 2009b); it aroused a lively debate and was later acknowledged by Robert Mundell as a source of inspiration for his theory of Optimal Currency Areas (Asso and Fiorito 2009).

A relevant point of agreement emerging from the debate between Ahiakpor and Laidler and Sandilands is the importance of Frank W. Taussig in the shaping of monetary economics at Harvard in the 1920s. The common training of these four economists under Taussig helps explain their common theoretical ground and policy convergence in the crucial years between 1932 and 1936.

III. STUDYING AND TEACHING AT HARVARD (1914–1933): THE QUANTITY THEORY OF MONEY REFRAMED

Currie, Viner, Williams, and White shared an early interest in monetary and international economics and banking, and a methodological approach based on quantitative analysis. This was the result of their training at Harvard University, and many scholars have drawn attention to the leading role played by Frank W. Taussig.[17]

Viner, Williams, and White wrote their PhD dissertations under the supervision of Frank W. Taussig and each of them prepared a case study of the same general topic: the adjustment mechanism of the balance of payments in presence of capital movements. Viner studied Canada during the pre-war years under the gold standard; Williams examined Argentina between 1880 and 1900 under a paper money regime and flexible exchange rates; White focused on France from 1880 to 1913 (Viner 1924; Williams 1920; White 1933). The goal of these studies was to provide an empirical validation of the classical theory of international trade. According to Viner, the case of Canada offered a confirmation of Hume's price-specie flow mechanism, with some qualification due to the working of the flexible banking multiplier and to capital movements: foreign reserves, bank deposits, and domestic prices moved in the same direction, fostering the adjustment of the balance of trade. In this context, capital movements exerted mainly a stabilizing effect. A huge flow of long-term capital investments gave rise to a fractional demand for short-term reserves in the opposite direction, mainly gold certificates held by Canadian commercial banks in New York, which supported the expansion of domestic credit. Changes in foreign deposits abroad played the role of shock absorber, minimizing the movement of specie required to keep the exchange rates within the

[17]An account of Taussig's theory of the balance of payments and of Viner's, Williams's, and White's dissertations is offered by June Flanders (1989, pp. 223–244). On Taussig's teaching at Harvard, see Maurice Beck Hexter's notes from Harvard University taken in 1921–22 (Johnson and Samuels 2010), which, however, were taken in the Economics 11 and 12 undergraduate courses and make little mention of monetary matters. Considering the central role that monetary issues had for Taussig—almost half of Taussig's *Principles of Economics* is devoted to money and banking—this is regrettable. See also Ahiakpor (2010).

gold points and adjusting the Canadian balance of trade according to the seasonal fluctuations in the demand for credit. Since Canada did not have a central bank at the time, this mechanism seemed to confirm the automatic functioning of the gold standard (for a discussion of this point, see Flanders 1989, pp. 228–229).

Unlike Viner, Williams and White were more critical of the actual functioning of the price-specie-flow mechanism. A statistical analysis of the balance of payments and monetary conditions of Argentina confirmed that, in presence of a paper currency, gold movements did not affect the domestic money supply but only the external value of the currency; i.e., its exchange rate. At the same time, the low export elasticity did not allow exchange rate flexibility to guarantee a smooth adjustment of the balance of trade, but stimulated a growing foreign indebtedness. According to Williams, the case of Argentina showed the destabilizing nature of capital movements, irrespective of the monetary rules—a gold standard or a paper standard—that a country adopted (Williams 1932a).

White's study of France casts further doubts over the traditional views of external adjustment. He noticed that most statistical surveys on domestic prices provided little support for Hume's hypothesis; moreover, long-term investments in developing countries were not matched by a parallel increase in export trade. White also observed that exchange rate movements within the gold points did not affect the balance of trade (Flanders 1989, p. 237). Most importantly, he emphasized the ability of the Bank of France to prevent substantial flows of gold from and to the country. Capital flows were endogenously driven by changes in income, consumption, and savings, and had a greater impact on the balance of payments than changes in the price level. White's adjustment mechanism was very close to Bertil Ohlin's income-expenditure approach, even though he regarded the movements of gold and international lending as the main driving force in the shifts of income and aggregate demand (Flanders 1989, p. 241).

While these studies reached different conclusions on the effectiveness of the classical adjustment mechanism, they all focused on monetary, financial, and banking aggregates to explain the dynamics of income, prices, and the balance of trade. As was typical of Taussig's approach, emphasis was put on the historical and institutional dynamics of the banking and monetary system. The same perspective informed Currie's (1931) PhD dissertation, which focused on the functioning of the US banking system in the postwar years.

Currie began his doctoral dissertation under the tutorship of Allyn A. Young, a pioneer of statistical research on the American banking system in the 1920s.[18] In 1928 Currie was the teaching assistant first to Ralph G. Hawtrey, and later, after the premature death of Allyn Young in March 1929, to John Williams. His PhD thesis, on the supply of money in the United States from the 1920s, was deeply influenced by his supervisors and senior professors. Currie adopted a narrow definition of money, including coins, banknotes, and demand deposits, but excluding time and saving deposits, regarding the latter as relatively idle balances with no direct circulation and therefore unable to affect aggregate demand. Among Currie's major accomplishments was the creation

[18]Young (1927, 1928). On Young's monetary thought, see Mehrling (1997); on Currie's training at Harvard, see Sandilands (1990) and Laidler (1993). Young was economic advisor to the governor of the Federal Reserve of New York, Benjamin Strong (Mehrling 1997).

of one of the first statistical series of the US money supply.[19] According to his data, during the 1920s the increase in the money supply had been lower than it had been usually believed. Currie's findings, later expanded to cover the early Depression years, showed that the money supply had ceased to grow already by 1928, and suffered a steep contraction from 1930 to 1932 (Currie 1933a, p. 86). It was clear, he concluded, that the Federal Reserve had failed to understand the need to increase the money supply to mitigate the Depression. For the first time, a scholar was charging the Fed system with specific responsibilities for having worsened the economic and monetary conditions of the country after the 1929 stock exchange crash.

Currie's thesis remained unpublished, but one chapter appeared as a separate article in the 1934 *Journal of Political Economy*, where Viner served as the chief editor. Currie blamed the almost exclusive attention of the Federal Reserve to the control of domestic security speculation as a major source of its restrictive stance (Currie 1934b). However, in Currie's opinion, the Fed's principal shortcoming was a doctrinal one: its statute and operations were inspired by the so-called Commercial Loan Theory of Banking. This meant that the Fed saw the primary function of the banks as "meet[ing] the short term borrowing needs of 'legitimate' business" (Currie 1934a, p. 34). As a consequence, the concerns of the Fed were primarily focused on the quality and the composition of banking assets. The supply of money and its connections with incomes and spending were essentially ignored.[20]

Currie's criticism of the Commercial Loan Theory of Banking resonated with Williams's writings of the late 1920s and early 1930s. Williams was familiar with the most recent quantitative work on money and banking. His 1931 extensive review of John Maynard Keynes's *Treatise on Money* discussed in great detail the relevance of income, business, and saving deposits on the cycle and the level of aggregate demand. Drawing from Currie's data, Williams analyzed the deep divergence between the US and the British systems (Williams 1931, p. 566n4). Furthermore, his criticism of Keynes's early views on the close relation between the money supply and the structure of interest rates seemed to fit very well in Currie's monetary control framework. For Williams, the connection between interest rates and investment expenditure was weak and uncertain, and such an abstract and immaterial concept as the Wicksellian "natural interest rate" could not play a central role in determining the direction and the intensity of business fluctuations: "the natural rate is an abstraction; like faith it is seen by its works." To explain the inability of monetary expansion to stimulate investment by pointing to an alleged fall of the natural rate, Williams claimed, "sounds suspiciously like saying that people do not want to borrow and spend in view of the business outlook" (Williams 1931, pp. 578–579).[21]

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[19]Currie's series differed substantially from the one proposed almost at the same time by James Angell (1934), another of Young's students, who included time and saving deposits in his calculation.

[20]Currie defended his dissertation at Harvard University in January 1931 but failed to win the Wells prize, which was instead awarded to Currie's classmate and close friend Harry White in 1933. Currie stayed at Harvard as an instructor. He assisted Williams in his famous Money and Banking Course, and was also an assistant to Joseph Schumpeter. Currie's opinion on the latter was quite critical, especially in connection with Schumpeter's attitude against any form of public action either on the fiscal or the monetary side. For details, see Sandilands (2009a, p. 6).

[21]Williams also claimed that, in the *Treatise of Money*, Keynes lacked consistency when he underestimated the importance of "people's judgments of the business outlook" in determining the "value of investments" as well as the "prospective demand for capital goods or their products" (Williams 1931, pp. 578–579). Williams did agree with Keynes that a central bank could exert a strong influence on consumers and business spending. Yet, he believed that no automatic mechanism was available to raise aggregate demand.

Williams drew a less clear-cut distinction than Currie between the banking aggregates that were a source of spending and those that were not, and insisted that even if central banks could effectively control banking aggregates, they would still not control consumer spending: "in monetary terms, the crux of the matter is that, while banks control the physical quantity of deposits, depositors control the spending of them, and changes in quantity may be offset by changes in velocity or in direction" (Williams 1931, p. 580).[22]

Williams's dismissal of the quantity theory in its crudest form was even more explicit in his discussion of the problem of price stabilization, and the ability of central banks to influence bank reserves and thus the amount of loans, the amount of deposits, and ultimately the price level: "This explanation," he claimed, "is too simple and begs some important questions" (Williams 1931, p. 574). One of the clearest fallacies of the quantity theory was that it assumed other things being equal—namely, the velocity of money and the quantity of goods—but this was unrealistic. Williams implied that money creation was an endogenous phenomenon, arising from the productive process, which in turn regulated the demand for credit. However, "the simple quantitative comparison of money and goods provides no explanation of how money is spent. If to have more money we must have the banks make more loans, who borrows and for what purpose? Different kinds of transactions require different amounts of money and have different degrees of effect upon the price level" (Williams 1931, p. 575).

Ever since their graduate years at Harvard University, Viner, White, Currie, and Williams shared intellectual interests and research methods. Their academic work, as we will see in the next section, later converged and developed into policy.

IV. HARVARD VIEWS ON THE GREAT DEPRESSION

At the 1932 Harris Foundation conference where the Chicago manifesto was drafted, Viner argued that those countries that had recently abandoned the gold standard were better off than those that had not. Yet, he refused to suggest that the United States should follow the same path. Viner defended the gold standard doctrine, dismissing the charges that it was responsible for spreading the contagion.[23] In his view, the roots of the Depression were to be sought in the powerful deflationary forces of the 1920s, originating from the heavy external imbalances produced by the war and the peace settlement and reinforced by subsequent protectionist policies such as the *Smoot–Hawley Tariff Act*. The consequences, for many foreign countries, were "inadequate gold reserves, a constant threat to the integrity of their currencies and a deflationary pressure on their prices in spite of embarrassingly rigid labour and other costs and inflexible internal and external public debt burdens" (Viner 1932, p. 132).

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[22]Williams agreed with Keynes that demand deposits could contain a part of idle business deposits that were kept idle by firms, as cash reserves, and could be considered as similar to saving deposits. As a consequence, as Williams put it, "the total of demand deposits may undergo little change from prosperity to depression, while yet the volume of consumer spending may be profoundly affected" (Williams 1931, p. 566). See also his treatment of the effects of stock market speculation on demand deposits and consumers' spending, which he considered quite complex to determine (Williams 1931, pp. 570–572).

[23]On this point, see Nerozzi (2011).

The single most important symptom of those disequilibria was the concentration of 70% of the world's stock of gold in only two countries: France and the United States. Gold inflows, moreover, were not sufficiently used to expand credit, but were mainly used for speculative purposes in the financial and real-estate markets, whose only effect was to reinforce the inflow of foreign capital. The first casualties were overseas countries, struggling hard to defend their stocks of reserves. However, while the accumulation of gold in France was due to institutional factors, in the United States it was attributable to the aggressive monetary and commercial policies enacted by the Fed and the Hoover administration. After 1927, Viner stated, "the Federal Reserve Board has revealed to the outsider no greater capacity to formulate a consistent policy, unless a program of thrift, punctuated at intervals by homeopathic doses of belated inflation or deflation and rationalized by declaration of impotence, can be accepted as the proper constituents of central bank policy" (Viner 1932, p. 134).

Given the asymmetric and uncooperative way in which the gold standard had been managed, Viner recognized that many countries could have incurred a lesser degree of suffering, had they "had a well-regulated paper currency instead of adhering to the world's ill-regulated gold standard" (Viner 1932, p. 133).[24] The "golden fetters" had prevented many countries from offsetting the deflationary forces under way, and those who had freed themselves were likely to gain. Yet, Viner's view of the United States was quite different: because the gold reserves of the United States were large enough to allow a substantial expansion of the money supply without seriously threatening convertibility, there was no need for the United States to abandon the gold standard (Viner 1932, p. 139).

Viner's critique was shared by other speakers at the conference, especially by John Williams, who blamed the Fed for its ineffectual behavior and supervision. Unlike Viner, Williams did not stress the responsibility of the Fed in the uneven distribution of gold among countries during the 1920s.[25] However, he added new arguments to Viner's criticism of the 1927 to 1929 credit restriction. First, Williams highlighted a saturation of demand for credit and a concomitant increase of idle deposits, which in 1928–29 financed security speculation. Second, as already pointed out by Keynes, the increase of US interest rates, designed to curb speculation on the stock market, had a nefarious effect on the domestic monetary and credit conditions. Banks were held responsible for short-circuiting the credit system and showed no capacity for influencing the demand for credit and steering it toward more productive purposes. According to Williams,

> The Reserve system met [the boom] with an attempt to discriminate between loans for commercial and loans for speculative purposes. Its complete failure should explode once for all the notion that it is possible to dictate the uses to which credit is put, rather than the quantity of credit for all purposes.... The draining of foreign funds into our stock market seems, without question, to have been one cause of the depression. The most significant aspect of the movement was that it was in response to high money rates ascribable in part to the Reserve banks' efforts to check domestic credit expansion. It revealed clearly how the problem of credit control by central banks has changed since the war. (Williams 1932b, p. 151)

[24]Eichengreen (1992) and Bernanke (1995).

[25]Allyn Young (1929) had also stressed the importance of the uneven distribution of gold in the 1920s and its deflationary consequences.

Currie shared similar views. He stated that the restrictive policies enacted by the Fed to control the stock market boom before 1929 had actually missed the target, as higher interest rates ended up undermining business conditions more than financial speculation (Currie 1934b). Currie referred to Keynes's *Treatise*: to have the occurrence of a boom, it must be assumed that investments exceed savings. But, as he put it, "[i]n 1929 the real danger, as we now know, was the very opposite. An expansion of investments was necessary in order to absorb the labour that would otherwise lose employment and to increase incomes that were shortly to become deficient relative to output of finished goods" (Currie 1934b, p. 173).[26]

Currie thoroughly discussed Keynes's and Williams's accounts of the likely effects of stock market speculation on the demand for credit, interest rates, and income (1934b, pp. 149–151). He recognized that these effects could be measured empirically only through the collection of data, which unfortunately were not available at the time. Whatever the effect of stock market speculation on the national income, the Fed's monetary policy had precipitated putting the country in the deepest depression it had ever experienced. As the onset of the crisis was caused by the steep monetary contraction in the means of payments of the country, the way out was to be looked for in a full reversal of that policy.

V. CAMPAIGNING FOR MONETARY EXPANSION

As we have seen, Williams considered the traditional practice of central banking to be obsolete. The huge speculative capital movements and the interdependence of central banks as regards their foreign reserves exacerbated the conflict between domestic stabilization and the functioning of the international monetary system. While the Genoa Conference and the stabilization loans of the League of Nations had somehow increased the efficiency and elasticity of the world's money supply, currency reserves held by national central banks in the principal international money markets exposed the national banking systems to a high degree of instability: "Unlike the member bank reserves in the central bank," Williams wrote, "they [currency reserves] are subject to no legal compulsion and may be withdrawn at the will of the foreign owner. They are, in consequence, highly unstable and are most apt to be withdrawn when they can least be spared. The effect is similar in kind to hoarding, to a run on a bank, or to a wholesale withdrawal of reserves by member banks from the central bank" (Williams 1932b, p. 147). His conclusion was unequivocal: "the transfers of foreign balances can produce a collapse of the international gold standard" (Williams 1932b, p. 147). Central banks were thus forced to have a surplus of reserves above ordinary requirements: only in that case could a country feel free from external influences. Yet, the creation of such

[26]Sandilands observes that the high place that Currie gave to the relation between saving and investment for monetary policy was influenced by pre-*General Theory* Keynes. In fact, Currie remained very skeptical of the new definition of savings that Keynes proposed in the *General Theory*, and of the role of the Keynesian multiplier in bringing about equilibrium between savings and investment via income expansion except insofar as such changes can be traced to expected changes in money and its income velocity (Sandilands 1990, p. 36).

a robust shield against capital flights conflicted with the smooth functioning of the gold standard, which was based on the assumption that banks were "loaned up" and properly responded to changes in their reserves.

Williams recognized that, in its first decade, the Fed had managed foreign exchange reserves efficiently. Those past accomplishments, however, contrasted with the poor record of the Fed's recent policy. Traditional instruments of monetary policy had failed to smooth the peaks and troughs of the cycle and check deflation. The system suffered from the lack of central bank supervision of the money market, and from its weak use of broad discretionary controls. Control functions, and especially the qualitative control of bank assets, became a central issue in Williams's reasoning. Central banks should be prompt and able to use all their discretionary powers to exert credit control, without being inhibited by rigid rules in the selection of bank assets eligible for rediscount: "There must be credit control…. The choice is merely between better or worse credit control" (Williams 1932b, pp. 135 and 137).

The Fed had been established with the aim of increasing the efficiency of the credit supply. The crisis highlighted the importance of qualitative control of bank assets, regardless of the effect this might have on the overall quantity of bank assets and the money supply. Thus, the criteria of the Fed's supervision over the banking system should be shaped along a wider set of objectives. While Williams did not use Currie's term of commercial loans theory, there are clear affinities in their critique of the Fed's ideology:

> It would be untrue to say that the founders [of the Fed] were unaware of the necessity for control. They prescribed safeguards, but not the proper ones. There is deeply imbedded in the Act the philosophy that member bank credit can be controlled by prescribing the uses to which central bank credit shall be put; and further, that if central bank credit is confined to these proper uses there will be no problem of control. It has taken some eighteen years of experience, including two major booms and depressions, to reveal the fallacies inherent in this philosophy; and notwithstanding the revelations, the philosophy persists strongly in the bill now before the Glass Committee. (Williams 1932b, pp. 137–138)

To reverse the powerful deflationary tendencies at work, the Fed should undertake a sudden and bold program of monetary expansion, and Williams was even more explicit than Viner in detailing the type and the amount of market operations the Fed should start up in order to reverse deflation. The most urgent problem was to relieve the banking system by buying securities stocked in the balance sheets of banks. This would encourage new loans and circulation of money and upgrade the quality of assets. The stock of securities of the Fed should reach a minimum of $1.6bn, which meant doubling the current Fed holdings (Wright 1932, p. 249). Laidler and Sandilands (2002) have underscored how accurately this suggestion matched the 1932 Harvard memorandum by Currie, Ellsworth, and White, which Williams certainly knew. Moreover, the Harvard memorandum anticipated many of the recommendations that the participants in the Chicago conference, among whom were Williams and Viner, sent by telegram to President Hoover. In addition to open market operations and the easing of international monetary relations (war debts and tariffs), the Chicago telegram urged Hoover to keep a steady flow of public works expenditures. It also stressed the need to widen the range of assets eligible for rediscount by commercial banks through

the inclusion, among others, of government securities. Viner underscored the crucial connection among government spending, credit expansion, and the growth of money supply, a typical monetarist argument for fiscal deficits as an effective means to put money into circulation (Tavlas 1998a, 1998b, 2003). This focus on fiscal expenditures as an accompanying measure to open market operations was even clearer in the Harvard memorandum, which stressed the need for government to undertake a "program of public construction on a nationwide scale." The main argument was to ensure that the money put in circulation would encourage adequate expenditures:

> Some people feel that an increase in means of payments would have no perceptible effect since, they say, there is plenty of money now; the real difficulty is in getting it spent. We can dispose of this objection very briefly by pointing out that we have provided for the spending of the increased means of payments by linking the plan for deposit expansion to one providing for public works with no immediate rise in taxes. If there is one point on which everyone is agreed, it is that any money borrowed by public bodies will be spent. (Currie, Ellsworth, and White 2002, pp. 537–538)

In his talk at the Chicago conference, Williams had somehow downplayed the role of fiscal policy. By contrast, Viner had been an early supporter of fiscal deficits, and dismissed the idea that public budgets should always be balanced at the end of a fiscal year (Viner 1931). Yet, in their campaign for anti-depression policies, Viner and Williams agreed that the best way toward recovery was an extensive use of open market operations. The crisis had originated in the heart of the banking system, and deflation was driven by the contraction of credit and demand deposits by commercial banks. To stimulate credit creation, banks should be provided with excess reserves.

The recommendations of the Chicago conference did not go unheard. One month later, the *Glass–Steagall Act* made it temporarily possible to include government securities and other non-short-term commercial paper in banks' reserves. In the spring of 1932, the Federal Reserve Board began a massive campaign of purchases in the open market, pumping almost $1.1 billion into the system (Meltzer 2003, pp. 357–363). In August, interest rates returned to previous year levels and the Open Market Purchases Committee decided to stop the purchase of securities.[27] Successful as it might seem at first sight, this program failed to attain its principal goal; i.e., the expansion of credit by member banks. At the same time, fueled by depositors' panic, a new wave of bank failures occurred: from 1930 to 1933, one-third of US commercial banks shut down. Internal and external drains on gold reserves imperiled gold convertibility and produced a further reduction of the money supply. On March 6, 1933, President Roosevelt declared, through the *Emergency Banking Act*, a week of bank holiday and the suspension of dollar convertibility. The United States left the gold standard system and began to pursue anti-depression policies without the threat of gold drains.

[27]According to the Riefler–Burgess doctrine (Burgess 1927; Riefler 1930), which had guided the Open Market Purchases Committee's action since the 1920s, the reduction of the rediscounting rate was the desired result and the committee decided to cease operations (Friedman and Schwartz 1963, table 17).

VI. A MONETARY FRAMEWORK FOR FISCAL POLICY

The failure of the 1932 Open Market Purchase Program to expand credit was no surprise for the four Harvard economists: they expected that banks would use the newly acquired reserves to strengthen their balances, without necessarily expanding the money supply or reviving credit conditions. Monetary policy alone, as Williams put it, was not sufficient to foster recovery, and had to be supplemented by fiscal policy: "The financing of deficits combined with pressure through reserves, affords an avenue for expansion of bank assets and deposits accompanied by a decline in interest rates. In addition to the money thus created, government borrowing provides an outlet for old deposits which might otherwise remain idle rather than assume the risks of investment in depression" (Williams 1942, p. 237). According to Williams, the transmission mechanism was expected to run from bank reserves (affected by open market operations) to short-term and then long-term rates, fostering investments and aggregate demand. Since the 1920s, the stock of financial assets in the portfolios of banks had been growing, while commercial paper had been declining. Thus, an increase of reserves was likely to foster banks' demand of all the types of assets, both short and long term. The possibility to hold government securities as a reserve eligible for rediscount strengthened the banks' asset position and lowered interest rates.

Viner's view was that the 1932 Fed's policy had not been strong enough to reverse the powerful deflationary forces at work. Like Williams, Viner pointed out that the government and Fed operations had been completely unsuccessful in countervailing the credit contraction: "There has been no net inflation of bank credit since the end of 1929. There has been instead a fairly continuous and unprecedented great contraction of credit during this entire period" (Viner 1933a, p. 22). For Currie, this was due to the Fed's "almost complete passivity and quiescence" in 1929–32 (Currie 1934a, p. 147). However, Williams later gave a more positive interpretation of the Fed's behavior in 1932, when Fed operations produced some important results; namely, "strengthening the capital structure and the general condition of the banks," and "increasing member bank reserves in the hope of stimulating … bank loans and investments and the consequent creation of new bank deposits." Williams also observed that "the Fed performed very well in its capacity to act as the fiscal agent, assisting the Treasury and financing through Treasury security issues the Government's expenditures, including the emergency spending program." True, no revival of private investment materialized, but the explanation for this failure did not lie within the banking system: "as the excess reserves continued to pile up and attain huge dimensions and interest rates sank to levels never previously reached, … whatever may have been the defects of central banks' policy, the main trouble laid elsewhere" (Williams 1941, p. 219). The banking system was thus in a deadlock: the monetary base was wide enough to support a huge increase of investments and economic activity, but lack of business confidence resulted in a sluggish demand for credit.

A similar reasoning underpinned Viner's interpretation of why monetary policy was unable to foster recovery. According to Viner, a crucial factor in the business cycle was of a psychological nature: the cycle depended on expectations about the future trend of prices and sales, which determined the rate at which firms were willing to make investments. Viner clearly pointed out that business prospects were self-fulfilling. When firms were unwilling to make investments, credit expansion may not occur, even in the face

of an absolute increase in bank reserves. While at the Treasury in 1934, with the help of Charles O. Hardy, Viner conducted an inquiry on the availability of credit in the Chicago Federal Reserve district, showing that banks were not, in the main, rejecting demand for new loans; rather, it was demand for credit that had been declining. No credit crunch was occurring at the time (Nerozzi 2007).

Once the Depression started, the rise of the currency/deposits ratio and of the reserve/deposits ratio provoked a decrease of purchasing power. Moreover, this destruction of money was driven and worsened by a decline in its velocity, which was likely to move pro-cyclically, due to expectations about future prices and demand.[28] Yet, according to Viner, it was not the *transaction* velocity of money that was relevant in determining the low level of aggregate demand, but rather what he called the "final purchases velocity of money"; i.e., the rate of use of purchasing power in making final consumption and investment expenditures.[29]

While blaming the onset of the crisis on the contraction of the quantity of money, Currie had also highlighted the "abnormal loss of confidence" that three years of steep depression had engendered in the business community (see also Sandilands 1990, pp. 49–50). Currie, like Viner, regarded velocity as the crucial factor for the inadequate level of aggregate demand at a time when banks and firms were piling up idle reserves and when interest rates were at a minimum. Again, it was not the transaction velocity of money that was important, but the *income velocity of money*, whose calculation for the period from 1921 to 1932 Currie had been the first to endeavor (Currie 1933c). According to Currie, the income velocity of money had been declining since 1929, worsening the effects of the contraction of the money supply (Sandilands 1990, p. 42). The most important cause in the decrease in the income velocity was the worsening of business expectations concerning prospective sales and prices.

Thus, fiscal policies became an increasingly important part of the recovery recipe. While the first evidence of Viner's advocacy of fiscal policy dates back to 1931 and that of Currie and White to January 1932, government expenditures were seen at the time as a necessary reinforcing measure to monetary policy.[30] In 1933 the situation had

[28]This "velocity pessimism" was shared by Taussig, who addressed Hawtrey's and Keynes's confidence on the powers of monetary policy: "You and Keynes are convinced that pumping money in would serve to get us out of the slough. I don't feel at all sure about this and many of my friends share the doubt.… Money constitutes a minor fraction of our circulating medium. Of course deposits and their velocity of circulation tell the story.… That's a matter largely of psychology and it is a deuce of a problem how the psychology (confidence) can be worked out. When one philosophizes it seems absurd that so tenuous, changing, protean thing as these blessed deposits should be of such importance; and that the welfare of millions and millions should be so profoundly affected by their unpredictable ups and downs" (Taussig to Hawtrey, April 26, 1932, Correspondence Box 6: H 1932-K1932, TP).

[29]See Viner (1937, pp. 366–367). Early use of this concept may be found in Viner's correspondence since 1932–33; see Nerozzi (2009a).

[30]In May 1932 Taussig also took a position, at least in private correspondence, in favor of Senator Wagner's proposal of public works expenditures financed by "long term bonds" as an alternative to "anything in the way of inflation in the currency. I am not at all sure that a step of this kind would have great result, even if the program is carried out with an eye to economical use of capital and labor, and with no drawing of resources that would get stuck, so to speak. No one can tell how much net good would result; but things are at an impasse, and it seems to me worth while to try something that might give a start. I hope you will agree with me that this is better than a proposed bonus to veterans, or higher tariff rates, or a huge financing of existing real estate construction" (Taussig to Childs, February 18, 1932, Correspondence file C1930-D1937, TP).

changed in many respects and Viner was one of the first economists to state clearly that a bold program of government expenditures was the best way to drive the country out of the recession: "I am very much in favor of a program of public works, as a means both of relieving unemployment and of stimulating an upturn in business. It is in this way, and in this way alone, that I would favor deliberate credit expansion under government auspices."[31]

This vision continued to steer Viner's activity during his tenure as special assistant to the Treasury. Based on an inquiry carried out during the summer of 1934 by his PhD student Simeon Leland regarding the total expenses and revenues of the public sector, Viner concluded that the increase in government expenditures had been compensated by a corresponding decrease on the part of the Federal States and other public agencies.[32] With these figures he tried to convince Roosevelt and Morgenthau that public works needed further federal support (Nerozzi 2007, p. 55). In September 1934 Currie, Sweezy, and probably Hart wrote a "Banking group memorandum on emergency expenditures" that explicitly urged the government to enact a bold program of public expenditures.[33]

At the same time, Viner had suggested to Currie to develop, with the help of Currie's student Martin Krost, a series on "pump priming deficits" in order to measure their effects on the national income.[34] Currie's statistical studies provided a theoretical justification to deliberate fiscal deficits and a guideline in the selection of the proper government expenses and investments in order to enhance the income velocity of money and mobilize existing banking reserves. Currie developed and further refined these datasets during his tenure at the Fed, providing a theoretical and empirical support for fiscal intervention well before the *General Theory* came to the United States (Stein 1969, p. 166). As a matter of fact, the four Harvard economists reacted quite critically to the publication of the *General Theory*. Viner regarded Keynes's treatment of liquidity preference as an undue simplification of the complex causal relationship among money, interest rates, and different types of financial assets (Viner 1936a). Currie did not share Keynes's definition of liquidity preference as demand for money, and criticized, together

[31]Viner to Albert W. Luse, 1933, January 24, JVP, box 38, f. 6. Albert W. Luse was secretary manager of the Chicago Face Brick Bureau. According to Viner, an increase in government expenditures would have been effective even without credit creation. The availability of idle funds and bank reserves could be sufficient to support a wide expansion of public expenditures without any subtraction of purchasing power from the private sector. Viner's position was somewhat in line with Hawtrey's credit cycle theory and the idea that the "Treasury view" would not hold under the exceptional circumstances of a credit deadlock. It was "in a period of depression when the rapidity of circulation is low" that the government could then secure money "that would otherwise have remained idle" (Hawtrey 1925, pp. 41–43). This also seems to reinforce Laidler's (1993) disputed contention that there was a strong Harvard link (inclusive of Hawtrey) to the Chicago School.

[32]A memorandum containing statistical series on "Federal Government Net Contribution to Money Incomes" was produced by "Viner's Fresh Team," on September 19, 1934 (Albert G. Hart Papers, Columbia University Archive, Box 15).

[33]Two different versions of the memorandum and an accompanying letter by Sweezy to Hart and other members of the Treasury Department (October 2, 1934) are preserved in Albert G. Hart Papers, Columbia University Archive, Box 12 and 50.

[34]Sweezy (1972, p. 118); see also Viner to Patinkin, January 15, 1970, cited in Patinkin (2003, p. 114).

with Williams, Keynes's insistence on the interest rate as the principal force influencing the decision to invest. Moreover, both Currie and Williams were skeptical of the multiplier. Williams's advocacy of fiscal policy and deficit spending rested on the argument that the most important effects of public spending depended upon business psychology. According to Williams, "not the least of our dangers is that of confusing this rather mechanical monetary concept with the deep-seated forces with which we should be mainly concerned in our analysis of the economic effects of deficit spending" (Williams 1941, p. 223).[35]

In Viner's view, a program of public works would offer industrial firms a growing outlet for their production, inducing them to use their purchasing power or apply for new credit in order to increase production and start up new investments. Yet, though not independent from aggregate demand, confidence was the main source of business recovery. The public sector could not do the entire work, and the private economy needed to play a major part in increasing the use of the existing purchasing power (Viner 1933b, pp. 133–134). Business confidence was a very volatile variable, which the government should take carefully into account by avoiding measures and practices that alarmed businessmen and fed into their fears about the future.[36]

As recovery proceeded, Viner, Currie, Williams, and White agreed in considering the huge amount of excess reserves piling up in the banking system as the most relevant danger, since a sharp revival in business expectations could suddenly give rise to heavy inflationary pressures. For this reason, they suggested that the Fed drastically raise the reserves requirements for banks. Contrary to Milton Friedman and Anna Schwartz (1963), who deemed these measures of monetary restriction responsible for the 1937–38 recession, the four Harvard economists considered the quantity of money as of secondary importance.

The 1937–38 recession was a crucial moment for the four Harvard economists as public servants: starting from a quite similar analysis, they came to disagree upon the proper measures that should be undertaken. Budget deficits could lead to potentially opposite outcomes. As long as they were able to convince firms that aggregate demand and thus the profitability of their production was increasing, they would be successful in boosting investments and employment; but if businessmen had anticipated future tax increases or had been concerned by the growing public involvement in economic activity, private investments would be discouraged.[37]

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[35]While Currie, White, and Viner supported fiscal policy and shared a similar vision of the way it worked, we have less clear evidence about Williams's views in this respect: in his later recollections, he placed himself among the early supporters of the pump-priming argument designed to restore business confidence and private investments; yet, as we shall point out later, he came to dissent from the 1938 spending program.

[36]The Harvard economists' opposition to the National Recovery Administration and other structuralist reforms typical of the early New Deal is largely explained by this conviction. Moreover, they fiercely criticized the "mature economy" idea, formulated by Alvin Hansen, stating the inability of modern capitalist societies to provide an adequate volume of private investments. According to this vision, government intervention by means of deficit spending should be regarded as a permanent feature of the US economy, instead of an anti-cyclical device to be reversed in the upswing (Williams 1941, 1942).

Currie and White believed that the first effect would prevail. Currie, especially, gave an important contribution to the bold program of public expenditures approved by the Congress in April 1938, and obtained the support of many other economists and officers, including White. Viner and Williams, on the contrary, thought that the ill-devised program of expenditures and the further increase of the public debt would delay a self-sustaining recovery. After having joined forces for many years within the administration, Currie, Viner, White, and Williams came finally to be enrolled in the two opposite armies involved in the "struggle for the soul of Franklin D. Roosevelt" (Stein 1969, ch. 6).

VII. CONCLUDING REMARKS

Viner, Williams, Currie, and White cannot be considered as members of a cohesive school of thought, and certainly they did not regard themselves as such. Yet, they shared a common set of methodological and analytical views, which were deeply rooted in their training at Harvard during the 1920s. They also shared a vision about what anti-depression policies the United States should enact, and they cooperated within the Roosevelt administration to promote them.

Their agreement on policies was grounded on the interpretation that they gave of the Great Depression: Currie, Viner, and Williams believed that heavy deflationary forces were at work all over the world as a consequence of the war and the postwar settlements, and blamed the onset of the crisis on the policies pursued by the Fed, which, in an awkward attempt to curb speculation and preserve adherence to the Commercial Loans criteria, provoked a sudden monetary contraction at home and abroad. This monetary interpretation anticipated the main lines of Friedman's and Schwartz's analysis of the Depression and, together with the recommendations stemming from the 1932 Chicago Harris Foundation Conference, played an important role in the establishment of the monetary tradition, whose main apostles have been known to reside in the economics department at the University of Chicago. As we have seen, the roots of the US monetary tradition are more than one, and intersect in many different ways.

Yet, a point that we would like to emphasize is that the monetary theory proposed by these four Harvard economists departed in important ways from the views that were

[37]In June 1939 Secretary Morgenthau asked Williams to write a memorandum concerning Adolph Berle's proposals for the constitution of new credit agencies designed to support a wide program of public works. Williams was, in principle, not unfavorable to an enlarged volume of Federal spending, which, given the heavy financial conditions of state and local governments, was the only way to restore the pre-depression volume of public constructions. At the same time, "The broad fact today is that we have gone much farther than this or any other country in expanding the money supply, reducing interest rates, creating government credit agencies and deficit spending. … A much more … pertinent and challenging question … is why the[se] policies, already carried out to such unprecedented lengths, have not been more effective." Among the factors hindering recovery, Williams indicated the steep increase of costs relative to prices since 1933 and wages since 1937, especially in the building industry, together with the need for amendments to the New Deal's taxation and *National Labour Relations Act*. "So long as we avoid facing these major problems, I do not think we will get very far by suggesting new lending or spending devices" (John H. Williams Papers, Federal Reserve Bank of New York, Box 1, FBRNY Policy Development 1934–1954, fold. 1).

later to be associated with Chicago monetarism. Their ideas concerning the way money and credit influenced aggregate demand and how the income velocity of money could offset—or, indeed, reinforce—changes in the money supply contrasted with Friedman's restatement of the quantity theory. Moreover, their interpretation of the deepening of the Depression, of the delayed recovery, and of the causes of the 1937–38 recession did not correspond to that proposed by Friedman and Schwarz in 1963. The four Harvard economists would have certainly denied that the dictum "money does matter" would apply without qualification to the US economy during the 1930s. Real factors such as the fundamental disequilibrium between savings and investments underpinned the working of monetary forces and the strenuous resistance of the "propensity to hoard" on the part of banks, firms, and individuals. Gloomy price and sales expectations, together with anti-business taxation, determined a sluggish demand for credit and the collapse of investment expenditures. Their opposition to Irving Fisher's plans of monetary expansion and—with Currie's exception—to the 100% bank reserves plan was also strengthened by their advocacy of central banks' discretionary powers against the imposition of any fixed rule.[38] Finally, their support of deficit spending was based not on the typical monetarist argument that it was an alternative channel to the increase of the money supply, but rather that it was the most effective means to directly increase consumption and investment expenditures, and thus revive business confidence.

It should also be noted that this vision had a clear Keynesian perspective and was, indeed, influenced by Keynes's pre-1936 writings. Especially the works of Currie and Williams in the early 1930s showed how much, though not uncritically, the Harvard economists had drawn from Keynes's *Treatise on Money*. Their focus on the disequilibrium between saving and investments, and the relevance they attached to long-term rather than short-term interest rates in business cycles and banking activity, clearly derived from Keynes. Their advocacy of open market purchases and of pump-priming fiscal policy (with reference to the indirect effect of public works expenditures) echoed Keynes's own proposals, especially for the United States (Keynes 1931, 1933). Sandilands has not ignored Keynes's influence on Currie and Currie's reflections on Keynes's scholarly work. The debate on the originality of the Chicago monetary tradition and its alleged Harvard roots, however, has somewhat de-emphasized the specific monetary views shared by these Harvard-trained economists in the early 1930s and afterwards. It has also neglected the complex functional and institutional relations the four Harvard economists drew among money, credit, and the real working of the economic system.

A final remark concerns the reception of the *General Theory* by this group of economists. Especially Viner's and Williams's comments, though not overly unfavorable, highlighted many shortcomings in Keynes's masterpiece. Keynes's multiplier was criticized as excessively mechanical and his concept of liquidity preference as excessively simplistic, and they pointed out his lack of attention to the supply side and especially to inflationary problems that were likely to arise in the wake of full-employment policies.

[38]Currie developed, on Viner's request at the Treasury, his own version of the 100% plan (Sandilands 1990 and Nerozzi 2007). All along his career as public adviser, Currie continued to regard the 100% reserve idea framework as the best banking arrangement for firmly establishing the central bank's control over the money supply.

Williams and Viner were also skeptical of the Keynesian concept of unemployment equilibrium as a long-term phenomenon, which required extensive and permanent deficit spending to be solved. It was also for this reason that they criticized the deficit spending program of April 1938.[39] White and Currie, in turn, often seemed to disagree with Williams's and Viner's criticism of Keynesian ideas. Despite all distinctions and divergences, however, these four Harvard economists were an effective channel through which pre-1936 Keynesian theory—as John K. Galbraith put it—"came to America" and merged with a vivid tradition of monetary and macroeconomic research that emerged in the landscape of the New Deal's policies.

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[39]In a later reflection, however, Viner pointed out that in 1938 he was not opposed to the deficit spending program per se, but to the specific program of public works proposed on that occasion, which he considered not adequately developed. See Fiorito and Nerozzi (2009, p. 83).

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