L. Albert Hahn's
Economic Theory of Bank Credit[*]

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Abstract — *In the mid-1920s L. Albert Hahn's Economic Theory of Bank Credit (1920) had become one of the most influential and certainly the most controversial book on monetary theory in the German language area. Hahn wanted to overcome the orthodox view that every credit has to be financed by means of savings deposited by the banks. Banks are producers of credit which is not limited by the amount of saving. Capital was seen by Hahn as the result of credit creation and not of saving. Over time Hahn moderated some exaggerations of the first two editions of The Economic Theory of Bank Credit, such as the idea of a permanent boom. The paper also compares Hahn's views on the role and effects of credit with those of Schumpeter and investigates Hahn's claim to have anticipated essential ideas of Keynes' General Theory.*

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I. Introduction

In the mid-1920s L. Albert Hahn's *Economic Theory of Bank Credit* (1920) had become one of the most influential and certainly the most controversial book on monetary theory in the German language area. Whereas the author still had stated in the introduction to the unchanged second edition (1924) that his contribution had been widely neglected by the economics profession, Gottfried Haberler only three years later not only came to the conclusion that "Albert Hahn undoubtedly deserves a prominent place in the history of the most recent German monetary theory" but also "that of late a Hahn literature has developed, inasmuch as scarcely a book is published today on money and credit that does not discuss Hahn's teachings at length."[1] Haberler's long, critical but also respectful review article of Hahn's *Bank Credit* itself has to be regarded as one of the most insightful contributions to the contemporary Hahn literature.

The most interesting aspects of Hahn's *Economic Theory of Bank Credit* are contained in the second part of the book where the author is concerned with the effects of credit creation and credit extension on production. From the beginning Hahn was convinced "that bank credit has the importance of a stimulus of the conjuncture" (1920: 156).[2] Thus a decisive function of an economic analysis of bank credit consists in a contribution to a monetary theory of the business cycle. Consequentially, Holtfrerich (1989) in his investigation of the development of monetary business-cycle theory in the German language area focuses on the main contributions made by Wicksell, Schumpeter, Hahn, Mises and Hayek. Knut Wicksell had not only been among those economists who early on perceived the growing importance of the banking system for the money supply of the economy at the end of the nineteenth century, and the elasticity or endogeneity associated with credit creation, i.e. the banks' ability to create deposits in their act of lending, but also placed it into the center of his analysis in *Interest and Prices*. There he confronted the case of a pure credit economy, in which every payment, and consequently every loan, is made by means of cheques or giro facilities, with the opposite extreme of a pure cash economy, a system of pure outside money to which the classical quantity theory applies. In contrast, in an advanced economy with highly developed credit institutions, which can grant loans in excess of the amount of savings deposited, the money supply is completely elastic being "more and more inclined to accommodate itself to the level of demand"[3]. In such an organised credit economy stability of the price level requires equality

[1] Haberler ([1927, 803] 1949, 253), the 1949 translation is a substantially reduced version of his 1927 German review article. The proud author of *Economic Theory of Bank Credit* himself refers extensively to this 'Hahn literature' at the beginning of the 3rd edition. See Hahn (1930: XIV-XVI).
[2] If not otherwise specified, translations from German sources are my own.
[3] Wicksell [1898] (1936:110).

between the natural (equilibrium) rate and the money rate of interest, i.e. the rate of interest charged on loans. Discrepancies between the two rates lead to cumulative processes.

The idea of creative destruction by innovations and the notion that bank credit is a decisive prerequisite for pioneering entrepreneurs to finance innovational investment activities are key pillars of Schumpeter's *Theory of Economic Development*. The financing of production is essentially performed by the creation and destruction of credit. Schumpeter shares Wicksell's view that the disturbance of economic equilibrium primarily emerges from an enlargement of profitable investment options due to technical progress rather than by an artificial lowering of the money rate of interest by the banks which thereby causes a period of expansion which is unsustainable. The latter is emphasized in the works of his two Austrian compatriots Mises's *Theory of Money and Credit* and Hayek's *Prices and Production*. There, the bust is the inevitable consequence of the credit-induced boom in which the reallocation of productive resources to excessively roundabout methods of production is corrected. Mises's argument of excessive credits by the banking sector as the decisive cause of cyclical fluctuations is most clearly stated in his *Monetary Stabilization and Cyclical Policy* (1928), in which he not only distances himself from views still held by Schumpeter but even from some of his own earlier views.

With his *Economic Theory of Bank Credit*, which remained the most important monograph among his many writings, Hahn wanted to overcome the orthodox view that every credit has to be financed by means of savings deposited by the banks. Whereas he regarded the classical doctrine as adequate for the state of development of the economy at the time of the classical economists (of whom he gave highest praise to Ricardo), he found it most inappropriate for a modern economy with an elastic money and credit supply. The central regression line of Hahn's thought is the doctrine that "*capital formation is not the result of saving but of the granting of credit*"[4]. Despite many later modifications and some fundamental changes of his economic views, which for some modern historians of economic thought mutated a "precursor of Keynesianism" into one of "the monetarist counterrevolution"[5], Hahn stuck to this view until the end of his life. Thus he concludes the condensed – autobiographical – history of economic thought survey of his own development as a theorist over half-a-century with pointing to the "(although only to be applied with care) fundamental principle of his business cycle- and employment theory: '*Every expansion of credit results in an expansion of goods because of a change in its distribution. Credit takes the goods out of nothing where they would have remained without credit expansion'*."[6]

[4] With this priority of credit creation over capital formation Hahn (1920: 120) starts the explanation of his own theory in contrast to the traditional doctrine.
[5] See, e.g., Boudreaux and Selgin (1990).
[6] Hahn (1963:13 and 1930: 125-6).

Since Hahn also shares with Schumpeter the view that the main function of credit is the financing of economic development, it is understandable that Howard Ellis (1934) in his *opus magnum*, i.e. his classical survey of *German Monetary Theory: 1905-1933* contrasts "The Schumpeter-Hahn type of cycle theory" with "The Mises-Hayek Analysis of Cycles". Ellis also ventures that for Hahn as for Schumpeter "the failure to perceive the dangers of over-investment accounts for the sanguine attitude of both writers toward the outcome of credit inflation"[7], which is in remarkable contrast to the monetary overinvestment theories of the cycle as developed by Mises and Hayek.

During more than half-a-century Hahn led a threefold existence: as a practical banker, a highly gifted economic journalist, and as an economic theorist with a high output of publications in the area of money, credit, business cycles and currency problems. However, even as a theorist he behaved as an entrepreneur, who consistently also worked on the self-construction of his own biography. Thus Jan-Otmar Hesse in his contribution to the HOPE 2006 Conference "Economists' Lives: Biography and Autobiography in the History of Economics" has pointed out correctly that "the self-construction of Hahn's life played a large part in his academic contributions"[8]. One cannot therefore understand the particular form of L. Albert Hahn's economics without knowing his biography. His academic life and his scholarly contributions are intertwined with his entrepreneurial life and his business success.

Section II therefore deals with the main stations of Hahn's entrepreneurial and academic life and gives an overview on his scholarly publications. *Section III* focuses on the more radical first edition of his *opus magnum*, *Economic Theory of Bank Credit* (1920), which created a general outcry and gave rise to the "Hahn literature" after it was published in an unchanged second edition in 1924 just after the end of the German hyperinflation. In *Section IV* we concentrate on some major modifications in the third edition, which was published against a completely different background of the state of the economy, i.e. at the beginning of the deflationary Great Depression. Hahn's abating of his earlier radicalism is already foreshadowed in his well-known 1923 contribution on *Credit* to the fourth edition of the *Handwörterbuch der Staatswissenschaften*. In *Section V* we will compare Hahn's views on the role and effects of credit with those of Schumpeter, and more closely examine similarities but also some important differences. When Keynes's *General Theory* was published in 1936, the former propagator of credit inflation, who had been classified by critics as the leading "inflation theorist by elimination of interest"[9], himself had developed already into a fierce opponent of Keynes, and in particular the inflationary dangers of his employment theory. Hahn's collected essays on *The Economics of Illusion* (1949a) is a pamphlet against Keynes and Keynesianism. In his introduction he could not help "thinking that what is today praised as the

[7] Ellis (1934: 334).
[8] Hesse (2007: 226).
[9] Lampe (1926:131).

"Keynesian Revolution" should, more accurately, be called the "Keynesian General Confusion"[10]. Nevertheless Hahn claimed to have anticipated the essential elements of Keynesian economics. Thus we find Hahn in the paradoxical position of, on the one hand, rejecting Keynesianism as "a sin of my youth" and, on the other hand, claiming priority over Keynes, "for as early as 1920 in my *Volkwirtschaftliche Theorie des Bankkredits* I presented what to me are the basic Keynesian statements"[11]. In Section VI we will investigate how much Hahn's own claim of anticipation of essential Keynesian ideas, which too easily has been accepted by many economists, is justified. The concluding *Section VII* will aim for a final appraisal and balanced assessment of Hahn's *Economic Theory of Bank Credit*.

II. L. Albert Hahn: A theorising banker fifty years between inflation and deflation

L(ucien) Albert Hahn was born into a family of private bankers in Frankfurt am Main on 12 October 1889.[12] The *Bankhaus L. Albert Hahn*, which had been founded by his grandfather in 1821, became a stock exchange company, the *Deutsche Effecten- und Wechselbank*, in 1872 in which, however, his father and uncle retained a majority. After finishing high school at the Goethe-Gymnasium in Frankfurt, Hahn started to study medicine at the University of Freiburg before he moved to law which he studied at the Universities of Heidelberg and Marburg, where he finished with a PhD in 1912. Thereafter he first worked in the bank of the family before he started his traineeship at the Country Court in Frankfurt to complete his legal education which, however, due to the outbreak of the First World War he could only finalize in 1919 at the *Kammergericht* (court of justice) in Berlin. In the very same year he entered the managing board of the family's bank to succeed his sick father. Hahn, who in the last two years of the war had already published articles on 'The gold policy of the Bank of Sweden during the war' (1917) and on the transition 'From the War to Peace Currency' (1918), was aiming for a better theoretical understanding of his practical activities as a leading private banker. Always regarding himself as *"ein theoretisierender Praktiker*"[13] (a theorising practitioner), Hahn acquired a second PhD at the University of Marburg in 1919, now in economics in the philosophical faculty, with the article "The object of the money and capital market in the modern economy. A contribution to the theory of the banking business" (1919), "whose results were extremely unorthodox"[14]. The article became the basis of the widely expanded *Economic Theory of Bank Credit* published in the following year, in which Hahn developed his thesis of an autonomous credit generating power of the banking system and its consequences for capital formation, the business cycle and employment. The book, "full of youthful

[10] Hahn (1949: 6).
[11] *Ibid*.
[12] For details on Hahn's biography see Kulla (1999), Hesse (2007), and Hauck (2009).
[13] Hahn (1963:1).
[14] *Ibid*: 4.

enthusiasm and convinced of having discovered the path to permanent prosperity"[15], was heavily criticized by many contemporary economists as an "apotheosis of credit creation"[16] after the hyperinflationary processes in Germany and Austria.

Due to internal pressure the full-time banker became an avocational theoretician[17] who published regularly in scholarly journals as well as in the best newspapers and economic magazines, thereby exerting some influence on the banking community and the public policy debate.[18] In June 1926 the *Frankfurter Gesellschaft für Konjunkturforschung* (Frankfurt Society for Research on Business Cycles) was founded at the initiative of Hahn. The trademark of the Society, which was chaired by Hahn's friend Eugen Altschul[19] and financially supported by the Frankfurt Chamber of Commerce, was the focus on the methodological foundations of business-cycle research, starting with a critical evaluation of the Harvard methods by Oskar Anderson (1929).[20] The Society cooperated strongly with the faculty members of the Goethe University from which Hahn received an honorary professorship in 1928. From the summer semester 1929 to the winter semester 1932/33 Hahn gave regularly courses on money and credit in the faculty of economics and the social sciences.

In the early 1920s Hahn's insights into the essence of the hyperinflationary processes and its consequences had helped to maintain the capital of his bank. Less than a decade later he was siding with the advocates of orthodox economic policies against the "economic activists" (Garvy 1975) in the controversial debates to fight the deflation and mass unemployment at the end of the Weimar Republic. In spring 1933 Hahn was among the 19 members of the Faculty of Economics and the Social Sciences of the Goethe University who were dismissed for racial and/or political reasons on the basis of the Restoration of Civil Service Act promulgated by the Nazis on April 7, 1933 only seven weeks after their rise to power. Among others the list included such outstanding scholars as Henryk Grossmann, Carl Grünberg, Adolf Löwe, Karl Mannheim, Fritz Neumark, Franz Oppenheimer and Karl Pribram.[21]

The Hahn family was able to sell their assets of the bank to a consortium of Berlin banks just in time before the 'legal' expropriation of Jews led to a rapid decline of prices. In the same year 1936 Hahn emigrated to Switzerland where he settled in Geneva. Since the Prussian annexation of Frankfurt in 1866 the Hahn family had acquired Swiss citizenship to avoid that their sons had to

[15] Hahn (1949: 171).
[16] Ellis (1934: 329).
[17] See Hahn (1963: 3).
[18] His most important articles were also published as two books of collected essays under the title *Money and Credit* (Hahn 1924, 1929). For a complete bibliography see Hahn (1963: 241-7).
[19] After emigrating from Nazi Germany, Altschul (1887-1959) worked from 1933-39 at the National Bureau of Economic Research with Wesley C. Mitchell whose *Business Cycles* Altschul had edited in German in 1931.
[20] For a more detailed analysis of the Frankfurt Society for Research on Business Cycles see Kulla (1996: chpt. E).
[21] For a full list see Hesse (2004: 443).

exert military service in the Prussian army.[22] In Switzerland the only son of Hahn and Nora von Girsewald (1906-1992), whom he had married in Vaduz, Liechtenstein in 1933 when he converted to Protestantism, was born in 1936. From Geneva Hahn moved to New York in 1939, where he worked as an asset manager and lectured regularly at the Graduate Faculty of Political and Social Science of the New School for Social Research which had been founded as the 'University in Exile' in fall 1933. In his first role he won a fortune by buying shares of American oil companies just before the United States entered the war against Nazi Germany. As an instructor and author of economic articles he now followed a strongly anti-Keynesian track in the country of the New Deal, which culminated in his collected essays *The Economics of Illusion*, published in New York with an introduction of the exposed anti-Keynesian Henry Hazlitt in 1949. In the same year Hahn left the United States and returned to Europe where he settled in Zurich, Paris and in Southern France. From there he quite often commuted to Frankfurt where he got back his honorary professorship from the Goethe University in 1948 and lectured on Keynes's *General Theory*[23], but didn't continue to teach regularly. However, in Germany Hahn became active again as a banker and finally in 1964 a member of the Supervisory board of the former bank of the family. Economically and politically he was now an "extreme liberal"[24]. No wonder that Ludwig Mises, Henry Hazlitt, Wilhelm Röpke, but also Gottfried Haberler, Friedrich Lutz and the German Minister of Economics and later Chancellor Ludwig Erhard were among the key contributors to the Festschrift which Hahn received at his 70th birthday by his friends (Muthesius 1959). Hahn had become an active member in the Mont Pelerin Society. Due to Machlup in 1963 Hahn also became a member of the Bellagio Group which was engaged in the fight for flexible exchange rates in the final decade of the Bretton Woods System. Hahn died in Zurich on 4 October, 1968.

III. Hahn's 1920 *Economic Theory of Bank Credit*: An "apotheosis of credit creation"

At the end of WW I Joseph Schumpeter established himself as a leading monetary theorist in the German language area with his long essay on "Money and the Social Product" (Schumpeter 1917-18), in which he systematically elaborated central ideas on money and credit which were already contained in his *Theory of Economic Development.* There he had emphasized the financing of innovative investment activities by means of credit as the key function of the banking system. In Schumpeter's view the banker is not the trader but the producer of purchasing power. "[C]redit is essentially the creation of purchasing power for the purpose of transferring it to the entrepreneur, but not simply the transfer of existing purchasing power" (Schumpeter 1934: 107). In contrast to the means of exchange-function of money, credit creation shows clearly the capitalistic function of money, i.e. its importance for industrial development. In chapter 8 "Money, Credit and Cycles" of

[22] See Hauck (2009: 19).
[23] Caspari (2004: 467).
[24] Neumark (in Schefold 2004, p.92).

Part IV of his *History of Economic Analysis* Schumpeter (1954) deals intensively with the important developments that occurred between 1870 and 1914 in the banking systems of all advanced economies. However, Schumpeter for whom money plays the role of a servant for proceedings in the real economy and basically constitutes a method to dispose of goods or factors of production, saw the true role of banks in capitalist evolution only insufficiently reflected in the literature on banking and finance in the pre-WW I period which "was as much of a separate compartment within the literature on money and credit as the latter was a separate compartment within the literature on general economics" (Schumpeter 1954: 1110-1).

Schumpeter who exposes the great difficulties economists had to grasp that bank loans do create deposits and have a central role to play in the financing of investment, independently of previous savings, and acknowledges Wicksell's achievements "to recognize certain aspects of 'credit creation', in particular the phenomenon of Forced Saving", in his analysis of the effects upon prices, emphasizes that "it was not until 1924 that the theoretical job was done completely in a book by Hahn" (Ibid: 1115-6).[25] However, with regard to the definitive impact of Hahn's book Schumpeter in retrospect came to the conclusion: "One reason why this book left so many economists unconvinced was ... the fact that the theory of bank credit there presented was wedded to certain highly optimistic views about the possibility of achieving permanent prosperity, which prejudiced some economists against its essential achievement" (Ibid, n. 10).[26]

The first and second edition of Hahn's *Economic Theory of Bank Credit* consists of three parts: Credit and Banks (pp. 6-105), Credit and Goods world (pp. 106-159), and International Credit (pp. 160-171). The short third part is eliminated in the third edition. The lengthy first part shows the intimate connection between theory and practice which penetrated Hahn's work lifelong and did not change with his pronounced mutation from a "pre-Keynesian" to an anti-Keynesian. In sometimes illuminating, sometimes rather technical and occasionally rather boring explanations the author wants to make clear the role of credit in the modern economy to his contemporaries. Hahn is respectful of the classical economists whose monetary theory was adequate for their time, but ardently declares the "uselessness" of the quantity theory for the modern economy, in which cash money plays only "a very unimportant, sometimes a completely vanishing role"[27]. This reasoning is as important for Hahn's further argumentation as is his view that the active business of banks dominates the passive side.[28] It is impossible to consider the means which are at the disposal of

[25] It should read 1920 since the second edition of Hahn's book is a completely unchanged version of the first edition.
[26] Strangely, Schumpeter in the note to the text refers to the third and completely revised edition of Hahn's book (1930) in which the vision of a permanent prosperity does not conclude the author's considerations of the effects of credit creation any longer.
[27] See Hahn (1920/24: 16-8).
[28] Ibid: 32.

banks for the granting of credit as an independently available stock, because these means are generated only by credit creation.

According to Hahn the activity of banks consists in functioning as guarantors, i.e. to procure trust for debtors. Money and credit markets therefore are nothing else than markets on which credit in the literal sense of trust is traded.[29] Hahn gives his *Economic Theory of Bank Credit* the *leitmotiv* from the British economist Henry Dunning Macleod (1821-1902) "A Bank is therefore not an office for 'borrowing' and 'lending' money, but it is a Manufactory of Credit (Macleod II/2, 1891: 594).[30] Following not only Macleod but also Wicksell and Schumpeter[31], Hahn denies the traditional idea of the role of the banks to function only as the mediator of credit between savers and investors. Different to Macleod, in whose writings money creation by private banks sides with that of the central bank, in Hahn the money creation capacity of the private banking sector takes the key role. "It is a basic view of this work that the passive business of banks is not the presupposition but only the result of credit creation" (Hahn 1920/24: 55).

Even in the third and completely revised edition of *Economic Theory of Bank Credit* the author emphasizes that "[i]t is a main purpose of this work to underline the relative independence of credit expansion from preceding and simultaneous savings and to point to the enormous theoretical and practical importance of an amount of credit expansion which transcends the sum of savings made simultaneously" (Hahn 1930: 41).

In part II of his book Hahn (1920/24) first discusses the "prevailing view on the relation between credit and the amount of capital goods" which he criticizes for the neglect of connecting business cycles with capital theory (119). For Hahn an expansion of credit means nothing else than an increase of demand for goods leading to an expansion of production since, as Hahn implicitly assumes to be the case, unemployed resources are available. Hahn emphasizes, as later Keynes, the deflationary consequences of voluntary savings and the positive effects of an expansionary credit policy for innovations and employment. Thus Hahn begins his discussion of the influences of credit

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[29] See Hahn (1920/24: 51-2) and Haberler (1927: 813) who criticizes Hahn that the banks are not mediating trust but purchasing power which allows debtors to acquire goods in the amount of the credited sum.

[30] See Hahn (1920/24: 52, n. 61). The *leitmotiv* is kept in the German translation on the cover page in the third edition (Hahn 1930).

[31] Schumpeter (1954: 1115: n. 7) considered Macleod as "an economist of many merits who somehow failed to achieve recognition, or even to be taken quite seriously, owing to his inability to put his many good ideas in a professionally acceptable form". In a typically contradictory Schumpeterian style he goes on to argue that Macleod "laid the foundations of the modern theory of the subject … , though what he really succeeded in doing was to discredit this theory for quite a time".
For a modern assessment of Macleod's credit theory of money see Skaggs (1997).

on capital, the core and most revolutionary part of *Economic Theory of Bank Credit* with the dictum: "*Capital formation is not the result of saving but of the granting of credit.*" [32]

With this fundamental proposition of his *Economic Theory of Bank Credit* Hahn turned upside down the traditional view that credit represented a store of savings deposited with the banks by the public. According to his revolutionary view the formation of deposits is not the cause but the effect of the granting of credit by the banks. Despite all emphasis on the positive consequences of credit extension via capital formation in the long run, Hahn primarily understood his approach as a monetary theory of the business cycle in which stress is laid on the credit theory of production. All relevant statements on the production and distribution of goods "are deduced from the sentence that bank credit exerts the importance of a stimulus to conjuncture" (Hahn 1920/24: 156). According to Hahn credit constitutes the *conditio sine qua non* of the production of commodities and all capital formation in a modern economy. His most outstanding early critic Ladislaus von Bortkiewicz has aptly summarized Hahn's main thesis in the statement: *"Am Anfang war die Schuld."*[33] (In the beginning was the Debt.)

According to Hahn the view of the representatives of the quantity theory that the extension of money and credit does not increase real income is not only inaccurate but wrong. "Credit takes the goods out of nothing, where they would have remained without credit extension" (Hahn 1920/24: 141). Hahn's conclusion that the extension of credit leads to an expansion of production rests on two assumptions[34]: 1. Modern mass production with its economies of scale requires only a small increase of labour input for a doubling of production output.
2. There is an enormous reserve of an underemployed labour force. Both components together have raised enormously the "elasticity" of production. The extension of credit activates these formerly unemployed resources which causes an increase of real wages. The change in distribution causes an increase in production. Hahn concludes that distribution, although following production, therefore, like consumption, logically precedes production.[35] The early Hahn, who sides with the critics of Say's law, also invokes the effective demand analysis of Malthus with the emphasis on income distribution as an anticipation of his own ideas.[36] However, the parallels are not very strong, except a certain emphasis on underconsumption and income distribution.

The increase in wages only holds for the upswing of the economy. In the long run, however, a modern economy is characterized by the tendency towards an excess supply of labour due to the

[32] Hahn (1920/24: 120). This dictum which is printed in italics in the first and second edition of the book, is not made anymore in this explicit form in the third edition.
[33] v. Bortkiewicz (1921-22: 87).
[34] See Hahn (1920/24: 135-7).
[35] See Hahn (1920/24: 138).
[36] Ibid: 147, n. 13.

two factors of a labour-saving technical progress and population growth which results in a downward pressure on real wages. This tendency towards a displacement and lying idleness of workers could be counteracted by an extension of credit which exerts the function of an offsetting force leading to capital formation and generating new employment opportunities. Credit extension thus is an “eminent social factor” (Ibid: 140).

But how long can the boom last? Is there any limit for credit extension to raise production and consumption and thereby the wealth of nations? Hahn, who held the view that cyclical fluctuations are nothing else than alternating credit inflations and deflations, gave as a first answer to this theoretically as well as practically important question that the expansion could persist as long as additional credit drew the last remaining reserves of labour power into production.[37] However, experience shows that this does not happen in economic reality, and instead of pushing production and consumption to the theoretical limit a general glut occurs before this point is reached. Hahn identifies the reason for the deficient matching of production by consumption in an increase of savings which make “circulating deposits metamorphose into savings accounts” (Ibid: 147). The result is a shortage of effective demand causing a fall in prices, wages, production and employment. Hahn not only refers to Malthus and Sismondi but also to Hobson’s analysis of oversaving.

Could the termination of the boom because of these negative consequences of additional savings be prevented? In his analysis of the influence of credit on the formation of savings[38], Hahn points out that no savings could exist without prior granting of credit. The more credit is extended the more savings could be generated. “An extension of credit does not only involve an absolute increase of savings pro rata of the granted credit, but also that the formation of these additional savings goes much quicker and more intensive than the formation of savings which takes place without a prior credit expansion” (Ibid: 153). Credit expansion does not only increase but also accelerates the formation of savings.[39]

Interestingly, Hahn also argues against the dominant theory, as represented in Cassel’s explanations of the nature and necessity of interest, constructing an inverse relationship between the amount of savings and the interest rate. As an observer of practical developments one must come to the conclusion that no factor has a lower influence on savings than the interest rate.[40] In an analysis of the laws of savings formation instead one should investigate the influence of fluctuations in income on savings. However, in his pre-Keynesian analysis Hahn refers to increases and decreases of

[37] See ibid: 145-6.
[38] See ibid: 152-5.
[39] Hahn’s reference to the consequences of the enormous expansion of credit on savings formation during WW I is not conclusive since the war situation is also characterized by a shortage, i.e. a rationing of consumption goods.
[40] See Hahn (1920/24: 154, n. 147).

individuals and does not go as far as making the overall savings function dependent on income in the whole economy.

According to Hahn the upswing is primarily caused by an expansion of credit which again has its main reason in the interest rate policy of the banks. The phenomenon of a glut which is rooted in the oversaving discussed before, with its negative consequences on the profitability of firms, causes the banks to restrict the granting of credit in the crisis. The resulting increases of interest rates should not be interpreted as a shortage of capital, as it is so often the case, but as a shortage of credit and trust. Here the government, as a special privileged debtor, in Hahn's story[41], comes into play. Although the state also has to pay interest for its loans, it can transfer the payment to the tax payers and therefore does not have to take the burden of interest payments into account in a way a private person has to calculate. The state (or the central bank by continuously lowering the interest rate), therefore could prevent the termination of the boom. Hahn concludes his analysis with the statement: "In theory, at least the assumption of the possibility of a 'perpetual boom' does not belong to the realm of Utopia" (Ibid: 159). No wonder that this enthusiasm in Hahn's original argument, against the historical background of an enormous increase of public debt in WW I and the hyperinflationary processes in Germany and Austria thereafter, has caused just so ardent opponents who criticized Hahn's *Economic Theory of Bank Credit* as an "apotheosis of credit creation"[42].

IV. Modifications: Credit (1923) and the 3rd edition of *Economic Theory of Bank Credit* (1930)

As we have seen in the preceding section, Hahn belonged to the exponents of the old credit view who based their analysis on the benchmark of a cash-saving credit economy in which the limits of credit are not drawn clearly.[43] Banks could determine the amount of credit granted in an autonomous and irresponsible way. Hahn's argument that capital formation in a pure credit economy differs fundamentally from capital formation in a cash economy has been a target of critique by many contemporaries.[44]

One of the most noteworthy critics was Hans Neisser who was recognized by Keynes as one of the leading neo-Wicksellians in the German language area. Keynes found "Dr. Neisser's general attitude to monetary problems particularly sympathetic" and hoped "that he may feel the same about

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[41] See ibid: 151-2.
[42] Ellis (1934: 329).
[43] For a detailed survey comparing old and new credit views see Trautwein (2000).
[44] See Lampe (1926: 134-5), Haberler (1927:814), Mannstaedt (1927: 13-5), Neisser (1928: 70-1), and Ellis (1934: 329).

my work" (Keynes 1930: 178). Although he regarded Hahn's distinction between primary banks creating credit, "the issuing bank of the modern economy" (Hahn 1920/24: 58), and secondary banks where the deposits appear quite fruitful, Neisser nevertheless criticized Hahn for denying the difference between the granting of credit by money creation and the granting of credit from saving deposits.[45] It would never be decisive whether a deposit had been generated by paying in cash or by the granting of credit but solely whether the deposit could be used for payments, i.e. exerting the function of money. It must be clear that additional credit could be created only by those banks which keep cheque accounts, and therefore are the carrier of cashless payments, i.e. exactly those deposit banks which can increase the amount of money in the economy by lending out again the cash flowing to them, by simultaneously keeping the cheque deposits.

A similar but even harsher critique had been raised by Bortkiewicz and Haberler. Bortkiewicz found fault with Hahn's classification of two types of banks which was only the result of ignoring the possibility that a bank could operate alternately on the active and the passive side.[46] Haberler emphasized that the primary bank must become passive against the secondary bank in the clearing process and that it therefore becomes dependent on the latter since it can give credit only up to an amount that the passive balance is granted a deferred payment.[47] Furthermore, Haberler criticized Hahn's statement that credit banks are independent from the central bank in their expansion of credit[48], pointing to the evident contradiction with Hahn's statement on the same page that the central bank has at its disposal the drastic means to deny the rediscounting of bankable papers.

Haberler was also among the first fellow economists to notice that since the first publication of *Economic Theory of Bank Credit* in 1920 Hahn had considerably watered down his radical position, that in particular his "Credit" essay (Hahn 1923) bears "conservative features"[49]. It is the more astonishing that a year later Hahn published his book without any changes. In retrospect Hahn himself stated that the much more moderate, completely revised 3rd edition of his *Economic Theory of Bank Credit*, published in 1930, had already been foreshadowed in his contribution on "*Kredit*" to the *Handwörterbuch der Staatswissenschaften*. He attributed his modified views on money and credit to the experiences with the hyperinflation in Weimar Germany in the early 1920s and summarized his new insights in the following points[50]:

1. There are limits to inflationary credit expansion in the long run, emphasized in the final section of Hahn (1930: 151-3), and the credit inflations which characterize the German economy since

[45] See Neisser (1928: 60-1).
[46] See Bortkiewicz (1922: 81-2).
[47] See Haberler (1927: 811-2).
[48] See Hahn (1920/24: 88).
[49] Haberler (1927: 819).
[50] See Hahn (1963: 11-3).

1870 show that such developments can undermine the value of money which makes it necessary to weigh the pros and cons of credit extension.

2. As a consequence of the autonomous credit creation power of banks which makes possible the conjunctures, an "economic theory of bank credit" must be formulated as a business-cycle theory.

3. Credit expansions may help to overcome depressions, but they should never be used in boom periods to perpetuate them or to make bearable structural maladjustments, particularly excessive wages. "A timely stabilization of the conjuncture, not their stimulation on and on by inflation is desirable" (Ibid: 12).

4. A failure in the limit of credit expansion results in progressive inflation and a possible ruin of state finances.

This retrospective view which is full of warnings against the inflationary dangers of excessive credit extensions, was not yet fully developed in 1923. However, it is in his article on "Credit" that Hahn takes up Schumpeter's distinction between "normal" and "abnormal" credit and develops the distinction between "*non-inflationary*" credit, granted in the amount of overall savings in the economy, and "*inflationary*" credit, which transcends these savings due to the money-creating ability of the banking sector.

Section II deals with "Credit and Capital", as Schumpeter does in chapter 3 of his *Theory of Economic Development*. Hahn praises the classics, in particular Ricardo, for distinguishing clearly between a low interest rate as the consequence of high savings and a low interest rate because of an increase in the quantity of money due to inflationary credit expansion. Whereas the quantity theory of money was appropriate for their time, this does not hold any longer for a modern economy with a high amount of cashless payments which induces a potential for the private banks to create money and credit. For such an economy capital formation is the result of the granting of credit, provided the credit is spent for investive purposes. Hahn keeps his earlier view also in arguing against Lexis, whom he replaced as the author of the contribution on *"Kredit"* to the fourth edition of the *Handwörterbuch der Staatswissenschaften*. This comprehensive handbook, first published in six volumes between 1890 and 1894 (with two supplements in 1895/97), a second and third edition soon to follow in 1898-1901, respectively 1909-11, was edited by Johannes Conrad in cooperation with Ludwig Elster, Wilhelm Lexis and the law professor Edgar Loening. Within a short time the Handbook became an "indispensable tool of study for any economist of German tongue", as Bortkiewicz (1915: 330) noticed in his obituary on Lexis, his former teacher. Due to the deaths of Lexis (1914), Conrad (1915) and Loening (1919), Elster was the only remaining editor when the fourth and completely revised edition of the *Handwörterbuch der Staatswissenschaften* was published in nine volumes since 1923, in cooperation with the two new editors Adolf Weber and Friedrich Wieser. Vol. 6 contained the famous article by Arthur Spiethoff on crises.

In 1923 Hahn sharpened his argument in disputing the view held earlier by Lexis. He pointed out "that the dilemma remains that, on the one hand, it is theoretically incontestable that the granting of credit is no production, and that only production can produce goods, and that, on the other hand, the capital-formative power of credit practically likewise cannot be ignored" (Hahn 1923: 946). This dilemma could not be solved if one would stick to the classical view shared by Lexis. "Capital formation ceteris paribus is *not* a question of the *production of goods but* a question of distribution, the *distribution of goods*, and that of the distribution of goods in *intertemporal* as well as *interpersonal* relation" (Ibid, italics in original). An intertemporal transfer of consumption into the future implies a change in the distribution of current goods. Insofar as the granting of credit is based on voluntary savings the change in distribution is a temporary one because current savers can consume more goods in the future whose production they have made possible. In the case of inflationary credit, however, the change in distribution becomes definitive because the price increases reduce the real purchasing power of receivers of fixed incomes who now are suffering from forced savings, i.e. an involuntary reduction of consumption (Ibid: 951). This "expropriation" is either provisional, as is the case for workers whose wages will be adjusted to the price increases so that they regain their earlier share in the social product, or permanent as for rentiers because inflation has eroded the basis of their real purchasing power for all times. Thus inflation has permanent consequences on the distribution of income and wealth. Whereas the owners of real assets and the debtors in industry, agriculture and wealth are among the winners, the owners of money wealth, creditors and all receivers of income which is adjusted with a time lag are among the losers.

Credit expansion does not only affect distribution but also production. Inflationary credit expansion leads to an increase in overall demand which on its part stimulates the production of goods. Hahn considers the economic "organism" as "elastic" so that hitherto underutilized resources could be activated. However, he now distinguishes between *consumptive credits*, among which the consumptive government loans are the most important ones, and *productive credits* which lead to capital formation. The latter play the dominant role in the modern economy and bring about a strong link between credit and capital.

In the third and completely revised edition of *Economic Theory of Bank Credit* Hahn (1930) keeps the leitmotiv of the founder of the modern credit theory Macleod on the cover page but eliminates not only the vision of a permanent boom but also some other of his earlier more radical statements. He now mentions Mises, Hayek and Stucken in the Introduction as representatives of the monetary theory of production sharing his basic views (Ibid: XIX), and integrates the distinction between non-inflationary and inflationary credit expansion as a core of Part I. He still regards the underlining of the relative independence of credit expansion from preceding or simultaneous savings as a main purpose of his work as well as the showing of the theoretical and practical importance of inflationary credit expansion. However, he does not open his own reflections on the link between credit and capital with the dictum “Capital formation is not the result of saving but of the granting of credit” any longer, but with the raising of the “central question of capital theory how much the stock of capital is enlarged by the granting of a new credit on the level of the individual borrower as well as in the economy as a whole” (Ibid: 127). He now also points out that the stimulating effect of credit occasionally could be a rather provisional one (Ibid: 152).

V. The Schumpeter-Hahn type of cycle theory

In his Introduction to the third edition Hahn (1930:XVII) points out that he had based his *Economic Theory of Bank Credit* (1920) on the overall economic views of Schumpeter, but that otherwise a work on the creation of purchasing power by the banks had no role model in the newer German literature. The importance of credit to finance innovational investment activities is at the very centre of Schumpeter’s *Theory of Economic Development,* which has been classified by Hahn (1920/24: 4) as “epoch-making”. There Schumpeter defined “the kernel of the credit phenomenon in the following manner: credit is essentially the creation of purchasing power for the purpose of transferring it to the entrepreneur, but not simply the transfer of existing purchasing power”[51]. As Schumpeter, Hahn emphasized the power of credit to generate a contribution to the social product.[52] In the second German edition of his *Theory of Economic Development* Schumpeter (1926:140) reacted to Hahn’s *EconomicTheory of Bank Credit* with the addition of a long opening note to chapter III on ‘Credit and Capital’ in which he explicitly referred the reader “to this original and meritorious book, which has essentially advanced our knowledge of the problem”[53]. In his autobiographical reflections on the history of economic thought Hahn (1963: 6) decades later still noted that this agreement by Professor Schumpeter was “particularly welcome”.

The early Hahn was, besides Schumpeter, nearly alone in recommending *forced savings* as a desirable economic policy. Schumpeter’s assumption that available resources are fully utilized in the stationary circular flow implies that the carrying out of new combinations requires a reallocation of these resources. In his view it is the essential function of credit to enable the innovating entrepreneur to withdraw the production factors she needs from their previous employments. The consequence of abnormal credit, i.e. financial means not rooted in previous or current savings, is an increase of aggregate demand in money terms which leads to an increase in prices. The credit-induced inflation acts as a tax on the mere managers stiffened in routine actions thereby implying a

[51] Schumpeter (1934: 107).
[52] See, e.g., Hahn (1920/24: 93).
[53] Schumpeter (1934: 95, n. 1).

reallocation of productive resources. It is, however, clear that for Schumpeter the spending of credit for innovative investments which have a productivity-enhancing effect is decisive. There is no argument in favour of spending the additional money for consumption. This becomes particularly evident in Schumpeter's statements on capital which is regarded as a fund of purchasing power. *"Capital is nothing but the lever by which the entrepreneur subjects to his control the concrete goods which he needs, nothing but a means of diverting the factors of production to new uses, or of dictating a new direction to production."*[54]

Hahn never was very precise on the question how much available resources were already utilized when credit was extended. He emphasized the redistribution of income away from the receivers of fixed income, i.e. the rentier class. From the fact that Hahn believed that the effects of additional credit are not fully absorbed by inflation, some resources must not have been fully utilized at the starting point. In the first and second edition of *Economic Theory of Bank Credit* Hahn (1920/24) also made no clear distinction whether the credit was used for investive or consumptive purposes. It is therefore not surprising that Schumpeter, in the second German edition of *Theorie der wirtschaftlichen Entwicklung*, despite all praise, felt obliged to keep some distance from Hahn, whose much stronger emphasis on the directly production-enhancing effects of an inflationary credit creation had led to widespread accusations of Hahn as an "inflationist". Schumpeter, for whom the inflationary effects/ forced savings of abnormal credit were only of a temporary nature due to the additional products entering the market as the consequence of the enlarged production capacities, commented with regard to Hahn's "otherwise excellent essay" on credit: "Against his formulation it appears to me correct to say: Although not by *existing* goods the quantity of new purchasing power that it is possible to create is supported and limited by *future* goods."[55] Thus Schumpeter definitely could not be accused to favour an "apotheosis" of credit creation. However, from a marketing-point of view Schumpeter's choice of wording was not much better than Hahn's one. Neither "abnormal" nor "inflationary credit" did sell particularly well against the historical background of hyperinflationary processes in Germany and Austria in the early 1920s. Both terms missed to give the positive connotation intended to the central view that the main function of credit is the financing of economic development, and that it is necessary that the amount of credit granted transcends the amount of savings in the economy.

Is it justified to talk of a "Schumpeter-Hahn type of cycle theory" as many commentators did, and Hahn himself believed who felt flattered to be classified into one category with such an authority as Schumpeter?[56] For Hahn typical conjunctures are "alternating credit inflations and deflations"

[54] Schumpeter (1934: 116; italics in original).
[55] Schumpeter (1926: 165; italics in original).
[56] There is only one argument where Hahn (1920/24) explicitly disagrees with Schumpeter, i.e. the latter's zero interest-hypothesis for a stationary economy. See Hahn (1920/24: 126-7, n. 115).

(Hahn 1930: 152). He wrote a long and overall very positive review (Hahn 1924a) of the second German edition of Mises's *Theory of Money and Credit,* which was published in the very same year as the unchanged and more radical second edition of his own *Economic Theory of Bank Credit.* Hahn's theory of money and credit from the beginning was a business-cycle theory. He identified credit cycles as the main cause of cyclical fluctuations. During the 1920s he became closer and closer to Mises and Hayek[57] who blamed the banking sector with its too generous granting of money and credit for causing cyclical fluctuations in which the bust is the inevitable correction of the excesses of the boom. It might be argued that Hahn contributed to the breakthrough of monetary business-cycle theory in Germany, with Mises and Hayek representing the more conservative position and the early Hahn the radical one.[58]

Hahn's 1923 essay on "Credit" marks the beginning of his transformation to a more moderate and finally a strong anti-Keynesian position. He is not talking any longer of the idea of a perpetual boom but still points to credit extension as a strong means to stimulate economic development of a country by full utilization of its factors of production, although at the price of the relative expropriation of the owners of money. He finishes his essay with the statement "that it is the task of an aim-conscious credit policy to guide the economy through the Skylla of economic stagnation and the Charybdis of depreciation of money and crises" (Hahn 1923: 953). This statement also reveals a difference to Schumpeter who always had emphasized the wavelike movement of economic development and the positive selective function of economic crises.[59]

It was Schumpeter's view that *The Theory of Economic Development* is dedicated to the problem of the business cycle, and that analyzing business cycles "means neither more nor less than analyzing the economic process of the capitalist era" (Schumpeter 1939: V). He took over emphasis on the central role of technical progress from Marx and made innovations the essential determinant of wavelike movements of capitalist economies, integrating the study of business cycles with an analysis of long-run economic development. Innovations are not only the decisive impulse of cyclical fluctuations but the period of their implementation also determines the different length of the cycles. Whereas in 1911, when he published *The Theory of Economic Development,* only the classical business cycle or "Juglar cycle" was known, Schumpeter later integrated the "Kitchin" and particularly the "Kondratieff" into his *Business Cycles.* Schumpeter's monocausality argument comes out very clear in his statement: "Innovations, their immediate and ulterior effects and the response to them by the system, are the common "cause" of them all, although different types of innovations and different kinds of effects may play different roles in each" (Schumpeter 1939: 172).

[57] See, for example, Hahn (1930: 141, n. 125).
[58] See Holtfrerich (1989: 123) and Hardach (1989: 166-7).
[59] See Hagemann (2003).

What role does credit play in this business-cycles story? Although he dates back capitalism as far back as the element of credit creation, for Schumpeter, in remarkable contrast to Hahn, the credit system does not play the role of an active producer of business cycles but rather a passive role. "It adapts itself to the demand which comes from entrepreneurs and submits to contraction by their repayment of loans" (Schumpeter 1931: 17). Thus Schumpeter points out the endogeneity of credit creation and credit deflation and therefore might be called a "horizontalist". Schumpeter thus shared Wicksell's view that the disturbance between the natural and the money rate of interest arises on the real side because an improvement in profit expectations due to technical advances causes an increase in the natural rate of interest and investment demand. Whereas in Schumpeter's system money and credit are subordinated to the real cycle determined by innovations, Hahn on the other hand identified the decisive cause of cyclical fluctuations in the money and credit-generating power of the banking system. Since monetary factors, in particular credit expansion, cause cyclical fluctuations his *Economic Theory of Bank Credit* essentially is a monetary theory of the business cycle. There are therefore some stronger parallels between Hahn and Mises as well as Hayek who emphasize the monetary impulse as decisive, i.e. an intervention of the banking system leading to an "artificial" lowering of the money rate of interest and thus causing deviations of the money rate of interest from the natural or equilibrium rate. Hayek, although emphasizing that monetary factors cause the cycle, stressed that real phenomena, in particular structural disproportionalities in production, constitute the cycle, as elaborated in his *Prices and Production.* Interestingly, in his review article of the second German edition of Mises's *Theory of Money and Credit* Hahn (1924a: 515) criticizes Mises for taking the "mysterious "natural rate of interest" of Wicksell, like so many other economists, as "much too serious". Cassel, so Hahn, had proved that the "natural rate of interest" does not exist at all and that therefore the new interest formed as the consequence of inflationary credit could not be a natural rate. Hahn overlooked that Wicksell, although focusing in his cumulative process analysis on price level fluctuations caused by divergences between the natural and the market rate of interest, nevertheless held a real view of the cycle in which he identified technical progress as the decisive cause.[60] Hahn, however, also in remarkable contrast to Schumpeter, nowhere in his writings on business cylces made innovations a regression line of his argument.[61] The parallels with Schumpeter therefore are limited so that the notion of a "Schumpeter-Hahn type of cycle theory" should be given up.

VI. L.A. Hahn : the "pre-Keynesian" anti-Keynesian

[60] For a clear exposition see Laidler (1991: 143-6).

[61] Hahn has this in common with Clément Juglar (1819-1905) who was praised by Schumpeter as the founder of modern business-cycle theory. In contrast to Hahn, however, Juglar emphasized the role of speculation fuelled by easy credit as the cause for an overheated boom. For a comparison of the business-cycle theories of Juglar and Schumpeter see Dal-Pont Legrand and Hagemann (2007).

"All that is wrong and exaggerated in Keynes I said much earlier and more clearly."[62] This is the *leitmotiv* of Hahn's writings on Keynes ever since he wrote an early review on the *General Theory* in his Swiss exile.[63] This self-stylization has engraved on a large part of the later Hahn literature. It found a particular resonance ground among his liberal friends. Thus we find Gottfried Haberler arguing in the Festschrift given to Hahn on the occasion of his 70th birthday that the *Economic Theory of Bank Credit* "anticipated as is generally known large parts of Keynes' *General Theory*" (Haberler 1959:26), without Haberler specifying these parts. Wilhelm Röpke went even further in claiming that the sins of his youth confessed by Hahn were nothing else than the "anticipated follies of age of the Keynes of the *General Theory*" (Röpke 1959: 69-70).

Fritz Machlup who was well known for his playing on words in his contribution "Why not Hahnism?" instead of Keynesianism did not only make puns but raised two serious questions: "1. If Hahn is such an ardent anti-Keynesian, why is he so eager to publicize his pre-Keynesian Keynesianism? 2. If Hahn's early teachings anticipated Keynes', why did they not attain the wide vogue that Keynesianism has attained?" (Machlup 1959: 50). Among the different hypotheses possible, Machlup favoured as an answer to the first psychological question the "fact that the world lends a more sympathetic ear to repenting sinners, to converted believers, and to cured heretics" (Ibid: 51). Machlup accepted Hahn's claim that he had anticipated Keynes's *General Theory* in the most important propositions in his own *Economic Theory of Bank Credit,* as it had been documented by Hahn in chapter 16 "Continental European Pre-Keynesianism" of *The Economics of Illusion,* a book which is dedicated to his fight against Keynesianism and inflationism: There Hahn confronts quotations from his *Economic Theory of Bank Credit* with quotations in Keynes *General Theory* on sixteen issues in the sections on 'The Consumption Deficit', 'The Investment Gap', 'Interest and Liquidity', 'Interest and Employment', 'General Recommendations to Combat Unemployment' and 'Recommendations to Combat Cyclical Depressions: An Easy Money Policy and Government Spending' (Hahn 1949: 213-227). As one decisive answer to the question why Keynes in 1936 and not Hahn in 1920/24 found a resonance ground among fellow economists and the general public Machlup rightly refers to the bad timing of Hahn's original ideas. In the early 1920s many countries suffered from severe inflations whereas in the 1930s they suffered from depression and associated deflationary processes.

Interestingly, Wilhelm Röpke, who after WW II was as staunch an anti-Keynesian as L. Albert Hahn, in his contribution to the Hahn Festschrift stated that the Great Depression, when many economists kept their orthodox views and thereby demonstrated a lack of insight and understanding in the opposite direction, was a situation when (Keynesian) "folly exceptionally became wisdom"

[62] Hahn (1963: 6). The statement first was made explicitly in Henry Hazlitts' Introduction to Hahn's *The Economics of Illusion* (Hahn 1949: 1).

[63] See *Neue Zürcher Zeitung* 19-20 November 1936.

(Röpke 1959: 70). It must be pointed to the fact that both Hahn as well as Röpke despite their liberal views were arguing against a conjuncture-policy nihilism in the pre-Nazi German debate during the Great Depression in 1931/32 favouring expansionary measures.[64]

Hahn's "proto-Keynesianism" (and even his "proto-Monetarism"[65]) has also been discussed in more recent contributions, as well as his conversion from pre-Keynesianism to anti-Keynesianism. In particular Hesse has shown convincingly "that the question of Hahn's precursorship was strongly woven into the particular self-construction of his biography" and that "it was Hahn himself who brought his own work into the discussion about the roots and the critics of Keynesianism" (Hesse 2007: 226). How much was Hahn's claim of anticipation of Keynes's *General Theory* justified, or how much was this claim only a strategy of self-marketing?

Whereas there is no simple and easy answer to the precursor question, Hahn's later anti-Keynesianism is evident. This is not only documented by his *Economics of Illusion*, a pamphlet against Keynes and Keynesianism, but also by his parallel German article on the "fundamental errors" in Keynes's *General Theory* (Hahn 1949a) which caused a fierce controversy with Erich Schneider (1952), a former research associate of Schumpeter at the University of Bonn and the leading Keynesian (of the neoclassical synthesis view) and long-time chairman of the Theoretical Committee of the *Verein für Socialpolitik* in post-WW II Germany. This anti-Keynesian spirit is also kept in Hahn's *Common Sense Economics* which he confronts with illusion economics. This confrontation also comes out very clearly in the *leitmotiv* which Hahn (1956) gave his book on the front page: "The propensity to work, and not the propensity to spend, is the foundation of national income and wealth."

What about Hahn's claim of having anticipated Keynes? In his detailed analysis of possible anticipators of the *General Theory* Patinkin (1982) summarily dismisses all German economists for his considerations. In doing this Patinkin (p. 6) explicitly refers to Garvy (1975) and the limited perspective that claims of anticipations imply the advocating of public works whereas Keynes's book is concerned with theory. Patinkin, however, was misled by Garvy who had focused almost exclusively on the economic activists and the policy conclusions of the reformers instead of on their theoretical analyses from which they cannot be separated. Patinkin is right in his claim that as a serious candidate for an anticipator of Keynes only an economist could be considered who made important building blocks of Keynes's theory of employment, interest and money a regression line of her or his argument.

[64] For greater details see Bombach et al. (1981: 34-46 and 309-353).
[65] See Boudreaux/Selgin (1990) and Leeson (1998).

Patinkin's claim has been accepted and anticipated by Machlup, a confessing friend of Hahn, who despite his contention "that Hahn anticipated many of the most widely quoted propositions of Keynes' book", concedes that "there is something in Keynes' work that is absent from Hahn's work: an integrated conceptual apparatus and a set of analytical tools" (Machlup 1959: 52). Thus Machlup distinguishes between Keynesian policies and Keynesian tools, such as the consumption function, the investment function, or the liquidity preference function, which "are useful tools of analysis regardless of any particular theory about aggregate spending and income with full employment or unemployment" (Ibid).

Probably the first historian of economic thought discussing explicitly parallels between Hahn and Keynes was Eduard Heimann[66] (1945: 231-6). Heimann pointed to the fact that Hahn (1920/24) had revised Malthusian ideas of effective demand, and that rising investment activities fuelled by credit extension should offset rising saving. But Heimann, although emphasizing that this thesis is also at the very centre of Keynes' theory, also stresses that "Keynes goes far beyond Wicksell and Hahn in developing the theory of saving and investment" (Ibid: 234) and that Keynes's liquidity preference theory of interest "assumes a new dimension in comparison with those of Schumpeter and Hahn, which connect interest only with the liquidity preference of the credit-issuing banks" (Ibid: 235).

Keynes himself had referred to Hahn's article on 'Kredit' in his *Treatise* (I: 154, n. 1), together with Mises's *Theory of Money and Credit* and Schumpeter's *Theory of Economic Development* as important German contributions in which "[t]he notion of the distinction which I have made between savings and investment has been gradually creeping into economic literature in quite recent years". Keynes here was also discussing the notion of 'forced saving' but already preferred "not to use the word 'saving' in this connection". Later, in the *General Theory*, Keynes completely distanced himself from 'forced saving' as a useful notion for conditions of less than full employment[67] and called it one of "the worst muddles" of the "neo-classical school" (Ibid: 183). In that context Keynes emphasized: "Saving and investment are the determinates of the system, not the determinants. They are the twin results of the system's determinants, namely, the prosperity to consume, the schedule of the marginal efficiency of capital and the rate of interest" (Ibid). No doubt that Hahn had not developed an equivalent theoretical system and could not be recognized as an anticipator of Keynes in that sense. Hahn himself even in his *Economics of Illusion* points out that he regards "as entirely correct the functional relationship as outlined by Keynes; what we object to is not his theoretical concept" but "certain basic assumptions about wage inflexibility, which were introduced by Keynes as valid 'in the general case' and 'as a rule'" (Hahn 1949:119).

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[66] Also an émigré from Nazi Germany and a colleague of Hahn at the New School Heimann (1889-1967) knew Hahn's writings well.
[67] See Keynes (1973: 79-81).

Hahn's critic Schneider concedes that there are similarities between Hahn and Keynes on some issues but emphasizes that Hahn was not the only economist who had anticipated elements of Keynes's construction. His own favourite was Nicholas Johannsen (1908) who had already anticipated the whole "savings-investment building block of the Keynesian system" and got a prominent place in Lawrence Kleins's discussions of anticipations of the *General Theory*.[68] Johannsen would fit perfectly into Hahn's view that scientific progress very often is only possible with the help and stimulus of external heretics, but Hahn was not particularly interested to compare his own work with those of other "anticipators" of Keynes. Schneider (p. 398) rightly criticized Hahn for his interpretation that Keynes throughout his analysis makes the assumption of rigid wages and thereby neglects chapters 19 ('Changes in Money Wages') and 21 ('The Theory of Prices'). Furthermore, it is a gross misunderstanding that in the Keynesian system "output and employment … can only expand if (the amount of money) has been inflated" (Hahn 1949: 229). None of the "anticipators" had developed an elaborate theory of income and employment such as Keynes did in his *General Theory*.[69] Hahn's new views on savings, as expressed in chapter 9 ('Is Saving a Virtue or a Sin') of *The Economics of Illusion*, such as those that saving does not reduce effective demand and "Saving or oversaving does not create unemployment" (Hahn 1949: 103) were extremely astonishing and disappointing for an author who contributed to the development of modern credit theory, of which one of the most important insights is that demand for credit is independent from the amount of voluntary savings and that the latter can differ from voluntary investment.[70] Schneider identifies the reason for Hahn's confusion in the fact that Hahn mixes up the values for saving and investment ex ante with those ex post, and regrets that an author who made a main contribution to the modern economic theory of bank credit wastes his time and energy for a hopeless task, i.e. the fight against a scientific apparatus which had turned out to be very fruitful.[71]

A similar and highly interesting critique was made by George N. Halm (1901-84) who after his emigration from Nazi Germany in 1936 made a career at Tufts University and the related Fletcher School of Law and Diplomacy. Halm, undoubtedly a liberal economist who had shared Hayek's position in the socialist calculation debate of the 1930s, was very critical against the early excesses and exaggerated optimism in the original version of Hahn's *Economic Theory of Bank Credit*. The main point of Halm's critique, however, consists in the fact that Hahn, who is so proud of having

[68] See Schneider (1952: 395-6) and Klein (1966: ch. V, in particular pp. 143-7).
Keynes described Nicholas Johannsen (1844-1928) in Vol. II of his *Treatise* as an "American amateur economist (crank, some might say)" whose "doctrine of 'Impair savings', i.e. of savings withheld from consumption expenditure but not embodied in capital expenditure and so causing entrepreneurs who have produced goods for consumption to sell them at a loss, seems to me to come very near to the truth" (*Treatise II*, 1971: 90). For a discussion of Johannsen's early analysis of the saving-investment process and the multiplier see Hagemann and Rühl (1987).
[69] See Schneider: 401 and 396.
[70] Ibid: 402.
[71] See ibid: 403.

anticipated the main theses of Keynes, does overlook that in his untiring fight against Keynesian economic policy he is not really attacking Keynes but his own much more radical earlier views. In contrast to Hahn (1920/24) Keynes neither propagated the idea of a permanent boom nor had he been an inflationist. “By his equating of Hahn (1920) and Keynes (1936) he [Hahn] imputes to Keynes unconsciously inflationary ideas which either did not exist at all or indeed were much softer than his own ones” (Halm 1963: 382).

Ironically, the only time Hahn had quoted Keynes in the three editions of *Economic Theory of Bank Credit,* together with Irving Fisher, is in the context to avoid fluctuations in the general level of prices by monetary policy, since public opinion does not accept significant inflation any longer.[72] So, ironically the Hahn of the 1930 vintage did not recognize Keynes as an inflationist, on the contrary. Halm’s reference to Keynes’s “How to Pay for the War” (1940) may be taken as a good indicator that Keynes did not change his view on inflation with the *General Theory* or after.

VII. Conclusion

“’Some more attention for foreign achievements’ one wants to shout out to Hahn” Bortkiewicz (1921-22: 88) concludes who reminds Hahn of the contributions of Lexis[73] on Credit and Böhm-Bawerk on capital theory. He also rightly criticizes Hahn for the severe misspellings of the names of prominent economists.[74] More important, Bortkiewicz criticized Hahn for not even having read the writings of his hero Macleod properly, who despite his strange use of the term “capital” had been a critic of excessive credit creation. For example, Macleod had criticized the American practice of the issuing of bank notes against government bonds and of “Lawism”, and had been a bimetallist for whom gold and silver were the only proper basis of paper money (Ibid). For Bortkiewicz Hahn was “a practitioner with a bent to theory” (Ibid: 71) who put emphasis on the fact that the important operations in the modern banking business happen on the active side and that “the passive operations of banks is nothing else than a reflex of preceding granting of credit” (Hahn 1920/24: 29).

Hahn’s self-marketing and his self-declaration as a “pre-Keynesian” who later mutated to a fierce anti-Keynesian has led many interpreters astray, as comes out in excessive modernistic

[72] See Hahn (1930: 147-8). Surprisingly, this reference to Keynes – to the best of my knowledge – has been completely overlooked in the ’Hahn literature’. Even Hesse (2007), the best essay on Hahn’s biography and the link with his economics, wrongly comments that “Hahn never quoted Keynes’s works in the several editions of *The Economic Theory of Bank Credit*” (Ibid: 224).

[73] Perhaps as a reaction Hahn (1930: 129) for the first time in his *Economic Theory of Bank Credit* refers to Lexis as a representative of the traditional view on credit and capital.

[74] For example, Wicksell figures throughout as Wicksel and Böhm-Bawerk most of the time as Böhm-Bawerck. These misspellings were not corrected in the second edition.

interpretations making him “a precursor of Keynesianism *and* the monetarist counterrevolution” (Boudreaux and Selgin). One should not overlook that Hahn never gave up the “basic principle of his business cycle- and employment theory”, which comes out in the speech he gave in 1962 on the occasion of receiving the honorary doctorate from the University of Marburg which he concluded with confirming: *“All expansion of credit causes an expansion of goods due a change in their distribution. Credit takes the goods out of nothing, where they would have remained without credit extension.”*[75] Hahn only added that this fundamental principle had to be applied with care, which apparently in his own view he had not done in 1920. This statement clearly indicates that Hahn gave not up his early insights but only moderated his excessive policy conclusions step by step, also as a reaction to the critics. Thus he could not maintain that *all* credit creation would enhance growth and productivity. In contrast to Schumpeter, for example, he was very imprecise at the beginning about such decisive questions whether additional credit would be spent for consumption or for innovative investment, or whether available resources at the beginning were fully utilized[76] or underutilized.

The first edition of *Economic Theory of Bank Credit* was published at the beginning of the hyperinflation in Germany and Austria after WW I for which the author made responsible the anti-theoretical bent of the German historical school, and where he located the roots of his quantity-theoretic convictions.[77] Hahn was not alone in blaming the teachings of the historical school for the inflation. He was accompanied by many fellow economists such as Eucken and Mises, but it also has to be mentioned that German was the language in which Wicksell’s *Interest and Prices* had been published originally in 1898. Laidler and Stadler (1998) are among the very few who have recognized important contributions by Bortkiewicz, Mises and Hahn (1924a)(!) in the interpretation of the German hyperinflation which made use of the quantity theory supplemented by an analysis of inflation expectations.

Among the few economists who recognized the lasting importance of Hahn’s *Economic Theory of Bank Credit* for a modern credit theory and monetary theory of business cycles we find such diverse authors as Fritz Neumark, an “enlightened” Keynesian, and Friedrich Lutz, an “enlightened” monetarist and liberal economist. Neumark (1900-91) was a colleague of Hahn at the Goethe University in Frankfurt, who was also dismissed by the Nazis for racial reasons in 1933. After his return from Turkish exile in 1952 he became the ‘Nestor’ of German public finance and in 1980 the founding chairman of the History of Economic Thought Committee of the *Verein für Socialpolitik*. Neumark appreciated the lasting contribution of Hahn’s pioneering work and regretted Hahn’s later

[75] See Hahn (1963: 13; 1930: 125-6, and 1920/24: 141); italics in 1963 and in the third edition (1930) but not in the original of *The Economic Theory of Bank Credit* (Hahn 1920/24)!
[76] This is the assumption in the business-cycle theories of such diverse authors as Schumpeter and Hayek, and the only constellation for which Keynes (1936: 80-1) accepted ’forced saving’ as a ”perfectly clear notion“.
[77] See Hahn (1963: 8-9).

strong anti-Keynesian crusade. In denouncing it as a *Jugendsünde* Hahn "had done injustice to himself" (Neumark 2004: 92).

Lutz (1901-75) had made an academic career in Princeton after emigrating from Nazi Germany in 1937. In 1953 he moved to Zurich. Lutz made major contributions to the theories of interest, investment, and currency problems and was an active member of the Mont Pelerin Society. In his contribution to the Festschrift for Hahn he preferred the term "*Jugendblüte*", i.e. the blossoming of the youth, to the term *Jugendsünde*, and pointed out that Hahn in 1920 had been a member of the avant-garde. Although Hahn's bold ideas, such as the denouncation of bourgeois virtues as saving, were "shocking in the extreme" (Lutz 1959: 48) at the time they were published, they nevertheless were "full of verve, unorthodox and stimulating", so that again he had "a small love" for Hahn's 1920 *Economic Theory of Bank Credit* (Ibid: 49).

Hahn is in a line with Wicksell and Schumpeter in emphasizing the importance of credit for a modern economy. Banks are producers of credit which is not limited by the amount of saving. Interest is not the price which equalizes savings with the demand for credit but the price for a higher liquidity. Demand for credit creates its own supply. Capital was seen by Hahn as the result of credit creation and not of saving. Over time Hahn moderated some exaggerations of the first two editions of *The Economic Theory of Bank Credit*, such as the idea of a permanent boom and inflationary credit hardly with any limits, which brought him closer to Mises and Hayek. Furthermore, he partly overcame the lack of precision concerning some important issues such as the question whether available resources are fully utilized or underutilized when additional credit is granted, and became more cautious with regard to the limits of credit creation. His self-marketing as an important precursor of Keynes, in combination with his fierce anti-Keynesianism, was exaggerated and did not do justice to Keynes. It also was counter-productive concerning the lasting importance of his own *Economic Theory of Bank Credit.*

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