

# Business Cycle Theory: Selected Texts 1860-1939

Monetary Theories of the Business Cycle

Edited by  
Harald Hagemann





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Selected Texts 1860–1939

Volume III



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Monetary Theories of the Business Cycle

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## INTRODUCTION

The development of business cycle theory was closely related to the development of monetary theory. Historically, this also holds for the general glut controversy of classical political economy or the crisis theory of the nineteenth century, which centred around Say's Law, and where the issue at stake was whether general overproduction of commodities was possible or whether money was neutral. No serious economist would deny that an explanation of the business cycle phenomenon must consider its monetary features. We may therefore designate as monetary theories of the business cycle the entire set of approaches that assign a central role to money and credit in the explanation of cyclical fluctuations. Major contributions at the turn of last century were made by Knut Wicksell (1851–1926) and Irving Fisher.

Wicksell's *Interest and Prices* (1898) had a major impact on the Austrian theory of the trade cycle – as it was developed by Mises and Hayek – and on Swedish contributions to macrodynamics in the interwar period. Whereas the book had originally been intended to restate and defend the quantity theory of money, it ended up developing ideas that discredited the theory. Since the quantity theory of money, as in Ricardo, is closely interlinked with the adherence to Say's Law, (these became the two main targets of Keynes's later attack) Wicksell became 'the patron saint of all those economists who renounce Say's Law (Schumpeter 1954, p. 1117, n. 1).<sup>1</sup> Wicksell distinguished between two extreme cases: the pure cash economy, a system of pure outside money to which the classical quantity theory applies; and the pure credit economy, a system of pure inside money to which the quantity theory is irrelevant. In such an advanced economy, with highly developed credit institutions, the banking system can grant loans in excess of the amount of savings deposited; that is, the money supply is completely elastic and the price level is indeterminate. In such a credit economy, stability of the price level requires equality between the natural rate and the money rate of interest (that is, the rate of interest charged on loans). Discrepancies between the two rates lead to cumulative processes. For example, if the natural rate exceeds the money rate of interest, borrowing will exceed saving, and the excess demand over supply will raise the price level. If the natural rate is lower than the money rate, the

<sup>1</sup> For a fascinating analysis of the Golden Age of the quantity theory and Wicksell's legacy see Laidler (1991 and 1999), who also rightly emphasises Wicksell's resistance to develop a monetary theory of the cycle.

opposite will occur. Unlike quantity theorists, Wicksell believed that the discrepancy arises predominantly in the real sector as technical progress is the dynamic impulse that raises the natural rate and the optimism of investors, with the banking system raising the money rate of interest only after a lag.

Whereas Wicksell stressed changes in the natural rate of interest in his cumulative process analysis, Irving Fisher (1867–1947) emphasised variations in the quantity of money as the main impulse and attributed cyclical fluctuations to avoidable monetary disturbances. In his book *The Purchasing Power of Money* Fisher shows himself to be a staunch and persuasive defender of the quantity theory. His equation of exchange, the ‘Yale equation’,  $MV = PT$ , where  $M$  is the quantity of money,  $V$  its velocity of circulation,  $P$  the price level, and  $T$  the volume of transactions, has become the best-known and most widely used version of the quantity equation. Written at a time when the United States were on the gold standard, *The Purchasing Power of Money* was designed to support Fisher’s case for stabilising the value of money, which came to be known as the ‘compensated dollar’. Although emphasis is on the long run – that is, the permanent effects of an exogenous change in the money supply consisting of proportionate changes in the price level, with the velocity of money, the volume of transactions and the rate of interest settling at their ‘normal’ values – Fisher (1911, p. 55) carefully distinguishes between the permanent effects and temporary effects that occur during transition periods. These transitional effects of changes in the money supply, which can cause changes in all the variables in the equation of exchange, later came to play a much larger role (particularly in his writings on interest rate theory and his accounts of cyclical fluctuations), and strengthened in the Great Depression.<sup>1</sup>

Fisher basically attributed business cycles to monetary disturbances, mainly because interest rates fail to adjust sufficiently quickly and adequately to price changes. In ‘Appreciation and Interest’ (1896) he had already developed his famous formula  $i = r + \pi$ , where the nominal interest rate  $i$  equals the sum of the real interest rate  $r$  and the inflation rate  $\pi$ , which is at first, like the equation of exchange, an identity, and becomes an equilibrium condition only if the actual inflation rate is replaced by the expected inflation rate  $\pi$ . Fisher developed his theory of the determination of interest rates in *The Rate of Interest* (1907), revised and enlarged as *The Theory of Interest* (1930), in which the real rate of interest in equilibrium is determined by time preferences and opportunities to invest, that is, the expected rates of return over cost. *The Purchasing Power of Money* then explains changes in the price level, with insufficiently anticipated price changes and thus the nominal rate of interest, implying the real rate of

1 For a more detailed assessment of Fisher’s contributions to modern monetary macroeconomics see Tobin (1987) and Dimand (1998).

interest is likely to vary in transition periods, thereby causing cyclical fluctuations. By claiming that through these imperfect adjustments of interest rates, monetary factors are the essential cause of crises, Fisher (1911, p. 62) uses his discussion of the temporary effects during transition periods to develop a monetary theory of the business cycle. It is remarkable that this quintessential quantity theorist and father of the Yale equation dedicated a large part of his later work to providing a short-run theory of the definitely non-neutral role of money in the cycle.

Fisher's contributions to business cycle theory can be grouped into three phases:

- the pre-First World War period with his contributions on interest theory and discussion of the quantity theory of money.
- several articles from the 1920s dedicated to the statistical and econometric analysis of economic fluctuations, at a time when many research institutes focusing on the empirical investigation of cycles were founded worldwide. Fisher, who became the first president of the newly founded Econometric Society in 1930, largely considered the so-called business cycle to be a 'dance of the dollar'; he stated in one of those articles, reproduced in this volume, 'that wherever the dollar ... suffers wide fluctuations in purchasing power, those fluctuations largely predetermine or, at any rate, precede closely related fluctuations in trade' (Fisher 1925, p. 179)
- Finally, Fisher, who for a long time had resisted the idea of a regular business cycle and liked to state that the cycle was a 'myth', wrote *Booms and Depressions* (1932) in the wake of the disastrous Great Depression. He also set forth his 'debt-deflation theory of great depressions', taken up in this volume, in which both real and monetary factors play an important role. He still held the view that cyclical fluctuations and instability are mainly the fault of misguided policies by monetary institutions, and that the misallocation of resources is the consequence of imperfectly foreseen changes in the price level, which lead to perverse pro-cyclical real interest rate movements. However, he modified his earlier theory, in particular by emphasising the negative consequences of the enormous increase in the level of indebtedness if a boom is fuelled by credit-financed investment activities. A debt-deflation is then triggered by too great a fall in asset prices and business profits, aggravating any initial excess supply and increasing unemployment levels. He regarded 'over-indebtedness to start with and deflation following soon after' (Fisher 1933, p. 341) as the two dominant factors explaining booms and depressions. Fisher's chain of causes, as explained in this article, consists of nine links basically containing an unstable interaction between a too high debt burden and deflation. However, it should not be

overlooked that this 'Fisher effect' is the consequence of over-borrowing, itself caused by new lucrative investment opportunities, and '[e]asy money' (p. 348).

Fisher's debt-deflation theory of great depressions was taken up and revived by Tobin (1980) in modern macroeconomic literature. Tobin contrasted the Fisher effect, which focuses on transitional dynamics and 'inside' assets, with the static, long-run Pigou effect (or Patinkin's real balance effect), which focuses on 'outside' money. The debtor's higher propensities to spend (as opposed to the creditors), and the devastating consequences of elastic price expectations in deflationary periods counteract the Pigou effect and lead to scepticism concerning the endogenous stabilising forces of a market economy. Fisher therefore regarded reflation and not deflation as a proper cure for great depressions.

Minnie Throop England (1875–1941), who taught at the University of Nebraska at Lincoln from 1906 to 1921, was one of the first economists to recognise the importance of the arguments put forward by Fisher (1911) for a monetary theory of the business cycle.<sup>1</sup> In Fisher's excellent book, 'booms occur when the money interest rate rises insufficiently in response to rising prices, resulting in higher profits, and the boom ends when the money interest rate has adjusted fully, returning the real interest rate to its normal level' (England 1912, p. 96). England extensively criticised this idea for empirical reasons, arguing that there is no evidence for such lags in the adjustment of the normal interest rate. In a subsequent article on economic crises (England 1913a) she emphasised the fact that in such situations debtors are unable to meet their obligations. Her definition of a crisis as a state of debtor insolvency has much in common with Fisher's arguments in 1932–3.

In two further essays, the second of which is included in this volume, England (1913b, 1915) continued to elaborate her own theory of business cycles driven by the promotion of new enterprises. She developed the argument that economic fluctuations are caused by swings of investment activity resulting from bursts of entrepreneurial promotion. She still downplayed the importance of rising interest rates and credit limitations in causing an end to booms compared to the emphasis on disappointed profit expectations resulting from rising costs, miscalculations and increased competition due to the entrance of new rivals. Her promotion theory of crises and cycles, which was developed independently, resembles that put forward in *The Theory of Economic Development*. It is no wonder that Schumpeter referred to England's two articles favourably in his discussion of the interpretation of business cycles as investment cycles (1954, p. 1128).

<sup>1</sup> See Dimand (1999) for a more detailed information on England and her work on macroeconomics.

The importance of the contributions to monetary economics and business cycle theory in the interwar period by British economists, in the wake of Marshall, is well known and prominently documented.<sup>1</sup> Since the writings of Hawtrey, Pigou and Robertson, not to mention Keynes and others, are easily available, only a few contributions have been chosen for this collection.

Ralph G. Hawtrey (1879–1975) would be the first choice for many economists if looking for a representative of a genuine monetary explanation of the business cycle. From the outset he regarded the trade cycle as a purely monetary phenomenon. Trained in mathematics at Cambridge, he did not follow an academic career but served in the British Treasury from 1904 to 1947. Thus he never became an integral part of the Cambridge school of economics, and in matters of economics might be regarded as an autodidact. This may explain some of the communication problems between Hawtrey and the economics profession. Beginning with his first published work, *Good and Bad Trade* (1913), followed by *Currency and Credit* (1919) and many other publications, business cycle theory became his main concern. While on leave from the Treasury Hawtrey lectured at Harvard during 1928 and 1929. He served as president of the Royal Economic Society from 1946 to 1948. The variable that Hawtrey emphasised in his monetary and business cycle analysis was the interest rate, not the quantity of money. Thus the turning points of cyclical fluctuations are governed by banks' decisions to expand or reduce the supply of credit. Some of his ideas are quite similar to Wicksellian ones, for example his distinction between three interest rate concepts: the natural (equilibrium) rate, the profit rate, and the bank rate. The tendency of the latter two to diverge constitutes an important source of the instability of credit in *Good and Bad Trade*. However, despite these similarities, he does not seem to have been really familiar with Wicksell's work.<sup>2</sup> Hawtrey was also particularly criticised for over-emphasising the short-term rate of interest and its influence on inventory investment at the expense of long-run considerations.<sup>3</sup> This collection includes his little-known article 'The Trade Cycle' (1926) from the Dutch journal *De Economist* and the dispute between Hawtrey and Pigou on 'The Monetary Theory of the Trade Cycle'.

Arthur Cecil Pigou (1877–1959) succeeded Marshall to the chair of political economy at the University of Cambridge in 1908 and held that position for thirty-five years. For Pigou, industrial fluctuations are intimately linked to unemployment, as is illustrated by his article 'Correctives of the Trade Cycle' (included in this volume), but developed in greater detail in

1 See, for example, Part III of Volume I of the collection of O'Brien (1997), and Part II of Laidler's superb study (1999).

2 For a critical diagnosis in this respect see Myrdal (1939, 9) who also makes this judgement for Marshall and Pigou. For a detailed study of Hawtrey's theoretical contributions and their impact see Deutscher (1990).

3 See, e.g., Haberler (1937).

his major study *Industrial Fluctuations* (1927). In that work Pigou emphasises psychological, real and autonomous factors (the last including creation and destruction of bank credit in foreign countries) which influence the expectations of business people and lead to cyclical fluctuations. Haberler (1937) classifies Pigou as an exponent of a 'psychological' theory of the business cycle, but it is more appropriate to regard him as an 'eclectic', who puts a lot of emphasis on supply-side disturbances creating cyclical fluctuations and is generally very critical of explaining the cycle as a purely monetary phenomenon.

Dennis Holme Robertson (1890–1963), who is hardly known to younger economists today, was regarded for many decades as a leading authority on business cycle and monetary theory. *A Study of Industrial Fluctuation* (1915), which emphasises the changing demand for capital goods, was the first of several substantial contributions to a better understanding of the causes and nature of cyclical fluctuations. Although the emphasis in his early work, with which he established himself as a leading theorist, is on real factors, there was a monetary element in Robertson's analysis from the very beginning. This was strengthened later, as is indicated in the title of his famous *Banking Policy and the Price Level* (1926), in which he attributes an important role to monetary factors.<sup>1</sup> Robertson also held a conception of forced saving, which has many similarities with the stress on money wages lagging behind prices in the Austrian business cycle theory of Mises and Hayek. However, there were some barriers that prevented a full understanding of his theory, not least due to his special terminology, such as 'automatic' or 'induced lacking'. Robertson believed, contrary to the Austrians, that cyclical fluctuations include an element of market failure, and this helps to explain some important differences in policy conclusions. For example, Robertson understood that government spending helps to relieve the disastrous consequences of depressions. This volume concludes with his 'Survey of Modern Monetary Controversy' (1938).

Ludwig von Mises (1881–1973) was one of the central figures in the third generation of the Austrian school of economics and the founder of the Austrian Institute for Business Cycle Research in Vienna in 1927. He is known as one of the first leading representatives of a monetary theory or credit view of the business cycle in the German language area. With his first book *The Theory of Money and Credit* (1912), which was published in the same year as Schumpeter's *Theory of Economic Development*, he made his habilitation at the University of Vienna. The book was reviewed by Keynes<sup>2</sup> and Wicksell,<sup>3</sup> among others. In comparing Mises's book with

1 See Laidler (1995) for a detailed exposition and critical analysis, and Presley (1979) for an examination of Robertson's work on industrial fluctuations.

2 *Economic Journal*, 24, 1914, pp. 417–19.

3 *Zeitschrift für Volkswirtschaft, Sozialpolitik und Verwaltung*, 23, 1914, pp. 414–19. For a more detailed discussion of the content and importance of Wicksell's review see Bellofiore (1998).

Friedrich Bendixen's *Money and Capital*, Keynes concluded that 'Dr. von Bendixen is without the cultivated subtlety of Dr. von Mises, but his practical wisdom is of a high order' (p. 419), Wicksell came to the opposite conclusion, believing that Mises was much better in his exposition of monetary policy and practical matters than in his theoretical high-altitude flights. Nevertheless Mises established himself with the work as one of the pioneers of a monetary theory of the business cycle in Austria and Germany. The book came out in a revised edition in 1924, shortly after the end of the hyperinflationary processes in Germany and Austria that followed the First World War. It was this second German edition that formed the basis of the English translation published at the initiative of Lionel Robbins a decade later, after Hayek's arrival at the London School of Economics.

This collection includes chapter 19, 'Money, Credit and Interest', of Mises's *The Theory of Money and Credit*. This chapter elucidates the three key sources from which Mises obtained his inspiration for developing an Austrian theory of the business cycle: Böhm-Bawerk's conception of the production sphere of an economy as a sequence of stages of production in which original inputs are transformed into a single output of consumable commodities, and where capital goods appear only as 'intermediate products 'or' working capital'; Wicksell's groundbreaking distinction between the natural rate of interest and the money rate of interest charged by banks; and a view of the operation of banking which was strongly shaped by the insights of Lord Overstone and other members of the British Currency School into the circulation of (even convertible) bank-notes and credit.

There is a remarkable change of emphasis between the first and second editions of *The Theory of Money and Credit*. Whereas in 1912 Mises still emphasised that the primary impulse for a boom does not proceed from excessive credit creation, and located only one of several possible causes for economic fluctuations in the credit sector,<sup>1</sup> he changed his views under the influence of the hyperinflationary processes. He now identified banks as the main culprits: they are responsible for an excessive credit creation by artificially lowering the rate of interest on loans below the natural rate, thereby inducing a period of unsustainable expansion. The inevitable consequence of such a credit-induced boom is a bust, which is only corrected by the acceptance of excessively roundabout methods of production. Mises's argument that excessive credit by the banking sector is the decisive cause of cyclical fluctuations is most clearly stated in his *Monetary Stabilization and Cyclical Policy* (1928), in which he distances himself not only from views still held by Schumpeter but even from his own earlier views.

Mises's view of the operation of banking ultimately aims at a theory of the business cycle. In contrast to the Currency School, which developed the doctrine of the 'external drain' and attributed the unsustainability of the boom exclusively to international repercussions and restrictions, he

1 See Mises (1912, 434).

wanted to show that a credit-induced boom is unsustainable even in a closed economy. It is a central element of the 'circulation credit theory' – Mises's formulation of a monetary theory of business cycles – that the banking system grants a volume of credit which transcends the level of voluntary savings, thereby causing a misallocation of resources. The boom thus contains the seed of its later correction.<sup>1</sup>

In contrast to Wicksell, Schumpeter and particularly Hahn, Mises denies the capital-forming power of additional credit and maintains the orthodox view that savings must precede investment. The banking system might postpone the crash by continuously pumping additional money into circulation, but this delay would only make the consequences of the mal-investments worse and aggravate the length and depth of the inevitable crisis (see Mises 1928, pp. 50–3). According to Mises, the victims of forced saving would regain their former position in this crisis-driven process. He proposed strict gold reserve requirements, including not only banknotes but also the demand deposits of private banks, to nip credit creation in the bud. Thus he overlooked the fact that in order to keep prices stable, a growing economy requires a creation of circulating currency to match the increase of production capacity. These factors caused a leading contemporary German monetary economist to write that Mises's recipes for cyclical stabilisation would reach that goal only in the form of the 'stabilization of a permanent depression' (Stucken 1929, p. 150).

Mises took over the theorem of the difference between the two interest rates from Wicksell. However, he criticised the Swede for concentrating too narrowly on the effects of this divergence on the absolute level of prices, thereby overlooking the importance of additional credit for the structure of production. Furthermore, Mises dissociated himself from Wicksell concerning the decisive impulse causing the divergence between the two rates of interest. Wicksell (1898) focused on an increase of the natural rate due to technological improvements, which disturb the initial equilibrium as inactive banks leave the money rate constant. In Mises's account the banks, which artificially lower the money rate below the natural rate of interest, play a much more active role and are therefore directly responsible for the disturbance of the initial equilibrium due to their short-term profit interests.

*Monetary Theory and the Trade Cycle* by Friedrich August von Hayek (1899–1992) is widely regarded as the culmination of monetary business cycle theory in the German language area. Hayek's book, which was his 1929 Vienna habilitation thesis, is an expanded version of an essay he contributed to the preparatory volume of the 1928 Zurich conference of the

1 For a condensed summary of his 'Austrian' theory of the Trade Cycle, in which overly credit creation by the banking system is creating an artificial boom, which must end sooner or later because of a shortage of saving, see Mises (1936), who moreover blames the policy of the trade unions and the rigidity of wages for the prolongation and aggravation of the crisis.

Verein für Socialpolitik (German Economic Association), which focused on the discussion of business cycle theories. Hayek's essay 'Some Remarks on the Relation of Monetary Theory to Business Cycle Theory' is published here in English for the first time.

Hayek's systematic elaboration of the monetary explanation of cyclical fluctuations owes a considerable debt to Wicksell's analysis of cumulative processes caused by discrepancies between the money and the natural rate of interest, and to Mises's theory of money and credit. Hayek sees the main division in business cycle theory lying between monetary and non-monetary theories, and emphasises that a theory of cyclical fluctuations other than a monetary one is inconceivable. Any theory of trade cycles must take the influences arising from money and credit as its starting point. Such a theory could explain cyclical fluctuations characterised by disproportionalities that would be unthinkable in the equilibrium system of a barter economy. The starting-point for the explanation of crises has to be a change in the money supply automatically occurring in the normal course of events, and not evoked by any forcible interactions (see Hayek 1928, pp. 285–6).

However, from the beginning Hayek emphasised that monetary theory has by no means accomplished its task when it has explained the absolute level of prices. Thus he argues against all approaches which concentrate exclusively on the relationship between the quantity of money and the general level of prices. The classical dichotomy has to be seen as a cardinal error of economic theory. A far more important task of a monetary theory of the trade cycle is to explain changes in the structure of production that arise because the price system communicates false information about consumer preferences and resource availability. Misallocation of resources due to credit expansion may even occur despite price level stability; that is, constant prices cannot automatically be regarded as a sign of monetary stability, as Hayek (1925) pointed out with reference to United States monetary policy during the prosperous 1920s. His emphasis on what later came to be known as the Cantillon effects of changes in the money supply on the price structure, and the consequential disequilibrating effects on the structure of production, also led him to write a critique of Wicksell. The latter 'only incidentally, in the course of describing the effects on the general price level of a divergence of the money interest rate from the natural interest rate on capital, reaches the insights which are crucial for business cycle theory concerning the consequences that such a falsification of natural price formation, which variability in the quantity of money makes possible, must have for the development of individual branches of production' (Hayek 1928, p. 287).

Hayek's arguments also contain a reaction against the criticism raised by Fritz (later Frank) Burchardt (1902–58) and Adolf Löwe (1893–1995; Adolph Lowe since 1939, when he was naturalised in Britain) against monetary theories of the business cycle. Hayek explicitly assents to the methodological thesis developed by Löwe in the latter's survey of the

current state of business cycle research in Germany (Löwe 1925), and particularly in the groundbreaking essay 'How is Business Cycle Theory Possible at All?' (Löwe 1926), 'that the incorporation of cyclical phenomena into the system of economic equilibrium theory, with which they are in apparent contradiction, remains the crucial problem of Trade Cycle Theory' (Hayek 1933, p. 33). However, the two economists come to different conclusions concerning the decisive endogenous factor causing the cycle. Hayek resorts to money and credit as the factors whose introduction breaks the equilibrium system and makes endogenous fluctuations both possible and necessary. Löwe, on the other hand, concluded that no one has succeeded in demonstrating the systematic nature of the monetary fluctuations themselves. He regards monetary factors as playing, at best, an intermediate causal role and as being likely to intensify any disequilibrium induced by non-monetary causes. In the era of progressive industrialisation he sees technological change as the decisive endogenous factor disturbing economic equilibrium.

This volume contains the first English translation of Löwe's contribution 'On the Influence of Monetary Factors on the Business Cycle' to the 1928 Zurich meeting of the Verein für Socialpolitik, which contains the essence of his critique of monetary theories of the business cycle. The article is based on a lecture entitled 'Does a Monetary Theory of the Business Cycle Exist?' which he delivered on 26 March 1928 in the lion's den: the Nationalökonomische Gesellschaft (Economics Society) in Vienna. Starting from Hawtrey's<sup>1</sup> definition of *monetary trade cycle theories* as those theories that aim to demonstrate how changes in the volume of money and credit are both necessary and sufficient for the business cycle phenomenon, Löwe's main intention is to show that monetary factors are neither necessary nor sufficient for the explanation of business cycles. According to Löwe, all monetary theories of the business cycle so far developed need to introduce other factors, such as technical changes or adjustment lags, in order to be capable of understanding cyclical fluctuations. These factors by themselves are sufficient to generate cyclical phenomena without falling back upon changes in the supply of money and credit, which may be superimposed.

Löwe's analysis was supported by the parallel study of the evolution of monetary business cycle theory (Burchardt 1928) by his closest research collaborator, which was distributed to the participants of the Zurich meeting, where the issue of monetary versus non-monetary business cycle theories had been chosen as a special theme. In his 1928 essay Burchardt<sup>2</sup>

1 See Hawtrey (1927, p. 472).

2 Burchardt had already submitted his habilitation thesis on the *Tableau Économique* as the foundation of business-cycle theory at the Goethe University in Frankfurt when the Nazis came to power and ended his university career in Germany. He emigrated to England in 1935, joining the Oxford Institute of Statistics and later becoming its director in 1949.

showed how structural changes in economic history alter the character of theory. During the nineteenth century, crisis theory evolved into trade cycle theory. Credit expansion and interest rate movements became increasingly important as symptoms of the cycle. Recognising that monetary influences, in particular, manifested themselves through changes in the price level, Burchardt concluded that monetary factors alone could not explain cyclical phenomena. In his view non-monetary factors, especially technical progress, play a central role in the cycle. Concerning Wicksell's influential theory Burchardt emphasised that although changes in banks' market rate of interest may cause movements of the price level, the equilibrium of an economy is disturbed by technical progress which causes the natural rate to rise above the market rate.

Hayek was not unimpressed by Burchardt's essay, which he praised as 'very valuable in its historical part' (Hayek 1929, p. 57). However, he criticised Burchardt and Löwe for falsely resting their critique 'exclusively on the idea that only general price changes can be recognized as monetary effects' (Hayek 1933, p. 123). He also dedicated the whole of Chapter IV of *Monetary Theory and the Trade Cycle* to the issues raised by Löwe. On the one hand, he views Löwe's most important argument – which concerns the *exogenous* character of the theory as it comes in by relying on arbitrary interferences on the part of the banks – against contemporary monetary theories of the business cycle as valid, even with reference to the theory of money and credit developed by his admired mentor Mises. On the other hand, Hayek aims to show that he has not to rely on the arbitrary lowering of the money rate of interest below the natural rate by the banking system, but that the fundamental cause of cyclical fluctuations is of an endogenous nature under the existing credit system.<sup>1</sup>

Gunnar Myrdal (1898–1987) was awarded the Nobel Prize in economics jointly with Hayek in 1974. Their pioneering work in the theory of money and economic fluctuations led to the prize committee's decision, despite their political antagonism, which came out more strongly in their analysis of the interdependence of economic, social and institutional phenomena. This volume contains the second of three introductory chapters which Myrdal added to the German edition of the original Swedish text. This was included in a famous volume on the foundations of monetary theory edited by Hayek in 1933 and first published in English in 1939.

In his critical examination of 'Wicksell's Statement of the Problem of Monetary Theory' Myrdal aims at a clarification of the equilibrium concept in Wicksell's monetary theory. According to Wicksell a *monetary equilibrium* is defined by three conditions: 1) equality between the money and the 'natural' (marginal productivity of real capital) rates of interest; 2) equality between supply of and demand for savings, that is, between saving and investment; and 3) a stable price level. Although monetary equilibrium

1 See, for example, *Hayek* (1933, pp. 147–8).

implies the absence of a cumulative process, Wicksell relies on this process to remove a discrepancy between the two rates of interest and to restore the economic system to equilibrium. The money rate of interest that brings about monetary equilibrium is called the 'normal' rate of interest. Myrdal's main aim is a critical re-examination of the three conditions constituting a monetary equilibrium in Wicksell's analysis. The fact that the concept of the normal rate of interest is a central factor in achieving a monetary equilibrium explains the subtitle of the original Swedish version, 'A Study of the "Normal Rate of Interest" in Wicksell's Monetary Doctrine' (Myrdal 1931).

Myrdal could build up his theory on his doctoral dissertation *The Problem of Price Formation and Change* (1927), written with Gustav Cassel as his supervisor, in which the conclusion that prices which are formed dynamically are not the same as prices inferred from a static model, is one of the most important results. Although he did not use the concepts *ex ante* and *ex post* in his Ph.D. thesis – the origination of which in *Monetary Equilibrium* he now regards as 'probably the chief contribution of this essay' (p. 47) – implicitly, they were already there. In between Myrdal's two books, Erik Lindahl, a former student of Wicksell and a member of Myrdal's Ph.D. committee, had published 'The Formulation of the Theory of Prices from the Viewpoint of Capital Theory' (Lindahl 1929), which introduced the temporary equilibrium method, and *Methods of Monetary Policy* (1930), published in English in a revised version 'The Rate of Interest and the Price Level' as part II of Lindahl (1939), whose interpretation of Wicksell's cumulative process analysis is the starting-point and major challenge for Myrdal.<sup>1</sup>

Both authors strive after a genuine dynamic macroeconomics, capable of dealing with alternative possible sequences, which despite all differences in individual approaches may be seen as the decisive and unique theoretical message of the Stockholm school. Myrdal and his Swedish fellows had in common with their Austrian colleagues a genuine Wicksellian pedigree<sup>2</sup> as a special offshoot of the quantity theory. They shared a certain critique of the quantity theory, in particular its overemphasis on the movement of the general price level and its neglect of the effect of changes in the quantity of money on relative prices and consequential changes in the structure of production, and emphasised that 'credit is a causal factor not only for the price level but also for price relations' so that 'the problem of credit ... requires a monetary theory which is really integrated with the central economic theory' (Myrdal 1939, p. 16). However, they differed substantially on other theoretical issues, not to mention economic policy conclusions. Above all this holds for the Swedish economists' awareness

1 For a more detailed analysis of differences and similarities in the works of Lindahl and Myrdal, as well as other members of the Stockholm School, see Hansson (1982) and the contributions in Jonung (1991).

2 See also Leijonhufvud (1981).

of the problems of measuring capital, which also enters Myrdal's 'immanent criticism' of Wicksell's three conditions for monetary equilibrium. Thus he rejects Wicksell's notion of the natural interest rate, which was directly derived from Böhm-Bawerk's physical marginal productivity of the roundabout process of production,<sup>1</sup> and which became central for the business cycle theory of Mises and Hayek (who only preferred the term 'equilibrium' to 'natural' interest rate), and replaced it with an anticipated yield of real investment, an *ex ante* concept which corresponds to Keynes's concept of the marginal efficiency of capital. Myrdal was also able to demonstrate that this marginal rate of planned real investment being in accordance with the money interest rate does not necessarily imply *ex ante* savings equating *ex ante* investment, that is, to exclude cumulative processes. Finally, he parted company with Wicksell when, in the examination of the third condition, he came to demonstrate that monetary equilibrium is compatible with any stable rate of inflation.

Gottfried Haberler (1900–95) became widely known in the 1930s for his contributions to international economics and business cycle theory. He had studied economics mainly with Wieser and Mises at the University of Vienna, where he received doctorates in law (1923) and economics (1925), and received his habilitation in 1928 with a stimulating thesis on *The Meaning of Index Numbers* (1927). In 1936 Haberler emigrated to the United States and became professor at Harvard University, where he stayed until his retirement in 1971. Shortly after his arrival in the United States, Haberler's most important work on business cycle theory was published: *Prosperity and Depression* (1937), a great survey, systematising and synthesising developments in the theoretical analysis of cyclical movements in the interwar period. The study, done on behalf of the League of Nations in Geneva, was a major reference work in business cycle theory for decades, and went through several new editions until the 1960s. Haberler's masterful study of cyclical fluctuations contains chapters on all the major theories: purely monetary, monetary and non-monetary overinvestment, underconsumption, psychological and harvest. By combining these theories, a more coherent approach, as well as a precise exposition of the nature and causes of business cycles (definition and measurement, expansion and contraction, crisis and revival), could be developed.

It is often stated that, although a remarkable contribution, *Prosperity and Depression* is mainly a synthesising work, cutting through voluminous, complicated and contracting material, clarifying relationships and developing a commonsense economic theory. Haberler's work in international economics, on the other hand, is celebrated for brilliant theoretical innovations. Undoubtedly Haberler's most important theoretical contribution was his reformulation of Ricardo's theory of comparative costs in his

1 However, Wicksell regarded the natural rate as an endogenous variable determined as the general equilibrium solution in an economy without money.

article 'The Theory of Comparative Costs and its Use in the Defence of Free Trade' (Haberler 1930), in which he introduced the production 'substitution curve', today's production-possibility frontier or transformation curve, allowing for several factors of production. Haberler's contribution revolutionised the theory of international trade and paved the way for the subsequent work of Ohlin, Samuelson and others. In his later textbook *The Theory of International Trade* (1933) Haberler made full use of his new concepts and, moreover, integrated real and monetary aspects of international economics, also employing supply and demand functions in the analysis of currency markets. He also integrated international aspects into his theory of economic fluctuations. In this respect the chapter on the international aspects of business cycles in *Prosperity and Depression* has to be seen as a highly innovative contribution. Haberler's discussion of how the degree of capital mobility and the exchange rate system influence the international transmission of business cycles is particularly noteworthy.

Another innovative feature is Haberler's priority as to time over Pigou (1943) in his discovery of the direct effect of a falling price level on consumption expenditures. Patinkin (1948), who elaborated on this 'real-balance effect', important for endogenous stability of a market economy, originally called it the 'Pigou effect'. He came to recognise, however, that this issue, which became relevant after Keynes's *General Theory* (1936) was published, had been addressed earlier by Haberler. In contrast to Patinkin, who refers to the 1941 edition, it should be noted that Haberler had already discussed the topic in the first edition of *Prosperity and Depression* (1937, pp. 298–9).

In his contributions to business cycle theory Haberler paid great attention to British monetary economics, in particular to Hawtrey and the Cambridge school. Thus Hawtrey is given a prominent, almost exclusive place in discussing the purely monetary theory of cyclical movements in *Prosperity and Depression*. Earlier, Haberler had already used an extensive review of Robertson's *Banking Policy and the Price Level* for a general discussion of the credit theory of the Cambridge school (Haberler 1929). Although he credits Robertson's work with great theoretical precision, an abundance of ideas and insights and high demands to the reader's theoretical training, Haberler nevertheless criticises Robertson for overlooking the fact that any process of credit creation is associated with a lowering of the interest rate, and for completely neglecting contributions of Wicksell, Mises and Schumpeter (pp. 268–9).

At that time Haberler was a capable exponent of the doctrines of Hayek and Mises, although less radical in his economic policy conclusions. This is also evident in his article 'Money and the Business Cycle' (1932), written in the middle of the Great Depression and included in this volume.

The article by Jacob Viner (1892–1970), 'International Aspects of the Gold Standard', is taken from the same book, based on a Harris Foundation conference, as Haberler's 'Money and the Business Cycle'. Viner received his Ph.D. from Harvard in 1922, and taught at the University of

Chicago from 1919 to 1946. His masterful *Studies in the Theory of International Trade* was published only five years later, and was part of 'A Chicago–Harvard Connection', as Laidler accurately described (1999, pp. 236–9). Viner's essay demonstrates his pessimism about economic policy options within the gold standard system, in which a conflict between internal and external stability potentially arises. His pessimism is based on the constraints imposed by this international currency system and the relative ineffectiveness of monetary policy in the Depression. However, one year later – after the passing of the Glass–Steagall Act of 1932 with its relaxation of the gold reserve requirements, and the subsequent abandonment of the gold standard in 1933 – we find Viner arguing against the 'mouldy fallacy' of a strict annual balanced budget requirement (Viner 1933, p. 129) and favouring deficit spending during the Depression, when a more traditional monetary policy was likely to fail.

A co-founder and leading member of what became known from the 1930s as the Chicago school was Henry C. Simons (1899–1946). Viner shared many of his Chicago colleagues' views about Keynesian economics, government intervention and *laissez-faire*, but was a much more pragmatic person arguing for modifications and the recognition of the special circumstances of time and space. Simons, on the other hand, was a libertarian who also wrote a famous pamphlet in favour of *laissez-faire*. In contrast to Viner, who had some debates with Milton Friedman in the 1960s in which he supported some degree of discretionary monetary policy against overly strict rules, Simons opted rather early on for rules against discretions. In 'Rules versus Authorities in Monetary Policy' Simons (1936) supported the price-level rule instead of the generally preferred quantity-of-money rule, only because he was worried that under the existing financial system the velocity of money would be too volatile to reach price-level stability.

Simons was also the key author of the unsigned manuscript 'Banking and Currency Reform', which circulated at the end of 1933 and became known as the 'Chicago plan' for 100 per cent banking reserve requirements (Fisher 1935). The manuscript contains an Appendix on 'Banking and Business Cycles', published in this volume, which comprises an explicit monetary explanation of cyclical fluctuations, although other factors such as cost–price maladjustments (sticky prices) are listed as well. The appendix ends with the statement: 'It follows as a corollary, incidentally, that the problem of unemployment is not, to an important extent, a problem of debt.' This is an utter rejection of the arguments put forward in Fisher's debt-deflation theory.

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# England

## **'Promotions as the Cause of Crises'**

Minnie Throop England, 'Promotions as the Cause of Crises', *Quarterly Journal of Economics*, 29 (1915), pp. 748–67.



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## PROMOTION AS THE CAUSE OF CRISES

## SUMMARY

Two groups of crisis theories, 748. — Failures the chief phenomena in the crisis, 749. — Promotion activity the cause of prosperity, 750. — Relation between promotion and failures, 752. — Newly-promoted concerns fail, 752. — Old concerns fail because of competition of new, 755. — All kinds fail because of inability to cope with dynamic conditions, 756. — The part of credit in the cycle, 761. — Exhaustion of loanable funds, 761. — Falling reserve ratios or falling reserves, 762. — Gold movements before crises, 763. — Break down of credit not the main cause of crises, 764. — Crisis failures include insolvent as well as solvent concerns, 765. — Promotion the cause of crises, 766.

THEORIES of crises may be divided into two chief groups. One holds that industry is normally in a condition of stable equilibrium and that a crisis is the disturbance of this equilibrium by unpredictable causes. The second maintains that industry is normally unstable and that its equilibrium is eventually ruptured by steadily operating and cumulative forces.<sup>1</sup> This article falls in the second group. It will attempt to show that even when prosperity is not interrupted by extraneous causes such as natural calamities (crop failures, fires, floods, and so on) or by political disturbances, threats of war, and the like, active promotion, the cause of rising prosperity, still sets in operation forces which lead to a financial crisis, tend to check promotion activity, and cause a return to a condition of depression such as characterized the beginning of the period.

It is often said that industrial depression and financial disturbance are but different phases of a given situa-

<sup>1</sup> Jones, *Economic Crises*, ch. I, gives a good discussion of the theories of industrial equilibrium; cf. also Taylor, *Kinetic Theory of Crises*, University of Nebraska Studies, January, 1904.

tion.<sup>1</sup> But just *how* the depression and the financial phenomena are related remains to be satisfactorily explained. It is proposed, as just stated, to show that crisis and depression are the logical sequence of the business activity of the preceding period. Before entering on such an explanation, it is necessary to make clear the essential features of the financial crisis, on the one hand, and of the industrial depression, on the other.

The financial crisis, I maintain, is a situation in which a larger number than usual of debtors are unable to meet their obligations, primarily because industry and finance have failed to yield returns as large as the estimates upon which borrowings or subsequent expenditures were based, and secondarily because of a contraction of credit. Many writers are inclined to lay sole stress upon the failure of firms which suspend because they cannot obtain the customary credit accommodations — a phenomenon here classed as secondary. While such failures are strikingly prominent and very numerous during panic times, it should be recognized that the chief failures are those of genuinely insolvent concerns which have not made good during the preceding period of rising prosperity. In fact, the panic stage is very often precipitated by the failure of a prominent firm or firms. The crisis of 1837 in the United States was preceded by failures in the fall of 1836 of English firms doing business with this country. In 1857 the panic began with the failure of the Ohio Life Insurance and Trust Company. The difficulties of 1873 commenced with the failure of the New York Warehouse and Security Company and the banking house of Kenyon, Cox & Company. In 1884 trouble began with the failure of the brokerage firm of Grant & Ward and the Mercantile National Bank. The failure that

<sup>1</sup> Cf. Taussig, *Principles of Economics*, vol. i, p. 400. Hull, *Industrial Depressions*, however, says there is no relation between the two.

marked the turning point of prosperity in 1893 was that of the Philadelphia and Reading Railroad. In 1907 one of the initial episodes was the failure of the Mercantile National Bank owing to its furtherance of copper enterprises and speculation.

On the industrial side of the crisis cycle the dominant factor is the condition of promotion.<sup>1</sup> If many new enterprises are being started the increased demand for capital goods means heavy orders placed with producers, a greater demand for labor, enlarged profits, increased railway earnings, and so on. The increased demand for capital goods is reënforced by heavier demands for consumption goods, and general rising prosperity is the result. Good times, therefore, are due to the investment of the social savings. If investment slows up all the phenomena of business depression appear. Professor Commons<sup>2</sup> says that "over-production" is mainly the "under-consumption" of wage earners. But is it not more nearly the case to say that "over-production" is the "under-consumption" of *investors*?

However much writers disagree as to what causes the transition from good times to bad, there is an increasing unanimity of opinion that rising prosperity is due to promotion activity, and depression to a relative inactivity in investment. Taylor brings this out clearly in his chapters on crises in *The Credit System*, as does Mitchell in *Business Cycles*.<sup>3</sup> Burton<sup>4</sup> takes a similar position.

<sup>1</sup> See my article, "Analysis of the Crisis Cycle," in *Journal of Political Economy*, October, 1913.

<sup>2</sup> *Races and Immigrants*, pp. 156-157.

<sup>3</sup> Professor Mitchell and I, each working independently, have reached conclusions regarding crises and the general cyclical movement of business which are in substantial agreement. He recognizes this in his book (p. 603). Under date of May 3, 1913, Professor Mitchell wrote me: "From your April article I infer that we have stated the problem in much the same way, applied similar methods of analysis, and reached much the same results. But I think you have discovered several points which have escaped me, and that you will find the interest in your results heightened rather than diminished by the appearance of my book. That surely ought to be the case. If you and I are really working by scientific methods our investigations ought to bring us out at the same conclusions, and that we confirm one another ought to be a matter of interest to those who are taking economic theory with seriousness."

<sup>4</sup> *Crises and Depressions*, p. 306.

He says that the important feature in the occurrence of crises and periods of depression "is the increasing proportion of expenditures in preparation for increased production, manifesting itself in the formation and prosecution of new enterprises and the building on a large scale of railroads, ships, and factories, and the providing of other means to meet increased demands. At times these expenditures for increased production attain an unusual proportion as compared with the ordinary expenditures for annual consumption or support." Tougan-Baranowsky<sup>1</sup> says: "Pendant les phases de prospérité, on crée le nouveau capital fixe de la société. Toute l'industrie sociale prend une orientation particulière: la fabrication des moyens de production passe au premier plan. La production du fer, des machines, des instruments, des navires, des matériaux de construction devient bien plus considérable qu'auparavant." Two writers of works less scientific than those above cited have come to the same conclusion. Hull<sup>2</sup> states that "what we call booms result almost entirely from the great periodic increase in the volume of construction, and what we call industrial depressions result almost entirely from the great falling-off in the volume of construction." Johannsen<sup>3</sup> says: "An augmentation in the rate of new constructions brings with it an augmentation of the country's business activity; and an increase in this activity, in turn, will increase the demand for new constructions; the one factor constantly invigorating the other. The governing factor, however, and the one that starts this reciprocal action, must be found in enterprise and new constructions."

But what is the relation between promotion, the dominant element in the industrial phase of the crisis

<sup>1</sup> *Les Crises industrielles en Angleterre*, p. 271.

<sup>2</sup> *Industrial Depressions*, p. 105.

<sup>3</sup> *A Neglected Point in Connection with Crises*, p. 7.

cycle, and failures, the essential factor in the financial phase of the cycle? An answer to this question is necessary before a working theory of crises can be said to be evolved. It is not enough to say that the failures are due to miscalculations in business. That does not explain why there should be more miscalculations at one time than another; nor does it show the relation between the industrial and financial phases of the crisis. The problem put in another form is: to what extent has promotion been a factor in bringing about these extra failures which constitute a crisis?

Analysis of any crisis situation shows that the two phenomena, promotion and failures, are closely related. Yet the relationship is more complex<sup>1</sup> than writers admit who say that the failures are due merely to overinvestment, or improvident investment, or exhaustion of capital, or some one factor. Not one class, but a considerable number of classes of failures directly or indirectly connected with promotion activity may be marked out. I have outlined three of the most important.

First, there are the failures of the newly-promoted concerns because of miscalculations in promotion. Here is found the much-talked-of anarchy of production. Investment is often carried too far in a given line and the market finally becomes overstocked with the particular commodity or service produced by these new concerns. Or, it happens that promotion is premature; as for example in railway building before our crises of

<sup>1</sup> Professor Taussig, *Principles of Economics*, vol. i, pp. 410-411, gives recognition to the complexity of the crisis situation. He says: "In sum, the causes of industrial depression seem to be reducible to various kinds of maladjustment, all connected with the intricate division of labor and the long stretch from production to consumption. There is likely to be maladjustment in the planning of some particular kind of capital, — railways, or electric enterprises, or textile mills. There is likely to be maladjustment in a greater addition to the total community's capital than is justified by the total of its available savings. There is excess or deficiency in the stocks of dealers and middlemen. There is accentuation of the whole series of misfits because of the psychological factor."

earlier date. While the capital is not from the social standpoint wasted, yet if the enterprises in question cannot find or stimulate enough demand for their products or services to meet their obligations they must sooner or later pass into receivers' hands.

The tendency for investment to follow a single line and to keep up until that line is greatly overdone is, I believe, more characteristic of the earlier crises than of the later ones. The era of distinctive railway crises apparently passed away with the crisis of 1884. The promotion activity preceding the European crisis of 1900-01 and the world crisis of 1907 spread out over much broader fields than formerly, resulting in proportionately less overdoing of any particular line. No one kind of investment was conspicuous in either case.

A study of the lines of investment followed in the last twenty or thirty years convinces one that investment manias are still present, but that they are localized and short-lived. Russia has recently had a more pronounced railway mania than any other country except the United States.<sup>1</sup> Germany extended her electric lighting system by leaps and bounds.<sup>2</sup> The boom in bicycles culminated in 1896, when over £17,000,000 of English capital went to cycle companies, as contrasted with £155,000 two years later. In the United States also a minor bicycle crisis occurred in 1896, as evidenced by the failure of over 5 per cent of all manufacturers and dealers in cycles.<sup>3</sup> Another boom occurred in breweries and distilleries when, in 1894-1905 inclusive, over £88,000,000 of English capital was invested in those lines. Of this amount over £54,000,000 was invested during the three years 1896, 1897, and 1898.

<sup>1</sup> Raffalovich, *Le Marché Financier*, 1898-99, p. 435.

<sup>2</sup> *London Economist*, 1900, p. 1072.

<sup>3</sup> *Bradstreet's*, 1897, p. 354.

In fact, in 1898 breweries and distilleries ranked first among English industrial undertakings.<sup>1</sup> In 1902 and 1903 there was a boom in stores and trading companies. In 1905 an unusually large amount of English capital went to build railways in the Americas, especially in Argentina, and in India, China, and Japan. The mania characteristics, however, have been more pronounced in mining investment than in most other lines. In 1895 occurred the boom in South African mining shares. In 1896 the Westralian mining mania reached its height. In a single month — April, 1896 — eighty-one Westralian companies were launched. Between March 1, 1894, and September 30, 1896, no fewer than 731 Westralian gold-mining companies asked British investors to subscribe an aggregate of almost £76,000,000.<sup>2</sup>

Over-investment or partial over-production, always an inadequate explanation of the great mass of failures which make up a crisis, is surely less prominent than formerly. This relative absence of mania in promotion should be a factor in reducing the severity of crises and may account in part for the short-lived effects of the crisis of 1907. Possibly it was a factor also in prolonging the period of prosperity in the United States from 1897 to 1907, with a slight interruption in 1903, — a period double the average length of good times in the past.

Of course there will always be some miscalculations in investment. Companies are formed to produce new commodities. There is no possible way to anticipate the demand for an unmarketed commodity, no precedents of demand in former years to be followed. Necessarily, they must first prepare the product for market and trust to their ability to stimulate a sufficient

<sup>1</sup> *Journal Royal Statistical Society*, vol. lxi, p. 145.

<sup>2</sup> Van Oss gives a good account of the boom in "Kangaroos" in *Nineteenth Century*, vol. xl.