

CASSEL, OHLIN, ÅKERMAN, AND THE WALL STREET CRASH OF 1929

BY

BENNY CARLSON 

The 1929 stock market crash on Wall Street is one of the most spectacular economic events of all times. In Sweden, leading economists got involved in a lively debate on the events on Wall Street before, during, and after the crash. Three of them were particularly active. Gustav Cassel and Bertil Ohlin were not overly worried since they regarded the stock market mania and the panic as phenomena more or less disconnected from the rest of the economy. Their theoretical argument was that booms and busts upon a stock market cannot create or destroy capital or purchasing power. Johan Åkerman, on the contrary, warned repeatedly that a serious stock market crash was in the making and, once it had happened, that it would in many ways affect the entire economy.

“One of the peculiarities of the neoclassical theory that preceded Keynes and the neoclassical synthesis that now dominates economic theory is that neither allows the activities that take place on Wall Street to have any significant impact upon the coordination or lack of coordination of the economy.”

Hyman Minsky ([1986] 2008, pp. 132–133)

I. INTRODUCTION

The stock market crash on Wall Street in New York in the fall of 1929 is one of the most spectacular economic events of the twentieth century, if not of all times. Consequently, it has been the subject of a vast literature. In this article the crash will be seen from a Swedish perspective. How did Swedish economists react before, during, and after the crash?

Benny Carlson: Department of Economic History, Lund University School of Economics and Management. Email: Benny.Carlson@ekh.lu.se. I am grateful for comments from Lars Jonung, participants in a seminar at the Ratio Institute (particularly Martin Korpi), *JHET* editor Pedro G. Duarte, and three anonymous reviewers.

ISSN 1053-8372 print; ISSN 1469-9656 online/23/0100073-93 © The Author(s), 2022. Published by Cambridge University Press on behalf of History of Economics Society. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.
doi:10.1017/S1053837221000572

A number of Swedish economists were engaged in a debate on the events on Wall Street. Three of them were particularly active: Gustav Cassel, Bertil Ohlin, and Johan Åkerman. At the time, Cassel was, alongside John Maynard Keynes, the world's most famous economist (Carlson 2009) and Ohlin was a rising star. Åkerman was less well known but had been trained in the United States in the art of forecasting business cycles. Their debate to a large extent took place in Swedish media.

Our attention will be focused on these three, although a few other economists will make occasional inroads. The discussion will be concentrated on the development leading to the crash in 1929 and the immediate effects of the crash.¹ More precisely, the following story will revolve around questions (distilled out of the debate) like these: Can stock market speculation draw capital from trade and industry? What kind of stabilization policy should a central bank pursue? Should central banks try to put a brake on stock market speculation? If not, who should? What might be the causes and consequences of a stock market mania and panic? What were the consequences once the crash had happened? What is the connection between stock market events and the business cycle?

In terms of time, the story will be limited to the years from 1928 to 1930, which means extraction from debates going on for a longer period of time. Cassel (1923) had accused Åkerman of being a business cycle dogmatist akin to “an ancient astrologer,”² and the debate between Ohlin and Åkerman spanned a longer period and touched on many more issues than the causes and consequences of the stock market crash (see Åkerman 1932c). Åkerman began publishing regular economic surveys—and sounding alarms—in 1928, which makes it natural to take this year as a point of departure. In 1931, a series of dramatic events—bank runs and the dissolution of the international gold standard—attracted the economists' attention and the effects of the stock market crash became intertwined in an ever-growing tangle of other issues. We present the material chronologically since timing and sequencing (who reacts to whom?) are of importance in a story like this.

Is a debate more than ninety years old revolving around a stock market crash of interest today? Yes, since it touches upon discussions of recurring importance. Should central banks focus on one target—the price level—and leave it to other actors to manage the effects such a policy may have on asset prices, or should the central bank act to prevent asset bubbles from emerging and collapsing with possible consequences for the entire economy?

II. THE GREAT CRASH

Before moving on, a few basic facts about the Wall Street events may be useful. The stock market boom was, to a large extent, based on loans. Purchasers put down a fraction

¹ For discussions of the interwar economic development where the stock market crash was part of a wider development, including war reparations and debts, tariff hikes, the restitution and eventual abandonment of the gold standard, and the Great Depression of the 1930s, see Eichengreen (1995, 2015) and Kindleberger ([1973] 2013).

² Åkerman worked on a Swedish business cycle index for a committee at the National Board of Trade (Kommerskollegium) in 1922–23. This antagonized Cassel, who saw business cycles as belonging to “normal” times before the war (1870 to 1914)—he himself had written a chapter on cycles in *Theoretische Sozialökonomie* (1918)—whereas booms and busts after the war were due to political mistakes and monetary instability. Cassel's (1923) attack forced Åkerman to resign from the committee. Åkerman (1928g) nonetheless appreciated Cassel's analysis of pre-war business cycles.

of the price of stocks and borrowed the rest. The stocks they had bought served as collateral for new loans and purchases. Call loans—to be repaid on demand from the lender—were common. Much of the discussion at the time revolved around the Federal Reserve’s credit policy, mainly around its discount rate.³

Some facts about the sensational stock market crash may be culled from the most famous account of the Wall Street drama, John Kenneth Galbraith’s *The Great Crash 1929* ([1954] 2009); the same scenario has been replayed in many versions, as of lately in Selwyn Parker’s *The Great Crash* ([2008] 2021).

Stock market prices reached their peak on September 3, 1929. The first price drops occurred on October 19, 21, and 23, followed by the three “black” days of October 24, 28, and 29. On Thursday, October 24, almost thirteen million shares were traded. Galbraith ([1954] 2009, p. 99) vividly describes how the stock market “degenerated into a wild, mad scramble to sell” and “surrendered to blind, relentless fear.” On Monday, October 28, more than nine million shares were traded and the losses were larger than under the whole previous week. On Tuesday, October 29, more than sixteen million shares were traded. It was, according to Galbraith ([1954] 2009, p. 111), “the most devastating day in the history of the New York stock market, and it may have been the most devastating day in the history of markets.” The next day saw a recovery. On Thursday, October 31, the panic resumed. If we are to believe Parker ([2008] 2021, p. 38), brokers “roared like lions and tigers.” In mid-November the decline stopped. By then the value of the market was down by 50% from the September peak. However, the downhill race continued until the stock market in 1932 had lost almost 90% of its value.

To what extent was the crash anticipated by economists and forecasters in the United States and Europe and what were their immediate reactions once it happened? During the bull market, most US pundits radiated optimism: “Any Cassandras who dared to forewarn of a stock market Armageddon were seen as spoiling the party, even as unpatriotic” (Parker [2008] 2021, p. 20). Nonetheless, a few Cassandras appeared on the scene. Roger Babson, “the country’s most popular economic prophet” (Friedman 2014, p. 42), had expressed concerns from the start of the boom and issued a sharp warning on September 5, 1929: “Sooner or later a crash is coming, and it may be terrific” (quoted from Eichengreen 2015, pp. 105–106). This warning caused the “Babson break,” when the stock market index lost 3%. Paul Warburg, investment banker and former member of the Federal Reserve Board of Governors, had issued a similar warning in March 1929 (Parker [2008] 2021).

Irving Fisher struck back against Babson and argued on September 6 that prices on the stock market were not overvalued. On October 15, he famously affirmed that stock prices had reached a permanently high plateau. The crash took him and most other forecasters by surprise, including John Moody and the Harvard Economic Society business cycle analysts Charles Bullock and Warren Persons (Friedman 2014). In Europe neither Keynes nor Friedrich von Hayek, director at the Österreichisches Institut für Konjunkturforschung since 1927, anticipated the crash. Hayek, however, had expressed “serious concerns” in May 1928, criticizing central banks for not adjusting

³ In August 1927, the discount rate had been reduced from 4% to 3.5%, due to a mild recession. Between February and July 1928, the rate was raised in three steps to 5%. In August 1929, at the height of the stock market boom, the rate was raised to 6%. In November 1929, after the crash, it was reduced to 4.5%, and during the first six months of 1930 further reduced in four steps to 2.5%.

interest rates in response to the financial speculation in New York (Wasserman 2019, p. 127).

Most pundits figured the crash would have limited consequences. In late October 1929, Keynes saw “daylight ahead” (quoted from Irwin 2014, p. 216). In November, Fisher claimed it had only been a “shaking out of the lunatic fringes” and the Harvard economists reported that a serious business depression, like that of 1920–21, was “out of the question” (quoted from Friedman 2014, pp. 80, 157). A couple of months later, both Keynes and Fisher figured recovery was on its way.

Christina Romer (1990) investigated five major business reports and found that four of them expressed great uncertainty about the future immediately after the stock market crash. Only the *Magazine of Wall Street* showed confidence and stated, in November 1929, that “the general outlook for trade and industry is thus one in which moderate restraint may be evidenced for some months, but ... recovery to a fair measure of prosperous conditions may be anticipated before the new year is far advanced” (quoted from Romer 1990, p. 613). In the spring of 1930, the forecasters displayed a more confident attitude, but their uncertainty resurfaced in the summer.

Once the pundits realized that a serious depression was in the making, two ways forward crystallized. Some economists, like Fisher and Keynes, insisted that the depression be counteracted through monetary policy, while others, like Hayek, Joseph Schumpeter, and Lionel Robbins, argued that the economic cycle must run its course and malinvestments made during the boom be liquidated during the bust.

III. THE ECONOMISTS

Not much has been written about Swedish economists' views on the stock market drama of 1929. What has been written mostly concerns Gustav Cassel (1866–1945), professor at Stockholm University. According to Erik Lundberg (1967, p. 5), Cassel figured that “the 1929–32 catastrophe was chiefly a *monetary* phenomenon caused by the sharp price fall. ... This focusing of interest on the development of the price level meant that Cassel—together with another world-famous economist, Irving Fisher—completely misjudged the 1929 crisis.” Douglas Irwin (2014) considers, on the contrary, that Cassel judged the situation correctly. During his visit to the United States in the spring of 1928, Cassel testified before the House Committee on Banking and Currency and warned that the tightening of monetary policy to curb stock market speculation would “have an effect on the general level of prices that will result in a depression in production in this country, followed by a decrease of employment, all only for the purpose of combating some speculators in New York” (quoted from Irwin 2014, p. 207). What happened thereafter was, writes Irwin (2014, p. 208), that “Cassel’s dire predictions were beginning to come true.”

The view of the stock market crisis taken by Bertil Ohlin (1899–1979), professor at the University of Copenhagen from 1924 to 1929 and thereafter at the Stockholm School of Economics, has, as far as I can judge, not attracted much interest. The same goes for Johan Åkerman (1896–1982), who took his doctorate in 1928 and at the time was employed as a business cycle expert by the Swedish Confederation of Industry, although it seems to be fairly well known that he was one of few economists who anticipated the

stock market crash (see, e.g., Mjøset 1997). Åkerman had been taught how to make business cycle forecasts by Warren Persons at Harvard University in 1919–20 (Carlson 1999).⁴ He eventually (1943) became professor at Lund University.

To a large extent, the debate between these three played out in the Swedish language, not least in the daily press. Cassel and Ohlin wrote regularly, mostly editorials, in *Svenska Dagbladet* and *Stockholms-Tidningen*, respectively. Åkerman also occasionally wrote in the latter paper, but mainly in *Det ekonomiska läget*, a journal he published on behalf of the Confederation of Industry.⁵

Some other economists will also appear as the story unfolds: David Davidson (1854–1942), professor at Uppsala University and doyen among Swedish economists; Eli F. Heckscher (1879–1952), professor at the Stockholm School of Economics and famous economic historian; Sven Brisman (1881–1953), also professor at the Stockholm School of Economics and banking expert; Erik Lindahl (1891–1960), at the time about to become professor at the Gothenburg School of Business; and Karin Kock (1891–1976), Sweden's first active female academic economist, who took her doctorate in 1929.

In all these cases, it is almost impossible to know from what sources they got their information and inspiration. Researchers back then were generally not as generous with references as they are today. In newspaper articles references have of course always been rare.

III. BEFORE THE CRASH

In March 1928, Cassel (1928a) criticized the Federal Reserve for having raised the discount rate in order to put a brake on the ongoing stock market speculation. On the one hand, the speculators had apparently misjudged the profitability of industry. On the other hand, politicians and the financial press had been obsessed with the idea that capital headed for the New York stock exchange was withdrawn from the rest of the business community. This idea he firmly rejected:

To begin with, stock exchange speculation can in itself not absorb any capital, as against every buyer of share values must exist a seller and thus every deal liberates as much capital as it binds. But the stock exchange, in this case the New York stock exchange, can of course absorb capital as far as the creation of new shares is concerned. This however simply means that the stock exchange provides capital for new real investments around the nation.

Nonetheless, excessive stock market speculation was harmful and could entail setbacks and “certain business depression.” Consequently, it ought to be confined within certain boundaries, however not through the means of a higher official discount rate.

One month later Cassel (1928b) attacked “the so-called business cycle research.” Regular cyclical movements belonged to the era before World War I and modern

⁴ Åkerman was nonetheless critical of the Harvard forecasts. His business cycle approach is summarized in Boianovsky and Trautwein (2007).

⁵ Åkerman stopped publishing *Det ekonomiska läget* in 1932 after having been attacked in print by Eli Heckscher.

business cycle research was “a fad, which at the moment is spreading around the world. ... This undoubtedly to a large extent seems to be a question of pure quackery.” It was dangerous, since it gave the impression that the economic development was fated.

In the April issue of *Det ekonomiska läget*, Åkerman (1928a, p. 9) argued that the Federal Reserve should raise the discount rate in order to mitigate “the unchecked speculation in industrial shares, which already seems to have overrated the profitability of production, and which therefore must result in a setback with unfortunate consequences.”

In *Ekonomisk Tidskrift*, the journal in which Swedish economists published most of their scholarly articles, Åkerman (1928b, p. 117) questioned the argument that stock market speculation has no direct effect on the rest of the economy and warned that “a deflation of the speculative credit and a sudden reduction of the value of industrial capital will necessarily result in losses within the entire trade and industry.” A stock market boom invites risky investments and a stock market crisis creates disorganization within financial and industrial management and will, when people of all social strata, not least workers, invest heavily in shares, turn into an income distribution crisis with reduced savings. Åkerman (1928b, p. 128) furthermore identified the vested interests that had prevented a tighter credit policy. They included most economists: “Finally, the scholars who have exalted the stabilization of the price level as a sovereign standard of monetary policy ... have undoubtedly influenced the policy of the Federal Reserve during the last two years, whereby a strong inflation of the credit with speculative purposes has emerged.”

David Davidson (1928, p. 174) wrote a lengthy article in *Ekonomisk Tidskrift*, the journal he had edited since 1899, in which, although he explicitly refrained from getting into a discussion with Åkerman, he claimed that no interest rate policy could prevent stock market speculation; it required “measures of another kind,” whereby he probably meant stricter examination of credit.

Ohlin’s (1928a) view of “Stock Market Prices and Discount Rate Policy” was radically different from Åkerman’s. For Ohlin, the Federal Reserve’s recent discount hikes from 3.5% to 4.5% was an unpleasant surprise. Since production in US industry had slowed down during the winter, “a liberal and stimulating credit policy” was needed. The discount rate hikes had been motivated by “a feeling that the heavy speculation on the New York stock exchange must be arrested at any cost.” However, this boom was fairly natural and meant that “the stock exchange discounts in advance the increased profitability of an improving business cycle.” No credit squeeze was justified. “Better to let the speculation go on. After excesses in one direction there will be a natural correction. It will not be pleasant but is by far preferable to a harsh credit policy that restrains the development of production.” According to Ohlin, the Federal Reserve had acted out of fear that a setback on the stock exchange would trigger a general economic crisis. This fear was only a remnant from a time when business cycle fluctuations were seen as signs of crisis. Recent research demonstrated “that the fluctuation between good and bad times is a wave where the transition between ups and downs can proceed very smoothly. ... A stock market crisis is dangerous only if it occurs at a point of time, when the expansion of the economy has been pushed too far and the conditions are set for a general crisis.”

Another factor that could have affected the Federal Reserve was the idea that the stock exchange in times of increasing share prices makes use of capital that otherwise could have been used by industry. Here Ohlin marched alongside Cassel:

A bit of reflection, however, makes it clear, that a deal on the stock market only means that money is *transferred* from one individual to another. For every buyer there is a seller who gets his purchasing power increased just as much as the former gets his purchasing power reduced. New capital is only required for purchasing new issues of shares, but in that case the capital will be directly transferred to production. (Ohlin 1928a)

In the July issue of *Index*, a journal of Handelsbanken, a leading commercial bank, Ohlin (1928b) presented a detailed version of his message. The discount rate had by then been raised to 5%. This restrictive credit policy had dampened production but not the speculation in shares. Ohlin (1928b, p. 5) made clear that assigning several functions to a central bank was problematic:

It is manifest that the more functions the central banks' credit policy has to perform, the greater will be the probability that the fulfilling of one function is only possible at the expense of another. Thus, speculation on the stock exchange, the requirements of production and considerations of the balance of payment may temporarily make divergent claims, particularly as regards the discount rate.

To affect the average speculator during a period of excessive speculation, the discount rate must be raised so much that it could cause a general economic depression. Consequently, it was not advisable to act against a stock market boom. "Does it not carry a corrective within itself, which prevents it from going too far?" asked Ohlin (1928b, p. 8). If something had to be done, he recommended "pressure exerted by the central banks upon the private banks and by the latter upon the speculators."

In the June issue of *Det ekonomiska läget*, Åkerman (1928c, p. 4) repeated his warning: "Alongside installment purchases the spread of stock market speculation to less affluent social classes seems to be a phenomenon that can have the most fatal consequences in case of a business cycle downturn." The wave of speculation had been unleashed by the discount rate cut in the summer of 1927 and the following rate increases had come too late. "The economic situation in America must be characterized as critical," wrote Åkerman (1928c, p. 7), and warned that "the prospects of a liquidation of the highly inflated stock market loans without losses in the whole economy seem to be very slim." In the October issue, Åkerman (1928d, p. 5) declared that the experiences from 1927 had "sharply demonstrated the weakness and one-sidedness of the common thesis, that central banks are completely free to keep the price level completely constant and that through this new policy business cycles will be completely eradicated."

Cassel (1928c, p. 60), in the October issue of *Skandinaviska Kreditakiebolaget Quarterly Report*, a banking journal in which he wrote regularly, on the contrary argued that a central bank has only one mission, to keep the level of prices constant: "We must get away from the notion that it is the duty of the central bank to keep unwise speculators in check." A sound regulation of the stock market must be carried out by some other means than discount rate policy.

In December, Åkerman (1928e, p. 8) once again issued a warning: "The economic prospects for 1929 imply considerable risks ... and one has to go back to the fall of 1920

to find a parallel to the uncertainty of the present situation.” This warning was dismissed by Ohlin (1928c):

As far as the prospects for the United States are concerned, it seems to me that there is very little reason to expect a depressive development during 1929. ... That a minor setback within production and trade may occur following a breakdown in the stock market is admittedly true, but for my part I do not believe, that the effect thereof can be particularly profound.

Ohlin also questioned Åkerman’s ambition to make forecasts, since business cycle research was underdeveloped and since forecasts would be influenced by the author’s disposition. Pessimistic forecasts, even if they turn out to be fairly well-funded, could be harmful by affecting expectations in business life. “Better then,” he said, “to be optimistic and predict an economic upswing” (1928c).

Åkerman (1928f) retorted by accusing Ohlin of accepting only forecasts characterized by “unchanging optimism” and by “a fixed, unchanging periodicity in economic life.” This approach did not take into account “the complex psychological element in banking policy and business life.” Åkerman expected a reversal of the business cycle within a few weeks or months. But, he said, when people believed in “forever rising commodity and share prices,” it was “an ungrateful task to bring these perceptions back to reality.” Ohlin and other economists apparently believed that “the postwar central banking policy and organization of production and trade ... had fundamentally changed the nature of economic risk.”

Ohlin (1928d) did not wish to be associated with the idea of business cycles characterized by periods of fixed and unchangeable length. He just wished to say that an economic downturn could not occur as early as in the spring of 1929. He was opposed to forecasts in general, be they optimistic or pessimistic.

At the beginning of the new year, Cassel (1929a, p. 2) elaborated his message in the *Skandinaviska Kreditaktiebolaget Quarterly Report*:

It is sometimes asserted that the general level of commodity prices is not a sufficiently comprehensive measure of the purchasing power of money. Attempts have accordingly been made to compile a still more general index, which is to include also wages and the value of capital assets, as expressed, for example, in the prices of shares. Such attempts, which are obviously based on statistical points of view, rather than on considerations of practical policy, must be sternly repudiated. ... It must also be borne in mind that the maintenance of a stable level of commodity prices presupposes continual changes in the bank rate. As these changes are bound to be followed by certain fluctuations in the prices of shares, what sense can there be in trying to prevent those fluctuations?

The idea that central banks should equalize the fluctuations of economic life was misconceived since it meant that they would have to check exceptionally rapid economic progress. The argument that this could be necessary for “purchasing power” to be able to catch up with production was absurd. Cassel (1929a, pp. 3–4) did not hesitate to be clear: “If the central banks will only see that the purchasing value of money is kept stable, in the sense that the general level of commodity prices remains unchanged, cyclical fluctuations of trade such as were experienced before the war will be relegated to the limbo of the past.”

Now Sven Brisman joined forces with Cassel and Ohlin. A stock market crisis would cause no major problems for industry and trade, he thought. "Some speculators will lose money, but otherwise it will be business as usual," wrote Brisman (1929). No capital could be created or destroyed at the stock exchange: "What the buyer of shares gives, the seller receives and no capital is lost." Brisman, however, had little confidence in central banks. He assumed that Federal Reserve managers were addicted to "speculative superstition" and "at least as big jackasses as their European colleagues."

In April, a pleased Cassel (1929b, p. 21) noted that his October article had evoked an animated discussion all over the world. However, he said, some people still maintained the idea that "at times when the prices of shares are rising and shares are rapidly changing hands, the Stock Exchange is bound to absorb a considerable amount of capital, and that this capital must be taken from industry and trade." No such thing could occur. A certain consumption of capital could occur, however, if speculators regarded their profits as current income to be consumed. That capital on its way to business life took a detour via the stock exchange could, Cassel (1929b, p. 24) admitted, cause "a considerable amount of insecurity, which, if a reaction should set in, might conceivably lead to serious disturbance." By what means could speculation then be curbed? This question was for the commercial banks and not the central bank to answer. They could, for example, demand a larger margin for mortgaging stocks.

Åkerman (1929a, pp. 103–104) identified the issues around which the debate, according to him, revolved: "1) Can the expansion of stock market loans in some way harm business life? 2) If this is the case, can the call loan market be confined without a general credit restriction simultaneously being carried out?" Taking aim at his opponents' argument that stock market speculation does not create any specific need for capital, Åkerman (1929a, p. 105) lined up his counter-arguments. Stock market loans do not always go to production since there is "a chain trade with securities among speculators, which keeps the provided credit tied up for as long as the boom goes on." And how could it be, if trade with securities means only that purchasing power is transferred from one person to another, that "rising commodity prices resulting from increased lending are so exceptionally much more dangerous than rising stock market prices"? In both cases, there was inflation. Furthermore, the issuing of shares would be more risky the longer the boom continued. A stock market crisis would result in the destruction of capital when businesses went bankrupt and when tumbling stock prices reduced savings.

In October, Åkerman (1929b, p. 17) explained "that the central bank from the summer of 1927 had lost control over the money market, whereby speculators, which can be counted in the millions and are spread over America and Europe, have been able to create their own money market with a higher interest rate." Even Ohlin (1929a) admitted that there were "certain signs indicating that an economic downturn, although of the smoothest kind, will arrive in America next year."

V. THE CRASH

Cassel (1929c) commented upon the stock market crash already in late October. In an editorial titled "A Burst Bubble," he concluded that it was impossible to get a complete

overview of the situation but that “the price losses after the long, wild and reckless boom are disastrous. ... Some time the liquidation of these follies had to come, and it was obvious that the longer it took, the worse the disaster would be.” Even so, he anticipated no major problems for the real economy: “Several months of depression for business life is expected. One must however not forget that this stock market crash is just a weeding out of unhealthy over-speculation, which has taken very violent forms, and is not a precursor of an emerging recession. ... The crisis ought ... to be overcome pretty soon.”

One week later, Cassel (1929d) explained that the increase in share values had been in line with increasing corporate profits. During 1929, however, the industrial production had lost steam. The New York stock market crash was quite simply caused by “the halt of the industrial boom. ... The interest rates of the Federal Reserve banks were of little importance for the stock market.”

Åkerman (1929c, p. 1) bantered over the hindsight of his colleagues: “Now that the stock market crisis has happened and overshadowed all previous stock market crises, people interested in economic issues have agreed that this event was since long foreseen and is desirable.” He asked why the warning calls had not been heeded, and pointed to factors such as self-reinforcing optimism and conformism: “The economic boom is partly a psychological phenomenon since optimism is increased as it is spread to ever more sections of the economy; to highlight increasing risks is even seen as disloyalty to the business community and this is so particularly at the end of the boom, when the overestimation of future profit opportunities has become general.”

Åkerman (1929c, p. 12) found it difficult to “assess the extent of the destruction of capital, which has been brought about in America.” The most severe disturbances would probably be caused by the fact that “large parts of the population have been deprived of their savings, which will cause a powerful, if only temporary, reduction of consumption.” Åkerman (1929c, p. 15) also came back to the theme that everything in economic life is connected:

In many quarters one still does not seem to have understood that production capacity and purchasing power in industrial nations are basically one entity and that all attempts with partial regulation of prices of commodities, savings and production goods are doomed to fail. From this follows that critical events in the international money market will have effects all over the international world,

Ohlin (1929b) did not believe that the stock market crash could seriously harm the economy. Since a slowdown in the economy had been expected, the crash was probably “nothing more than a discount in advance of the expected impairment of industrial profitability.” Admittedly, the crash meant that many minor speculators had lost money and had to refrain from buying cars, gramophones, and radios, and furthermore could find it difficult to pay installments on goods they had already purchased. Some industries could be forced to reduce their production, which in turn would affect other industries. “The effects will thus spread in ever wider circles,” Ohlin said. Psychological factors could also have some influence. Ohlin’s optimism was, nonetheless, unbroken: “At the moment the Federal Reserv [sic] system has such a strong position and such great elasticity, that all fears [of a general economic crisis] are unnecessary.” On top of this, President Hoover had the intention to rush public works: “My conclusion is thus that one can expect a slower pace of production but no crisis within the American economy during the next six months.”

Åkerman (1929d) again accused Ohlin of demanding that forecasts “must always be optimistic,” and continued: “In America professor Ohlin’s prescription has been thoroughly applied during the last two years and up to the great stock market crash, but today it is generally admitted, that it would have been better for the economic health of the new as well as the old world, if one had listened to the warning voices.” Åkerman interpreted Ohlin’s position as if it would be possible to “isolate different parts of the money market [from each other] and also isolate the money market from production.” He was convinced that there were “innumerable connections between changes in the monetary sphere and the commodity sphere.” Also, economic cycles in different countries could not be isolated from each other. International capital had been attracted to the New York stock exchange, where, to a large extent, it had been annihilated—“this is the real meaning of the great stock market crisis.”

Ohlin (1929c) again denied having demanded that forecasts must always be optimistic, and listed “facts that show that economic conditions this year have been better and not worse compared to last year.... Dr. Å. makes it too easy for himself when he calls an economic boom a bust only to make it fit his predictions.” Ohlin continued by giving Åkerman a lesson in economic theory:

Here, indeed, we encounter a new theory or at least one that economists previously have attributed to economic superstition. Should capital disappear when stock prices fall? The stock market crisis, as is well known, means that shares issued already before 1928 reached high prices and then fell back again. Since no real capital was created during the upturn, no capital has been lost—“annihilated”—during the downturn.

Ohlin finally gave Åkerman yet another lesson: “He must learn to adopt a different attitude than the one he now has shown against me and recently against professor Heckscher.”⁶ Whereupon Åkerman (1929e) replied that “the attitude in professor Ohlin’s remark on the attitude in my article seems to follow the path of a boomerang.”

In an editorial, Cassel (1929e) trivialized the effects of the stock market crash: “That such a deprivation should come was completely natural and ought in no way be surprising.” The slowdown would by itself initiate an economic revival when the industrial demand for capital decreased at the same time as the “perpetual flow of new savings” made capital available and generated new activity. However, the flow of savings was so abundant in relation to the demand for capital that the interest rate was falling. It was of vital importance that the discount rate was reduced at the same pace. If it was kept above the natural capital market equilibrium, the commodity price level would be forced down. Cassel feared that exactly this was happening.

Åkerman (1929f) presented a suggestion for a new monetary policy norm and discussed the events leading up to the crash. With reference to Knut Wicksell’s theory about the relation between the rate of interest and the rate of return on capital, he alleged that the idea of a constant price level as an infallible sign of sound monetary conditions had turned into a fixation. Rationalization and reduced warehousing meant that a latent inflation could develop below the surface of constant prices. Åkerman (1929f, p. 182) therefore concluded that a central bank cannot

⁶ Åkerman and Heckscher debated the reliability of price index calculations in *Ekonomien* in 1929 with four contributions by Åkerman and two by Heckscher.

“plight itself to one single principle, which is rigorously applied at all times” but must balance several objectives against one another. Stabilization of exchange rates, price level, and production increase were the three basic monetary norms. The first one must always be considered, but the second one could not stand. The third norm, which he advocated, required information on production of real capital and consumer goods, on industrial profits and wages, and on the distribution of credit between production, consumption, and speculation. Åkerman’s (1929f, p. 186) exposition did not end there: “This monetary policy cannot be satisfied with changes in the discount rate according to the manifestation of price indices but must be founded on a study of the relationship between savings and capital formation, taking into account the interdependent relation between seasonal fluctuations, business cycles and secular changes.” This policy, he claimed, was close to David Davidson’s and Erik Lindahl’s norm, according to which the price level ought to vary in reverse relation to productivity.

Regarding the events leading up to the crash, Åkerman (1929f, pp. 187–188) regretted that the discount rate, under influence of “eager supporters of price stabilization,” had been reduced to 3.5% in the summer of 1927, when prices were declining, even though stock market lending increased. At the beginning of 1928, the course had been reversed, but by then it was impossible to “arrest the development which had been initiated with such force.”

On New Year’s Eve, Cassel (1929f) looked ahead with confidence: “For the economy there is no crisis, just a certain slowdown in the production of real capital, particularly in housing construction.” Not surprisingly, in contrast to Ohlin, he turned against Hoover’s plans to launch public works to counteract an economic depression.

VI. AFTER THE CRASH

Ohlin (1930) began the new year by dismissing the stock market crisis as of no interest: “Nothing indicates that it will exert any substantial influence on the world’s economic situation for more than a few months.” He was, just as Cassel, worried by deflationary tendencies, but nonetheless the future looked bright. “Fortunately the prospects of further price reductions are very small. One has reason to expect that the economic development during the next couple of years will deserve to be designated economic progress.” Ohlin’s assessment is similar to the forecast made by the *Magazine of Wall Street* in mid-November.

In the first 1930 issue of *Det ekonomiska läget*, Åkerman (1930a, pp. 6–7) argued that the events in the United States at the end of 1929 “once again have underlined, that changes in the money market and in the area of production are closely related to one another.” He did not believe that the rate cuts after the crash would have any significant effect, “since after such a general revaluation of real capital one has no knowledge of the right, profitable areas where savings can be applied.” As a consequence, entrepreneurs took a hesitant stance during “the clarifying process of liquidation.”

Davidson (1930, pp. 22–24) concluded that the Federal Reserve’s reduction of the discount rate to 3.5% in 1927 had been costly: “The price was the fateful stock market

speculation in New York in the years 1927–1929.”⁷ Discount rate policy was “a double-edged weapon.” It could uphold or change the prevailing value of money. To try to stimulate the economy by lowering the rate should be allowed only in exceptional cases, since otherwise it would lead to “not only a stock market crisis, but a general crisis, which would probably result in a world crisis and confirm the old experience of the danger of playing with fire.”

In April 1930, Åkerman gave a lecture titled “The Price Level and Interest Rate Policy” at the Swedish Economic Society. He portrayed the price level policy in maritime terms: “It is like attempting to steer a ship in a specific direction, with the eyes fixed at the position of the compass needle over the degree number, without bothering about magnetic disturbances, tides, streams, wind, waves and rocky islets” (*Nationalekonomiska Föreningen [NF]* 1930, pp. 74–75). He summarized his criticisms of this policy as follows: 1) The price level measure—the price index number—is a composite and abstract mean. Economic life is in constant flux and the same goods play different roles at different points of time. 2) The price level is just *one* measure of what is going on. The monetary policy norm must be something of a more general character. 3) The connection between price level and interest rate policy is more complicated than what is claimed by the supporters of price stabilization. Changes in the price level depend not only on monetary factors but also on technological and commercial progress. The norm Åkerman advocated was stabilization of increase in production, being almost the same as business cycle stabilization.

How could the central bank stabilize the increase in production? Apart from the factors of money supply, physical output, and price level in the quantity theory of money, the fourth factor, velocity, ought to be studied, which required information on cash balances and inventories in business life. Åkerman ended his lecture by stating he hoped that Sweden would show the way in this direction.⁸

Sven Brisman, the first speaker after Åkerman’s lecture, labeled the economic development in the United States in the fall of 1929 as the beginning of “a real old-fashioned recession” (*NF*, p. 90). The economic turning point had occurred in the summer and the stock market crash in October. The crash was thus the effect of an economic downturn rather than the other way around. Brisman sided with Cassel and the majority of economists against the idea that stock market speculation could absorb capital. He mentioned, however, a “heretic” interjection made by Davidson (*NF*, p. 92).⁹ He was pessimistic about the future and foresaw a prolonged stagnation in the industrial countries. The dogfight over gold between central banks made it inevitable that a secular fall in prices would strengthen this development. Against Åkerman, he remarked that it would be far too subtle to differentiate between stabilization of production and prices in the current situation. What mattered was to get as much credit as possible into the market.

Karin Kock argued that it had been difficult for the Federal Reserve to manage the monetary policy when the credit flow took a roundabout way over the stock exchange. She remarked that Åkerman had not emphasized the effect of gold on prices, particularly gold hoarding in France and gold scarcity in Britain.

⁷ Davidson’s position was thus (cf. his 1928 article) that discount rate policy can trigger but not prevent a stock market rally.

⁸ A production index was launched by Åkerman (1932b).

⁹ Brisman had in mind the article by Davidson (1930) mentioned above.

Ohlin assumed that ordinary wholesale price indices exaggerated the present price drop since they included only a few goods. He sided with Kock on the gold issue and said he was surprised to learn that Åkerman, “a very well-read man,” was not aware of analyses demonstrating that scarcity of gold could cause falling prices (*NF*, p. 98). The current situation could be explained, said Ohlin, by three interacting factors: a restrictive credit policy over the last few years, falling commodity prices over the last few months, and a traditional business cycle downturn. Now the most important thing was to break “the recession psychosis” with a less restrictive credit policy (*NF*, p. 101).

Eli Heckscher concurred with Åkerman that there was too much focus on the price level:

The superstition with which the price level has been regarded has been very dangerous. The price level is an abstraction from many different factors and one must go behind it to observe these factors. I believe that professor Davidson is absolutely right in that one ought to have a falling price level under certain circumstances and a rising price level under other circumstances to achieve what we, for lack of a better term, use to call equilibrium. (*NF*, pp. 104–105)

Heckscher, however, complained that Åkerman had not clarified by what means he wished to regulate the economy and he was skeptical towards the concept of rationalization: “The word has become a galosh which fits any foot” (*NF*, p. 106).

Åkerman had the last word. Against Ohlin, he argued that the ongoing fall in prices was underestimated rather than overestimated. Against Heckscher, he argued that at least something could be said about rationalization. Against those who had said that he underestimated the importance of gold, he argued that the gold scarcity was overrated.

Cassel (1930) scrutinized the American discount rate policy in an extensive article. He began with recent developments. During the winter of 1929–30, the central banks had endeavored to check the general fall of prices by repeated reductions of the discount rate. So far, so good. But no central bank had really taken the lead. Why were central banks more reactive than proactive? Cassel (1930, p. 41) as usual put the blame on business cycle ideas, “the superstitious belief in a regular rise and fall of business activity, which predetermines the curve of economic development.” Like Åkerman, he took to a maritime metaphor: “A sailor steering his boat does not delay shifting the helm until wind and current have carried the boat far out of her true course.” Regarding developments leading up to the crisis, he found no merit in the argument that the Federal Reserve had triggered the stock market speculation with an overly liberal credit policy in the fall of 1927; the discount rate should rather have been reduced already at the beginning of the year. It had been wise to raise the discount rate successively during the first half of 1928 in order to check the rise in the level of prices. In August 1929, the Fed was seduced by a desire to check the stock market speculation and raised the rate to 6%. After the October crash, the discount rate was successively reduced to 4.5% at the end of the year. “These reductions, however,” Cassel (1930, p. 44) concluded, “were made too late. The fall of prices had already set in and added its depressing effect to that produced by the collapse of the Stock Exchange.”

Erik Lindahl (1930) presented an analysis, “Stock Market Speculation and Monetary Policy,” in *Ekonomisk Tidskrift*. He doubted that central banks could do much to avert a stock market boom. A discount rate hike could perhaps have a psychological effect but hardly any real effect, since stock market speculators would not be deterred by a

somewhat higher interest rate. He also doubted that central banks could judge whether a stock market speculation was unhealthy or not, and that they could affect stock prices without neglecting their principal mission, to regulate the commodity price level. If the bank kept the price level stable, it would indirectly stabilize the stock exchange. However, Lindahl (1930, p. 87) went on to advocate Davidson's and his own norm: "The latest events in the United States have provided interesting evidence supporting the thesis that keeping a constant price level during a period of increased productivity will entail over-speculation within industry, which makes a reversal to depression inevitable." If the US price level had been allowed to fall in proportion to the increase in productivity, the economic events would have been less dramatic. There would have been no need to arrest the falling prices in 1927 and consequently the stock market boom would have been less accentuated.

Åkerman (1930b, p. 103) addressed the question "Why Do We Have Bad Times?" He found "a deeply rooted perception, that the economic organism is simple, that it works like an automatic sandwich machine" and went on: "Good, 'normal' times are perceived as the rule and depressions as peculiar exceptions, which each time requires a particular, fixed explanation, of the type that the coin is stuck in the machine. And still decade after decade have shown that the economic development proceeds in a wavelike fashion."

Our story basically ends here. Cassel spent the next couple of years fighting against deflation and gold accumulation in the US and France. The showdown between Ohlin and Åkerman continued. In 1931, they each published a book in which they nailed down their respective conclusions. In his analysis, *The Course and Phases of the World Economic Depression* for the League of Nations, Ohlin (1931) was convinced that the general decline in production and demand would have occurred at approximately the same time even if there had been no speculation on the New York stock exchange, but admitted that the downturn probably would have been less violent. On the other hand, the increased interest rates during the third quarter of 1929, intended to dampen the speculation, had contributed to the contraction of economic activity.¹⁰

In *Some Lessons of the World Depression*, Åkerman (1931) listed fallacies of the mainstream economic theory and a wide range of causes and cures for the depression, which cannot be summarized here; suffice it to say that his main thrust was directed against the neoclassical idea of timeless static equilibrium. "Monetary policy can no longer be based on equilibrium economics; it should be founded on *time* economics," Åkerman (1931, p. 34) concluded. Regarding US monetary policy, he (1931, pp. 6–10) summarized the main mistakes:

In 1927: Price cuts due to rationalization are mistaken for signs of deflation. ... the American monetary policy of 1927 predestinated the severe crisis of 1929. ... In 1928: Speculative and productive credits are held to be entirely distinct from one another. ... In 1929: The scarcity of gold is held to be the real cause of the crisis. ... In 1930: Low discount rates are believed to be an immediate cure for the depression.

Åkerman (1931, p. 30) came back to his basic idea about boom and bust: "Just as in medicine the prophylactical measures are far more efficient than the curative, the

¹⁰ Ohlin's writings in the daily press through the depression give the impression that he was "fairly optimistic in his belief in a swiftly passing crisis," except for "a short-lived fear of a crack in the social order in the summer of 1933" (Carlson and Jonung 2002, p. 295).

depression is 'remedied' if the worst excess of the boom are [sic] remedied." But what to do once the bust was a fact? Åkerman's (1931, p. 27) position was that the "if the central bank seeks to arrest the processes of liquidation and reorganization within the economic life of the country, it will simply prolong the period of depression." Once the liquidation process was in progress, the discount rate could be reduced to a low level.¹¹

As the world descended into turmoil, with bank runs, breakdown of the international gold standard, bankruptcies, and skyrocketing unemployment, the economists' discussions about the causes and cures of what was to be labeled the Great Depression intensified. The duel between Ohlin and Åkerman continued. Their positions were presented in *Det ekonomiska läget* in 1932 (Ohlin 1932; Åkerman 1932c). Regarding the cures, they had very different ideas on how to revive confidence in business life. Simply put, Ohlin focused on liberal monetary policy and increased consumption, and Åkerman on reduced production costs (wages), increased savings, and reorganized capital formation. Their positions were thus similar to Fisher's/Keynes's and Hayek's, respectively. This continued duel offers material for an article of its own.

VII. THE CRASH IN RETROSPECT

In retrospect, innumerable scholars have scrutinized the causes and effects of the great crash but no unambiguous picture has emerged. Harold James (2010, pp. 131–132) labels the stock market crisis "The Mystery of 1929," since "no one has ever been able to convincingly explain what caused it," and, regarding its effects, refers to Ben Bernanke's simile: to try to understand the Great Depression is like searching for the Holy Grail. It is not possible to thoroughly dig into this material in a short article; it would be tantamount to opening Pandora's box. Let us just note a few interpretations.

Jeremy Atack and Peter Passell (1994, p. 592) state that "[t]here is remarkably little unanimity among economists about the issues, explanations, or tests of the theories concerning the Great Depression." However, they supply a set of aggregate demand-based and monetary explanations. They estimate that at least one-third of the decline in consumption between September 1929 and June 1932 could be attributed to stock market losses. Simultaneously, crumbling business confidence undermined investment spending, and Atack and Passell (1994, p. 598) conclude: "Indeed, the changes in investment during the early years of the depression are of such magnitude that they can plausibly explain the entire change in aggregate demand between 1929 and 1933—just as the Keynesians argue."

The monetary explanation supplied by Milton Friedman and Anna Jacobson Schwartz (1965) and Schwartz (1981), a view shared by, for example, Eugene White (1990), blames the Federal Reserve for excessively tightening its credit policy in order to curb the stock market speculation and insufficiently easing it after the crash. Friedman and Schwartz (1965, p. 10) also point to psychological effects of the crash: "It changed the atmosphere within which businessmen and others were making their plans, and spread uncertainty where dazzling hopes of a new era had prevailed." Charles

¹¹ Åkerman further elaborated his views in a book on economic progress and economic crises, translated into English the following year (Åkerman 1932a).

P. Kindleberger and Robert Z. Aliber (2011, p. 99) point to the dilemma faced by the Federal Reserve when share prices soared at the same time as commodity prices were stable, since “policymakers cannot kill two birds with one stone.”

One common interpretation is thus that the crash created widespread uncertainty, which made consumers and investors tighten their belts. This view is neatly summarized by Gary M. Walton and Hugh Rockoff (2002, p. 502):

The unique psychological trauma produced by the crash was more significant than the direct effects of the loss of wealth. Many Americans had come to believe in the 1920s that the economy had entered a “New Era” of continuous and rapid progress that would carry them to higher and higher standards of living. The spectacular rise in the stock market was taken as proof that this view was widely shared by knowledgeable investors. When the market crashed, this optimistic view of the future crashed with it: almost overnight, uncertainty and pessimism about the future gripped the public.

VIII. CONCLUDING REMARKS

Discussions in Sweden about the developments before, during, and after the 1929 collapse of the New York stock exchange were dominated by three economists—Gustav Cassel, Bertil Ohlin, and Johan Åkerman—with occasional interjections from a few others.

Cassel, Ohlin, and Sven Brisman trivialized the events on Wall Street. They regarded the mania and panic on the stock exchange as phenomena more or less disconnected from the rest of the economy. Their theoretical argument was that booms and busts on a stock market cannot create or destroy capital or purchasing power. Even so, they admitted that many speculators lost money in the 1929 crash and had their purchasing power reduced.

To Cassel and Ohlin, a monetary policy that kept the price level stable left nothing to fear. The central bank should not intervene against stock market speculation but could delegate action to “somebody else.” This position is in line with Kindleberger and Aliber’s notion that “policymakers cannot kill two birds with one stone.” Cassel and Ohlin thus stuck to Wicksell’s norm, according to which a stable price level will avert cumulative economic processes. Åkerman argued for another policy target: stabilization of production increase. Basically, he advocated, in line with David Davidson and Erik Lindahl, for a norm according to which the price level is allowed to fall (or rise) as productivity increases (decreases); otherwise cumulative processes can take place in spite of stable prices.

Cassel figured that investors had misjudged the profitability of industry and sounded warnings but was more concerned that a monetary policy aimed at dampening the speculation would lead to deflation and depression than about the effects of a stock market crash per se. Ohlin saw the speculation as a natural consequence of expectations about increasing industrial profitability and was, just like Cassel, totally negative regarding monetary interventions. Åkerman claimed that investors had overrated industrial profitability and were seized by self-generating perceptions without foundation in reality, i.e., mania. He repeatedly warned of a coming stock market crisis and argued that

the discount rate should have been raised at an early stage to put a brake on speculators; the longer the boom, the worse the bust.

Once the crash had occurred, Cassel and Brisman concluded that a slowdown in production had preceded the stock market crash, not the other way around. The crash was natural and expected. Ohlin differed somewhat from these two in that he was more optimistic. Even a couple of months after the crash he—just as several US pundits—saw bright prospects on the horizon. In retrospect, he figured that the discount rate hikes undertaken by the Federal Reserve had exacerbated the crash and economic downturn. Åkerman warned that the crash on Wall Street had annihilated capital on a large scale and would in many ways affect Main Street. Ohlin gave Åkerman a theoretical reprimand: no such thing was possible.

The duel between Ohlin and Åkerman was intense. Ohlin, arguing from a more theoretical standpoint, at the time seemed to have the upper hand, but it was rather Åkerman who had a better sense of what was at stake. Not least, Åkerman early on issued warnings about the psychological effects of a stock market crash, effects that have been emphasized in subsequent literature on the developments after the black days in October 1929. Once the crash had happened, Ohlin also paid some attention to psychological effects.

After the crash, Cassel blamed the Federal Reserve for not being proactive enough to counteract a depression and figured this had to do with a fatalistic belief in business cycles. He detested modern business cycle researchers, whom he sometimes likened to Babylonian astrologers.¹² Åkerman (1932c, p. 50) undoubtedly had a fatalistic bent, as he declared that the context of a depression is determined by economic laws and that “the cures of the crisis must obey these laws.” Malinvestments incurred during mania had to be liquidated before the economy could enter upon the road to recovery.

Ohlin and Åkerman had Babylonian difficulties understanding each other. Ohlin represented a more deductive, and Åkerman a more inductive, approach, in line with his teachers at Harvard. Åkerman (1932c, p. 50) complained about Ohlin’s “completely negative attitude towards modern, inductive economics.”

It is tempting to conclude that Åkerman had a better understanding of the events leading up to the crash and Cassel and Ohlin a better understanding of the policies needed to get out of the depression. However, according to Barry Eichengreen, a position like Åkerman’s was faulty also before the crash. Eichengreen (2015, pp. 33, 62) refers to the question whether the Fed ought to have raised interest rates in response to the stock market speculation or should have resorted to “other means”—“direct pressure”—to limit lending for speculative purposes. “In the light of recent experience, the answer is clear,” states Eichengreen (2015, p. 62). A central bank should assign monetary policy, in 1929 the lending rate, to the needs of the economy while using regulatory tools to address financial risks. “This was precisely the intuition of those who advocated direct pressures in 1929: leave the interest rate at a level appropriate for the economy and use other tools to limit lending to the stock market.”

The 2010s have shown some similarities with the 1920s, with a strong economic expansion without inflation. In the 1920s, constant prices were the norm. In our time

¹² Keynes took a similar stand. He became critical of the Harvard forecasters. In the words of Friedman (2014, p. 146), he felt that they had “mistakenly perceived business cycles as being inevitable and, in some sense, natural.”

central banks aim for 2% consumer price inflation, a target that was for many years difficult to attain even with interest rates below zero. This aim can be questioned if increased productivity explains low consumer price inflation and when exceptionally low interest rates mainly boost asset prices. It has been difficult, not least in the country where Cassel, Ohlin, and Åkerman once fought their battles, to curb speculation in housing and stocks through “other means” when money is almost free.

REFERENCES

- Åkerman, Johan. 1928a. *Det ekonomiska läget I* (April): 1–24.
- . 1928b. “Federal Reserve bankernas penningpolitik.” *Ekonomisk Tidskrift* 30 (4–5): 101–128.
- . 1928c. *Det ekonomiska läget I* (June): 1–23.
- . 1928d. *Det ekonomiska läget I* (October): 1–20.
- . 1928e. *Det ekonomiska läget I* (December): 1–19.
- . 1928f. “Konjunkturprofetior.” *Stockholms-Tidningen*, 30 December.
- . 1928g. *Om det ekonomiska livets rytmik*. Stockholm: Nordiska Bokhandeln.
- . 1929a. “Kapitaldisposition och kreditransonering.” *Ekonomisk Tidskrift* 31 (3): 95–109.
- . 1929b. *Det ekonomiska läget II* (October): 1–28.
- . 1929c. *Det ekonomiska läget II* (December): 1–30.
- . 1929d. “Börskrisen och konjunkturerna.” *Stockholms-Tidningen*, 2 December.
- . 1929e. “Debatten om konjunkturläget.” *Stockholms-Tidningen*, 8 December.
- . 1929f. “Penningpolitikens normer.” *Ekonomisk Tidskrift* 31 (4): 170–190.
- . 1930a. *Det ekonomiska läget III* (February): 1–28.
- . 1930b. “Varför är det dåliga tider?” *Ekonomien* 7 (7–8): 103–108.
- . 1931. *Some Lessons of the World Depression*. Stockholm: Nordiska Bokhandeln.
- . 1932a. *Economic Progress and Economic Crises*. London: Macmillan.
- . 1932b. *Industriförbundets produktionsindex: Motiv och principer*. Stockholm: Sveriges Industriförbund.
- . 1932c. “Svar till prof. Bertil Ohlin.” Appendix to *Det ekonomiska läget V*: 33–50.
- Atack, Jeremy, and Peter Passell. 1994. *An Economic View of American History*. New York and London: W. W. Norton & Company.
- Boianovsky, Mauro, and Hans-Michael Trautwein. 2007. “Johan Åkerman vs. Ragnar Frisch on Quantitative Business Cycle Analysis.” *European Journal of the History of Economic Thought* 14 (3): 487–517.
- Brisman, Sven. 1929. “Spekulationsvidskepelsen.” *Göteborgs Handels- och Sjöfartstidning*, 30 March.
- Carlson, Benny. 1999. “The Institutional Ideas Virus—The Case of Johan Åkerman.” *European Journal of the History of Economic Thought* 6 (1): 71–86.
- . 2009. “Who Was Most World-Famous—Cassel or Keynes? The Economist as Yardstick.” *Journal of the History of Economic Thought* 31 (4): 519–530.
- Carlson, Benny, and Lars Jonung. 2002. “Ohlin on the Great Depression: The Popular Message in the Daily Press.” In Ronald Findlay, Lars Jonung, and Mats Lundahl, eds., *Bertil Ohlin: A Centennial Celebration (1899–1999)*. Cambridge, MA: MIT Press, pp. 263–301.
- Cassel, Gustav. 1918. *Theoretische Sozialökonomie*. Leipzig: C.F. Winter.
- . 1923. “Konjunkturdogmatik.” *Svenska Dagbladet*, 1 November.
- . 1928a. “Världsekonomin kritiska punkt.” *Svenska Dagbladet*, 5 March.
- . 1928b. “Konjunkturforskning och affärsprofeter.” *Svenska Dagbladet*, 11 April.
- . 1928c. “Discount Policy and Stock Exchange Speculation.” *Skandinaviska Kreditaktiebolaget Quarterly Report* 9 (October): 57–60.
- . 1929a. “The Problem of Stabilization.” *Skandinaviska Kreditaktiebolaget Quarterly Report* 10 (January): 1–4.

- . 1929b. "Does the Stock Exchange Absorb Capital?" *Skandinaviska Kreditaktiebolaget Quarterly Report* 10 (April): 21–24.
- . 1929c. "En brusten bubbla." *Svenska Dagbladet*, 31 October.
- . 1929d. "Den amerikanska konjunkturen." *Svenska Dagbladet*, 7 November.
- . 1929e. "Den stora börskrisens verkningar." *Svenska Dagbladet*, 9 december.
- . 1929f. "Statsmakt på avvägar." *Svenska Dagbladet*, 31 December.
- . 1930. "Tardy Discount Policy." *Skandinaviska Kreditaktiebolaget Quarterly Report* 11 (July): 41–44.
- Davidson, David. 1928. "Den amerikanska centralbankspolitikerna." *Ekonomisk Tidskrift* 30 (8/9): 157–174.
- . 1930. "Räntepolitiken." *Ekonomisk Tidskrift* 32 (1): 22–25.
- Eichengreen, Barry. 1995. *Golden Fetters: The Gold Standard and the Great Depression 1919–1939*. Oxford: Oxford University Press.
- . 2015. *Hall of Mirrors: The Great Depression, the Great Recession and the Uses—and Misuses—of History*. Oxford and New York: Oxford University Press.
- Friedman, Milton, and Anna Jacobson Schwartz. 1965. *The Great Contraction 1929–1933*. Princeton: Princeton University Press.
- Friedman, Walter A. 2014. *Fortune Tellers: The Story of America's First Economic Forecasters*. Princeton and Oxford: Princeton University Press.
- Galbraith, John Kenneth. [1954] 2009. *The Great Crash 1929*. Boston: Houghton Mifflin Harcourt.
- Irwin, Douglas A. 2014. "Who Anticipated the Great Depression? Gustav Cassel versus Keynes and Hayek on the Interwar Gold Standard." *Journal of Money, Credit and Banking* 46 (1): 199–227.
- James, Harold. 2010. "1929: The Stock Market Crash." *Representations* 110 (1): 129–144.
- Kindleberger, Charles P. [1973] 2013. *The World in Depression 1929–1939*. Berkeley: University of California Press.
- Kindleberger, Charles P., and Robert Z. Aliber. 2011. *Manias, Panics and Crashes*. London: Palgrave Macmillan.
- Lindahl, Erik. 1930. "Fondbörspekulation och penningpolitik." *Ekonomisk Tidskrift* 32 (3): 75–88.
- . 1967. "The Influence of Gustav Cassel on Economic Doctrine and Policy." *Skandinaviska Banken Quarterly Review* 50 (1): 1–6.
- Mjøset, Lars. 1997. "Johan Åkermans dualistiske Synthese." In *Vademecum zu einem Klassiker des skandinavischen Institutionalismus*. Düsseldorf: Verlag Wirtschaft und Finanzen, pp. 31–55.
- Minsky, Hyman. [1986] 2008. *Stabilizing an Unstable Economy*. New York: McGraw Hill.
- Nationalekonomiska föreningen (NF). 1930. "Prisnivån och räntepolitiken," 25 April, pp. 73–110.
- Ohlin, Bertil. 1928a. "Börskurser och diskontopolitik." *Stockholms-Tidningen*, 1 June.
- . 1928b. "Central Bank Policy & Stock Exchange Prices." *Index* 3 (July): 2–9.
- . 1928c. "Konjunkturprofetior." *Stockholms-Tidningen*, 14 December.
- . 1928d. "Konjunkturprofetior än en gång." *Stockholms-Tidningen*, 31 December.
- . 1929a. "Ränteparadoxen." *Stockholms-Tidningen*, 30 September.
- . 1929b. "Börskrisen och konjunkturerna." *Stockholms-Tidningen*, 25 November.
- . 1929c. "Debatten om konjunkturläget." *Stockholms-Tidningen*, 6 December.
- . 1930. "Ekonomiska framtidsperspektiv." *Stockholms-Tidningen*, 2 January.
- . 1931. *The Course and Phases of the World Economic Depression. Report Presented to the Assembly of the League of Nations*. Geneva: League of Nations.
- . 1932. "Prisstegringens problem. Replik till fil. D:r Johan Åkerman." Appendix to *Det ekonomiska läget V*: 21–32.
- Parker, Selwyn. [2008] 2021. *The Great Crash: How the Stock Market Crash of 1929 Plunged the World into Depression*. London: Piatkus Books.
- Romer, Christina D. 1990. "The Great Crash and the Onset of the Great Depression." *Quarterly Journal of Economics* 105 (3): 597–624.
- Schwartz, Anna J. 1981. "Understanding 1929–1933." In Karl Brunner, ed., *The Great Depression Revisited*. Boston: Kluwer-Nijhoff, pp. 5–48.

- Walton, Gary M., and Hugh Rockoff. 2002. *History of the American Economy*. Toronto: Thompson Learning.
- Wasserman, Janek. 2019. *The Marginal Revolutionaries: How Austrian Economists Fought the War of Ideas*. New Haven and London: Yale University Press.
- White, Eugene N. 1990. "The Stock Market Boom and Crash of 1929 Revisited." *Journal of Economic Perspectives* 4 (2): 67–83.