The First Practical Guide to Price Level Stabilization

The confidential reports to the Riksbank in 1931 by
Gustav Cassel, David Davidson and Eli Heckscher

Lars Jonung

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Please note: Work in progress. A preliminary outline for a book.

Abstract

When Sweden left the gold standard on September 27, 1931, the Swedish government declared that the aim of monetary policy should be to stabilize the domestic purchasing power of the Swedish currency, the krona. With this step, price level stabilization became for the first time the official goal for a central bank. Soon after, the Riksbank (Bank of Sweden) sent a questionnaire to three prominent economics professors — Gustav Cassel, David Davidson and Eli Heckscher — asking for advice about the new monetary situation. In a few weeks, the Riksbank received their replies.

This paper presents the three reports, for decades kept as classified documents in the Riksbank's archives. The reports give an excellent view of the monetary thinking in the early 1930s of the leading Swedish economists, just before the outbreak of the world depression of the 1930s and shortly before the emergence of the Stockholm School in macroeconomics. The reports are strikingly modern. They deal with central issues in the present discussion on inflation targeting, such as the choice of price index to target, the proper instrument to use, the importance of creating public credibility for the new monetary rule, potential legal changes to anchor the new standard, and the appropriate central bank response to changes in the exchange rate. In short, the three economists prepared the first practical guide to inflation targeting, with a target rate of zero percent.

The paper considers the events leading to the adoption of price level stabilization, the debate on the monetary program of 1931 and the impact of the reports on the policy of the Riksbank. Most strikingly, the Riksbank started to construct and collect a weekly consumer price index to use as a guide for implementing the new policy of price stabilization. Dag Hammarskjöld contributed to this task under the guidance of Erik Lindahl. The paper also considers why the monetary program of 1931 was abandoned in Sweden until a new area of inflation targeting started in the 1990s.

Key words: Inflation targeting, price level targeting, Gustav Cassel, David Davidson, Eli Heckscher, Knut Wicksell, Dag Hammarskjöld, Erik Lindahl, the Riksbank, the Great Depression, Sweden.

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Comments invited to: Lars.Jonung@nek.lu.se

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Timeline

1873. The krona is introduced as the monetary unit of Sweden. The krona is tied to the gold standard. Denmark takes a similar step, establishing the Scandinavian Currency Union with the Scandinavian krona as the common currency. Norway joins in 1875.

1898. Wicksell gives his first lecture to the *Nationalekonomiska Föreningen* (Swedish Economic Association), recommending that price level stabilization should be the primary goal of monetary policy.

1898. Wicksell's German-language book *Geldzins und Güterpreise* is published. In it, Wicksell presents his idea of the cumulative process and his view that a stable price level should be the goal of central bank policy. (English translation published as *Interest and Prices* in 1936.)

1899. David Davidson launches *Ekonomisk Tidskrift* as a journal of economics in Swedish. As editor, he runs the journal until 1938. In the first volume, he reviews *Geldzins und Güterpreise* and argues that Wicksell has ignored the effects of productivity changes on the relationships between creditors and debtors.

1901. Wicksell is appointed professor in economics at Lund University.

1906. David Davidson publishes an evaluation of Wicksell's *Geldzins und Güterpreise* in *Ekonomisk Tidskrift*, suggesting an alternative rule for monetary policy. According to Davidson's rule, the price level should move inversely to the growth of productivity.

1908. Eli Heckscher is appointed professor in economics at *Handelshögskolan* (Stockholm School of Economics).

1909. Gustav Cassel is appointed professor at *Stockholms högskola* (today Stockholm University).

1914. August. Beginning of World War I. The Scandinavian countries remain neutral during the war. Sweden leaves the gold standard.

1914-1918. High inflation in Sweden turns into a major political issue. Lively debate in Sweden on the causes and cures of high inflation. Wicksell argues that the discount rate of the Riksbank should be raised to arrest inflation. Cassel presents his purchasing power parity theory to explain differences in inflation across countries. Gradually the Scandinavian Currency Union dissolves.

1916. Wicksell retires from Lund University and returns to Stockholm. Heckscher starts the

Political Economy Club (*Nationalekonomiska klubben*) to give Wicksell a forum for discussion with fellow economists.

1921. Cassel publishes *The World's Monetary Problems: Two Memoranda*, written at the invitation of the League of Nations, the first memorandum being for the International Financial Conference in Brussels in 1920 and the second for the Financial Committee of the League of Nations for its September 1921 meeting.

1922. After a deep deflation, Sweden becomes the first country in Europe to return de facto to the gold standard at its prewar parity.

1924. Erik Lindahl publishes *Penningpolitikens mål* (The Aim of Monetary Policy), concluding that "free currencies" with floating exchange rates combined with domestic price stabilization is "the ideal for the monetary system of the future."

1925. Bertil Ohlin is appointed as professor at the University of Copenhagen.

1925. Wicksell gives his last talk at the *Nationalekonomiska Föreningen.*

1926. Wicksell dies.

1929. Ivar Rooth is appointed head of the Riksbank.

1930. Bertil Ohlin returns to Sweden as professor at *Handelshögskolan* in Stockholm.

1930. Lindahl publishes *Penningpolitikens medel* (The Instruments of Monetary Policy), a sequel to his 1924 volume on the goal of monetary policy.

1931. September 20th. England leaves the gold standard. The krona is put under speculative pressure.

1931. September 27. Sweden leaves the gold standard. The minister of finance, Felix Hamrin, declares that the domestic purchasing power of the krona will be stabilized. The Riksbank adopts price level stabilization as its monetary policy rule.

1931. October 9. The Riksbank invites three economists to reply to a questionnaire concerning the conduct of monetary policy after the abandonment of the gold standard.

1931. October 22. The responses of the three economists arrive at the Riksbank.

1931. November 4. At a meeting at Heckscher's home, ten economists discuss authoring a joint publication on the future of Sweden's monetary policy. The attempt fails. Instead, Heckscher and Myrdal publish books of their own.

1931. November 18. The Riksbank pegs the krona to the British pound. The peg fails after a few days.

1931. December. Heckscher publishes *Sveriges penningpolitik. Orientering och förslag* (Sweden's Monetary Policy: Background and Proposals). Shortly afterwards, Myrdal publishes *Sveriges väg genom penningkrisen* (Sweden's Way Through the Monetary Crisis).

1933. July. The Riksbank pegs the krona to the British pound. The peg lasts until the outbreak of World War II in 1939.

1936. Wicksell's *Interest and Prices* is published in England with an introduction by Ohlin.

1936. Keynes's *General Theory* is published.

1937. Invited by Keynes to review the *General Theory,* Ohlin presents the Stockholm School approach to economics in two articles in the *Economic Journal,* of which Keynes is the editor.

1939. Lindahl publishes *Studies in the Theory of Money and Capital* in London. In the preface he thanks Ursula Hicks for her "never-failing interest and patience" in bringing the book to publication.

1939. The krona is pegged to the US dollar when World War II starts.

1944. A new monetary program based on Davidson's rule is adopted by the Parliament in a Government report. Dag Hammarskjöld and Erik Lindahl are responsible for the program. Sweden is the first country to introduce such a rule for monetary policy.

1948. Rooth resigns as head of the Riksbank to protest the intention of the Social Democratic government to hold down the rate of interest.

1951. Sweden joins the Bretton Woods system at a pegged exchange rate to the U.S. dollar.

1951. Rooth is appointed managing director of the International Monetary Fund. When leaving in 1956, he is replaced by another Swede, Per Jacobsson.

1954. Hammarskjöld is appointed secretary-general of the United Nations.

1961. Hammarskjöld is killed in the Congo. He receives posthumously the Nobel peace prize the same year.

1974. Gunnar Myrdal shares the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel with Friedrich Hayek.

1979. Bertil Ohlin shares the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel with James Meade.

1993. January. The Riksbank announces an inflation target at 2 per cent annual consumer price inflation starting from 1995.

Dramatis personae 1931

Main actors. The three economists replying to the Riksbank's questionnaire:

Gustav Cassel. Age 65. Professor of economics at *Stockholms Högskola* (later the University of Stockholm) since 1904. World-famous expert on international monetary issues, on par with Keynes in the 1920s. Known for his work on the purchasing power parity theory of exchange rates. Prepared reports for the League of Nations and for international conferences and testified before the U.S. Congress in 1928. Governments and politicians asked for his advice. Thesis advisor to Bertil Ohlin and Gunnar Myrdal. Cassel was known for his clear style of writing, often simplifying too much. Held a liberal conservative position. Viewed himself as a voice of reason fighting against socialism and economic planning.

David Davidson. Age 76. Professor of economics at the University of Uppsala since 1889. Discussed the proper rule for monetary policy under a paper standard in an exchange with Knut Wicksell in several issues of *Ekonomisk Tidskrift* from the very start of the journal. Proposed a productivity rule as an alternative to Wicksell's rule of a stable price level—in short, the price level should be falling in inverse relation to the rise in national income. Published many articles on monetary issues in *Ekonomisk Tidskrift,* a journal he founded, owned, and edited from 1899-1939.

Eli Heckscher. Age 52. Professor of economics since 1909 at *Handelshögskolan* in Stockholm (Stockholm School of Economics and Business Administration). Hard-working researcher and prolific writer of books and articles. Moved from a conservative to a liberal position during World War I. A leading economic historian through his work on mercantilism. A mentor of Bertil Ohlin in the early 1920s. Laid the foundation for economic history as an academic field in Sweden.

Additional actors:

Dag Hammarskjöld. Age 26. Assistant secretary for the government committee on unemployment since 1930, recruited by Heckscher to work for the Riksbank in October 1931. Prepared the Riksbank's new consumer price index in the fall of 1931. After defending his thesis in 1933, made a brilliant career as civil servant in the Swedish government, notably as chairman of the Riksbank Board of Governors, while undersecretary in the Ministry of Finance. Served as secretary-general of the United Nations from 1953-1961. Died in a plane crash during a peace mission in Congo. Recipient posthumously of the Nobel Peace Prize.

Erik Lindahl. Age 39. Professor on a temporary basis in Gothenburg. After defending his thesis on the principles of just taxation in Lund 1919, focused in the 1920s on studies of the goals and instruments of monetary policy. Became a proponent of Davidson's productivity rule. Today best known for Lindahl pricing of public goods. In the 1920s, he had great difficulty obtaining a professorship, earning him the nickname "the permanent docent". Heckscher once advised him to leave economics and become a lawyer, as he had a law degree. Lindahl stayed in economics and managed to become full professor first in Gothenburg, then in Lund and finally in Uppsala.

Ivar Rooth. Age 42. Governor of the Riksbank (*förste deputerade*) since 1929, a position he held until 1948. Managed to remain after the Kreuger crash in the spring of 1932 despite the Riksbank's lending to Kreuger's businesses. Also survived criticism of Riksbank purchases of Nazi gold during World War II. Left the Riksbank in protest in 1948 when the Social Democratic government prevented him from raising interest rates. Soon after, Rooth started an international career, serving as managing director of the International Monetary Fund from 1951-1955.

Economists debating the monetary program of 1931:

Gunnar Myrdal. Age 33, After obtaining a degree in law in 1923, Myrdal turned to economics, starting by reading through all issues of *Ekonomisk Tidskrift*. Became a student of Cassel. Developing a close long-lasting friendship with the conservative Cassel in despite of Myrdal turning into a Social Democrat and a socialist planner. In his 1927 doctoral thesis, Myrdal brought expectations and uncertainty into Wicksell's cumulative process. Published a book in 1931 on Sweden's monetary policy. He then moved into fiscal policy and housing policy and into politics. Professor in 1933, succeeding Cassel at *Stockholm Högskola*. Lived in the US during part of World War II to prepare *An American Dilemma*, a pioneering work on the racial question. Back in Sweden, Myrdal took part in the preparation of the post-war Social Democratic program. Minister of commerce 1945-1947 before moving to Genevea as head of the United Nations Economic Commission for Europe 1948-1957. Then he turned to development issues in a monumental study *Asian Drama*, 1963. He was an institutionalist stressing processes of cumulative causation– an influence from Wicksell's dynamics. Myrdal shared the Nobel Prize in economics with Friedrich Hayek in 1974.

Bertil Ohlin. Age 32. After his undergraduate degree Ohlin left the University of Lund to attend the seminar given by Heckscher at *Handelshögskolan*. A student of Cassel and Heckscher, he was quickly accepted by the profession. After obtaining his doctorate in 1924 with a dissertation on the theory of international trade, he was professor in Copenhagen 1925-1930, returning to Sweden as professor at *Handelshögskolan* in 1930. Ohlin gradually moved from international trade into macroeconomic issues. He became famous for an exchange with Keynes in the *Economic Journal* on the German reparations policy. He prepared a study of the causes of the world depression for the League of Nations in 1931. He became an early proponent of fiscal policy to fight the depression of the 1930s, viewing price stabilization as an inadequate approach. Invited by Keynes to review the *General Theory* in the *Economic Journal*, Ohlin presented in 1937 the ideas of Stockholm School of Economics, a body of macroeconomic theory on a par with Keynes for its innovations. Ohlin, like Myrdal, turned into politics, serving as the leader of the Liberal Party 1944-67. Ohlin shared with James Meade the Nobel Prize in Economics in 1978.

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Introduction[1]

When Sweden left the gold standard on September 27, 1931, one week after the Bank of England had taken the same step, the Swedish government declared that the aim of Swedish monetary policy should be to stabilize the domestic purchasing power of the Swedish *krona.* This announcement implied that Knut Wicksell's rule of price level stabilization was officially adopted as the guide for the Swedish central bank, the Riksbank (Bank of Sweden).

The Riksbank, left with the task of implementing the new policy rule, turned to three renowned

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[1] This is a revised, updated, and extended version of a paper "Cassel, Davidson and Heckscher on Swedish monetary policy. A confidential report to the Riksbank in 1931", published in *Economy and History* in 1979. See Jonung (1979a). I have updated and extended this paper for two reasons. First, the adoption of inflation targeting worldwide starting in the 1990s has created an interest in the early Swedish experiment of price level targeting. Second, several studies have been published since 1979 dealing with the Swedish monetary program of 1931, the Riksbank's policy in the 1930s and the monetary and macroeconomic thinking in Sweden in the interwar period. Where relevant, these strands of research are incorporated here.

In the study of 1979, I acknowledged generous assistance from the University Library of Lund and the Royal Library of Stockholm in making the correspondence of Gustav Cassel, David Davidson and Eli Heckscher available to me. I expressed my gratitude to the Board of Directors of the Riksbank for granting me permission to examine the archives of the Bank for the 1930s. Financial support from the Bank of Sweden Tercentenary Foundation was gratefully acknowledged.

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professors in economics for advice: Gustav Cassel, David Davidson and Eli Heckscher. Their recommendations concerning the proper aims and means for Swedish monetary policy, presented in three separate reports at the end of October 1931, remained classified documents in the archives of the Riksbank for decades.

This paper explores the reports of the three professors. Their recommendations are of interest for several reasons. First, they represent the first practical guide for price level stabilization. They demonstrate how the Swedish economists viewed such a rule-based regime at its very start in October 1931 — so far, the only time any country has officially adopted price level targeting, as opposed to inflation targeting. The reports give an excellent description of the views of the first generation of modern economists in Sweden.

Second, their recommendations influenced the Riksbank's policy in the 1930s. The governor of the Riksbank remained in contact with the economists involved with the questionnaire. Thus, when examining the Swedish stabilization record of this decade, their replies merit attention.

Third, starting from the three reports, it is worthwhile to contrast Swedish views in the 1930s on price level stabilization with the present approach to inflation targeting.[2] Such a comparison brings out surprising similarities, demonstrating that the Swedish economists worked within a framework identical to the modern strategy of inflation targeting. In addition, the Swedish experience attracted considerable interest in the 1930s from U.S. and U.K. economists.[3] However, the literature of the last 30 years on inflation targeting has paid little attention to the 1931 Swedish program of price level targeting. This paper hopes to remedy this state of affairs.

This paper is organized as follows. Section I gives the background to the program of 1931. Here the contributions of Knut Wicksell take the center stage. He fathered the Swedish experiment by suggesting price level stabilization as the rule for monetary policy. In response, David Davidson recommended a different rule, whereby the price level should move inversely to changes in productivity. The debate about monetary policy became intense during World War I and afterwards. Erik Lindahl further developed Wicksell and Davidson's analyses in the 1920s. The leading position that the economics profession had in public debate contributed to the monetary program of 1931.

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[2] Price level stabilization should be distinguished from inflation targeting at the zero rate in the sense that the former involves a memory, and the latter has no memory. Under price level stabilization the central bank commits to return the price level to the original level in case of deviations. The same does not hold for inflation targeting at the zero rate.

[3] See for example Fisher (1934), Gayer (1937), Kjellstrom (1934), Lester (1939) and Thomas (1936).

Section II describes how the Riksbank's questionnaire emerged. In Section III, the main section, contains translations of the replies of the three economists. Section IV gives an account of the effort by several economists to prepare a joint book on Sweden's monetary policy in November 1931. The eventual outcome was two books with diverging ideas, one by Heckscher and one by Myrdal. Section V describes how the government's monetary declaration of September 27, 1931, gradually evolved into a monetary program. Section VI focuses on the impact of the economists' reports on the Riksbank's policy. Section VII summarizes the views of three prominent economists, Fisher, Lindahl and Ohlin, regarding the monetary program.

The next two sections deal with developments after World War II. Section VIII identifies the factors that pushed price stabilization away from the policy agenda until it returned again in the shape of inflation targeting in the early 1990s. Section IX compares the monetary program of 1931 with the inflation targeting that started in 1990s.

The main actors in October 1931 are presented briefly in the dramatis personae. Cassel is known for his purchasing power parity theory, and Heckscher for his work on international trade and on mercantilism. Davidson argued for his productivity rule, stating that the price level should fall in inverse relation to the rise in productivity. Dag Hammarskjöld, who took part in the construction of the Riksbank's consumer price index in the fall of 1931, served later as secretary general of the United Nations in the 1950s. Erik Lindahl, who was guiding Dag Hammarskjöld, is known for the theory of Lindahl-pricing of public goods and his monetary analysis. Ivar Rooth, the governor of the Riksbank in the 1930s, became managing director of the International Monetary Fund in the first half of the 1950s.

The dramatis personae also includes two young economists, Gunnar Myrdal and Bertil Ohlin, as they became heavily involved in the circle of economists dealing with the framing of economic policies of Sweden in the early 1930s. They were representatives of the second generation of modern economists in Sweden who eventually broke with the first generation because of their emphasis on the role of active fiscal policy, viewing price level stabilization as inadequate to bring Sweden out of the depression of the 1930s. Both of them became recipients of the Prize in economics in the 1970s.

This focus of this paper is on the ideas of Swedish economists concerning price stabilization as a rule for monetary policy. However, their ideas emerged in close interaction with actual monetary events. Thus, the paper also touches on the economic and political history of Sweden.

I. The background.

Why did Sweden adopt price level stabilization in 1931? The decision reflected the impact of the economics profession on policymakers. Two developments were important. First, Knut Wicksell's contributions to monetary theory led to the policy conclusion that monetary policy should aim at stabilizing the price level. Wicksell gave the rationale for price stability, and he promoted it in many contributions.

Second, economists played a highly visible role in public debate and in framing economic policies during World War I and in the interwar years. They became respected, in this way creating a role for themselves. It was an economist, Gustav Cassel, who advised the minister of finance to adopt price level stabilization when Sweden left the gold standard in 1931.

1. Knut Wicksell's rule of price stabilization, 1898

In April 1898, Knut Wicksell was for the first time the main speaker at a meeting of the Swedish Economic Association (*Nationalekonomiska föreningen*) in Stockholm. The title of his lecture was "The influence of the rate of interest on commodity prices" (Wicksell 1898a).

To introduce his lecture he said:

There is no need to waste words proving how important it is that the exchange value of money or, what is the same thing seen from the opposite view, the general level of commodity prices, remains as stable and constant as possible. Money is the standard of all values, the basis of all property transactions, and daily becomes more and more so. All commodities are exchanged for money, and, moreover, we produce only in order to exchange, and to exchange for money. What then can be more important than that what constitutes the standard of everything else should itself retain a constant magnitude?

Next Wicksell wanted to rule out the belief, held by many, that continuously rising prices would have "a fruitful and stimulating effect on the economic life of the community as a whole." This idea "is a pure illusion". Once inflation is fully expected, there would be no gains from it.[4] Actually, the outcome would be worse than if commodity prices were kept constant:

Were it therefore in our power to arrange these circumstances as we please, it is fairly certain that all interests would be best served if the standard of value were kept as scrupulously constant as the standards of weights and measures.

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[4] In modern parlance, Wicksell rejected the existence of a stable long-run Phillips curve.

Indeed, Wicksell stated that we are "complete masters over" the average level of money prices, once we have a "completely clear theory" of the process determining the general price level. After dismissing several obsolete theories, Wicksell set out to present his own theoretical approach. To bring out its main features, he assumed a pure credit economy, that is an economy with no cash, in his own words "a completely flexible and elastic monetary system".

The cashless economy constituted an important element of Wicksell's contribution to monetary theory. He was the first economist to analyze price level determination in such a setting.[5] Still, he stressed that his work belonged to the quantity theory of money, to him "the only theory that rests on a sound, logical basis.". His aim was to include the modern commercial banking system in this theory.

In the cashless framework, Wicksell introduced two types of interest rates: the bank rate, the rate charged by the banking system; and the natural rate of interest, the return on new investments. Any discrepancy between the two rates sets off a change in the price level.

If the natural rate is higher than the bank rate, the price level will rise as investors borrow from the banking system to finance new expenditures, driving up prices. The opposite will hold if the bank rate is higher than the natural rate. The process of price changes will continue as long as there is an interest rate gap, thus the term "cumulative process" given to Wicksell's theory. At the "normal" rate of interest, defined as the bank rate that is equal to natural rate, the price level remains constant.

Here Wicksell expressed astonishment that his simple exposition had not been applied before as the theory of price level changes, although some economists had come close to similar explanations.

Moving from theory to empirical testing of his approach, Wicksell displayed a chart with the price levels and interest rates of Germany and England from 1850 to 1897. He argued that the secular movements of prices were primarily associated with secular changes in the natural rate.

The lecture ended on a positive note:

Once a clear insight into the cause of the changes in the value of the present instability thereof has been gained, the men concerned with the practical aspect will surely show themselves equal to the task of availing themselves so this insight to create a completely stable value of money, to the advantage of world commerce. Once the causes of the evil have been found, the therapy and, above all, the prevention of the disease will prove a comparatively simple matter.

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[5] See for example the description of Wicksell's contribution in Jonung (2022).

In other words, Wicksell expected that price level stabilization would be adopted once his theory for price level determination became known. He was proven wrong. His approach assumed a paper standard, while Sweden was on gold at the time of his lecture. There was no public debate in Sweden about the problems of the gold standard. His lecture did not even attract any comments from the audience judging from the printed version of his lecture.

In his talk, Wicksell referred to the analysis of his book to by published later in 1898 as *Geldzins und Güterpreise,* today better known as *Interest and Prices* (Wicksell 1898b, 1935). Here his monetary theory and monetary rule were presented in greater detail.

In the last chapter of *Interest and Prices*, Wicksell turned to the policy conclusions of his monetary theory. He recommended first price stabilization within a single country through cooperation among the banks in setting the bank rate identical to the natural rate. In a similar way, he proposed international monetary cooperation through an international commission to establish price stability. The existing gold standard should be replaced by "an international paper standard". He even considered a common currency unit for the whole world, at least the prevailing units could be arranged such that "their arithmetic relationships" were simplified, that is the exchange rates would be easy multiples of each other.

The publication of *Geldzins und Güterpreise* started a long-lasting debate between Wicksell and David Davidson in Davidson's journal *Ekonomisk Tidskrift* on the proper *norm* (rule) for monetary policy.[6] In the journal's very first issue, Davidson (1898) published a lengthy review, basically positive towards Wicksell. However, he raised two objections at the end.

First, Wicksell's proposal to abolish gold as the basis of the monetary system was "pure utopia". In Davidson's view, "Hardly any country will a solid business sector would like to hand over the right to determine the measure of value to the central bank at its discretion (*fria skön*)." Second, Wicksell's rule of stabilization of the commodity prices ignored the impact of productivity changes on the distribution of income and wealth. If total production increased by say 25 percent and the price level were held constant, holders of money would be able to buy 25 percent more commodities. This would create social injustice, according to Davidson.

In the ensuing debate, whose first phase lasted for about a decade, Wicksell defended his rule while Davidson developed his own rule that the price level should move in inverse proportion to the growth of productivity, that is, the price level should fall in response to growth.[7] These

[6] This paper consistently uses the term "rule" as a synonym for "norm" in accordance with the present use of the concept of rules in the debate on monetary policy.

[7] See Selgin (1995) for a summary of the debate between Davidson and Wicksell on the

two rules became part of the Swedish monetary debate and research for about half a century.

Both rules were actually officially adopted as guidelines for the Riksbank: Wicksell's rule in 1931 and Davidson's rule in 1944. In both instances, economists were behind the design of the rule: Cassel in the first case and Hammarskjöld and Lindahl in the second case.

2. The debate on monetary policy during and after World War I

The gold standard was an early casualty of the outbreak of war in August 1914. Sweden left gold. Gradually the Scandinavian currency union dissolved. The war was accompanied by a sharp rise in prices during 1914-1920, followed by a period of deflation (Figure 1). The sharp movement in prices as well as in the rate of unemployment became issues in a most lively debate involving leading economists, including Cassel, Davidson, Heckscher, the young Bertil Ohlin and Wicksell. The debate dealt with many topics: the policy of the Riksbank, the Scandinavian Currency Union, the causes of the wartime inflation, the proper monetary system after the war and the return to the gold standard.

Wicksell was one of the most active participants, consistently arguing for a stable price level. On many occasions, he recommended the Riksbank to raise its discount rate to arrest inflation. He suggested that the wartime inflation should be eliminated by a policy of deflation bringing down prices to the 1914 level. Thenceforth, the price level should be stabilized. Wicksell's proposal was much criticized. In response, he suggested the establishment of a special public office to "calculate exactly" the gains caused first by inflation and subsequently by the deflation. From these calculations the losers would be compensated, and the winners be taxed. Fellow economists like Cassel and Heckscher remained unconvinced.

Davidson was also active in the debate through *Ekonomisk Tidskrift*, his journal. He shared much of Wicksell's analysis but modified it by stressing that inflation was not only a monetary phenomenon; it was also caused by a scarcity of goods caused by the war. Inflation could not be arrested simply by a tight monetary policy. Here Davidson reopened his prewar debate with Wicksell.

Cassel had an international outlook. Shortly after the start of the war, Cassel viewed the high rate of inflation as solely due to the reliance on central bank financing of the war effort in the belligerent countries. The volume of money expanded roughly in line with the rise in prices or the fall in purchasing power. In Cassel's view, the old quantity theory of money was useful as a first approximation.

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proper rule.

A neutral country like Sweden became dragged into this process through extending credit to the belligerent countries. The "active purchasing power" within Sweden expanded and the Swedish price level rose. Cassel began to collect price data, complaining of the lack of reliable statistics and that the Riksbank expressed no interest in his work.

Cassel presented his view in a large number of talks and articles, blaming the policy of the Riksbank as the main cause behind the high inflation. At the same time, he criticized the government for introducing price controls and restrictions on exports to hold down rising prices. There was a lack of coordination of the actions of the Riksbank and the government.[8] He later presented his purchasing power parity approach in an article in the *Economic Journal* (Cassel 1918) and more detailed views in a book in Swedish (Cassel 1917) as well as in articles in German. In this way, he laid the basis for becoming an international authority on monetary matters after the war.

The gold standard had a strong hold on public opinion. After the war, the Swedish government eventually decided to return to the gold standard at the prewar parity to gold—not, as Wicksell suggested, to the prewar price level. This required a sharp deflation, which brought about a deep depression and rapidly rising unemployment (Figure 1). The ensuing unemployment and social unrest came as a surprise to the economists. The experience of deflation made economists critical of a policy of deliberate deflation during the depression of the 1930s.

In a talk to the Swedish Economic Association late in his life, Wicksell (1925) considered the organization of the international monetary system after Sweden had returned to the gold standard in 1922 de jure and de facto in 1924. The gold standard had returned, although in a modified version, after the experience of paper standards during and after the war. By this point he had abandoned his earlier optimism about the adoption of his price stability rule. He was pessimistic about the future of price stabilization (Wicksell 1925, p. 87):

The principal fight for a paper standard based a constant value [that is, a stable price level] versus the gold standard is terminated, at least for the moment. This fight has also been a very uneven one. On one side, only a few nitpickers of theory, if not to say freaks; on the other the compact majority of sensible people, who have never for a moment faltered in their belief in the gold standard as the only true and sound system, a viewpoint that they have been able to maintain so much stronger as they, as a rule, never have bothered with giving or taking the arguments for or against this system.

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[8] Cassel (1940, p. 197).

Still, Wicksell recommended international monetary cooperation to maintain a constant world price index. He hoped for such cooperation despite the gold standard. This was his last appearance for the Association. He died in the spring of 1926. Thus, he did not live to see his policy rule being adopted officially in September 1931.

3. Erik Lindahl on the aims and means of a rational monetary policy

The work of Knut Wicksell served as a source of inspiration for a new generation of economists in the 1920s, most prominently for Erik Lindahl. The ideas of Lindahl are of interest to summarize since they later emerged in the debate on the monetary program of 1931. In addition, Lindahl became instrumental in the design of the consumer price index that the Riksbank used a guide for its policy. He also served as advisor to the bank's governor, Ivar Rooth. Lindahl turned out to be the most persistent advocate of price level stabilization of all economists in the ensuing decades. He never changed his mind on this issue.

He published two volumes on monetary policy under a paper standard starting from Wicksell's theory; one in 1924 entitled *Penningpolitikens mål* (The Aims of Monetary Policy) and a sequel in 1930, *Penningpolitikens medel* (The Instruments of Monetary Policy) (Lindahl 1924, 1930). Both volumes deal primarily with theoretical issues.[9]

In his preface to the first volume, Lindahl (1924) stated that he started from Wicksell's monetary program but gradually Davidson's work caught his attention. This is an understatement: he advocated Davidson's rule. Perhaps he wanted to be kind to his former professor in Lund: he thanked Wicksell for commenting on the manuscript for the book.

Lindahl wanted to analyze the principles for "a rational monetary policy" once the gold standard has been replaced by "free currencies", that is by national paper standards. The aim for such a rational policy must be a stable value of the general price level, however defined. This aim raises three questions:

1. How should the general price level be defined?
2. Should the price level be held constant, or should it fall when the supply of goods increases and increase when the supply declines?
3. Should stabilization aim at the average price level of many countries, in which case exchange rates could be maintained fairly unchanged, or should each country by itself stabilize the domestic price level and allow its exchange rate to fluctuate?

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[9] Fregert (1994) presents an excellent summary of Lindahl's volumes, relating it to later work on monetary policy and rules.

Before replying to these questions, constituting the core of the book, Lindahl first presented two "fundamental" principles for a rational monetary policy. The first principle is that a rule must be established and given a firm legal foundation. It is less important which rule is adopted:

The main point is that a definite goal is set for monetary policy in every country and is clearly presented and motivated, and that the program thus established is carried out using all possible means under all circumstances. An explicit goal should be specified for monetary policy and should be enshrined in the constitution: otherwise the public will not have an anchor (hållpunkt) *for judging the future value of money and must engage in guesses about the future course of monetary policy, …*

The second fundamental principle is that the rule adopted should "create a minimum of deviations between the real and intended outcome of nominal contracts". This would foster economic activity. If the government authorities fail to pursue the monetary rule, it would violate the spirit of all economic contracts.[10]

The main part of the book compares Wicksell's rule and Davidson's rule under different assumptions about growth, productivity and the profits of firms. All these exercises end with the same policy conclusion: Davidson's rule is preferable.

In the final chapter, entitled "Stable exchange rates or a stable price level", Lindahl dealt with the open economy aspects of monetary rules. Comparing the gold standard system based on stable exchange rates with a price level rule, he concluded that a stable price level should be the preferred arrangement. The volume concludes:

… the main result of our investigation is that free currencies with fluctuating flexible exchange rates stand out as the ideal for the monetary system of the future.

Six years later, the sequel appeared (Lindahl 1930). The starting point is the same as in the 1924 volume: "monetary policy should as much is possible *reduce the risks, that not fully expected events might create for economic activity,* in this way a creating a minimum of disturbances within economic life."

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[10] In a footnote, Lindahl (1924, p. 8) referred to Irving Fisher's discussion in *The Purchasing Power of Money* on the advantages of the principle that "neither debtor nor creditor should be worse off by being deceived" by fluctuations in the price level.

As in the earlier volume, Lindahl presented a number of cases, moving from simpler to more complicated ones. In the straightforward benchmark case, the monetary system is organized to facilitate a theoretical analysis. It is the same framework as in Wicksell's *Interest and Prices*: a closed economy; a free currency (defined as a paper standard); all granting of credit is centralized in the central bank; and no cash holdings exist, that is, all transactions are carried out through bookkeeping transfers at the central bank.

Lindahl made a distinction between the case with perfect foresight and with imperfect foresight. With perfect foresight, it is sufficient for the central bank to establish a rule. Expectations and thus the behavior of the economy will follow from the rule.[11]

Under imperfect foresight, which is the case in real life, the task of the central bank becomes more complicated. Here the central bank has a powerful instrument in "publicity"—announcements and declarations that influence the expectation of the public. Lindahl presents as a "general rule" that a large volume of publicity will improve the efficiency of the instruments adopted by the central bank. The authorities should explain the monetary rule that is adopted by the central bank as well as the policy actions taken by the central bank.[12]

Every change in monetary policy should be accompanied by a clear justification that contains an account of the monetary situation and the intended purpose of the actions of the central bank. Such a policy of communicating the objectives of the central bank will make it easier for the central bank to reach the intended effects of its action if the public has confidence in it. In the case of a "weak" central bank, it is better to avoid communication with the public. Communication might initiate a discussion about monetary policy and put more political pressure on the central bank to modify its policy, undermining the monetary rule.

Lindahl stressed that the appointment of the members of the management of the central bank should follow methods that "prevent" political considerations from influencing the conduct of monetary policy. The management should have a "fully secure employment". It should not be possible to fire management during the period of its mandate unless it has failed to achieve the agreed-on program.

Turning to the instruments of monetary policy, Lindahl assumed that their use is accompanied by public announcements. The discount rate is the most important instrument for monetary policy, a conclusion he reaches after a long discussion of the impact of interest rates on

[11] This is basically a rational expectations solution where the expectations of all decision makers are identical and correct.
[12] Lindahl (1930, pp. 27–30).

economic life.[13] Open market operations should also be an instrument of monetary policy to influence the long-term interest rate. Fiscal policies could be considered in cases when interest rates are too low.

Dealing with the practical aspects of a monetary rule, Lindahl introduced the concept of a tolerance band, a "margin of error" as he termed it.[14] The tolerance band should be decided upon explicitly. His discussion here has a very modern tone: [15]

If the central bank had perfect foresight and could take all necessary measures to regulate the price level in line with the rule established as the aim of monetary policy, the actual development of prices could be fairly accurately controlled. In reality, however, one cannot expect a central bank, even one with the best of intentions and with all the required discretion, to never deviate from the agreed upon rule. Every now and then, a central bank will either overshoot or undershoot the intended target. The question then becomes whether these deviations are tolerable or if they should be corrected and, in the latter case, how such a correction is best attended to.

The answer to the first question ought to be that central banks must naturally be allowed a certain margin of error, but that they must be obligated to take action against any price developments beyond this margin. This is of the utmost importance, as price changes could otherwise accumulate over time and lead to severe deviations from the intended policy. The public's trust in the control of future prices would thus be betrayed and monetary policy would fail the above-mentioned requirement, namely, to reduce risks and disturbances in economic life.

It is from the above clear that the margin of error, which should be kept to within perhaps a few percentage points a year, ought to be set based not only on the circumstances in the previous year, but also consider circumstances further in the past. For if the annual deviations generally occur in the same direction, the total deviation over time could be considerable. If, given unchanged productivity, prices were to increase by, as an example, 2% annually; this would lead to prices increasing approximately 22% in just ten years. The public's economic calculations, which require predictions of price developments decades into the future, would of course be extremely uncertain if one had to take such large deviations from the established norm into consideration. For monetary policy to adhere to the recently mentioned requirement, the margin of error must therefore be set in such a way that the annual deviations average out in the long run.

[13] Lindahl (1930, p. 70).
[14] Lindahl (1930, p. 99–100).
[15] Andersson and Jonung (2027) on the role of tolerance bands xxx

Lindahl then proceeded to examine how monetary policy should respond in different cases to keep the price level within the target band.

The final chapter drops the assumption of a closed economy. Still, the instruments for monetary policy should be the same as in a closed economy. The preferred rule should be that price level of consumer goods should vary inversely to the growth of productivity. The discount rate should be the prime instrument of monetary policy.

Lindahl's two volumes were highly innovative. He furthered the Swedish discussion on the proper rules for monetary policy and he stressed the importance of central bank announcements to influence the expectations of the public and of steps to protect the independence of the central bank from political pressure. He was the first to discuss the use of a tolerance band and the possibility of base drift under price level targeting. He was a pioneer many decades before the modern discussion of these issues emerged with inflation targeting.

4. The public standing of the economics profession

Swedish economists held a strong position in public life during World War I and in the interwar period. They established this exceptional standing by being active in various settings.

First, they wrote diligently in newspapers to make their views known. Wicksell published about 450 articles in a wide variety of newspapers. Cassel had *Svenska Dagbladet*, a conservative Stockholm daily, as his main outlet, writing more than 1500 op-eds. *Dagens Nyheter*, the liberal rival of *Svenska Dagbladet*, was Heckscher's main outlet, with about 300 articles. Ohlin followed this pattern with more than 2000 articles, mostly in *Stockholms-Tidningen*, a major liberal newspaper.[16]

The economists published regularly in *Ekonomisk Tidskrift* as well as in the proceedings of the Swedish Economic Association. Cassel was associated with the *Quarterly Review of the Skandinaviska Kreditaktiebolaget*, a major commercial bank. It served as a prime outlet for his monetary analysis, with an outreach in four languages: Swedish, English, German and Spanish. Bertil Ohlin had a similar arrangement with *Index*, the journal of *Svenska Handelsbanken*, a competitor to *Skandinaviska Kreditaktiebolaget*. Some of Ohlin's articles held a high academic standard. His critique of Keynes's views on the German reparations were first presented in *Index* before they were published in the *Economic Journal* in 1929.[17]

[16] See Carlson and Jonung (2006) on the journalistic activities of the economists and their views on media exposure.
[17] See Carlson and Jonung (2024).

The economists worked as consultants, experts and advisers in various capacities. Most notably, they took part in government investigations, known as SOU, *statens offentliga utredningar*, meaning official state investigations. Here they covered a wide selection of issues, ranging from taxes, tariffs, railway rates, banking, unemployment and monetary topics. Here they applied economic theory to current policy issues.

The work could be quite burdensome, involving many meetings and much writing. In the period 1904-1945, Davidson took part in six government investigations, Wicksell in three, Cassel in 13, Heckscher in 12, Lindahl in 10, Ohlin in 12 and Myrdal in 11.[18] These numbers are simply astonishing. In addition, economists served directly as advisors to the government. For example, the Riksbank sent Wicksell on study visits to Berlin, Vienna and London during World War I to report on the monetary problem of the belligerent countries.[19] Cassel and Davidson were consulted in a similar way.

Swedish economists, in particular Gustav Cassel, were also active on the international scene. Cassel served as adviser to the League of Nations, obtaining a standing as an expert on international monetary issues.[20] For a few years after World War I, he was the most famous economist in the world before Keynes succeeded him.[21] He was an ardent critic of the Versailles Treaty, leading to close contact with Keynes in the early 1920s. Cassel lectured widely outside Sweden on international monetary issues. When he addressed the House of Representatives in 1928, he was introduced as ‘‘the world’s foremost economist”.[22]

Many Swedish economists at the universities were not recognized internationally. One case is Emil Sommarin (1874-1955), who replaced Wicksell as professor in Lund in 1919. He was introduced by his Danish host as “The only Swedish professor in economics who is not world famous” when he gave a lecture in Copenhagen.[23]

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[18] See Hasselberg (2007, appendix 2).

[19] On one of his trips to England, Wicksell met Keynes in London in 1916. He reported home to his wife that he had tried to convince Keynes about the advantages of price stability. Keynes listened but was not aware of the issue.

[20] Clavin (2013, in particular chapter 2 and 3).

[21] Carlson (2009).

[22] Carlson (2009).

[23] This presentation made it into Holm (1962, p. 373), a classical collection of quotes, proverbs and pithy sayings in Swedish.

The Swedish economists published in German and English outlets. Cassel presented his theory of purchasing power parity as early as 1916 in the *Economic Journal*. His textbook *Theoretische Sozialökonomie* of 1918 was widely read. Ohlin became well-known through his exchange with Keynes in 1929 in the *Economic Journal* concerning the German reparations, and later through his work on international trade.[24]

In short, the economists were well-known inside and even outside Sweden. They were "household names" to some extent. Figure 2 displays the number of mentions in the major Swedish newspaper of the most active economists in public debate. The figure covers the first generation of economists (Cassel, Heckscher and Wicksell) as well as the second generation (Myrdal and Ohlin). Davidson and Lindahl were not as prominent.

As Figure 2 shows, Cassel was at the top almost all years, with Heckscher as a strong second. Keynes is included because he became well-known in Sweden due to the publication of his 1919 book on the economic consequences of the Versailles peace treaty.[25] The younger Myrdal and Ohlin were not yet fully established. However, in the late 1930s and early 1940s, they surpassed their older colleagues in mentions. At the time, both were deeply involved in Swedish politics as well.

The respect an economist like Heckscher earned is reflected in a thank-you card from Ivar Rooth in the spring of 1929. Heckscher had congratulated Rooth for his appointment as the new head of the Riksbank. In his reply, Rooth hoped for future cooperation with Heckscher on monetary matters. Indeed, they were soon going to work together on the price stabilization program of the Riksbank.

To sum up, the prominent standing of the economists in public debate is a big part of the explanation why economists were called to advise the Riksbank when Sweden left the gold standard in 1931.

II. The program of price stabilization

1. Leaving the gold standard in September 1931

[24] Heckscher's pioneering work on mercantilism was translated and appeared in print in the 1930s. Lindahl and Myrdal published their treaties on monetary theory in the end of the 1930s.
[25] Carlson and Jonung (2024) examine the response of the Swedish economists to Keynes' book.

When the news that England had left the gold standard reached Stockholm between 5 and 6 in the afternoon on Sunday September 20th, it set off an intense week of meetings and contacts involving the Riksbank, the commercial banks, the government, politicians, industrialists, trade union representatives and economists, primarily Cassel and Heckscher. The Board of Directors convened at least once a day, usually twice the day.

The very same evening, the Board of Directors and representatives from the commercial banks and the inspector of the banking system met in Ivar Rooth's place of living. The prime minister and the undersecretary of the Ministry of Finance were asked to participate. The minister of Finance, Felix Hamrin, was out if town but was informed by Rooth. At this point, the general opinion was that Sweden should try to remain on gold with the help of obtaining foreign credits in the coming days.

On Monday the 21st, the Riksbank raised its discount rate to 5 per cent. Marcus and Jacob Wallenberg from the *Enskilda Banken* became involved with obtaining foreign financing from Paris and New York. The BIS gave a promise to support Sweden by contacting the Banque of France and the Federal Reserve Bank in New York.

The same day, Cassel and Rooth discussed on phone, where Cassel argued that Sweden should try to stay on gold. The next day, Cassel published an op-ed in *Svenska Dagbladet* with the title "An accident for the world economy", criticizing British economic policies for bringing about the fall of the pound. In spite of a declining commodity price level, English trade unions had managed to keep the wage level unchanged, in this way destroying economic equilibrium and increasing unemployment. The British government responded by support to the unemployed, undermining public finances. Imports were favored while exports declined leading to a collapse of the English currency.

England could have stayed on gold if France and the United States had used its "superfluous" gold reserves for a monetary expansion, raising the world price level. Without such a policy, "all measures to help are completely useless". Cassel ended by recommending that the Riksbank must under no circumstances hesitate to defend the gold parity of the krona.[26]

On Thursday the 24th, Felix Hamrin, the Minister of Finance, made a public statement that the Swedish gold standard should be firmly maintained. According to Cassel in his autobiography:[27]

This announcement was so firm that it should have been trustworthy. I phoned then Rooth

[26] See Cassel (1941, pp. 281-283).
[27] Cassel (1941, p. 284).

about the necessity of a raise in the discount rate of the Riksbank. Such a raise was made later the same day.

The discount rate was raised to 6 per cent. The next day, Cassel published a new article in *Svenska Dagbladet*. The message was that the Swedish gold parity could only be maintained if the commodity price level and the nominal wage level were in equilibrium.

In the afternoon of Friday the 25th, Cassel and Heckscher took part in a meeting in the Prime minister's office involving the Riksbank, the National Debt office, several commercial bank managers, representatives of big business, trade unions and employers' organizations. After reporting the fall in the foreign reserves of the Riksbank, Rooth explained that if Sweden did not get a substantial loan from abroad, the gold standard would have to be abandoned in a few days. At this meeting, the general view was that the goal for Sweden's currency policy should be a stable price level. Cassel argued that if Sweden left the gold standard "a new rule (*norm*) for the value of the Swedish krona should be put in place".[28]

In the morning on Saturday the 26th, a telegram reached Stockholm that no financial support was forthcoming from New York. A similar message arrived later from Paris. No foreign credit could be obtained. The same day Felix Harmin asked Cassel to prepare a statement concerning the currency issue. Cassel responded immediately with a three-page report entitled *Guidelines for Swedish currency policy*.

Here Cassel first stated that Sweden should try to remain on gold as long as possible. This was the duty of the Riksbank as it had promised to convert its notes into gold. A prerequisite for staying on gold was that Swedish wholesale prices followed international prices. This had been the case 1925-1930 but not since then. Now foreign credit was not likely to be of much use at this late stage unless the financial support was so huge that it will give a convincing guarantee that Sweden will remain on gold.

In case Sweden was to leave the gold standard, this step should not allow for a deterioration of the domestic value of the Swedish krona. In Cassel's words:

Our program must then be to maintain the Swedish krona at an unchanged purchasing power. In practical terms, this means that the present level of the wholesale price index should be kept constant or preferably a few percentage points below the present level. Such an announced program is the only possibility to create confidence, within and outside the country, in the Swedish currency once gold convertibility has been cancelled. The Government and the Riksbank must then give a firm assurance that no inflation of the Swedish currency will take place under any circumstances.

[28] Cassel (1941, p. 284).

Sweden will then have an independent paper currency resting on an unchanged domestic purchasing power. As a matter of fact, there is no other alternative which can be seriously considered.

According to Cassel, the discount rate of the Riksbank was the main policy instrument for stabilizing the purchasing power of the krona, the same instrument as under the gold standard.

To the extent that Sweden could convince the world about its determinacy to maintain a stable domestic purchasing power for the krona, the exchange rate of the krona will also be stabilized. Finally, Cassel hoped for international monetary cooperation that could lower the value of gold, leading to a rise in the world commodity price level. Sweden should stand ready to tie its currency to such a regulated international gold standard at the right moment.

In his autobiography, Cassel gives the following account of his report to Hamrin:[29]

I wrote it and sent it immediately to him [the minister of finance] with a special messenger. After this the minister of finance asked me to prepare a statement for the cabinet minutes (statsrådsprotokollet) concerning the repeal of the gold standard. I wrote also such a proposal, and my secretary brought it to Hamrin late in the evening. For this most pressing work I never received a word of thanks. Politeness was not Hamrin's strong suit.

Late in the evening on Sunday the 27th, the government decided to leave the gold standard at the request of the Riksbank. The notes of the Riksbank were no longer redeemable into gold. The decision was a temporary one in the sense that the decision was only valid from September 28 to November 30. The Riksbank was allowed to return to gold if this was deemed possible during this period. The government also prohibited the export of gold from Sweden.

The announcement of the Government was accompanied with the statement designed by Cassel that the domestic purchasing power of the krona should be maintained with all available means. With this step, Sweden became the first country to adopt price level targeting as the official goal for monetary policy. So far it is the only country to have taken this step.

2. Designing the Riksbank questionnaire

Immediately, the following day Monday the 28th, Cassel as well as Heckscher published each an op-ed on the new monetary situation. In *Svenska Dagbladet*, Cassel stated[30]:

[29] Cassel (1941, p. 285).
[30] Cassel (1941, p. 286).

The krona should not be allowed to be a currency that can drift anywhere under the influence of unknown forces. We must in other words have a monetary policy which has a determined goal. The goal cannot be anything else but keeping the domestic purchasing power of the Swedish krona at the level where it has now.

Cassel stressed that Sweden managed to cut the commodity price level by half in the early 1920s in order to return to the gold standard at the prewar parity of the krona. Now the task of was much easier: just to keep the prevailing price level constant.

Heckscher (1931a) began his op-ed by arguing that now is the time to look forward, not back on other options that the Riksbank could have selected like a change in the gold rate. Sweden must now have a paper standard. Such a standard cannot be managed as simply as many believed would be the case during the war. First, the krona has to find its new equilibrium rate. The Riksbank should not intervene under any circumstances to influence the exchange rate of the krona.

Heckscher stressed that better statistics of wholesale prices were needed immediately as the paper standard will be based on such an index. The existing wholesale index was of such low quality that it was of little use. He ended in the following way:

Now as a start we should try to steer after the price level. The public must accept once again to listen to those discussions that we became tired of during and after the war. This is a necessary consequence of the free currency. And its adherents have no reason to complain. For the rest of us this will be a bitter necessity.

In the following weeks Ivar Rooth, the head of the Riksbank, searched the advice of Cassel and Heckscher concerning monetary policy under the new paper standard. The contacts were frequent. At a private dinner with Rooth on September 30th, Cassel recommended that a weekly price index should be constructed. An agreement between the unions and the employers' organizations to support price stability was also discussed. A few days later, Rooth with his wife dined at the home of the Cassels. The new monetary program was a topic in the dinner conversation.

A few days later, Cassel discussed the monetary situation with Ivar Kreuger who feared for bank runs in the United States. Kreuger thought the risk of bank runs were high in Sweden as well. The next day Cassel had a long talk with Rooth on bank runs. He stressed that in case of a bank run in Sweden, the Riksbank should be able to issue notes without being bound by any legal restrictions concerning the gold coverage of its notes. Rooth asked if a special meeting of the Parliament should be called to consider the issue. Cassel rejected the idea. It would actually create fears of a bank run.

They also discussed the proper index to guide the policy of the Riksbank. Cassel claimed that a cost-of-living index was useful for domestic monetary policy but a wholesale price index was necessary for international comparisons. Rooth reported that the Riksbank had already started the work on a new price index. Finally, the gold policy of the BIS was discussed. Here Cassel suggested that all legal rules concerning gold coverage should be abolished internationally. Rooth agreed.[31]

Rooth was closely involved with Heckscher as well.[32] Most likely, the idea of a questionnaire to be sent to a small set of economists emerged in his contacts with Heckscher. This is seen from a letter of October 4th from Heckscher to Rooth:

Brother Ivar Rooth,

Here are the proposals we talked about. The questionnaire can be designed in many different ways. I would not rule out that the best solution would be to state in very general terms what you want information about, as all [economists] are well aware of the issues. If we instead follow the approach that I have adopted at your suggestion, I advise you to stress that the plan of the Riksbank does not restrict their freedom of action in any positive or negative way. It is only a suggestion about the issues that are of most current interest.

If you want to consult with me about one or the other proposal, it is of course my pleasure to assist you. …

In the letter above, Heckscher apparently included the proposal for a questionnaire to Rooth displayed in Table 1. It is organized in eight sections. In section I, Heckscher deals with the "first option", that is the case of a "fully independent, national currency", in short, the paper standard with a floating exchange rate that was adopted when Sweden left the gold standard. He asks about the advantages and disadvantages of such a monetary arrangement and about what rule the Riksbank should use for price stability. Here the choice of price index defines the rule. Heckscher mentions five price indices as possible guides: wholesale prices, retail prices, the cost-of-living, import and export prices.

Section II deals with the "second option": issues related to a fixed exchange rate system for the krona. Under this option, should Sweden go back to gold, or rather to a to a fixed exchange rate to the currency of another country? At which exchange rate should such a transition take place: the old parity or the prevailing rate? Should the transition be temporary or permanent? Should Sweden revive the Scandinavian currency union, and even include Finland in Nordic monetary cooperation?

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[31] Cassel (1941, pp 287-289)

[32] Heckscher was very active as advisor to the government and the Riksbank in the fall of 1931. See Landberg (2012).

The question about Scandinavian monetary arrangements reflects Heckscher's keen interest in the Scandinavian currency union, shown in reports he prepared for the Riksbank in 1929 and 1930.[33] He was also a committed proponent of close cooperation among the Nordic countries.[34]

After dealing with those two main alternative monetary arrangements for Sweden, Heckscher considers five issues that he deemed relevant for the workings of both systems.

Section III asks if the rule adopted should be based on a fixed number or on a target range. In the case of a paper standard, the implied question is whether the price level should be kept exactly on the target or if the price level should be allowed to fluctuate within a range around the target, in his terminology within limits. In a similar way, in the case of a fixed exchange rate, should the rate be maintained exactly or held within a target range by the Riksbank.

Section IV asks if the Riksbank should buy and sell gold at a preannounced price. Most likely, Heckscher had the experience of World War I in mind, when the Riksbank was active in the market for gold during the paper standard. Section V concerns the powers the Riksbank needs to make the transition to a new monetary regime, whether a paper standard or a fixed exchange rate.

The regulations concerning the note issue and the gold reserves of the Riksbank as stipulated in the Riksbank law are the subject of section VI. How should these rules be addressed? Section VII broadens the perspective by focusing on the full legal framework for monetary policy making. How should responsibilities be allocated between the Government, the Riksbank and the National Debt Office?

Finally, the last question in VII is open-ended, inviting respondents to discuss other issues not mentioned in the questionnaire but relevant to the future of the Swedish monetary system.

Heckscher's proposal served as the crucial input into the questionnaire the Riksbank settled for a few days later, as Table 2 shows.[35] The wording of some of the questions originates directly from Heckscher. However, there is a crucial difference. Heckscher deals with a floating and a fixed exchange rate as equally possible alternatives. The Riksbank questionnaire focused on a return to a fixed exchange rate and treated a paper standard as

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[33] Heckscher dealt in detail with the breakdown of the Scandinavian currency union in his study of Swedish monetary policy during and after World War I; see Heckscher (1926).
[34] As Ohlin (1953) stressed in his biography of Heckscher.
[35] The archives of the Riksbank do not reveal who prepared the Riksbank questionnaire. Most likely, Rooth had the main responsibility under advisement from members of the Board.

temporary until Sweden returned to a fixed exchange rate. This was consistent with the Government's decision of September 27th that Sweden left the gold standard temporarily.

In addition, the Riksbank questionnaire is shorter than Heckscher's. It omits his questions relating to the Scandinavian currency union, to the use of a target range, to gold purchases of the Riksbank, to the legislation of the note issue and gold reserves and to the broader legal framework for monetary policy.

The first four questions from the Riksbank (see I. A, B, C and D in Table 2), concern the transition of the existing Swedish monetary system to the gold standard or to a pegged rate with a foreign currency. The phrasing is similar to Heckscher's. When is it proper to tie the krona to international monetary cooperation? Should the krona be tied to gold or to a foreign currency? At which rates? Should the transition be temporary or permanent?

In question I. E, the Riksbank turns to the case of a floating exchange by asking for the rule to guide its policy while waiting for a return to a fixed exchange rate. Next, question I. F asks about the type of price index to serve as guide for the paper standard. Here the choice concerns the same five indices as in Heckscher's proposal, with the addition of "or in any other way".

In section II, the Riksbank first wants to know which instruments to use for transitioning to and preserving the new monetary system. Then, it asks if there are any powers that it presently is lacking or not using.

The last question, Section III, is identical to the last question of Heckscher's proposal, inviting additional comments and suggestions concerning the future of Sweden's monetary system.

On October 8, the Board of Directors, at the suggestion of Ivar Rooth, decided:

to ask each of professors David Davidson, Gustav Cassel and Eli Heckscher to inform the Board in a short report about their views on the proper guidelines for the development of the Swedish monetary system.

The next day the questionnaire was mailed to the three economists with a personal message from Rooth to each of the three professors. The message was the same. In the letter to Cassel, he included a report on the construction of price indices in Sweden. Here is the October 9 letter to Heckscher:

Brother,

On behalf of the Board of Directors I would like to ask if you could prepare a short report, without any profound scientific motivation, informing the Boad about your views on *the guidelines which should hold for the development of the Swedish monetary system.*

If you accept this request, I ask you to send me your report as soon as possible, at least before Saturday the 24th this month.

I have taken the liberty to attach on a separate page some questions which seem to be important.

Finally, I want to mention that the same request has been sent to Cassel and Davidson.

Yours (signed) Ivar Rooth.

The Board turned to the three professors for several reasons. They were at that time the most prominent monetary economists in Sweden.[36] They were well-known to the Riksbank and the public as they had all actively participated in the monetary debate for many years. Cassel and Heckscher had been in frequent contact with the government and with Ivar Rooth in September 1931 as well as during the years preceding the paper standard of 1931.

III. The reports by the three economists

Less than two weeks later, the Riksbank received the replies to its questionnaire. They are translated below. All three economists talk about *fri valuta* or *fri standard,* literally a free currency or a free standard, meaning a fiat currency or paper standard as opposed to a gold standard currency or a currency tied to another country's currency. They commonly use the term *inre köpkraft,* translated here as the domestic purchasing power of the krona, used in contrast to the external purchasing power, meaning the value of the exchange rate of the krona. They discuss the proper *norm,* in plural *normer,* to be adopted for monetary policy. Here, following modern usage, *norm* is translated as "rule", meaning the rule to guide the actions of the Riksbank.

As Heckscher offered the longest response and as he shaped the design of the questionnaire, his report is dealt with first. The translation of the three reports is summarized and commented on immediately after the transcript. Table 3 gives a condensed summary of the views of Heckscher, Cassel and Davidson.

1. Eli Heckscher's report of October 24, 1931

CONFIDENTIAL.

GUIDELINES FOR THE DEVELOPMENT OF THE SWEDISH MONETARY SYSTEM

[36] See the dramatis personae for a brief presentation of the three professors.

P. M.

In the following, I have attempted to provide the brief memorandum requested by the gentlemen in the Board of Governors of the Riksbank (Bankofullmäktige), outlining guidelines for the development of the Swedish monetary system. Given the vast and complex extent of the monetary system at present, a concise presentation will necessarily consist of conclusions with insufficient justification. This is all the more unsatisfactory since choosing between different solutions often proves very difficult and must depend on changing and partially unpredictable conditions. Thus, this can only be an initial orientation, it appears to me, and surely nothing more is intended. Moreover, I have rather sought to indicate the existence of tasks that must be addressed than to offer specific proposals for solutions, although it has always been my desire to clearly indicate how I perceive the task.

I.

If we first examine the option of tying the krona to an international currency, it is almost self-evident that Sweden has the strongest reasons to welcome and join such a currency as soon as it [the currency] has a satisfactory standing. Although a purely national currency, as a matter of principle, has certain advantages over an international one because each individual country's monetary system must pay attention to its specific economic conditions, it can hardly be denied that the isolated national currency, in times of strong economic ties between countries, represents a particularly difficult system to manage and is less suitable from a practical standpoint than a well-regulated international currency. In this regard, the path back to such a system must clearly remain open. It does not matter whether this future international currency takes the form of an international gold standard or whether it is organized in a different manner.

The answer to the question of joining an international currency thus depends entirely on when the international monetary system can regain a satisfactory order. However, this also means that the question cannot be answered at this moment. Guarantees for such an international order are currently lacking, and there are hardly any clues as to when they might materialize.

There are many different solutions that could be considered. The task is no more difficult than many other monetary technicalities that have been solved with sufficient precision to be recognized as distinct progress. However, we do not know when any of the acceptable solutions, from a monetary point of view, will have sufficient support from all the countries dominating economics and politics to be realized. Thus, the political conditions rather than the economic ones are still missing. As long as this is the case, the question must remain open.

Since joining an international currency is, for the time being, ruled out, the next question is *whether there is anything to gain from establishing a fixed exchange rate to a specific foreign currency.*

Considering the direction of Swedish foreign trade, the monetary systems of two countries come to mind, namely England and Germany, as they occupy the first place in our exports and imports, respectively. However, both are far from dominating even the side of foreign trade where their significance is greater than that of other countries, since they represent no more than about one-fourth or less than one-third of our exports and imports, and between one-fourth and one-fifth of both combined. Thus, the benefit of joining with either of these countries is strictly limited, at least until both these countries will join the same monetary system, an outcome for which all signs are missing.

Moreover, Germany's economic difficulties since the war [World War I] are so great that the idea of aligning with the German monetary system has rightly never been seriously considered. However, even if it were the case, any alignment with a foreign monetary system could cause disruptions on the import side that such an internationalization of our monetary system should protect us against. Such disturbances are no less troublesome than similar difficulties on the export side.

Furthermore, it is far from certain that fixing the relationship to the monetary system of England, the most important country for Swedish exports, would offer a guarantee against monetary policy disturbances. If it turns out that England finds a satisfactory solution to its monetary problem and this solution proves suitable for other countries to join, although an adequate international monetary system is not established, then it is possible to discuss cooperation with England. But at present, one knows hardly more about such a possibility than about the reorganization of the international monetary system. Therefore, it is impossible to discuss such a solution now.

However, if one imagines that the proper conditions for the internationalization of our monetary system were achieved one way or another, it appears clear that the transition should be based on the prevailing exchange rate between the Swedish and the foreign monetary unit at that time unless it involves insignificant adjustments. Increases as well as decreases in prices in order to return to the old [pre-World War I] parity should be avoided.

Similarly, a desirable alignment should not be postponed because the parity rate has not been reached. The disorder in the world's monetary system is already so great and it is likely to become even greater, so that the old gold parity does not seem worth any sacrifices. The same reasoning applies even more to the parity rate against any single foreign currency.

As unpredictable as all relevant circumstances are at present, it does not even seem to offer much advantage to determine any relationship to one or another foreign monetary standard.

During the previous Swedish paper standard, it was suggested that the Riksbank should record daily the price of gold to express the relationship to the gold standard.[37] *However, currently such a procedure would hardly serve any purpose. If and when a renewed link to the gold standard or to any other foreign standard is established, it will be a new situation. It is conceivable that not only a measure of the same type as the one mentioned above but also a restriction of the fluctuations in the Swedish monetary unit [that is, an exchange rate band] should be implemented. However, a closer examination of these possibilities seems unnecessary for the time being.*

My conclusion is, therefore, that for the time being, Sweden must seek to maintain an adequate Swedish isolated monetary unit as possible, without attempting to combine it with any international or foreign standard. However, Sweden should also, to the best of its ability, contribute to the emergence of international stability in the monetary system and without hesitation join an international monetary system as soon as it obtains an adequate organization, regardless of the exchange rate of the Swedish monetary unit to the international one at that moment.

II.

The next question, apparently, concerns the rules (normerna) for such an isolated, national monetary unit.

In one way or another, almost everyone would agree that a stable monetary value represents the best standard for the monetary system. This rule is also generally considered to be expressed through a more or less stable price level, although opinions differ regarding which prices should primarily or exclusively serve as the benchmark.

Accordingly, the statements made by Swedish government authorities during the transition to the paper standard emphasized that the domestic purchasing power of the Swedish krona should be preserved. In general, most of us would still support this program, although it is interpreted in various ways. However, before these interpretations are examined, it is necessary to establish certain consequences of this seemingly unanimous basic belief, as they are not always considered.

In a negative sense, adherence to the program of a stable domestic price level means that the exchange rate, the foreign value of the currency, should not guide monetary policy. Any attempt to push foreign exchange rates in a specific direction, whether upwards or downwards, is incompatible with the program and must therefore be rejected. However, this requires some

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[37] Here Heckscher is referring to the paper standard of the *krona* from the outbreak of World War I in 1914 to the return to gold in 1922.

cornerstones for our monetary system that are not yet in place. These missing foundations are not insignificant.

At this moment, it may indeed seem least important that the separation from gold of the Swedish krona has only occurred downwards, not upwards [depreciating, not appreciating]. There is therefore no possibility for the krona to rise above its old gold parity. However, given the current uncertainty of the value of gold, one cannot readily dismiss the possibility that a new international inflation of significant proportions could occur, and that the current depreciation of the Swedish krona against gold might be insufficient to prevent its spread to Sweden. There is no reason to refrain from making legislative changes in this regard. Such adjustments can hardly avoid reinforcing the impression of the purposefulness and of the credibility behind Swedish monetary policy.

What is required in this regard is a suspension of article 9 of the Coinage Act (myntlagen) and article 10, section 2 of the Riksbank Act (riksbankslagen), or rather an authorization in the usual way for the King[38] *and the Parliament, and for the former alone between sessions of the Parliament, to undertake such suspension. The only difficulty lies in the remaining part of the Scandinavian Currency Union, namely the legal tender status of Scandinavian gold coins in all three countries. Under certain conditions, this provision might present an obstacle. However, it appears that it might be sufficient to address it through purely domestic legal regulations at this stage.*

Even though I believe this should be done, there is no doubt that the rules for the note-coverage are in more urgent need of change. There are two groups of regulations in question.

The regulation regarding the minimum amount of gold reserves is quite obviously irrational under a paper standard. It means relatively little when the Riksbank has no obligation to provide gold and therefore faces no pressure on its gold assets. This provision is unlikely to cause harm before the time comes to return to gold. At this stage, however, adjustments of the foreign exchange rates with the help of gold exports might potentially become desirable. And considering the desirability of not further accelerating the concentration of gold assets to two countries, the provision might as well be left untouched for the time being.[39]

There is another regulation that is not as harmless, however. This concerns the regulation regarding the size of the note issue in relation to the gold coverage. At the last turn of the

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[38] In practice, the prime minister and the cabinet, acting in the name of the monarch.

[39] Heckscher refers to gold being concentrated in two countries. Most likely, he refers to the gold policy of the United States and of France as the public debate had focused on the gold policy of these two countries as a source of problem. See David Davidson’s report as well on the gold hoarding of France and the United States.

quarter, the unused right to issue banknotes was only around 53 million kronor, or about 9 % of the volume of notes, which is certainly too little. The situation is worsened by the fact that the right to the additional note issuance of 125 million kronor, which the Riksbank Act allows in critical situations, requires a joint decision by the King and the Parliament, making it almost illusory.

The lesser risk of this arrangement is that the Riksbank might be prompted to increase its gold reserves without any need in this regard, either domestically or internationally, thereby potentially exerting a disruptive influence on the international monetary system under certain circumstances. The more serious concern is that instead, or if gold imports encounter difficulties for one reason or another, the Riksbank might be tempted to regulate the monetary system based on the size of the note reserve rather than on the value of money (penningvärdet).

The risk of this appears significant enough to necessitate a legal amendment as soon as possible. But considering that the fundamental provision in article 6, section 1 of the Riksbank Act was modified as recently as 1930, it might be most appropriate to leave it untouched for now and only adjust the second section of the same article according to current requirements. This should be achieved through two changes: first, by regranting His Majesty the right he once had, in a somewhat simplified (rationaliserad) form, and second, by doubling the amount, possibly by fixing it at a constant relationship to the normal note issuance right, independent of the size of the gold reserves. Following a proposal from the War Preparedness Commission (Statens krigsberedskapskommission) in its report of 1918, article 6, section 2 might then have the following wording:

If necessary, the Government and the Parliament, or, if the Parliament is not convened, the Government, may grant the Riksbank the right to issue notes for an amount exceeding double the sum of the metallic reserve as stipulated in the first article.

III.

The uniquely most significant aspect of regulating the free currency concerns the considerations that must be given to the price level. This is a difficult and complex issue, which I do not feel even remotely capable of fully exhausting in this context. It seems very desirable to me that the Riksbank undertake a thorough investigation of it, led by one of the scholars who have studied it more fully than I have. For my part, I will limit myself to some of the most important but also most immediate questions in this context.

The first question should reasonably be the choice of the starting point for a policy of price stabilization. Probably it seems most natural to start from the situation immediately before the transition to the paper standard. This undoubtedly aligns best with the statements made on September 27. However, from many quarters, it has been advocated that the price level before *the last sharp decline in prices, thus in 1928 or 1929, should be the base. Thus, an increase in prices up to that level should take place. This is clearly a central issue.*

There is nothing inherently unreasonable about the proposal to reintroduce a price level from just a few years ago. The only question is how such an action would work. If the majority of the foundations on which the economic activity is currently based originate from the period before the latest price decline, then the strongest argument for such a claim would exist. However, as a start this [proposal] would need to be investigated.

Moreover, it is by no means certain that the fact that certain prices have acquired their current characteristics as a result of the fall in prices would also mean that they would change their character through a new increase in prices. It is possible that they would be adjusted in response to a price increase, so that no real change would result.

What matters most in this regard is likely the wage level. It seems quite clear that real wages have risen due to the price decline. However, it is entirely possible, if not quite likely, that a deliberate and openly conducted price increase carried out by the Riksbank would lead to higher nominal wage demands, even demands for wage increases that would not only correspond to the price increase that might have already occurred but also to what could be expected to follow in its wake.

Even if a reduction in real wages is considered desirable - a matter I cannot discuss here - a price increase appears to be both an uncertain and irrational approach. The only certain effect, in terms of relief in real production costs, would be in relation to fixed debts. It seems undeniable that a reduction in this regard would be welcome.

Despite this, it seems to me decidedly inappropriate to pursue the above-mentioned path [of a return to the price level of 1928-29] due to the significant difficulties associated with managing a free currency during rising prices. The effect will almost invariably be domestic commodity speculation, especially considering that many people remember the previous period of price increases and may even overestimate the effects of a new price surge.[40] *If such a trend emerges, the Riksbank's ability to control the value of money can be greatly weakened, or even disappear, leading to a worse situation than before.*

Mainly for this last reason, I recommend that the stabilization of prices should be based on the situation during the ending period of the gold standard, perhaps most appropriately the average during the third quarter of 1931. The price calculations that will guide monetary policy should be based on this reference point, to the extent that reliable price data for this period can be

[40] Heckscher is referring to the experience of high inflation in Sweden under the paper standard during World War I (Figure 1).

obtained.

The next question obviously concerns which of the many prices in society should be used as a basis for assessing future developments. The answer to this question is aggravated by the fact that a new foreign exchange value has been [achieved by] the Swedish currency, resulting in an inevitable price increase for certain domestically circulated goods that will remain permanent as long as the foreign exchange rates maintain their new level. Thus, average domestic price stability must necessarily go hand in hand with a changed relationship between different domestic prices. We have now two prerequisites; that the foreign exchange rates have moved in a specific direction and that the foreign price situation has remained constant. These two conditions must be discussed first.

The depreciation of the English currency, not only against gold but also in relation to the Swedish currency, constitutes the first factor. However, it seems most natural not to discuss it in isolation but rather in connection with the English price development.

According to the Economist's new weekly index, English wholesale prices increased by 8.3% between September 18 and October 14, while the depreciation of the pound sterling against gold has been around 20% and against the Swedish krona 8.6%. From a Swedish perspective, it is not so much the "general" English price level that matters but the prices of goods in English-Swedish trade. For the time being, it appears reasonable to expect approximately unchanged prices in Swedish kronor for goods to and from England. Thus, it is natural to expect a price increase for other goods in foreign trade without any compensatory price reduction of the English goods.

But then the question arises about the development of world prices or rather, gold prices. The Economist's so-called gold price index shows a considerable decrease up until the beginning of October, but there was some increase between the 7th and 14th of this month. Irving Fisher's American index also shows a very slight price increase for the past week. The natural starting point for the reasoning would, therefore, be foreign price stability, expressed in gold, and an increase in English commodity prices in proportion to the depreciation of the pound sterling against the Swedish krona.

Under these conditions, it is almost inevitable that the prices of imported goods, considered as a unit, must have increased in Swedish kronor. As for Swedish export goods, this [price increase] is not as certain because it is possible that the export industry prefers to sell more at lower foreign prices, as long as these correspond to an unchanged price in Swedish kronor, rather than not selling more than before while receiving an unchanged amount in foreign currency for what is sold. However, in any case, one cannot expect any price decline within Sweden for export goods and, in that sense, at least no compensation for the price increase on imported goods. This has significant consequences for the treatment of the price level as a *whole.*

If one wishes to keep constant the average price level, [which is] composed of prices for imported, exported, and domestically produced goods, then the only possibility seems to be to lower the prices of the third group to the extent that it compensates for the increase in the first group and possibly also for the second group of goods. Such a policy would likely curb imports, stimulate exports, and therefore lead to a reduction in foreign exchange rates [an appreciation of the krona], which in turn would have an even more price-reducing effect as foreign prices, when converted into Swedish currency, would become lower.

To undertake such an operation using the usual means of monetary policy, which are far from precise instruments, in a way that results in price stabilization, poses significant difficulties, even if it is not impossible. But regardless of this, the method would likely trigger depression phenomena. However, the main advantage of the free exchange rate system should be that it does not inherently create depression. Although a program like the one outlined must be considered the closest to the requirement for an unchanged domestic purchasing power for the Swedish krona, it seems hardly prudent.

Instead, one could allow the increase in import prices not to be met by price reductions on other goods and primarily aim for price stabilization of domestically produced goods. A certain price increase would then characterize the average price level, but it is unlikely to be substantial. Such a solution seems to me to be the closest at hand.

This reasoning is based, as evident from the above, mainly on [assuming] unchanged world market prices. However, as long as foreign exchange rates can move freely, there will be no change in the situation - at least in a schematic sense - even if the foreign price level were to change. In such a case, an increase in foreign prices would proportionally lower the foreign exchange rates in Sweden. This could continue indefinitely if the Swedish currency were disconnected from gold in both directions, as previously suggested. The same applies in the opposite direction in the case of a foreign price decline.

Certainly, this schematic reasoning requires a very strong reservation regarding business cycle fluctuations (konjunkturväxlingar), since it became apparent during the earlier Swedish paper standard era that they had a strong tendency to be transmitted to Sweden, despite there being no necessary connection between Swedish and foreign monetary conditions. However, exploring the immensely complicated issue of business cycle fluctuations in this context is not possible. What has been said may at best imply that, under otherwise similar conditions, Sweden has a better chance of remaining independent of foreign business cycle fluctuations under a paper standard than under an international monetary system.

However, the issue of business cycle fluctuations is also related to other aspects of the *management of the price level, namely the relationship between wholesale and retail prices, production costs, and the cost of living.*

It is a common view at present that monetary policy should bring about a shift between different price groups which, unlike the previously discussed groups, do not hold a different position in foreign trade. What has prompted this demand is undoubtedly the fact that wholesale prices and the cost of living have shifted relative to each other during the course of price developments. The cost of living has shown much greater inertia than wholesale prices, at least to the extent that the existing index calculations are credible witnesses.[41]

However, it does not follow from this that monetary policy can do anything, or at least anything significant, to equalize prices in different areas. It is not easy to see how this could happen other than to the extent that monetary policy induces a general price increase or decrease and thus acts differently on more and less sluggish prices. If one does not desire such a tendency for a shift in the general price level, which, as previously stated, appears very risky, there is then no possibility of restoring the different price groups to their relative positions before the war. A request for raising wholesale price level to the same level - still based on pre-war relative prices - as the cost of living would, in reality, result in such a rise in the general price level. This would certainly not leave living costs unaffected, even if it did not raise them to the same extent as wholesale prices.

Instead of following such a course, one should, in my opinion, set all prices immediately before the introduction of the paper standard to be equal to 100 and ignore their relative shifts since the pre-war period. This does not mean that the current relationship between these prices is considered desirable or appropriate, only that it is not the responsibility of monetary policy to bring about such an adjustment of relative price levels.

It is a separate question from the one currently being discussed, which prices the Riksbank should specifically choose as the point of reference for its policy regarding the desirable future price development. Expressed using the method of index calculations, the previously discussed question concerns whether all prices at the starting point during the third quarter should be set at their relative relationships from the pre-war period or, on the contrary, set all equal to 100. My conclusion was that the latter approach should be adopted.

Now, the focus is on the choice of the index to be used in the future, based on a situation where all goods prices are set at 100 at the starting point. The choice concerns which of all the alternative indices, which are likely to diverge in the future as well, that the Riksbank should strive to keep at or near 100.

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[41] See Figure 3 displaying the discrepancy between the wholesale price index and the cost-of-living index.

This issue is truly the core of monetary policy under a free currency. However, it is impossible for me to investigate this problem here. I must limit myself to the unconfirmed statement that the program first developed by Professor Davidson and later more fully presented by Docent Lindahl seems to have the strongest arguments in its favour.[42] *According to this program, a price level that varies in inverse relationship to productivity, not a fully stable price level, has the best prospects of preventing disruptions in the economy. But the very important and complicated nature of this problem makes it necessary for the Riksbank to seek advice from those who have specifically devoted attention to it. I will, therefore, confine myself to this observation.*

In practice, such a program will require special attention to developments in wholesale prices. This is confirmed by the fact that they are likely to change much faster in the vast majority of cases than retail prices. For this reason, they offer the Riksbank far better guidance concerning the forces within the economy that need to be considered in the conduct of monetary policy.

Retail prices will indicate to what extent the measures taken have ultimately achieved their goal. They become a confirmation, not a forecast. However, it is given that both are equally important. Therefore, the Riksbank must have all kinds of price indices at its disposal and not commit in advance to always follow any specific index, even though the wholesale price index seems to me to generally provide the best guidance concerning the decisions to be made.

This requires the additional comment that no price index alone is capable of providing sufficient guidance on the monetary policy that should be pursued to create stability in the monetary system. The Riksbank must consider many factors that often even precede any price changes, namely the entire large group of economic phenomena which are affected by the expectations (föreställningar) of future changes in one direction or another. In reality, this approach comes much closer to the kind of judgement that central banks have long been accustomed to under the gold standard. In this way, it is an easier task for the management of the Riksbank than the more unusual one of evaluating the behaviour of price indices. For this reason alone, I will not go further into questions related to this issue.

In any case, it appears evident that the Riksbank has a greater need for help from economists than it has had in the past. For this reason, I emphasize the desirability of the Riksbank of engaging a younger researcher in this field to provide continuous advice and assistance. The immediate task for such an expert will be to comment on the collected price data, for the benefit of the Riksbank as well as for the public. In this way, on the one hand, the Riksbank's

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[42] Davidson proposed that the price level should move inversely to changes in productivity. Erik Lindahl developed Davidson's rule in two books published in the 1920s, Lindahl (1924, 1930).

management can take full advantage of the resources at its disposal. On the other hand, the public will be informed about the reasons for its [the Riksbank's] policy. Tendencies to exaggerations in the assessment of the economic situation, sometimes in one direction and sometimes in the other, will be counteracted.

IV.

An exceedingly difficult question is whether any constitutional guarantees for a free currency can be created, similar to those that have, thanks to long and hard-earned experience, been provided to the gold standard by the constitution and general law in Sweden. Unfortunately, it must be said that the possibilities for this are small.

A free currency does not have the simple and noticeable reference points that make the gold standard a system where anyone can see if the established rules are followed or not. It is through this flexibility that the paper standard can better adapt to the fluctuations of economic life but also lead to much greater confusion than has ever been the result of a purely metallic standard. What little could be done to anchor the free currency constitutionally, however, should undoubtedly be done. It is possible that better reference points could eventually be found than what I am currently able to propose.

In previous discussions about a free currency, it was generally assumed that the central bank could be bound to maintain a constant price level. This could be - at least nearly - as reassuring as its obligation to redeem its notes with gold or, better yet, to keep foreign exchange rates within the gold points. However, such a view undoubtedly represents a dangerous oversimplification of the problem.

First, it would then be necessary to give a constitutional status to a certain price index since the choice of index is of great importance for the conduct of monetary policy. Such a set-up would likely prove incapable of considering the constant shifts in economic life.

Second, probably any price index would be an unsatisfactory reference point for monetary policy for the reasons already pointed out. At best, one could limit price fluctuations by determining a maximum allowable deviation from an unchanged position concerning a price index or a combination of price indices. If monetary policy were found to be highly deficient, it is possible that such an approach would have to be taken. But it would be very impractical to engage in such regulation now when both the one and the other are yet untried, and there is reason to hope that the Riksbank will be able to manage a much more flexible system.
However, this does not prevent government authorities (statens organ) from clearly expressing their views on the substance of Swedish monetary policy. In fact, a very suitable opportunity presents itself when the decision on the non-redemption of banknotes according to article 72 in the constitution of Sweden (regeringsformen) must be confirmed by the parliament within

twenty days after its opening to avoid expiration. If my proposal to change the Coinage Act and the Riksbank Act is accepted, it should obviously be presented at the same time.

Quite apart from the latter, there should be an explicit adherence to the principles of the new monetary standard in the motives behind the government proposal and the parliamentary decision. Perhaps this should most simply be formulated as follows: the preservation of the domestic purchasing power of the Swedish krona, namely in the form of average unchanged prices for domestically produced goods in relation to the price conditions prevailing immediately before the country's changeover from the gold standard. Ideally, it should also be explicitly stated that both the foreign value of the Swedish krona and the size of the stock of circulating Riksbank notes should be made independent of the stated purpose. This is also the justification for the proposed changes in the law that I have allowed myself to suggest.

V.

Even if one adheres to a purely national [independent] currency and thus does not aim for fixed exchange rates with any other country, it does not follow from this that fluctuating or uncertain exchange rates in the future could be treated as a trivial matter. On the contrary, they represent one of the most problematic aspects of a free currency, but they are inherently inseparable from it. In that regard, they must be accepted until the time when a return to an international monetary system becomes feasible. However, there are two possibilities to mitigate the disturbances before that moment. They deserve at least to be discussed.

The first possibility concerns the short-term fluctuations from day to day. In itself, it would be possible to overcome or at dampen them through regulating purchases (regleringsköp) and sales of foreign currencies. The difficulty lies in distinguishing temporary fluctuations from lasting changes. It may happen that operations aimed at temporary regulations encounter changes in the fundamental value of the exchange rate that cannot be managed in the long run in this way. Thus, such operations immediately lead to substantial losses, to more violent fluctuations in the rates than if no regulatory attempts had been made, and ultimately even to the neglect of deeper-reaching measures.

Under certain conditions, in spite of the problems mentioned above, exchange rate operations may still be necessary for regulatory purposes. However, they should not be resorted to without a serious need. At present, such a need seems decidedly absent. The fluctuations in the exchange rate of the krona since leaving the gold standard have been unexpectedly small. Therefore, the most natural course of action seems to be, at least for the time being, to leave the rates to themselves.

A completely different question, however, is whether anything can be done to protect the business sector and especially the export industry, which operates on deliveries several months *ahead in time, from the consequences of changes in exchange rates that cannot or should not be annulled.*

The export industry is not in a position to protect itself from such risks on its own because it has more claims than debts abroad. It is therefore unable to offset them. However, the commercial banks are in the opposite position. Since claims and debts abroad largely balance for the country as a whole, it is not an impossible task to create guarantees against the effects of exchange rate fluctuations.

It requires more banking expertise than I possess to discuss such a system in detail, but undoubtedly, it can be created. It would mean a lot to facilitate the production process under the current monetary system. It would also help industrialists and business to reconcile with the situation and fend off demands that would be unfortunate to comply with.

VI.

The last question concerns the means available to the Riksbank when implementing the program of the paper standard. In principle, there are no other means than those that have existed and always been used to preserve the gold parity. Over somewhat extended periods, the gold standard has required precisely the same control over the domestic economy that will come into play with the paper standard. In this regard, there is nothing new. However, there are nevertheless two differences compared to the situation under the gold standard.

One difference is that temporary disturbances under a gold standard can be smoothed out through gold movements or short-term international credit. Such means are inapplicable or made more difficult under a paper standard. In that respect, the situation has got worse. However, they are more related to the symptoms, i.e., the tendency of foreign exchange rates to shift, rather than the disease, which is the misalignment of the domestic economy concerning stated goals of the monetary policy. Thus, they may do more harm than good in the long run. Under a paper standard, one can directly intervene against the deficiencies in the domestic price system and thus arrive at the decisive point more quickly.

On the other hand, foreign exchange rates can be left more to their fate. It must not be denied that under a paper standard speculation in changes in the foreign exchange rates, both domestically and especially abroad, can pose the greatest, indeed, insurmountable difficulties for a country's monetary system. The only thing that, to my knowledge, can be said in such a situation is to avoid anything that can feed such tendencies.

The second difficulty is related to the first and must be dealt with in the same way. It consists of the fact that while speculation under a fixed gold parity usually tends to preserve parity, i.e., deviations are met with operations assuming that everything will return to the old situation, *there is no such tendency under a paper standard. On the contrary, shifts in exchange rates, easily lead to speculation in the opposite direction, i.e., away from the old situation because exchange rates have no fixed position.*

As far as I understand, there is no real remedy for this because the monetary systems of different countries are truly in a constantly changing relationship with each other under a national paper standard. It is one of the fundamental inconveniences of this state of affairs. But an individual country must give as clear conceptions (föreställningar) as possible about the policy it follows to create as much confidence as possible in the sustainability of its monetary order. This is by no means equivalent to instilling the idea of an increase in the foreign value of its currency, as speculation in bullish tendencies is as disastrous for stabilization as speculation in the opposite direction. The goal should instead be to inspire confidence in the stabilization itself. As I have already stated, the experience of the first weeks of the paper standard indicates that this result has been obtained.

Under these conditions, I have no reason to go further into a discussion of the various means of monetary policy, especially as I have no specific expertise in this area. Discount policy is always the most obvious approach and usually it has the least disruptive effects. However, under different conditions, it may be necessary to resort to other measures, with a stronger tendency to disrupt normal economic activities, such as credit restrictions in addition to those resulting from changes in the discount rate, interest-bearing deposits in the Riksbank and more.

VII.
Summary

While emphasizing again how inadequate the investigation I have been able to present here is, I will now summarize the conclusions to which I believe I have arrived.

I. The Swedish monetary system should not be linked to the gold standard or any other international monetary system until it has reached a much more stable state than at present. However, on the other hand, such a connection should be established as soon as its stability can be considered secure, at the exchange rate that the Swedish krona has at that time, without any attempt to restore the old parity. Connecting to any single foreign country's monetary system is hardly advisable under any circumstances.

II. Therefore, for the time being, Sweden must establish and maintain an isolated, purely national currency, based solely on the conditions of our domestic economy. This requires the following legal changes:

> *1) Changes in the Coinage Act and the Riksbank Act that free the currency from gold, not only downwards but also upwards.*
> *2) Changes in the provisions for the right of extra issuance of Riksbank notes.*

III. The foundation of the Swedish monetary system should be domestic price stability. The price level during the third quarter should be the primary reference with the aim for an unchanged level of domestically produced goods. However, the Riksbank should monitor price developments in all different areas, with particular attention to the wholesale price level and with the purpose of adjusting it to some extent inversely to the development of productivity.

IV. The King and the Parliament should explicitly endorse the program for the country's monetary policy in connection with the decision on continued inconvertibility.

V. Measures to smooth out short-term foreign exchange rate fluctuations should be avoided for the time being. However, it is desirable to create insurance against the effects of changes in foreign exchange rates in the long run.

VI. The means available to the Riksbank for its monetary policy are the same as under the gold standard. However, due to the particular difficulties facing the paper standard, it is more critical than usual to clarify the principles of monetary policy and create confidence in its maintenance.

Stockholm, October 24, 1931.
Eli F. Heckscher

Summarizing the report by Heckscher

In his answer to question I.A, Heckscher thought it was desirable to tie the krona to an international monetary standard, based on either gold or on a foreign currency, once the international monetary system was satisfactorily organized. However, in reply to question I.B, Heckscher believed that it would probably take a considerable time before a lasting international currency system could be established. In the meantime, tying the *krona* to the pound should be seriously considered if Britain found a proper solution to its monetary problems.[43]

In response to question I.C and I.D regarding the basic conditions for a return of the *krona* to an international monetary system or a foreign currency, Heckscher viewed it as self-evident that Sweden should join at the going exchange rate of the *krona.* His recommendation was based on the experience of Sweden's return to the gold standard in the early 1920s. At that time the deflationary policy of the Riksbank, aimed at raising the gold value of the *krona* to the pre-1914

[43] On this point Heckscher was foreshadowing actual events: in 1933 the Riksbank pegged the *krona* to the pound and held the rate fixed until 1939, while no international monetary order was restored in the 1930s similar to the stability demonstrated by the pre-1914 gold standard.

parity after the war-time inflation, caused pervasive unemployment, a large reduction in the output and widespread social unrest.[44]

Concerning questions I.E and I.F about the proper rule for the Riksbank under the new paper standard and the choice of price index as a guide for the Riksbank, Heckscher stated that a stable purchasing power of money was the best goal for monetary policy. He recommended that the price level of goods domestically produced should be stabilized at the level of the third quarter of 1931.

The Riksbank should not try to change the relationship between the wholesale price index and the cost-of-living index. (Figure 3). As monetary policy could not do anything in this field, the Riksbank should set all prices equal to 100 at the time immediately preceding the adoption of the paper standard and ignore any disparate movements of individual indices in the past.

The future behavior of the price level, once it was set at 100 at the introduction of the paper standard, was the key issue of monetary policy under a paper standard according to Heckscher. He favored the rule first developed by "Professor Davidson and later in more depth by docent Erik Lindahl" of a price level varying inversely with the growth in productivity.

Heckscher stressed that the Riksbank should make use of all sorts of price indices, not just one. He strongly recommended the Riksbank to employ a young researcher with the task of assisting the Riksbank with advice and help. This expert should comment on the price data collected, making the analysis available to the management of the Riksbank and to the general public as well. Most likely, he had Dag Hammarskjöld in his mind.

Heckscher discussed whether any constitutional guarantees should be adopted in support for the paper standard similar to those once included in the Swedish constitution (*grundlag*) and general law (*allmän lag*) pertaining to the gold standard. He was pessimistic about the feasibility of such legal guarantees, since the paper standard lacked those simple points of

[44] After the inflation of World War I, Heckscher was a strong advocate of a return of the Swedish currency to its prewar gold parity. In the discussion of Sweden's monetary policy at *Nationalekonomiska Föreningen* on November 26, 1931, that is a few weeks after he answered the questionnaire of the Riksbank, Heckscher explained why he now was suggesting, in case the *krona* was tied to gold again, that the return should not be made at the old gold parity. The deflation in the early 1920s had to some extent corrected for the distributional effects of the preceding war-time inflation. However, a deflation in 1931 to pave the way for a return to gold at the old parity would have no positive effects on the distribution of wealth and income. Rather, it would aggravate the situation for many groups that already were suffering from the recent deflation. Heckscher (1931a, p. 164). The learning of the economists from the experience of the deflation of the early 1920s is analyzed in Fregert and Jonung (2004).

reference *(hållpunkter)* of the gold standard that made it easy to see if the rules of the system were followed.

Still, attempts ought to be made to anchor the paper standard in legislation, suggesting that in due time it would be possible to find better points of references for the paper standard than those presently available.

To legally require the central bank to maintain a stable price level was probably dangerous. It would give a constitutional status to the weights of a given price index, which would not adjust to the continuous changes that occur in the economy. One specific price index was, in any case, an inadequate point of reference for monetary policy. At best, the law could prescribe some maximum allowance for the deviations around a fixed level of a specific price index or of a combination of price indices.

Fluctuating exchange rates was a major drawback of a free currency according to him. As the external value of the *krona* had exhibited unexpectedly small fluctuations so far, it seemed reasonable that the Riksbank should not intervene. Heckscher believed that the commercial banks would in due time offer companies in the export sector guarantees against the impact of fluctuations in exchange rates.[45]

Concerning question II, about the appropriate monetary instruments under a paper standard, Heckscher pointed out that the instruments under price level targeting were in principle the same as under a gold standard. He recommended chiefly the use of discount policy.

In summary, Heckscher presented a balanced report, strongly influenced by his appraisal of the Swedish monetary experience during World War I and the 1920s. His style was modest, and his recommendations were commonly surrounded by qualifications. He showed considerable uncertainty about the future workings of Sweden's newly adopted paper standard and feared that speculation would pose an insurmountable obstacle. His frequently voiced pleas for public announcements, and declarations in support of the program should be seen in the light of this concern.

2. Gustav Cassel's report of October 22, 1931

Gustav Cassel mailed his response on October 22, 1931.

[45] Later in 1931, Heckscher published a book extending his answers to the Riksbank. Here he discussed the creation of a "forward market" for foreign currencies similar to his arguments in his report to the Riksbank. See Heckscher (1931b, p. 113).

To the Board of Directors of the Riksbank.

At the request of the First Deputy on October 9, I hereby submit the following statement regarding the guidelines for the development of the Swedish monetary system.

When the question originally arose as to whether the Riksbank could continue to maintain the redemption of its banknotes into gold, I pointed out that the suspension of gold redemption did not necessarily imply a deterioration of the domestic (inre) purchasing power of the Swedish krona. The deeper reason for Sweden's departure from the gold standard was the unreasonably inflated demand for gold, which led to a constant rise in its value expressed in a continuous decline of the price index measuring the prices of goods relative to gold.

Both for Sweden and England, it became increasingly burdensome to follow this price decline. And as a result, Sweden was forced to cut its currency's link to gold. The natural consequence and the only safe policy were then to allow the krona to maintain the domestic purchasing power it held just before leaving the gold standard. The government also accepted this program. In the Finance Minister's statement to the minutes of the Council of Ministers on September 27, it is stated: "The monetary policy should now aim at preserving the domestic purchasing power of the Swedish krona using available means."[46]

Since September 28, the Riksbank also seems to have followed this program. By immediately and decisively raising the discount rate, the Riksbank indicated its clear intention to prevent any tendency towards inflation, which might have been expected, especially abroad, as a consequence of leaving the gold standard. According to the available price index data, the Riksbank seems to have succeeded in this endeavor.

This monetary policy should continue to be maintained. Until greater clarity is gained regarding the future structure of the international monetary system, Sweden is compelled to have a free paper currency, which Sweden must regulate independently. For such a regulation, the only goal that can be set is the stabilization of the krona's domestic purchasing power. However, this goal must be quantitatively defined by determining a specific measure for the Swedish krona's purchasing power.

In this regard, we have to choose primarily between stabilizing wholesale prices or stabilizing the cost of living. It should be noted that the normal equilibrium between these two price levels has been greatly disturbed by the recent significant price decline in wholesale goods. The cost of living has not followed the same pace downward, resulting in an abnormally large gap

[46] This sentence is taken from a memo sent by Gustav Cassel to Felix Hamrin, the minister of Finance, the same day as Sweden left the gold standard.

between the two price levels, which is likely greater than what is compatible with overall equilibrium in the country's economy.

The wholesale price index of the National Board of Trade (Kommerskollegium) averaged 148 in 1928 and had dropped to 110 in July 1931. This represents a decrease by 25.6%. The cost-of-living index of the National Board of Social Welfare (Socialstyrelsen) was 173 in July 1928 and 158 in July 1931. The decrease here is 8.7%, which is only one-third of the wholesale price level's decline.

A currency stabilization is apparently not possible while maintaining such an abnormal proportion between wholesale prices and the cost of living. A certain convergence between these two price levels is an indispensable condition for achieving stability in the country's economy. It seems reasonable to primarily seek the necessary convergence by allowing a certain increase in wholesale prices, which have experienced abnormal falls, leading to the existing imbalance.

It will also be necessary to rely primarily on this method since a sufficient reduction in the cost of living would likely require significant reductions in nominal wage rates, reductions that would hardly be achievable without considerable social conflicts. Moreover, it should be considered that the general public's direct interest in the Swedish krona's domestic purchasing power is primarily associated with the level of living costs. Stabilizing the cost of living at the level it was in the middle of this year would be perceived by the general public as a satisfactory stabilization of the krona's purchasing power. Above all, it would not result in any change in the real value of the prevailing nominal wage rates.

However, it is certainly desirable to base the measure for the Swedish krona's purchasing power on a broader foundation than just the cost of living as calculated by the National Board of Social Welfare. Consideration should be given not only to the consumption of a working-class family but, as far as possible, to the entire amount of utility (nyttighetsmängd) that Sweden's national income can purchase.

The index for the purchasing power of the krona should preferably be calculated on a weekly basis. However, it should not refrain from considering important prices that can only be obtained at longer intervals. It should be kept in mind that the purpose of the index is to measure the krona's purchasing power. For the exchange rate policy (valutapolitik) of the Riksbank, only the total index is of significant importance. The index numbers for particular product groups are of interest only from more specific economic viewpoints.

By stabilizing the Swedish krona's domestic purchasing power at a level determined according to the specified criteria, Sweden's exchange rate policy would be fixed as long as Sweden is compelled to maintain an independent free currency. With such a program, we make ourselves *temporarily independent of the irrational and entirely unpredictable forces that currently govern the fluctuations in the value of gold.*

Of course, it cannot be avoided that foreign exchange rates may display significant fluctuations. To the extent that these fluctuations depend on uncertainty about the Swedish exchange rate policy and its [the Riksbank's] ability to implement an explicit program, they will eventually weaken when it becomes clear that we know what we want. The international assessment of the Swedish krona can, in other words, be expected to accurately reflect the Swedish krona's domestic purchasing power to an increasing extent.

However, any changes in the purchasing power of gold will obviously result in corresponding changes in the Swedish krona's gold value. It is possible that some countries will continue to increase the value of gold by further accumulating it. In that case, the Swedish krona's gold value would decline, and thus, our exchange rates with gold-standard countries would rise. This is something we can accept with complete calmness. It is precisely the advantage of avoiding the disastrous deflation that follows from the ongoing appreciation of gold, which should be the deeper motivation for leaving the gold standard.

On the other hand, we must also consider the possibility that the deflation in the gold-standard countries may be interrupted and replaced with a certain inflation, leading to an increase in the commodity price levels of the gold-standard countries. The Swedish krona's gold value would then increase correspondingly, and the exchange rates with gold-standard countries would decline. It is even possible that in this way, the Swedish krona's former gold parity may temporarily be restored.

The question of tying the Swedish krona to an international monetary system clearly depends on when and in what forms such a system of sufficient stability is established. The question that needs to be answered in this regard is primarily the question of the prerequisites for restoring a common international gold standard system. When assessing these prerequisites, it must be clarified which factors have contributed most to the breakdown of the old gold standard system.

According to the classical theory of the international gold standard, the world's gold reserves would automatically be distributed among different countries, so that their price levels would be raised to a level corresponding to an equilibrium in international trade. If a country had too much gold, it would be used to expand its domestic money supply. The consequence would then be a price increase, benefiting imports and hampering exports, resulting in a deterioration of the trade balance and gold exports, with subsequent downward pressure on the overly high price level.

This system is clearly undermined if some major creditor countries attract a large amount of gold without using it to expand their own money supplies. In that case, the other countries would *receive too little gold, and the price level in these countries would come under strong pressure.*

If the gold-rich countries simultaneously pursue a monetary policy that tends to push down their price level in proportion to the price decline in other countries, then the accumulation of gold will have led to a general appreciation of gold's value and a corresponding general depression of commodity prices measured in gold.

We have witnessed precisely such a process since the middle of 1929. The United States and France, along with a few smaller countries, have accumulated disproportionately large amounts of gold, resulting in the rest of the world experiencing an increasingly noticeable gold shortage.

Colonial countries, such as Australia, several South American states, and finally Canada, have been subject to such severe pressure that they have been forced to abandon the gold standard and faced significant difficulties in fulfilling their payment obligations. During the current year, Austria and Germany have experienced similar difficulties. Ultimately, England and the Scandinavian countries have found the gold drain so strong that they have been forced to abandon the gold standard.

Two factors have manifested themselves in this regard. One is the unilateral accumulation of gold in certain countries. The other is the failure of these countries to use this gold to raise prices accordingly. As a result, the prerequisites for the normal functioning of the international gold standard system have been destroyed.

It is unlikely that the restoration of an international gold standard system will be possible before specific guarantees are given for the management of this system in accordance with its fundamental principles. Such guarantees would require intelligent and in-depth international cooperation, which at present cannot be seen as seriously attempted. Therefore, we must prepare ourselves for the possibility that it may take a long time, perhaps many years, before the restoration of an international gold standard system becomes possible.

The future currency policy of gold-standard countries is not currently possible to assess. The necessary prerequisites for Sweden's return to a gold standard do not seem to be present in the near future. This applies to any tying of the Swedish krona to gold, regardless of the parity at which this tying would take place. As long as gold is subject to such strong fluctuations in value, as has been the case recently, it seems desirable for us to keep our currency free from these fluctuations.

The countries that have abandoned the gold standard must, for the time being, pursue an independent monetary policy. However, for them, the question of [international] cooperation will become increasingly important. The task for this cooperation would naturally be a joint *stabilization program with the consequent possibility of stabilizing exchange rates between the participating countries. It is conceivable that, in this way, a new international monetary system with a certain domestic stability would emerge.*

The natural approach would be for England to take a central position in such a system, so that other free currencies would gather around a pound currency, whose purchasing power against goods is maintained with certain stability. If this were to happen, it would seem natural for Sweden to join such a currency group. However, joining an isolated pound currency without the guidance of a specific stabilization program seems out of the question under any circumstances.

The prospects for a new organization of the world's monetary system are currently so uncertain that it is not worth attempting to formulate a program for how Sweden should respond to such an organization. Therefore, a closer answer to the questions marked as I. A., B., C., and D by the Riksbank is currently not possible. For now, all we can do is to wait, closely follow the developments in the world, and in the meantime, adhere to the independent stabilization policy (stabiliseringspolitik) described above for our own currency.[47]

Regarding the questions raised in section II, I believe it is essential that the Riksbank be granted sufficient flexibility to implement the stabilization program outlined here without being unnecessarily disturbed by extraordinary demands that may arise during the current turbulent times. It seems particularly necessary to remove the current restrictive regulations governing the Riksbank's note issue rights in relation to so-called gold coverage. Such legal provisions are generally of little use but have, as recent experience has shown, the potential to cause serious damage. In the October issue of Skandinaviska Kreditaktiebolagets kvartalsskrift, I have elaborated extensively on the reasons in favour of an immediate international agreement to abolish all such legal provisions.[48]

In the near future, it may be essential for the Riksbank to be able to issue as many banknotes as the situation requires without any legal hindrance. In several countries, there has been a tendency among the public to seek security by accumulating large quantities of banknotes. Although such a demand for banknotes may be regarded as irrational, it must be met, and the safest means to meet such a rush is to clarify that the Riksbank will meet every demand.

It is natural to fear that increased issuance of banknotes for such purposes may be perceived as a sign of inflation. Therefore, it is essential to make it clear to the public that inflation occurs only when the increased volume of banknotes is used as active purchasing power [i.e., spent]

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[47] Cassel uses the term "stabilization policy" for a monetary policy aimed stabilizing the internal value of the krona. The term does not include fiscal policy.
[48] See Cassel (1931d).

and, as a result, leads to an increase in commodity prices.

As long as the banknotes are merely hoarded and kept in reserves, they have no such effect. An increase in the volume of notes outstanding is, under this assumption, irrelevant to the purchasing power of the krona. As long as the Riksbank ensures that this purchasing power is held constant, there is no reason to worry that the circulation of banknotes might grow and even exceed the maximum limits prescribed by the current law. Nothing could be more harmful than if the public were to believe that the Riksbank's ability to issue banknotes was exhausted and that no further credit could be obtained.

From what I have stated above, it should be clear that a definite answer to the question raised in section III cannot currently be given. The situation requires constant attention to the development of international currency relations, and an ongoing evaluation of the stance Swedish monetary management should adopt towards this development.

Djursholm, October 22, 1931
Gustav Cassel

Summarizing the report by Cassel

First, Cassel noted that he had advocated a policy of maintaining an unchanged domestic purchasing power of the *krona* before the fall of the Swedish gold standard. He added that the government had adopted such a program, and that the Riksbank also appeared to have followed it since September 28.

Under prevailing circumstances, before the future state of the international monetary system was known, Cassel argued that Sweden must have an independently managed paper standard and that there could hardly be any other rule for this standard than the stabilization of the domestic purchasing power of the krona.

According to him, this goal had to be determined by the use of a quantitative measure of the purchasing power of the krona. Either wholesale prices or of the cost of living should be stabilized. However, Cassel believed that the "normal equilibrium" between these two indices did not exist at present because the cost of living had not fallen as much as wholesale prices (Figure 3). In Cassel's opinion, these two series had to converge before any stabilization could take place. A slight rise in wholesale prices was the best way to accomplish this, given that lowering of the cost of living would imply a substantial reduction in nominal wages and subsequent social unrest.

Cassel argued that the public would favor stabilizing the cost of living at the level prevailing in mid-1931. Most important, it would not cause any changes in the real value of existing nominal wage rates. Since the cost-of-living index was based on the consumption of a working-class family, he suggested that a "broader" measure of the purchasing power of the *krona* than the cost-of-living index should be constructed in the future, preferably computed on a weekly basis. The Riksbank should adopt this general index as a guide for its policy, paying attention to indices for separate groups of goods only under special circumstances.

According to Cassel, Sweden's return to an international monetary system should depend on whether such a system was sufficiently stable. Cassel did not expect a rapid return to an international gold standard. Under present circumstances, Cassel saw no other way for Sweden but to adhere to its monetary program and to maintain a paper standard, avoiding tying the krona to gold again. Sweden might cooperate with countries having independent standards, specifically with Great Britain. Only if England decided to stabilize the purchasing power of its currency, would it be proper to tie the krona to the pound.

Due to the extreme uncertainty about the future organization of the international monetary system, Cassel felt he could not give a detailed answer to questions I.A, I.B, I.C, and I.D. Instead, he suggested a wait-and-see strategy, where Sweden in the meantime carried out an independent stabilization policy based on domestic price stabilization.

Turning to question II, Cassel recommended that the Riksbank be given sufficient freedom of action to implement the program of price stabilization. Specifically, he suggested abolishing legal restrictions on the note issue of the Riksbank related to the backing of its notes by gold. Such restrictions were generally of no use for monetary policy; rather, they could easily cause grave damages as recent events had confirmed. He referred to his article in the October issue of the *Quarterly Review of Skandinaviska Kreditaktiebolaget,* pleading for an immediate international agreement to abolish all legal reserve requirements for central bank note issues.[49]

Cassel advised the Riksbank to stand ready to supply as many notes as demanded by the public, pointing at the prevailing tendency of hoarding of notes in several countries. The Riksbank should not fear that a run would cause inflation. Prices would increase only if the growth in the note issue led to a rise in active purchasing power (*aktiv köpkraft*), and not merely to hoarding. Nothing could be worse than having the public believe that the Riksbank was not able to put enough notes in circulation. Actual events in Sweden revealed that Cassel's fear of bank runs was exaggerated.[50] It is likely that Cassel had in mind his discussion with Kreuger on the risk of bank runs a few weeks earlier. He might also thought about the hoarding of Riksbank notes

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[49] Cassel (1931).

[50] The ratio increased from an annual average of 11.9 percent in 1930 to 12.0 per cent in 1933.

that followed the outbreak of war in August 1914, when Sweden left the gold standard.[51]

Finally, in reply to question III, Cassel declined to give an answer, concluding that the authorities should closely follow international monetary developments and be ready to revise Swedish monetary policy in response to changing circumstances.

To sum up, Cassel was more assertive and less modest than Heckscher, sometimes writing in the first person, and referring in a few cases to the advice he had already given elsewhere. His report was considerably shorter than Heckscher's, thus dealing with a smaller number of issues. It focused on the causes of the fall of the gold standard and on the future of the international monetary system, issues that Cassel discussed in detail in many contributions.[52] Cassel stressed repeatedly that the main advantage of leaving gold was that Sweden avoided being dragged down by the devastating international deflation.

3. David Davidson's report on October 22, 1931

Davidson presented one main report and one appendix. The translation of the main report is displayed first followed by his appendix on the struggle for gold.

On the desirable guidelines for the development of the Swedish monetary system:

The recent unpegging of Sweden's currency from the gold standard was necessitated by the events of the past and especially by events most recently. Sweden's participation in the competition for gold, which developed into a pure calamity for the gold standard system during the summer, would have further worsened the situation. Three countries - Holland, Switzerland, and Belgium - with a total population of only 20 million, increased their gold reserves by a total of 430 million dollars during the three-month period of July to September, exceeding the world's entire annual gold production.

The depreciation of Sweden's currency following the unpegging should not be considered as decisive for the actual value of the Swedish krona. The depreciation has been a necessary consequence of the unpegging because the [market] assessment of the krona's value now lacks the support that the redemption of the krona into gold previously provided. To some extent, it may have been influenced by the fact that the international value of the Swedish krona has remained below [the gold] par for a large part of this year - a sharp contrast to the situation in

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[51] Cassel (1917, pp. 34-45) analyzed in detail the hoarding of notes in 1914-1915.

[52] On Cassel's criticism of the performance of the gold standard in the interwar period, see Cassel (1932a) and Cassel (1936) as well as Irwin (2014).

1930.

A small country should have its currency's international value above par.[53] *However, the main reason was that the normal international speculation became uncertain about the value of the Swedish krona, leading unsurprisingly to a too low estimation. If the Riksbank manages the Swedish krona in a rational manner, the exchange rate for the krona will likely become more accurate.*

Regarding the direction of Sweden's future monetary policy - which is addressed in points I A - B and II of the attached questionnaire - it is indisputable that if the link between the Swedish krona and the gold standard is restored, it should be directly to gold and not through another country connected to it. The days of the gold exchange standard are probably numbered.

However, the question of <u>whether</u> this reconnection should take place and <u>when</u> it should take place can hardly be determined now. The significance of what has happened and what will happen in the near future within the gold standard system due to France's gold [buying] offensive cannot yet be accurately assessed.

Of course, it would be most desirable that the gold standard system should regain its equilibrium and begin functioning normally again. However, one of the conditions for this to happen is that those countries who have left the system do not return until sufficient guarantees of future peace have been obtained. It must be considered that it could take a very long time before equilibrium within the system is permanently restored - if such a restoration can be achieved at all.

Only when this result has been realized will the questions raised in section I C and D of the questionnaire become relevant. But these questions can be answered already now with a high degree of consensus based on experience. Thus, in the case of a return to the gold standard, the prevailing relationship between the value of the Swedish krona and gold should be taken as the basis for the return. (The value of gold refers to the value of the dominant currency in the gold standard system, currently the dollar). The same applies to a connection with a specific foreign currency.

When such a return takes place, it should be done at once, not provisionally, because if the return is provisional, speculation that the return may fail will be more likely than if the changeover takes place at once.

Regarding the questions raised under II in the questionnaire, there is likely to be a significant

[53] Davidson's footnote: Speculation always turns more vigilant when the currencies of small countries display a tendency of depreciation.

consensus. The danger during a return to the gold standard or the immediate period thereafter lies, as mentioned earlier, in the possibility of domestic or foreign speculation that the return will fail or that it will not be maintained. To prevent such speculation, or to prevent it from succeeding, large foreign credits should be used. This measure has generally proven to be fully effective. No other specific powers for the Riksbank are likely to be necessary.

The same reply holds for Question III as in the response to question I A. It is probable that a condition for permanently restoring equilibrium within the gold standard system will be a complete reconstruction of the whole system. Currently, it is impossible to say how such a reconstruction will be designed.

Thus, the Swedish krona will probably become a so-called free currency for a period. In this regard, the choice is between making the krona a floating currency or linking it to another floating currency.

For the moment, this choice is limited to linking either to the currency of England or the currencies of the other Nordic countries.

Linking to England's currency should not be considered. When England returned to the gold standard in 1925, the gold content of the pound was restored to its level before the war. However, the necessary measures to adjust England's general price level were not taken. To achieve the same relationship between the gold content of the pound and the general price level that existed between the gold content of the dollar and the general price level in the United States, England's general price level should have been pushed down by at least 10 percent [more].

Due to England's domestic economic and financial conditions, it could not undertake such a reduction. Therefore, in 1927, England sought to persuade the United States to raise its general price level. When this attempt did not have a lasting success, England was the country that primarily experienced the effects of France's aforementioned gold [buying] offensive.

The monetary policy of England fundamentally involved an unacknowledged, incorrect procedure. The incorrect procedure consisted of England fostering and maintaining the false belief through its exchange rate quotations that the value of, for example, Sweden's pound claims was 18.10 to 18.16 kronor per pound when the actual value was at least 10 percent lower. While the incorrect exchange rate quotation was in effect, Sweden received the aforementioned price per pound claim. However, as soon as England had to abandon this incorrect procedure, Sweden's pound claims underwent a reduction in value of at least 10 percent. This conduct by England makes linking Sweden's currency to England's currency inadvisable.

Linking to the currencies of the other Nordic countries is likely to be ruled out due to Sweden's experience during the [First] World War of monetary cooperation with Denmark and Norway.[54]

Under such circumstances, the only option is to let the Swedish krona be a fully free currency.

In the gold standard system, currency management takes place:
1) through variation in the money supply and in the velocity of money,
2) guided by the development of commodity prices,
3) guided by the exchange rates, and
4) through the rule for redeeming the currency in gold.

In the strict gold standard, the rule for redemption with gold is fixed, which, as is known, affects the exchange rates between the gold standard countries, keeping these rates' variations within a narrow range between the upper and lower gold points.

A floating currency is characterized by the freeing of the value of the currency from gold. However, in other respects, a free currency can be organized according to various principles.

First, it is necessary to determine the goal monetary management intends to achieve. This goal is the same as for currency management under the gold standard. As is well known, there has been a conflict within the gold standard system regarding this point. The conflict has essentially been between two rival answers to the question of the goal: whether it should be a constant general price level or normal conditions within the economy in a broad sense.

The first solution has the merit of fixing the goal and is, therefore, simpler (although, on the other hand, the goal is flawed). The second solution refers to something much vaguer, but the vagueness cannot be avoided. However, normal conditions within the economy generally presuppose a high degree of stability in price formation. Even if the vaguer goal of normal conditions within the economy is chosen, the examination of the development of commodity prices will always be one of the most critical parts of the task.

But there will always be a difference in the meaning of <u>*price changes*</u> *compared to when price stability is the goal. The* <u>*causes*</u> *of price changes will then play a significant role.*
Regarding the question raised in section I F of the questionnaire about which prices should be considered, the correct solution is probably that due consideration should be given to all different types of prices. The problem is still so little explored that it is impossible to determine this point in advance. This perspective seems to have guided the proposal accompanying the

[54] The monetary cooperation of Sweden, Denmark and Norway during World War I was based on the Scandinavian Currency Union. The cooperation gradually dissolved during the war, leading to the breakup of the union.

questionnaire.

The important points are, on the one hand, that the price data collected are appropriate and, on the other hand, that the principles for using the data are clarified as far as possible. However, clarification can only emerge gradually as the management of our floating currency progresses and the necessary experience accrues. Nevertheless, it is desirable that the methods for <u>constructing</u> the price data be decided in detail, as this may be important for the evidence value of the price data. This is of particular importance because the price data has two tasks.

One task is to show what has already occurred. This is probably the primary task. It indicates, among other things, the effect of the Riksbank's monetary policy. The other task is to guide the Riksbank in identifying predictions of future abnormal conditions. This task is extremely important but may not be achieved very often. For this task, it is particularly important to know in detail how the price data were created.

Furthermore, it should be noted that the aforementioned statistics on prices will be equally necessary when Sweden becomes able to return to the gold standard in the future.

The perhaps most crucial task for the management of a floating currency is included in I E. This task, the Riksbank's monetary policy, is also the most difficult one.

It is perhaps primarily because there is no recent experience regarding this task. One may object that Sweden had the opportunity to acquire such experience during the [First] World War. However, conditions in Sweden during that crisis were entirely different from current conditions. The most characteristic feature of that time in Sweden was the scarcity of goods (varubristen). This scarcity was likely to cause a significant increase in prices, especially as it mainly affected essential goods. The resulting price increase was not inflation, although it was often perceived as such in many places. Despite its incorrectness, this perception was very useful because it prevented real inflation from becoming too intense.

Now, on the other hand, there is no scarcity of goods, but to some extent the opposite. However, there is still a dispute about whether there has been a decrease in the value of goods or an increase in the value of money.

Regarding the <u>means</u> that the Riksbank currently has at its disposal for its monetary policy, the fact that our krona is a floating currency does not require any changes. But it should be assessed whether the measures used in the monetary policy of the United States, in addition to discount rate changes, should and could also be used in a modified form here in Sweden.

I will now turn to the rules (normerna) for the Riksbank's monetary policy under a floating currency.

The Riksbank's task in this regard will be the same as that of the central banking system in the United States until recently.[55] *The fact that this task has been carried out within a* *gold standard* *system does not matter. The reason is that the flows of gold to and from the central banking system have had no independent influence on the monetary policy of this system [i.e., the Federal Reserve]. The policy of this system has included not only receiving gold from abroad without resistance but also readily delivering gold to foreign countries.*

The ideal of a gold standard system is, namely, that gold is constantly at rest.[56] *It is changes in the exchange rates that immediately affect monetary policy. This arrangement requires, on the one hand, that changes in the exchange rates have the necessary impact on monetary policy to prevent gold flows, and, on the other hand, that gold shipments, which are not needed and instead disrupt monetary policy, occur in the same way as shipments of [ordinary] goods, as they are in reality.*[57]

If this ideal state existed within the gold standard system, the only gold shipments that would occur would be of a nature that had no significance for monetary policy.

In the event that this desirable state would prevail, the monetary policy of the Federal Reserve would be the same as that of a country with a floating currency. Both would regulate the money supply and the velocity of money only based on the prices of goods and of the exchange rates. The difference would only be that exchange rates within the gold standard system would not be subject to the influence of speculation, unlike the exchange rates in a country with a floating currency.

Now that the Swedish krona is a free currency, the Riksbank has taken on tasks having new difficulties. But these are mainly of an initial character. It is fortunate that the Board of the Federal Reserve System has stated in its journal, the Federal Reserve Bulletin, and in its annual reports the reasons for its monetary policy and what it has learned from its experience. The Riksbank has an instructive guide in this material to use to determine its monetary policy completely independently, based on the development of commodity prices and the exchange rates. It is worth remembering that the exchange rates of gold standard countries are characterized by relatively high stability, and this fact provides a good basis for interpreting

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[55] Davidson's footnote: That is, before the effects of the gold policy of France and its followers [i.e., the "gold bloc" countries] were felt.

[56] Davidson's footnote: An exception must apply to movements of gold from gold mines to various countries. However, the most rational approach would be to ensure that these movements were not associated with monetary policy.

[57] Davidson's footnote: Even these gold movements are, after all, a redistribution of gold holdings that do not take place due to the needs of monetary policy.

the evidence from Swedish exchange rates.

Upsala, October 22, 1931.
David Davidson.

Davidson added the following appendix:

<u>The struggle for gold</u>.

As is well known, it has been argued that the general fall in prices that has occurred during the last two years is caused by an increase in the value of money, and that this increase in turn has been caused by the rise in the value of gold.

Other observers have contested this explanation of the crisis. According to them, the decline in the price level is primarily a consequence of overspeculation during the years 1928 and 1929, which, for well-known reasons, had its special center in the United States. But even if this general decline in commodity prices is regarded as a decrease in the value of the dollar, the causal relationship between the dollar and gold is such that it was the decrease in the value of the dollar that caused the decrease in the value of gold, not the other way around.

Recently, however, there have been events that are unambiguous evidence that a reversal of these causal relationships has taken place in such a way that gold has recently begun to undergo a primary increase in value compared to money, which, due to the close relationship between the value of gold and money in gold standard countries, is likely to lead to a corresponding increase in the value of money in those countries.

Since the Federal Reserve System managed to free its monetary policy from the influence of the earlier wartime policy [from] after 1920, until recently, it has been able to prevent <u>primary</u> changes in the value of gold, i.e., changes that are independent of the value of money. It has been able to achieve this feat by following two rules in its monetary policy.

The first rule has been to accept all gold that flowed in from abroad without any resistance, and likewise, without any resistance, to release all gold demanded from abroad. The second rule has been that the Federal Reserve, to the same extent that gold flowed in from abroad, exchanged real assets [i.e., securities] for the gold inflow [i.e., sterilized it], thereby preventing the gold inflow from affecting the value of the dollar. Furthermore, to the extent that gold flowed out of the United States and thereby the amount of money in circulation in the United States threatened to decline, this decline was prevented by the central banking purchasing corresponding amounts in securities, etc.

Of these two rules, the first is infallible in its effect. The Federal Reserve can, with the assistance of the Union [i.e., the Treasury], if necessary, buy all the gold flowing into the country. The effect of the second rule, as can be easily understood, is not as infallible since the Federal Reserve cannot give up unlimited amounts of gold. But until recently, it has been obvious that, with the current unchanged world production of gold, the claims of foreign countries on gold *have never exceeded what the Federal Reserve could provide without inconvenience.*

However, this last circumstance has depended on the gold claims of foreign countries against the United States remaining within the loyal limits dictated by the idea of the gold standard system. When a country, for loyal reasons, decides to enter the gold standard system, it does so to enjoy the benefits of a fixed value of its currency. But this presupposes, among other things, that each country duly limits its claims on gold, since otherwise the gold standard system cannot exist. This has also been the case until recently, until France returned to the gold standard. When that happened, a new factor began to operate: France's increased demand for gold and the consequences thereof.

France's gold policy before the [First World] War was characterized by its central bank's belief that it should maintain both absolutely and relatively a high gold reserve. At the end of 1913, the reserve amounted to $679 million and represented nearly 14 percent of the world's estimated monetary gold reserves, which amounted to $4,933 million. During the War, these conditions changed, of course.

The changes persisted after the War until the country was able to return to the gold standard. Even at the end of 1926, the gold reserve of the Banque de France had not risen above its level during the War. It amounted to $711 million, less than 8 percent of the world's monetary gold reserves. Since then, this gold reserve has undergone continuous growth and reached:

- *At the end of 1927: $954 million*
- *At the end of 1928: $1,253 million*
- *At the end of 1929: $1,633 million*
- *At the end of 1930: $2,100 million*
- *At the end of June 1931: $2,200 million*
- *At the beginning of October 1931: $2,500 million*

At this last point, it represented almost 22 percent of the world's monetary gold reserves of $11,400 million.

From the above, it is clear that the increase in the gold reserve of Banque de France is not simply a completion due to France's return to the gold standard. This increase has also had another purpose. It has caused the relative size of the gold reserve to be now 50 percent larger than at the end of 1913. In addition, there is reason to believe that this increase has not yet reached an end.

France's gold policy has strongly affected the gold policy of three other European countries as well. During the last three months, the Netherlands, Switzerland, and Belgium have considered themselves obliged to increase their gold reserves to maintain their adherence to the gold *standard system, and the amounts of these countries' central banks' gold reserves at the mentioned times are as follows, in dollars:*

	Netherlands	*Switzerland*	*Belgium*
At the end of June 1931:	*200 million*	*162 million*	*199 million*
At the end of Sept. 1931:	*317 million*	*328 million*	*347 million*
Increase:	*117 million*	*166 million*	*148 million*

So, the total increase for these three countries, which together have a population of only 20 million, in the last <u>three months</u> amounts to $431 million, which is more than the world's entire annual gold production.

These data show that there is now a struggle for gold within the gold standard system. Such a struggle, which contrasts sharply with the spirit of the gold policy that has so far characterized the U.S. Federal Reserve System, is likely to cause a primary increase in the value of gold, which, in turn, is likely to raise the value of money in the gold standard countries.

Some signs indicate that both this primary increase in the value of gold and the resulting increase in the value of money in the gold standard countries have already occurred. It is not impossible that these increases may continue and grow for a longer time.

However, there might be another possibility. Although this possibility may seem quite incredible to count on, it should anyway be presented here.

As mentioned above, the Federal Reserve has so far been able to release gold without any resistance when it has been demanded from abroad. The demands of France alone on the world's gold reserves, along with any additional demands by France, are so large that there have been fears recently that the United States would be forced to take drastic protective measures or, to avoid these measures, abandon the gold standard.

The basis for this argument is that France seems to want to induce the United States to help promote the goals France wants to achieve through its gold policy. France probably prefers that this cooperation by the United States be fully voluntary. However, according to some recent observers, if necessary, France would seek to force such cooperation. It would exercise pressure by threatening to demand payment in gold for France's claims against the Federal Reserve and other American debtors.

If France indeed entertains such plans and succeeds in carrying them out, there would be great danger that the gold standard system would be killed for all time. No country that values its *sovereignty is likely to remain in a monetary system where such manipulations can succeed.*[58]

However, it is highly probable that the United States and the Federal Reserve need not yield to France's plans. In addition, the interest in maintaining the gold standard, both among the countries that remain on it and among those that have temporarily left it, is so great that, if necessary, they would be willing to contribute their resources to maintain a sound gold standard system.

Uppsala, October 22, 1931.
David Davidson

Summarizing Davidson's report

First, Sweden was fortunate to have left the gold standard. Turning to the questions on the future monetary standard of Sweden, question I. and I. B, Davidson declared that the re-establishment of a well-functioning gold standard system would be most desirable. However, he was quite pessimistic, doubting that an international gold standard system would ever function in a normal way again.

In reply to questions I.C and I.D, Davidson was of the opinion that earlier experience made it clear that Sweden ought to go back on gold at the existing *krona* exchange rate in case the gold standard was re-established, and to do this in a permanent step in order to avoid speculation. However, a return to a fixed rate would mostly likely take a long time.

Davidson thought that Sweden will have a free currency for some time. He considered two competing monetary rules for such a standard in reply to question I.E: a stable general price level and "normal conditions within the business world in a broad sense".

A stable price level has the advantage of being simple and easy to follow, although it was not the correct guide in his opinion. The second rule aims "at something very indeterminate but this lack of exactness can probably not be avoided". Unfortunately, Davidson was not explicit when discussing how his second rule for monetary policy could be made operational. Surprisingly, he was not referring to the rule associated with his name that the price level should move in inverse proportion to changes in productivity.
The suggestion that the causes of fluctuations in prices should be studied rested on his theory of changes in the price level, where he made a distinction between several types of inflation,

[58] Davidson's footnote: The struggle for gold between the central banks is likely to promote a demand for gold from a new actor, the public. There are signs that this has already occurred.

most important between commodity inflation and monetary inflation.[59] A commodity inflation was caused by a shortage of goods. This, according to him, was a major explanation for Sweden's inflation during World War I. Monetary inflation, on the other hand, was due to changes in the money stock or in the velocity of money.

The choice of monetary policy instruments should depend on the causes of the changes in prices. Judging from his writings, he was convinced that the Riksbank was able to prevent monetary inflation but not commodity inflation.[60] This interpretation is supported by the views on monetary policy that Davidson presented in earlier articles and comments, although he was often vague and cryptic in those as well.[61]

In reply to question I.F concerning the proper choice of price index to be used by the Riksbank, Davidson suggested that every kind of index should be studied since so little was presently known about this issue. He advised the Riksbank to explain in great detail how its price data was going to be compiled and constructed because such knowledge would facilitate an analysis of actual price movements.

In Davidson's view, question I.E, concerning the conduct of monetary policy under a paper standard, was the most difficult one. According to him, Sweden lacked any recent experience of such a policy to provide guidance for the Riksbank. He explicitly rejected the view that monetary events during World War I had much relevance for the present situation. Here he was clearly at variance with Cassel and Heckscher.

Davidson was of the opinion that the present paper standard did not require any extension in the number of the instruments available to the Riksbank. The tools used by the Federal Reserve System in the 1920s should be studied. He argued that the United States had *de facto* maintained a free currency because the Federal Reserve System had not followed the rules of the gold standard. The U.S. experience should thus give the Riksbank useful information concerning the conduct of monetary policy under the new paper standard.

Davidson’s report is not as well structured as the reports by Heckscher and Cassel. He has much focus on the workings of the gold standard. Its failings are studied in detail in his

[59] Heckscher (1952) suggested that Davidson had several types of inflation in the debate during World War I.

[60] On this point see Uhr (1975, chapter 8). See Davidson (1923) for an account of his theory of inflation applied in an empirical investigation of the movements in the Swedish price level during and after World War I.

[61] Davidson was known for expressing himself unclearly. See for example the comment by Dag Hammarskjöld (1955, p. 146) that he "must make a reservation concerning the possibility of misinterpretations of, in particular Davidson's ideas, which are often difficult to follow".

additional report "The Struggle for Gold". He does not give a simple answer to the question about the proper rule for the new paper standard. He is uncertain about the prospects of the paper standard. An original twist with Davidson is his recommendation that the Riksbank should learn from the policies of the Federal Reserve in the 1920s.

4. Comparing the reports

The reports of the three economists reflect their monetary thinking, their approach to the analysis of monetary policy issues and their style of writing. Someone familiar with their earlier work reading the three reports would probably be able to identify them from a “blind” reading.

Heckscher has a cautious and searching attitude, trying different arguments before arriving at any conclusion. He stresses the need for more research on various issues. His narrative, rich in detail and reflections, makes frequent references to earlier Swedish monetary history in support for his arguments. Cassel, on the other hand, presents a short and concise report. True to his style, he appears often uncompromising and self-assured. Davidson lacks the clarity and assertiveness of Cassel. His thinking is more difficult to follow. This is the case with all his writings.

These differences in style should not obscure the fact that the three economists held common views on the central issue raised by the Riksbank. There are impressive commonalities in their recommendations.[62] See the summary of their recommendations in Table 3.

Common policy issues

First of all, Sweden should maintain a free currency, that is, a paper standard, as long as the world monetary system remained disorganized. There should be a rapid and immediate return at the prevailing exchange rate to a gold standard or to an international monetary system once international monetary stability has been restored. Nor should there be any attempt to return a pre-crisis parity by deflating or inflating the domestic price level.

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[62] Swedish economists held in the fall of 1931 roughly the same views about the proper conduct of Swedish monetary policy. This is seen from the discussion documented in the *Nationalekonomiska Föreningen.* However, as the depression became deeper, divergent views gradually emerged concerning the role of monetary and fiscal policy in the 1930s. See Jonung (1979b) and the contributions in Jonung (1991).

Second, the rule of monetary policy under the free standard should be to stabilize the price level. The Riksbank should be able to regulate the domestic price level with available instruments, primarily using its discount rate. The trio were cautious in their opinions about the actual workings of the paper standard, stressing that price level stabilization was a new rule for monetary policy. Specifically, speculation might be destabilizing.

Third, their analysis and recommendations emphasized the importance of monetary factors and the potential of monetary policy. Cassel and Davidson argued that the crisis in the international exchange rate system of the early 1930s was caused by monetary developments, more specifically by the refusal of France and the United States to play according to the rules of the gold standard. They also believed that the Riksbank had the ability to regulate the domestic price level with available instruments, in this way protecting Sweden from international disturbances.

Fourth, the three economists displayed a keen knowledge of current affairs. They followed international central banking and monetary policies as well as Swedish and international statistics on exchange rates and prices. They referred to recent data on prices and exchange rates.

Some differences in opinion are evident. It is likely that the dispersion of views would have been wider if Cassel and Davidson had delivered reports as long and detailed as Heckscher's.

One area of conflict concerns the operational definition of price stability. Heckscher suggested that the Riksbank should make the level of wholesale prices vary in inverse proportion to productivity, that is, he proposed the rule of Davidson and Lindahl. Cassel, on the other hand, preferred a stable price level as the goal of monetary policy. Davidson did not believe this was the correct guideline. He proposed that the Riksbank should foster "normal conditions in the economy" without defining this rule more explicitly.

A second clear difference in advice is between Heckscher's recommendation that the Riksbank should stabilize the price level at the existing structure of prices and Cassel's argument that the wholesale price index should first be raised, closing the "gap" between wholesale prices and the cost of living that had developed from 1928-31, before the Riksbank started to stabilize prices. Davidson did not discuss this issue at all.

Last, both Heckscher and Cassel envisaged pegging the krona to the pound, while Davidson ruled out any Swedish-English monetary linkage. Still, these points of divergence are secondary compared to the solid consensus on the major issues dealt with.

Policy issues not considered.

It is worth considering some policy issues that were *not* present in the three reports. First, while Heckscher, Cassel and Davidson thought that the Riksbank could control the domestic price level, none of them considered any time lags involved in the process.[63]

From Cassel's recommendation to collect data on prices weekly, one may infer that he believed in a close link between the Riksbank's policy measures and the price level. This is an impression arising in several analyses by Swedish economists writing at that time, in particular by Erik Lindahl, who once said, with much irony, that he was ready to propose a change in monetary policy if the second decimal in the price index of the Riksbank had changed.[64]

Second, the three economists did not consider the use of a tolerance band around the price level to be held constant by the Riksbank. This is a bit surprising, since Lindahl (1930) had explicitly proposed such a band. It would allow for minor fluctuations around the price level target. The neglect here might be related to a strong belief that the Riksbank could control the price level with high accuracy, thus the use of a tolerance band did not emerge as a policy issue in the reports of 1931. This disregard might also be due to ignorance of the three economists of the work of Lindahl.

Third, outside Sweden, bank runs, and bank failures were striking features in the early 1930s, most prominently in Germany and the United States. Only Cassel considered a run on a commercial bank as a possibility, proposing that all legal restrictions on the note issue of the Riksbank should be abolished. Otherwise, the economists showed no concern about bank failures or other type of financial risks.

Fourth, the economists did not discuss explicitly the proper relationship between the Riksbank and the Government during the new monetary program — central bank independence, in modern parlance. The questionnaire did not ask about this issue. It evolved in the Spring of 1932. In addition, the Riksbank was already fairly independent. It was owned by the Riksdag, thus the Riksdag was in control of the central bank. Rooth was in close contact with the Government while being appointed by the Riksdag. Rather, he was a central banker with a considerable independence.

Fifth, the three economists did not discuss how the monetary program should be treated within the political process. In September 1932, Cassel discussed this issue in more detail in an op-ed in *Svenska Dagbladet*. Here he considered the role of the government, the parliament and the Riksbank in establishing the mandate for the new monetary program, an issue omitted in his

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[63] The issue of time lags in stabilization policy apparently emerged in Sweden with the theories of fiscal policy developed by the members of the Stockholm School in the 1930s.
[64] On this story, part of the oral tradition of Swedish economics in the 1930s, see Jonung (1979b).

report in October 1931. Cassel (1932b) started by saying that the gold standard might never return, but this should not imply that the monetary system should be based on "pure discretion" (*rena godtycket*).

If the duty of the Riksbank to exchange its notes to gold at a fixed price given by law is abandoned, this rule must be replaced by another rule:

The Riksbank must be legally bound to maintain a specific monetary program and this program must be mandated through joint decisions by the government and the parliament. The government must take the initiative to develop such a program, submit a well-founded proposal to the parliament and get it approved. The task of the Riksbank must then be to carry out this program. Without doubt the Riksbank must be given maximum freedom in its choice of instruments, but the program must be established by the Crown (statsmakterna). This program implies by necessity the choice of a firm rule for the stability of the value of the Swedish krona.

In this op-ed, Cassel complained that the government had failed in 1932 to anchor a monetary program in the proper way, instead allowing the Riksbank to decide at its discretion (*gottfinnande*) the destiny of the *krona*. This piece of analysis about one year after Sweden left the gold standard, although missing in Cassel's report to the Riksbank, has a distinctly modern approach.[65] Cassel's proposed legislative procedure was not finally incorporated until the Riksbank law of 1998, when the Crown gave the Riksbank the explicit mandate to carry out inflation targeting.

Sixth, the three economists did not consider the use of exchange controls, tariffs, and restrictions on the flow of trade, measures adopted in the 1930s by many countries. All had a liberal attitude towards free trade and commerce.

In addition, none made any reference to fiscal policy measures or to any other government interventions except those legislative adjustments deemed necessary for the adoption of the paper standard. In the 1930s, younger economists such as Gunnar Myrdal and Bertil Ohlin became ardent proponents of fiscal policy, while Cassel and Heckscher remained unconvinced.[66] There is no mention of the problem of unemployment either, except for a fear that deflation might cause social unrest.[67] In short, the three reports dealt purely with monetary

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[65] Cassel is here clearly dealing with the issue of rules versus discretion in monetary policy making. See Dellas and Tavlas (2022) for the evolution of the debate on rules versus discretion in monetary policy, although they are not aware of the Swedish debate in the 1930s.

[66] See Jonung (1979b).

[67] In October 1931, the Swedish rate of unemployment remained at a low level. However, in

issues.

To sum up, the reports demonstrate that the three economists shared the same approach to the questions raised by the Riksbank. This common view is best explained as the result of the influence of Knut Wicksell. His work served as the basis for the adoption of price level targeting in 1931. Ohlin (1934) makes this point forcefully in an article on the monetary program of 1931 by titling it “Knut Wicksell, Father of the Swedish Monetary Experiment”. The lively discussion of monetary theory and of the monetary experience of Sweden in the first three decades of the 20th century contributed to the emergence of a fairly unified body of Wicksellian thought among the three.[68]

The fundamental and lasting impact of Wicksell on Swedish monetary thought might be demonstrated by the farewell lecture given by Heckscher in 1944, the year he retired from his chair in economics. Looking back on his 40 years as professor and policy advisor, Heckscher (1944, p. 91) talked about Wicksell in the most laudatory way:

Almost all of us were more or less students of his in the sense that we probably all had learnt more from his works than from the works of any other Swedish scientist. Still, this was not the even his most important trait. It was his moral standing. He was a modest man, who did not rank his own results particularly high and was always ready to receive criticism of them. Above all else, he always expected something precious from others and listened as attentively to the youngest among his colleagues as to any top-ranking economist. Thus, in our small circuit his highly respected position was a given.

1932 and 1933 unemployment emerged as a major social issue. The deepening of the depression caused a rift between the old generation of economists and the young one. Younger economists like Bertil Ohlin quickly became critical of price stabilization and suggested more reliance on fiscal measures. See for example Ohlin (1933) and Jonung (1979b).

[68] As David Laidler pointed out in private correspondence, this is in contrast to the state of monetary analysis in the United States, where no single economist had the authority Wicksell had in Sweden.

IV. The book that turned into two. Heckscher and Myrdal on monetary policy in 1931

1. Planning a joint book

The monetary program of 1931 became immediately a source of debate among the economists as seen from articles in the newspapers and the October meeting of the Economic Association. Soon the plans for a joint book by members of the Political Economy Club emerged. The club held two meetings, one at the end of October and one in early November to prepare a common report on Sweden's monetary policy. At the first meeting, Karin Kock gave a talk on why Sweden was forced to leave the gold standard.[69]

The second meeting took place on November 4 at Heckscher's home. The minutes of this meeting cover 40 pages, giving an exceptional opportunity to examine what the economists were thinking at this stage. Every comment is transcribed word for word. Ten economists took part, among them Dag Hammarskjöld, Eli Heckscher, Gunnar Myrdal, Karin Kock and Bertil Ohlin. Myrdal, Heckscher, Kock and Ohlin offered the longest comments. Myrdal served as chairman leading the deliberations.

The discussion followed an outline for the structure of a proposed book of four main sections: the introduction, the survey of the monetary situation, the instruments of monetary policy and the choice of rule for monetary policy. Most of the debate dealt with the instruments and the rules of monetary policy.

Myrdal started by saying that "we must have a common view here. "First of all, we must agree that the regulation of a free [floating] currency is the issue. There is no need for a discussion for or against the gold standard." This should be in the introduction of the book. No objections were raised. Ohlin recommended that the introduction should be very short. Heckscher replied that it should be long because a long book would be profitable for the bookstores to bring to the market.

Next, Myrdal argued for a chapter on the theory of the determination of the exchange rates and the flow of payments to and from Sweden after the collapse of the gold standard. This chapter could be written without any commitment concerning the monetary program, he said. Heckscher and Ohlin raised some questions, but the group agreed to accept the chapter.

Myrdal then moved to the third chapter on the instruments of monetary policy, stating that it should be written so that everybody could accept it. According to him, discount policy had very

[69] Karin Kock was the only woman economists active in the 1930s in the debate on monetary policy. She made a brilliant career, becoming the first woman to obtain the title of professor in economics and the first woman to be appointed minister in the government. For a presentation see Jonung and Jonung (2014).

unclear effects on the flow of capital: they were either non-existent or negative; negative meaning that a rise in the rate could lead to an outflow of capital instead of the normal response of an inflow of capital. This set off a confusing and rambling debate with no firm conclusions.

Several questions were raised about how exporters and importers, stockpiling, the commercial banks, the building industry, speculators and the Riksbank might respond to changes in the discount rate and in the exchange rate in the short and long runs. Discussion then moved on to the use of other instruments like open markets operation, credit rationing and the build-up of a foreign reserve through international borrowing by the Riksbank. Ohlin wanted to deal with the broad effects of monetary policy on the general business cycle, on production and unemployment in Sweden. Myrdal agreed.

Heckscher stressed that the book should also deal with the legislative changes that pertained to the note issue and the gold reserves of the Riksbank under this heading. Myrdal objected to the idea of selling the gold reserves. From a theoretical standpoint he could agree, but it might reduce the credibility of the Riksbank.

Kock asked if a forward market could presently be established in Sweden. It had not existed in before as the commercial banks had carried out that business in London. Ohlin suggested direct clearing between Swedish exporters and importers. Hammarskjöld noted that there was a rumour that exporters and importers to South America had tried to set up a clearing system. Heckscher thought that the Swedish commercial banks would be incompetent were they to allow for such a clearing; it should be the business of the commercial banks.

The economists referred sometimes to economic theory but admitted that they did not know how the institutional framework worked for the moment. They suggested asking someone with practical experience. This plea was raised so they would not get criticized by bankers.

Myrdal then moved to the fourth section, on the design of monetary policy: "This section concerns which rules should steer Swedish monetary policy in the near future. Monetary policy is for the moment not isolated from fiscal and social policy. This is only a short-run phenomenon." Myrdal wanted the discussion to deal with the "deeper issue" of the effects on industry, where the price level is "instrumental". To Myrdal the behaviour of production and unemployment were more important than the development of prices. Heckscher objected that changes in prices have an impact that should not be ignored.

In reply, Myrdal viewed his deeper issue as the "central problem", the really "thorny issue". "I mean that the starting point must be to keep industry going and preventing unemployment. Thus, the labour market is the point of departure." The discussion followed his proposal. In this way, the choice of monetary rule was ignored.

Ohlin dealt with the current wage agreements. Heckscher recommended that the book should discuss indexation of wages. Myrdal agreed. He asked Heckscher if he could explain his view that wages should be reduced if the price level was to be kept constant. Heckscher responded that such a discussion would take at least an hour. Instead, somebody should write up the text for the others to discuss at a later stage.

The discussion turned quite personal and heated when Ohlin brought up his proposal of establishing a business cycle institute (*konjunkturinstitut*). He had thought a lot about such an institute or an economic council (*ekonomiskt råd)*. The council should consist of representatives from businesses and labour, advising the government on practical issues:

We only have a group of isolated economists who all lack the institutional support which is important for their work and for exercising an influence. ... I think that an economic council in cooperation with a sizeable secretariat and a department of economics and statistics at the Riksbank might be important for the economic policy of Sweden in 1931 and perhaps later as well.

Myrdal agreed, but Heckscher felt attacked personally and objected strongly:

I am very sceptical because I think that the right persons will not be selected. ... I think this is the last thing we should do. We should first see if we can find other ways. Here is Hamrin or Rooth. One of them gets a letter from one of us: What is the Government thinking about? Why do you not do so or so? Then they can talk to the person they find most appropriate. However, if we have an economic council, they have to listen to it. ... We shall not forget the great fiasco of the previous economic council.

Here Heckscher referred to the economic council that served in the early 1920s without making any contribution to economic policies.

Myrdal stepped in with a new argument. A council would foster economic planning (*planhushållning*). For this reason, the council should only consist of men with an influence over business life. "Preferably no theory would be part of the council" – that is, no economists with a background in theory. The council should have a secretariat working with a statistical department at the Riksbank. The Riksbank needed such a department because of the need to synchronize policies that emerged under the new paper standard. During the gold standard it was sufficient to look at the "stock of notes and the gold reserve and the discount rate".

Ohlin supported Myrdal: "I must argue against Heckscher". If some economists were employed to prepare policy advice, they could do so better than we "who only write our scientific studies and are busy with our teaching". We can still take initiatives like Heckscher but "Heckscher is not always at the disposal to push with no limits for new initiatives."

Ohlin argued that there were clear benefits from the creation of an institution for economic analysis:

I think that we in Sweden have had far too much of professors who manage everything and too little of young economists specializing on certain tasks, as the case is in other countries. There is a danger that this could reduce the channels through which the economists work. However, for the moment this danger is not that large. I cannot imagine that this would prevent Rooth or

Sköld [member of the Board] from having daily conferences with Heckscher about the currency issue.

Heckscher fired back that it was important to distinguish between two fundamentally different tasks for a council. It could serve as a part of the administration of a planned economy or as a council to compile information to guide policymakers.

If despotism [i.e., the planned economy] is introduced in our country, of course there is a need for more information than if not. A council that should manage industry and commerce of our country is something different from a council that gives information to the constitutional minister of finance or the management of the Riksbank. These two roles must be separated. If it is done, I would be happy, but I must reserve the right to present the drawbacks of the argument.

Heckscher developed his argument further by mentioning the case of Erik Lindahl, now serving the Riksbank as an expert on the theory of free exchange rates. However, Lindahl had some limitations. He could only deal with a specific technical task, not serve as a general adviser. If the Riksbank hired two or three economists as advisers, such an arrangement would not be as good as if it could talk to whomever it wanted. Heckscher also stated that "he would be extremely happy if his services were not requested."

Myrdal held his ground. Heckscher could not know everything when contacted by Rooth at short notice. A council was needed. The Riksbank could not carry out its policy independent of other policies. Ohlin tried to praise Heckscher. His contributions during the recent months had been of "conspicuous importance". Rooth and Hamrin would have used their private channels to Heckscher regardless of a council or not.

There was no additional meeting to finalize a book manuscript. The schism between the older Heckscher and the younger Myrdal and Ohlin appearing above was too serious for Heckscher. He decided to publish a book of his own while Myrdal went forth from the minutes of the November meeting to publish his volume.

2. Heckscher's book of 1931

Heckscher moved fast. In about three weeks his manuscript for a book of 135 pages went into print. The preface of *Sveriges penningpolitik. Orientering och förslag* (*Sweden's monetary policy. Guidance and proposals*) was dated "Stockholm November 28, 1931" (Heckscher 1931).

The preface has a modest tone. Uncertainty is great about the future. We should acknowledge the benefits of a many contradictory opinions emerging in the public debate. And we should be tolerant so tensions in society are not increased. "I have tried to write this little survey in such a spirit." Perhaps this was a signal to Myrdal and Ohlin after the recent meeting of the Political Economy club.

In the introduction, Heckscher compared economists with doctors in medicine. They do not know the cure of every disease, but they can organize their diagnosis and recommendations in a scientific way. The economists can differ in their recommendations depending on their beliefs about how economic activity is best organized, through the Government or through reliance on individual decisions. Here the Russian planning experience is an extreme case. When economists advise about the future, they are not scientists, they are advisors with some knowledge in economics.

The book has four main sections. First the establishment of the paper standard is described with heavy reliance on economic history. Next, Heckscher argues that the prime task for the government is now to select a proper goal for monetary policy. The third section describes alternative policy frameworks, settling for a free national currency for the moment. This currency must be managed through the use of price statistics to be developed by the Riksbank. The fourth section is a survey of the instrument available for monetary policy.

In the last chapter Heckscher summarizes his "program scattered" in the book in eleven points. The main parts of these points are extracted below.

I. A floating exchange rate, especially at a time of economic disruption in world industry, presents such difficulties that a speedy return to an international monetary system is desirable.

II. The only two options are the gold standard and a paper standard system with the English pound as the leading currency.

III. When the transition to a fixed exchange rate takes place, the parity should not be determined by any historical considerations [e.g., by the old parity].

IV. Since the free currency [the paper standard] must in any case continue for some time, it is necessary to guarantee its proper foundation. The guiding principle is not to be found in the foreign exchange rates, but in the domestic price system.

V. Here domestic prices should be held constant.

VI. To protect the domestic price system, … the discount rate must remain … the most important instrument.

VII. The exchange rate should adjust to the domestic price system, not the other way around, although exchange rate stability should always be sought over shorter periods of time, such as one month or two.

VIII. In so far as fluctuations in the exchange rate cannot be prevented, measures should be taken to offset their effects on imports and exports … through a forward market.

IX. The design of monetary policy must rest with the government … The connection between the Minister of Finance and the Riksbank is most important. Given the status that the Swedish Constitution confers on the Riksbank, in the case of a floating currency, the situation requires an official in the Ministry of Finance with special capabilities to be helpful to the [Riksbank] …. . The government's contacts with all other major economic interest groups should be as close as possible. The same applies to the Riksbank's contacts with the commercial banks, whose contribution to the objectives of monetary policy are indispensable. However, this cooperation cannot be achieved by creating a separate banking council or an economic council.

X. Most importantly, the King and the Riksdag should formally bind themselves to a clear goal for monetary policy, as long as the currency remains free. This decision should take the form of a detailed explanation of the announcement made with the transition to the paper standard on September 27 [1931]. The government and the management of the Riksbank should make such a statement as soon as possible.

The last point stated that the note issue of the Riksbank should be free from all legal ties to the gold standard.

Heckscher's book has the same message as his report to the Riksbank, although extended by a deeper analysis and updated with more recent information. In addition, he dealt with some of the issues emerging in the discussion within the Political Economy Club, most noteworthy, Heckscher discussed the role of indexation of wages, and he ruled out an economic council.

3. Myrdal's book of 1931

Myrdal's book, *Sveriges väg genom penningkrisen* (*Sweden's way through the money crisis*) appeared shortly after Heckscher's volume. The preface starts with this declaration: "This book is an attempt to give a realistic account of the current situation." It is "fresh, without prejudice and honest". Myrdal stressed that the book ends with a question mark. There is a risk that the exchange rate of the krona will rise substantially. A possible collapse of the value of the krona cannot be arrested by the domestic monetary policy. Direct actions to influence the balance of payments might be needed.

The preface also covers the genesis of the volume. A group of economists had met twice to discuss the Swedish monetary problem, once in October and once in November. For the first meeting Karin Kock delivered a report on the breakdown of the Swedish gold standard. After the second meeting, Myrdal prepared "a first manuscript" that was sent to participants as well as several economists that did not take part at the original meeting. He thanked a long list of commentators; in addition to all those present at the meeting the names of Gösta Bagge, Erik Lindahl and Arthur Montgomery appear.

Myrdal also recommended Heckscher's book as "good compliment to" his book. The books have much in common which proves that an intensive discussion among experts (*fackmännen*) can bring about "considerable consensus" about Swedish monetary policy.

The Myrdal book thus followed the outline for the debate at the November meeting. In the first chapter he gives the background of the book. The decision to leave gold on September 27 and the announcement by the minister of finance that the domestic purchasing power should be held constant have created a completely new situation for Sweden. Public opinion has so far been in favour of the view that the domestic stability of the krona should be the goal while inflation or deflation should be avoided.

This is not enough according to Myrdal. We should also dig deeper into the issue of stability and what is desirable for society. We should not get caught in a discussion about which price level to choose and at which date the price level should be stabilized. Instead, we should focus what is in the best interest of the economy (*näringslivet*). The monetary problem under a free currency is now connected to fiscal, business, and social policies, broadly speaking to the welfare interest of various parts of society. Monetary policy must now be integrated with other policies:

The role of the Riksbank in the Swedish economy has fundamentally been changed through the decision of September 27, 1931. This conclusion might be concealed from the public opinion through formalistic legal reasoning, but it will not disappear until Sweden again is tied to a stable international standard which probably requires that the entire world economy is following a quiet and progressive trail. But this is a long way to go. This problem is not a current one.

In case we discuss the monetary problem as a long-run issue, it will be difficult to reach consensus. However, our focus should be on the short run as we are in a crisis. We need a domestic crisis program for the winter and the spring. Thus, we should stay away from an academic debate about the principles for monetary policy. It will not be constructive.

The second chapter, entitled the exchange rates, describes the "mad fight to protect domestic currencies" through exchange controls, prohibition of imports and increases in tariffs. Complete disorganisation characterizes the international capital market and international cooperation. The process has a "cumulative tendency" feeding upon itself. The bottom line is that we should not use the concept of equilibrium when discussing exchange rates. It is dangerous to leave the exchange rate for itself. There is a need for an exchange rate policy.

The third chapter is a long catalogue of the advantages and disadvantages of all the instruments available or potentially available to the Riksbank. However, the economic situation is so confused that we should not expect these instruments to have normal effects. In the meantime, the Riksbank should hold on to a free currency and avoid introducing a fixed exchange rate, at least as long as it has no foreign reserves.

The fourth chapter deals with goal for the monetary policy. First Myrdal rules out a return to gold or to any fixed exchange rate for the krona. Such a step would likely be a method to create a new crisis. Instead, the Riksbank should announce a program promising a constant price level. A constant price level is not sufficient, however. The monetary program should also pay attention to the business sector, to the standard of living and the rate of unemployment. The prime goal should be rising production: "Production must be maintained and preferably increased from the current reduced level due to the depression".

From then on, Myrdal describes the depressed state of the Swedish economy, covering a large number of sectors like agriculture, forestry, export industries and the labour market. Unrest on the labour market might be prevented by a policy of stabilizing the cost of living. The final solution to all the problems encountering Sweden would be a recovery in the world economy. In case the depression is getting deeper we might have to consider starting public work projects for the unemployed.

The last chapter, entitled "The current worries", deals with various scenarios for the Swedish economy. The main threats are coming from the international developments. To meet them, a proper domestic response must be designed, free from the prejudices and restrictions of the past. At least temporarily we need more central planning (*planhushållning*) according to Myrdal. Fiscal policy should be made more expansionary. The idea of a balanced budget should be abolished, here referring to a statement by Wicksell: "As Wicksell said: the state does not do business in the normal sense with its citizens as little as the father does with his children." An agreement concerning wages should be made with the involvement of the employers and the unions. "The Riksbank, the government, workers and employers have a deal to make, where all four are *partners*. It is impossible to maintain the fiction of non-intervention in wage deals … ". In the ultimate case, if the international depression gets worse, we might have to consider "to shield our production and our price system" from foreign influences using controls over international trade and finance.

The final pages consider the future of international cooperation. The "atomistic internationalism" of the liberalism of the 19th century did not work according to Myrdal. A new successful international cooperation requires stronger national units created through state planning. "A world organisation is not possible before the national states are better organized". The message is that the future belongs to the organized powers. "Free competition is dying." We should free us from "the old liberal-democratic fiction" that only government authorities should exercise executive power. Instead, the social partners and the state should cooperate as a prerequisite for a successful monetary policy by the Riksbank. Myrdal ends with a plea for a constructive role for organized interest groups in framing economic policies.

Myrdal was here promoting corporatism as part of the planned economy that was to replace the liberal order of the 19th century.[70] The framing of monetary policy should take place in connection with other policies. The Riksbank could not maintain the type of independence it had under the gold standard. Myrdal was an interventionist who argued that restrictions on trade and finance like exchange controls could be introduced if the depression was getting worse. In short, the crisis was an opportunity to expand the role of public policies and public intervention in the economy.

The ideas and reasoning of Myrdal ran counter to Heckscher's classical liberalism.[71] He wanted the Riksbank to focus solely on price stabilization. He was sceptical of giving more powers to the government. Heckscher turned into a strong critic of the fiscal activism favoured by Myrdal, as well as of the idea of central planning, a key element in the program of the Social Democratic Party, which took power after the election in September 1932.[72]

Thus, it is obvious that Heckscher chose to publish a book under his own name while Myrdal could mobilize the support of other economists for policy ideas that were further developed in the 1930s and 1940s. In addition, Heckscher had an outline of the arguments for his book already in his confidential report to the Riksbank.

V. The evolution of the monetary program 1931-1933

The announcement by the Minister of Finance that the aim of monetary policy should be to stabilize the domestic price level was short, one sentence. It started a process where the goals and instruments for the new paper standard were discussed and framed under the influence of the deepening of the world economic crisis. The Riksbank, the government and the Riksdag as well as the economists were involved. Eventually, a full-fledged monetary program with an explicit framework concerning responsibility for deciding the goals and the use of instruments emerged. This process took about two years. It is summarized in Table 4.

When Sweden left gold in September 1931, there was a general fear that an inflationary process would start, similar to the rise in prices that occurred when Sweden abandoned the gold

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[70] This is a theme Myrdal returned to after World War II as well where he argued that the market economy was doomed to disappear (Myrdal (1951).

[71] Heckscher (1922) compared old and new liberalism. For his move from conservatism to liberalism see Carlson (2016).

[72] See here the study of Carlson (1994) on the response of Cassel and Heckscher to the ideas promoted by the younger economists.

standard in August 1914. Thus, the Riksbank raised the discount rate to 8 percent, the highest level on record at that time. A few weeks later it was reduced to 6 percent.

Initially the krona was allowed to float freely as the foreign reserves of the Riksbank were severely depleted. However, when the pound reached the old parity of 18.15 kronor in November, the Riksbank announced a fixed rate for the krona to the pound. The policy failed after three days as the foreign reserves of the Riksbank fell sharply.

The Riksbank did not give a satisfactory explanation of the pegging of the pound, which was running counter to the spirit of the monetary program.[73] Consumer and wholesale prices were falling slightly at this point. One reason might be that the Riksbank wanted a fixed exchange rate before November 30 when the decision to abandon gold ceased to hold. Instead a new extension was granted. The lesson of this failure was most likely that the Riksbank had to obtain sufficient foreign reserves before any pegging of the krona could be considered.

In the first part of 1932, the Swedish economy was hit severely by the world depression. Exports were falling to record low levels, unemployment increased rapidly and wholesale prices declined. Pressure was placed on the Riksbank to move towards a more expansionary stance, more specifically to allow for a rise in wholesale prices. In January 1932, the Minister of Finance repeated that the aim of monetary policy should be to maintain a stable purchasing power but added "this, of course does not preclude certain modifications of prices, especially wholesale prices".[74]

The Board of the Riksbank stated in February 1932 that the consumer price level should be stabilized while attention should be given to employment as well. The death of Ivar Kreuger in March 1932 was a severe blow to the Swedish financial system. The krona depreciated while the Riksbank refrained from exchange interventions. Instead, financial support was given to the *Skandinaviska Kreditaktiebolaget* to prevent a run on the bank, closely associated with the business empire of Kreuger. A lasting effect of Kreuger's death was a depreciation of the krona well into 1933.

In May, the Banking committee of the Riksdag examined the policy of the Riksbank.

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[73] According to Lester (1939, p. 244), Rooth was under the influence of Davidson recommending a deflationary policy. The failed pegging contributed to a nervous breakdown for Rooth. In a letter of November 24, Marcus Wallenberg noted that Rooth is on his way out. He has run into bad luck with Kreuger and the *Skandinaviska Kreditaktiebolaget*. See Gårdlund (1976, p. 546).

[74] Ohlin (1932, p. 3).

The committee first reminded the Riksbank that the government decided the goals of the Riksbank: “The Committee’s starting point is that the broad guidelines for monetary policy are established by the Government, not by the Board of Governors,”. In short, the Riksbank was goal dependent, it could not decide its goal by itself. Turning to the conduct of monetary policy, the Committee recommended a stable purchasing power combined with a rise in wholesale prices. The Riksbank should also pay attention to the state of Swedish business as long as this did not interfere with stable domestic prices.

In the spring of 1933, a committee appointed by the Minister of Finance, recommended a moderate rise in wholesale prices while consumer prices should be held constant. The Minister of Finance presented a first evaluation of the monetary program in a government bill of May 26, 1933. The policy of the Riksbank was criticized. As wholesale and consumer prices had fallen between September 1931 and April 1933, the goal of monetary policy had not been met. The Minister of Finance, Ernst Wigforss, asked the Riksbank to be more active and to coordinate its actions with the Government’s fiscal policy. Wigforss was inspired by the new ideas on fiscal policy promoted by Keynes, Myrdal and Ohlin.

In June 1933, the Riksbank pegged the krona to the pound at its own initiative. The step was taken as a temporary one, but the pegging lasted until World War II. This step ended the floating exchange rate of the krona. Still, price stabilization remained a prime goal for the Riksbank throughout the 1930s.

During the paper standard 1931-1933, price stabilization was the major goal of monetary policy. Given this goal, the Riksbank first aimed at preventing an expected inflation in the fall of 1931, then aimed at allowing wholesale prices to rise during 1932 and in 1933 promoted a rise in wholesale prices while consumer prices were held roughly constant in line with the announcement of September 27, 1931.

The monetary program of September 1931 did not bring about any substantial changes in the legal framework pertaining to the Riksbank in the 1930s. The Riksbank remained the bank of the Riksdag. The Government and the Riksdag determined the goal of monetary policy, leaving to the Riksbank to decide which instruments to use. A report from the Banking committee stressed that the Riksbank had the right to decide which instruments to use to carry out the monetary program.

VI. The impact of the reports on the policy of the Riksbank

The legal framework for the framing of monetary policy remained unchanged in the 1930s. Within this framework, the Riksbank took actions to implement the program of price stabilization. An important first step was to mail a questionnaire to Cassel, Davidson and Heckscher in October 1931. Their replies informed the Riksbank about the new issues it was facing. The fact that the Riksbank asked for advice and prepared a questionnaire indicates that it was ready to listen to the views from the outside. In addition, it received fairly similar advice from the three professors.

What was the impact of the recommendations on Swedish monetary policy in the 1930s? One way to answer the question is to examine the actual policy of the Riksbank in the 1930s. Was it in line with the recommendations proposed by the economists? This approach is open to the objection that it cannot be known to what extent the policy measures taken were due to the advice of the reports or to other influences. The management of the Riksbank was continuously seeing representatives from commercial banking, industry, the government, the Riksdag and from other foreign central banks expressing their views about the conduct of Sweden's monetary policy. In the 1930s, Rooth was also consulting with other economists than the three, most prominently with Lindahl.[75]

The Riksbank took several actions in the 1930s that were consistent with the recommendations of the three economists. Most important, it began to compile and publish a consumer price index. This work started already in September 1931 when Sweden still was on gold. The Government wanted to be informed by better statistics on the Swedish economy. The work was pushed forward vigorously after the fall of the gold standard. Dag Hammarskjöld was assigned the task of constructing a consumer price index on October 2 at a meeting where Rooth and Heckscher took part.[76] Erik Lindahl, professor in Gothenburg, was recruited to serve as Hammarskjöld's supervisor.[77]

As usual, Hammarskjöld worked diligently. Already at the end of October, Hammarskjöld and Lindahl presented their plan concerning the new consumer price index of the Riksbank. After

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[75] Erik Lindahl was in frequent contact with Rooth in 1932 and onwards judging from the archive of Erik Lindahl at the University Library of Lund and from the Riksbank archive. A letter from Lindahl to Rooth dated April 6, 1932, illustrates this point. Lindahl sends Rooth a short memo on the monetary policy situation ending his letter: "As far as I understand, a small reduction in the policy rate is recommended."

[76] The next day Hammarskjöld presented his plans for collecting statistics on prices at a morning meeting at the Riksbank. In his diary, he noted that he was confronted by "a number of malevolent gentlemen". The Riksbank bureaucracy was not impressed by the new ideas coming from a very young economist. See Landberg (2005, p.17).

[77] Landberg (2005) gives a detailed account of Hammarskjöld's involvement with the Riksbank. See also Landberg (2012) for a monumental study of Dag Hammarskjöld's career as a civil servant in the 1930s and 1940s.

that, the work on the new index went smoothly. The index was collected on a weekly basis, calculated initially with two decimal point precision. The figures were made available regularly to the public.

Judging from its behavior, the consumer price level was stabilized around the level of September 1931 with no officially announced attempt to raise or lower the consumer prices to any pre-1931 level as seen from Figure 4. The krona remained on a flexible exchange rate until June 1933 with the exception for failed attempt to peg the krona to the pound in November 1931.

When the construction of the consumer price index was completed, Hammarskjöld left the Riksbank in early 1932 to work on his thesis and on other tasks. Erik Lindahl continued to serve as an advisor to the Riksbank, focusing on the analysis of the consumer price index. He remained in close contact with Rooth in the 1930s.

Lindahl (1933) made a lengthy and detailed presentation of the construction and the use of the consumer price index of the Riksbank in *Ekonomisk Tidskrift.* The index was calculated using data from 15 cities. Three version of the index were prepared: one with seasonal adjustments, one dealing explicitly with indirect taxation and one general version. The Riksbank cooperated with the *Socialstyrelsen* (National Board of Health and Welfare) in collecting data for the price index.

The Riksbank arranged for a translation into English of Lindahl's article and mailed it to a number of foreign economists.

To what extent was Ivar Rooth, who became governor of the Riksbank in 1928, open to the idea of price level stabilization? Did he have the necessary training and background to absorb the views of the economists in 1931? In his autobiography, Rooth (1988, p.78) confessed that he was an autodidact in economics with no formal training in economics at a Swedish university. To him, it was learning by doing. Still, he had an open mind towards the economics profession, although he thought that many professors lacked knowledge about the real world.

At an early stage, he had turned to several professors in economics asking for the names of some "really able boys" to recruit to the Riksbank. Eventually, Heckscher recommended Hammarskjöld as the most able of them all.[78] Rooth also stayed in close contact with Lindahl as his advisor in the 1930s. It is safe to conclude that Rooth was listening to the views of the economists.

[78] Rooth (1988, p. 79). Later in the 1930s, Hammarskjöld worked at the Riksbank and the Ministry of Finance at the same time, forging a link between the government and the Riksbank, and weakening the Riksbank's independence.

Rooth also appreciated Hammarskjöld. He managed to bring Hammarskjöld back to the Riksbank later in the 1930s. Hammarskjöld worked for a while at the Ministry of Finance and at the Riksbank at the same time.[79] Eventually, he became chairman of the General Council (*Riksbanksfullmäktige*) of the Riksbank.

Although it is difficult to determine to what extent the economists' reports influenced the actions of the Riksbank, the reports contributed to an understanding of the problems and policy alternatives facing a central bank basing its policy on price level targeting, counteracting the Riksbank's traditional penchant for fixed exchange rates.

In addition, Cassel and Heckscher exerted an indirect influence on the Riksbank through their prolific writings during the 1930s in *Svenska Dagbladet* and *Dagens Nyheter;* both newspapers were major Stockholm dailies. Here they served as proponents of price level stabilization, educating the public on the proper conduct of monetary policy under a paper standard and on the dangers of a gold standard.

The coverage by the leading newspapers of Swedish monetary policy and monetary events in the 1930s is examined in a paper and a book by Carlson (2011, 2014). Here Cassel and Heckscher play a major role. Carlson (2011) refers to 37 editorials and op-eds by Cassel while 13 is the corresponding number for Heckscher. Among the young economists, Ohlin holds a prominent position as the author of 33 newspaper articles cited on the policy of the Riksbank.

It is an open question to what extent the management of the Riksbank actually accepted price stabilization as the goal of its policy. Much suggests that the Riksbank wanted a rapid return to fixed exchange rates and regarded price stabilization more as a restriction on its actions than as the proper goal of Sweden's monetary policy, except for the most immediate period after the fall of the gold standard.[80]

In the spring of 1933, the Riksbank pegged the krona to the pound successfully. The step was initially considered temporary but turned into a long-term measure. It was actually in line with the recommendations of the three economists. The peg can be interpreted as an intermediate step to maintain price stability as long as the British price level remained stable.

Another way to study the impact of the economists' reports on the Riksbank is to examine how

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[79] Dag Hammarskjöld took part in the framing of Swedish monetary policy during World War II and the years immediately following. He was a strong proponent of price stabilization and was instrumental in the adoption of Davidson's rule as guide for Swedish monetary policy in 1944.

[80] This issue is discussed in Jonung (1979b) and Berg and Jonung (1999).

the annual reports of the Riksbank treated the consumer price index. Figure 5 covers the period when the index was mentioned explicitly. The first mention, which is brief, occurs in the 1931 report. The same holds for the reports for 1932 and 1933. The 1934 report spends several pages on the consumer price index – a text based on the account by Lindahl (1933).

Starting in 1935, the introduction to the reports contains a table with the price index and its components as well as a special section of two- or three-pages discussing changes in retail prices under the rubric *Prisutvecklingen* (*The development of prices*). In later reports the title is *Utvecklingen av detaljpriserna* (*The development of retail prices*).

The data on retail prices receive a thorough discussion in the first part of the report in the mid-1940s, about 10-12 pages. Two tables show the consumer price index: one for the middle-of-month index for the current year with a breakdown in various categories of consumption, the other for the annual index from 1931. For 1944, a most detailed table is included on the distribution of total consumption by the various items of expenditures of the consumption price index, followed by a comment on the construction of the index.

After World War II, mention of the index drops sharply. The last discussion of the consumer price index appears in the annual report for 1948, covering less than two pages. By 1949, there is no longer any discussion of the index nor any tables with data on the Riksbank's consumption price index.

Judging from the annual reports, it is tempting to say that the monetary program of 1931 ended in 1948. By then, the focus of the domestic policy of the Riksbank turned to controlling the domestic interest rates and holding a pegged rate for the krona. The external policy was focused on attaining Swedish membership in the Bretton Woods system. Here Hammarskjöld, with Rooth at his side, led the Swedish negotiations to join. In 1951, Sweden became a member of the Bretton Woods system. As Ahlström and Carlson (2005, p. 77) note:

Hammarskjöld and Rooth were generously "rewarded" for their cautious and trust-building maneuvering. Rooth was Managing Director of the IMF 1951-56 and was succeeded by another Swede, Per Jacobsson, 1956-63. And when Hammarskjöld in 1953 became Secretary General of the United Nations he was supported by the US due to his earlier negotiations with the Americans. In this way Sweden exerted a good deal of influence in word affairs, in spite of its "cheap" Bretton Woods entrance ticket.[81]

It is an amazing twist of history that the interaction between Rooth, as Governor of the

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[81] The "cheap ticket" was Sweden's quota of $100 million to become member of the Bretton Woods arrangements. Sweden initially requested a significantly higher quota; see Ahlström and Carlson (2005).

Riksbank, and Hammarskjöld, still working on his doctoral thesis, that started in October 1931 when Hammarskjöld became involved in the construction of the consumer price index of the Riksbank, eventually led both to high-ranking international positions in the United States roughly twenty years later.

Regardless of the impact of the reports on the policy of the Riksbank, the macroeconomic effects of Sweden leaving the gold standard in September 1931, adopting a paper standard and the monetary program of 1931, were beneficial. The ensuing depreciation and the floating of the *krona* had strong positive effects. They protected Sweden from the deflationary forces acting on countries that remained on gold. Most notably, the depression in Sweden was far milder than the major downturn in a country like the United States that remained on gold until 1933.[82]

V. The views of the economists on price stabilization 1931-1936

In the 1930s, unemployment became the most urgent policy issue while the Riksbank's program of price stabilization faded in attention. Still, it attracted an interest both from those who were in favor of it and those critical of it. The opinions of three economists, Irving Fisher, Erik Lindahl and Bertil Ohlin are of interest to present here.

Irving Fisher

The American economist Irving Fisher was an active and indefatigable advocate of price stabilization, or 'stable money'. At a very early stage he became interested in the Swedish monetary program, and he promoted the case of price stabilization by using the Swedish experience.

The Riksbank's consumer price index displayed remarkable stability during the monetary program of 1931, as Figure 4 shows. The "amazing stability in prices" inspired a lively controversy in the 1930s.[83] Was it due to the policy of the Riksbank or was it due to other forces, simply being an accident? In an appendix, Irving Fisher (1934, p. 409) summarizes the major contributions, Swedish as well as international, to this discussion, while promoting a very favorable interpretation of the program:

If little Sweden can become an oasis in the world-wide desert of depression surrounding her, and despite the Kreuger disaster at home, can maintain her chosen index number almost unchanged, the same result is economically feasible [Fisher's italics] almost

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[82] For a comparison of Swedish and U.S. economic performance in the depression of the 1930s, see Jonung (1981).

[83] See Kjellstrom (1934, p.56).

anywhere.

Fisher was most enthusiastic about the Swedish monetary program, viewing it as a model for the United States. In his many letters in the 1930s to policymakers like British Prime Minister Ramsay MacDonald and U.S. President Franklin Roosevelt, Fisher pointed “with increasing frequency to the example of Sweden”.[84] In his letter to Roosevelt of February 25, 1933, Fisher even included “a chart showing Sweden’s stable price level”. An updated version was sent to Roosevelt on September 11, 1933, with the following comment by Fisher “It shows that Sweden is still doing her stabilization job well, but that America has fallen down on her reflation job.”[85]

In 1935, Fisher published a book entitled *Stabilized Money – A History of the Movement*, which is at the same time an exposé of the history of price stabilization from ancient Greece up to the depression of the 1930s and an eloquent and personal plea for stable prices. In this work, the Swedish monetary policy of 1931–1934 received a thorough and favorable treatment.[86] He described the policy of the *Riksbank* and the development of consumer and wholesale prices, concluding that the Swedish policy was very successful, especially in view of the difficulties which confronted the *Riksbank* such as the deep depression, Sweden’s dependence on foreign trade, the Kreuger crash and unrest on the labor market. He considers the monetary policy declaration of 1931 and the resulting stability in the domestic purchasing power of the *krona* as one of the "most remarkable facts of the depression".

Fisher (1935, pp. 399-410) replied in a special appendix to the criticism of the Swedish policy made by some US economists and bankers. He takes special exception to the view that Swedish monetary policy had not succeeded in preventing a rise in unemployment. Unemployment is caused by the decline in exports, and this cannot be counteracted immediately, according to Fisher. On the other hand, price stabilization helped to keep unemployment lower than it would have been had the gold standard been retained. After responding to the criticism, Fisher declared that the Swedish experiment is "the most important landmark up to this time in the history of stabilization". Furthermore, he argued that it ought to be easier to stabilize the US price level than the Swedish, since the American economy is less dependent on foreign trade than the Swedish. "If little Sweden can become an oasis in the world-wide desert of depression" and stabilize its prices, "the same result is economically feasible almost anywhere".

Irving Fisher was enthusiastic about Sweden’s monetary policy. His optimism made him

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[84] Barber (1997, p. 27).
[85] Barber (1997, p. 65).
[86] Fisher (1935, pp. 319-331). Fisher contacted also the *Riksbank* concerning its price series.

assume that when knowledge of the Swedish experiment became generally available, the Swedish principles for monetary policy were sure to become accepted everywhere.

Erik Lindahl

When Lindahl (1934) presented his evaluation of the Swedish monetary policy program for an American audience, he struck a very optimistic tone, declaring that a new era in monetary history had begun in Sweden. In time, so much knowledge of free currencies would be gathered that the monetary system could be guided 'scientifically', that is according to some rule. This gathering of knowledge and information would take a long time, perhaps even a century, but the old system of fixed rates of exchange should not in any case be re-introduced. Analyzing the *Riksbank*'s policy more closely, Lindahl stated that it had been successful in limiting the fluctuations in consumer prices but had not achieved a sufficient increase in wholesale prices. Thus, he was not wholly satisfied with the Riksbank's policy.

In his opinion, three important lessons should be learned from the Swedish price stabilization: first, a clearly defined goal for the activities of a central bank should be established. This gives the public the correct expectations about the future activities of the Bank. The Bank is also forced to follow a consistent policy and cannot fall victim to various pressure groups as easily. Secondly, monetary policy should be based on a price index. This index does not necessarily need to be held at a constant level as in Sweden. Here Lindahl was of the opinion that a falling price level would be the accepted norm in the future. Thirdly, changes in foreign rates of exchange should be used as an important instrument in counteracting undesired foreign price impulses. In closing, Lindahl declared that the prospects of rational monetary management were now greater than what one could "ever have hoped for". His belief in the future of price stabilization was as strong as Irving Fisher's.

A few years later, Lindahl (1937) widened his perspective, discussing in a *Festschrift* for Irving Fisher how the international monetary system should be reconstructed after the depression. The purpose of the *Festschrift* was to make the proper conclusions from the monetary experience of the 1930's. According to Lindahl, every country should have a free currency, that is a paper standard, rationally managed according to some norm. Fixed rates of exchange should not be contemplated. It was important to establish a definite goal for monetary policy, which Sweden at that time was the only country in the world to have done. It was not important which goal was adopted – the important thing was that the public had full confidence in it and believed that it was to be followed. If all countries in the world followed these recommendations, Lindahl believed that world trade would increase, that trade and currency restrictions would be lifted, and that the rates of exchange would become relatively stable. Thus, he proposed that all central banks should accept and follow the Swedish price stabilization policy or some version of it.

Bertil Ohlin

Bertil Ohlin was interested at an early stage in the issue of unemployment. In several newspaper articles towards the end of the 1920's, he suggested government measures to reduce unemployment. During the 1930's, he formulated his arguments in a long series of articles in the *Stockholms Tidning*, in *Index*, a publication of the *Svenska Handelsbanken*, and in scientific journals and books.[87] At the meeting of Nordic economists in June, 1931 – that is before the *krona* had become a paper currency and the depression had struck the Swedish economy in full force – Ohlin (1931) pleaded for an expansionary policy. This policy should combine monetary and fiscal measures, notably through public works financed by loans from the *Riksbank.* Ohlin wanted also to abolish the budget-balancing principle, since he could not find any viable reasons for retaining it. He saw no reasons for basing the budget policy on a twelve-month period.[88]

Like other Swedish economists, he originally favored the price stabilization norm. When Ohlin (1932) analyzed the first twelve months of the paper standard, he found that consumer prices had been kept relatively stable. The *Riksbank*, however, had not created a rise in wholesale prices as requested by the *Riksdag.* Monetary policy should have been more expansionary in his opinion. He hoped that the Riksbank in the future would concentrate more on a stable domestic price level and less on stable foreign exchange rates.

One year later, Ohlin's opinion of the policy of the Bank was considerably harsher, as seen in an article entitled "The insufficiency of price stabilization". Here Ohlin (1933) found that the wholesale price level had not been constant or rising because the *Riksbank* had pursued a policy which actually had deflated prices. Furthermore, the decline in employment, industrial production and investment had not been halted. Ohlin felt, however, that if the monetary program had not been introduced, the situation would have been much worse. His conclusion was that an economic policy aiming towards full

[87] According to his contract with the *Stockholms Tidning*, Ohlin wrote four editorials and two articles in the business section per month during eleven months of the year in the 1930's, starting at the end of 1931.
[88] Ohlin (1931, p. 35) argued strongly for the acceptance of an unbalanced budget. He wondered why the budget should be balanced every year "Why not follow the principle of balancing it for example over a five-year period, taking in the surplus in the good years so as to be able to cover a deficit in the bad years?" Myrdal later presented a similar line of reasoning in a supplement to the Budget of 1933 giving a theoretical support to Wigforss' crisis policy.

employment cannot be based on price stabilization. According to him, events in Sweden had shown that the price stabilization policy had run into more problems than its supporters had expected.

Ohlin (1937) gave a thorough account of his skeptical views on price stabilization in his contribution to Fisher's *Festschrift* – the same volume in which Lindahl also participated. Ohlin put two goals for economic policy against each other: price level stabilization versus full employment, arguing that the latter was the better alternative. Here Ohlin was one of the first economists in Sweden to advocate full employment. The primary task of a full employment policy should be to influence the entire volume of investment through the control of the rate of interest and public investments.

According to him, it is not sufficient to stabilize the price level, since this does not automatically lead to full and stable employment at the desired level. Ohlin reached this conclusion – quite critical of price stabilization as it was – through a theoretical line of reasoning. Hardly any reference to the Swedish experiment is made. His argument for a stabilization of employment stands in direct contrast to the views on price stabilization which Lindahl developed in the same book; whereas Lindahl was hoping for international monetary cooperation based on paper currencies, Ohlin asked for international collaboration to create full employment.

VIII. Why did price stabilization disappear and why did it return in the 1990s?

Price level stabilization was announced as the goal for monetary policy in Sweden in 1931 when the Riksbank was forced to leave the gold standard. As a consequence, a stable consumer price index remained an important goal for the Riksbank in the 1930s, at least during the period of the floating exchange rate for the krona. After World War II, price level stabilization was ignored as an explicit aim of economic policies. Wicksell's theory lost influence and was replaced by alternative ideas.

Why did not the Swedish experience serve as a pioneer case after World War II, inside as well as outside Sweden? Not until the early 1990s did a version of price level stabilization emerge in the form of inflation targeting. Several factors explain this decline in interest in price stabilization.

First of all, the Great Depression of the 1930s made unemployment the main issue for economic policy and economic research. Although prices were falling during the Great Depression, unemployment emerged as the key social issue. Keynes's *General Theory* published in 1936 laid the foundation for the field of macroeconomics and macroeconomic policies. Full employment became the prime goal of stabilization polices in the Keynesian framework.

Monetary policy and thus price stabilization were pushed into the background.

In Sweden, the Stockholm School of Economics headed by Ohlin took the center stage in academic economics in the 1930s. He launched this approach as an alternative to Keynes's *General Theory* by summarizing the contributions by Swedish economists in the 1920s and 1930s, notably those of Myrdal, Lindahl, Lundberg and Ohlin. The common feature was the study of dynamic processes, an approach inspired by Wicksell's cumulative process. Wicksell assumed full employment in his cumulative process. However, this assumption was dropped. Expectations, risk and uncertainty were brought into the center. Plan, period, expectations were building blocks. A key concept was *ex ante-ex post* applied to bring out the difference between expected and realized outcomes.

The Stockholm School, however, was not based on unifying model allowing for a formal modelling. Instead, dynamic processes were analyzed through verbal reasoning, often turning into a case-studies as the Swedes lacked the mathematical techniques needed. Their disequilibrium approach was used in the 1930s for the study of unemployment and business cycles, moving away from the analysis of price level movement. After World War II, the Stockholm School disappeared as an independent school in macroeconomics in Sweden. Elements of the Swedish approach was absorbed into mainstream economics. The Keynesian approach dominated Swedish macroeconomic thinking until the 1970s and 1980s.[89]

A second factor behind the disappearance of price stabilization was the institutional framework for framing fiscal and monetary policy that emerged after World War II. In short, it was not consistent with Wicksell's rule of price stabilization which was built upon the assumption of a freely working monetary system.

Most important, the world returned to a modified gold standard of fixed exchange rates through the Bretton Woods system where the US dollar served as the key currency. Once a fixed exchange rate was introduced among the members of the Bretton Woods arrangement, the scope for a price level stabilization was eliminated. The fixed rate became the main external priority of stabilization policies while the unemployment rate was the main aim of internal policies.

In addition, financial repression emerged as a main part of the new international order. Sweden was an extreme case. At the outbreak of war in 1939, capital controls restricting cross-border financial flows were introduced. They remained in force until 1989. Behind the wall of capital controls shielding the domestic financial markets from foreign impulses, the Social Democratic government introduced in the early 1950s a far-reaching system to control interest rates and

[89] Erik Lindahl remained an exception. He was promoting price level stabilization also after World War II.

the flow of short-term credit and long-term capital within Sweden. The aim was to give priority to sectors and activities favored by the Government. Interest rates were kept below market-clearing levels for decades. In the monthly meetings the Riksbank checked the balance sheets of the commercial banks.[90]

In this process, the Riksbank lost its independence. Rooth decided to leave his post as head of the Riksbank in protest against the policy of keeping low interest rates in 1948. The Riksbank turned into an office under the ministry of finance during the 1950s and 1960s. Central planning characterized the financial system. Monetary policy became closely integrated with other public policies as envisaged by Myrdal in his book of 1931.[91]

Wicksell's rule of price stabilization assumed a paper standard, the use of the policy rate of the central bank as the main instrument and "free" unregulated financial markets as well as an independent central bank. Such an institutional framework did not exist in Sweden until the early 1990s following the financial deregulation in the 1980s. Again a free movement of capital across borders was allowed and again the allocation of credit and capital was market-determined starting from the 1990s.

The way the financial deregulation was carried out, it contributed to a deep financial crisis in the early 1990s.[92] The Riksbank was forced to abandon the fixed exchange rate of the krona in November 1992. It started a search for an alternative goal. A few months later, in January 1993, the Riksbank announced an inflation target of two percent to be valid from 1995. At the end of the 1990s, the Riksbank was made formally independent from the Government.

The prerequisites for Wicksell's rule were once re-established. At this point the world had moved close to the pure credit economy of Wicksell's cumulative process. From the early 1990s up till today Wicksell's model has ruled the design of international monetary policy as the institutional building blocks of the cumulative process were restored after the financial repression of the Bretton Woods period.

IX. The monetary program of 1931 as seen from today

Starting in the early 1990s, inflation targeting has emerged as the best-practice approach to monetary policy across the world. Today an international system of pegged rates does not appear a politically viable option for the leading central banks and thus not for a small country like Sweden.

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[90] See Jonung (2023) for this unique form of monetary policy through open mouth operations.
[91] See Jonung (1993) for the rise and fall of financial market regulations in Sweden.
[92] See Jonung et al (2009).

Inflation targeting should be described as a framework for monetary policy.[93] The key elements of this framework can be summarized in the following way. The prime goal of monetary policy is price stability. Price stability is expressed as a numerical target for the increase in a certain price index, commonly a consumer price index. The short-term interest rate of the central bank, also known as the policy rate, is the main policy instrument.[94] The monetary system is based on a paper standard (fiat money) with floating exchange rates. Inflation targeting embraces a communication strategy, characterized by a high degree of transparency concerning the aims and means of monetary policy. The central bank commonly makes public announcement concerning the size of the numerical target and its determination to reach it.

The institutional structure of inflation targeting as described above is similar to the one that the Swedish economists proposed in their reports to the Riksbank in October 1931. According to them, price stability, as expressed by a numerical value for a price index should be the goal of monetary policy. The short-term rate of the central bank should be the main policy instrument. The currency should be floating. The central bank should communicate its strategy to the public. Financial markets should not be repressed.

The similarity in the framework of yesterday and today is easy to explain. Present inflation targeting has the same theoretical basis as the Swedish monetary program of the 1930s, namely the monetary analysis of Knut Wicksell.[95] The neo-Wicksellian approach behind present inflation targeting, as expounded in the work of Woodford (2003), follows closely Wicksell's theory in spirit (Jonung 2022). However, the neo-Wicksellians start from a set of assumptions not originating in Wicksell's *Interest and Prices,* but they arrive at the same conclusions concerning the design of monetary policy.[96]

It is fascinating to compare the Swedish experience of the 1930s with that of inflation targeting starting in 1993. Both regimes emerged out of a financial crisis. Price stabilization was adopted in Sweden in 1931 as a *temporary* emergency measure when Sweden left the gold standard. It was a way for Sweden to avoid being dragged down in the international deflation of the time. The prevailing idea was a return to a fixed rate. The floating rate lasted for roughly two years.

Contrarily, inflation targeting was introduced in Sweden in the 1990s as a method of bringing

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[93] The distinction between inflation targeting as a framework and inflation targeting as rule is stressed by Bernanke et al. (1999, pp. 4-6), among others.

[94] In addition, in recent years, central banks have relied on quantitative easing and tightening as a policy instrument.

[95] See for example Clinton (2006) demonstrating how Wicksell's approach arrived in the Bank of Canada with the start of inflation targeting.

[96] See Table 1 in Jonung (2022) for a comparison between Wicksell's cumulative process of 1898 and the neo-Wicksellian approach.

down the rate of inflation and holding it at bay. The high inflation was the result of a domestic boom-bust process initiated by the financial deregulation in the 1980s. In the bust phase, the Riksbank abandoned the pegged exchange rate of the *krona* in November 1992, opening the way for inflation targeting.[97]

In 1931, there was a general belief in a return to a fixed exchange rate. In the 1990s, there was hardly any discussion to go back to a fixed exchange rate for the krona after the announcement of the inflation target, ignoring the requests for euro area membership. By now, Sweden has been an inflation targeter for more than thirty years, one of the longest monetary regimes in its history.

The announcement of price level stabilization was made by the Government in 1931. In 1993, the announcement of inflation targeting was made by the Riksbank while the position of the Government was not clear from the very start. Eventually, the government accepted inflation targeting as the rule for monetary policy in the new Riksbank law coming into effect in 1998.

In the 1930s, the economists looked backwards to decide which price level to stabilize, settling for the level in the fall of 1931. The case was different in 1993. The Riksbank looked forward. It feared high inflation as a result of the depreciation of the krona in November 1993. For this reason, the Riksbank decided that the target of two per cent was to hold from 1995 and onwards.

A main difference concerns the analytical foundations of the two monetary programs. In the 1930s, the monetary program rested on a firm theoretical foundation with domestic roots, that is on the work by Wicksell, Davidson, Cassel and Lindahl. The Minister of Finance relied on the guidance of Cassel.

In the 1990s, the new program of inflation targeting lacked such a foundation. The Riksbank "imported" inflation targeting by inviting advice from the Bank of Canada.[98] In turn, Canadian inflation targeting was inspired by the New Zeeland experience where the introduction of inflation targeting was an administrate reform with no base in monetary theory.

The Swedish program of 1931 settled for a stable price level, that is, a zero rate of inflation. Today, inflation targeting is commonly based on a numerical target of 2 per cent or thereabout. Still, this difference of two percentage points should not be exaggerated. Price level

[97] As in 1931, the Riksbank turned to the economics profession for advice. The Riksbank organized in December 1992 a conference on "Monetary Policy with a flexible exchange rate". See Riksbank (1992).

[98] See Andersson (2003). He describes how economists and policymakers were preparing reports on the monetary situation before the abandonment of the fixed krona rate. Still there was no consensus emerging based on inflation targeting.

stabilization and inflation targeting are grounded on the same policy framework.

A striking difference between price level targeting in 1931 and present inflation targeting concerns the analysis of central bank behavior. Because of the widespread adoption of inflation targeting, economists have by now developed a sophisticated set of arguments and theories for the proper way of conducting monetary policy under inflation targeting. They concern, among other topics, the role of inflationary expectations, the use of forecasts for inflation and for interest rates and of quantitative easing. Today, economists have three decades of observations of inflation targeting to work from.

In contrast, the Swedish economists in 1931 focused on how the new monetary standard should and could be established. They did not give practical advice on how the monetary program of price stability should be developed further, once it was established. One reason for this was the monetary program was terminated by the pegging of the krona to the British pound in 1933.

In the 1930s, the Riksbank was advised to employ economists to inform about the new monetary rule. Rooth made an effort to this extent. Hammarskjöld, Lindahl and Lundberg invited to prepare reports. Under inflation targeting, the Riksbank has carried out a similar approach, now being of on the biggest employers of economists with a doctoral degree in Sweden. Already in the 1990s, Lars E O Svensson served as economic advisor, making central contributions to the literature on inflation targeting.

The economists in the 1930s had a strong belief that the Riksbank could stabilize the consumer price level. Lindahl was the most optimistic one. He was ready to recommend a change in the price level when the second decimal of the consumer price index has changed according to the oral tradition. A similar belief in monetary finetuning emerged in the 2010s within the Riksbank as members of the Board discussed the evolution of the interest rate forecasts with a precision that focused on the decimal points. A member of the Board classified this propensity as the "tyranny of the tenths" referring to the first decimal point.[99]

In the 1930s, the Riksbank did not consider a tolerance band although Lindahl (1930) had suggested such a band in his book on the instruments of monetary policy. In contrast, the Riksbank first introduced a tolerance band, then abandoned it and then reintroduced it again, although under a new name. However, the band has not been a prominent instrument.[100]

The monetary program of 1931 evolved in various ways, in particular requests were made that

[99] See Andersson and Jonung (2019).
[100] See Andersson and Jonung (2017).

the Riksbank should pay attention to other developments than solely the consumer price level. The current regime of inflation targeting has also evolved in several steps during the past 30 years. The Riksbank has been recommended to consider unemployment, growth and financial stability as additional secondary objectives. A new Riksbank law started to hold from January 2023.

The Swedish monetary program of 1931 is of interest in the present discussion of price level targeting versus inflation targeting. If central banks can establish a low rate of inflation, it seems plausible that they can maintain a stable price level as well. Based on theoretical models, thus on a set of specific assumptions about expectations, commitment, production structure etc., some economists have argued that price stabilization would be a superior strategy to its close relative, inflation targeting.[101]

Central to this debate is the notion that inflation targeting has no memory (bygones are bygones) while price level targeting has a memory, at least under certain circumstances. This assumption implies that under inflation targeting, inflationary shocks moving the rate of inflation away from the target rate are treated as bygones. If the actual rate of inflation turns out to be different from the target rate, the central bank should not try to compensate for this deviation in the future. Instead, at each interest rate decision, the central bank aims at stabilizing the inflation rate at the targeted level. Under price level targeting, there is usually a memory in the sense that the central bank should respond to any deviations from the targeted price level.[102] Should it not respond, the path of the price level will deviate permanently from the announced path, depending on how the price level target is designed.

The Swedish economists in the 1930s did not discuss price level targeting as having a memory. Only Lindahl in the 1920s was concerned with how a central bank should respond to shocks to the price level under a monetary rule. Instead, their focus was on introducing a program of stabilization of the price level and on its performance in the short run. This is evident for example from the construction of the index for consumer prices on a weekly basis. They viewed the program as a provisional one, not as a permanent one. Thus, they did not consider the long run aspects of price level stabilization when the issue of dealing with divergences from a constant price level would most likely emerge.

[101] For surveys of the debate on price-level targeting versus inflation targeting, see Ambler (2009) and Hatcher and Minford (2014).

[102] According to Nessén and Vestin (2005, p. 838), formal models for price level targeting are based on the concept of *history dependence*.

X. Summary

When Sweden left the gold standard in September 1931, the Swedish government declared that the aim of monetary policy should be to stabilize the domestic purchasing power of the Swedish currency. With this step, Knut Wicksell's rule of price level stabilization or, in modern parlance, price level targeting, was officially adopted for the first and so far, the only time as the guide for monetary policy.

The Riksbank, left with the task of implementing the new monetary program, sent a questionnaire in October 1931 to three economists, Gustav Cassel, David Davidson and Eli Heckscher, asking for their advice. In a few weeks, they responded.

All recommended that price stability should be the goal of the Riksbank as long as the krona was floating freely and that the discount rate of the Riksbank should be the main instrument. The Riksbank should communicate its strategy to the public to foster credibility in the new monetary program. The Riksbank should construct a consumer price index to use as a guide for its policy.

These recommendations were pioneering ones in the sense that the modern framework of inflation targeting is the same framework as proposed by the Swedish economists to the Riksbank in October 1931. Their reports remain strikingly up to date, dealing with issues familiar in the present discussion on inflation targeting, such as the appropriate price index to target, the importance of creating public credibility for monetary policy, possible legal measures to anchor the new standard, and the proper central bank response to changes in the exchange rate. In short, the three economists prepared the first practical guide to inflation targeting at the zero rate.

Their advice as expressed in the reports in October 1931 reflected almost three decades of analytical work and lively debate on monetary issues, inspired by the monetary turmoil during and after World War I. The three economists were well prepared when they received the questionnaire from the Riksbank.

The great similarities between the views of the three professors in 1931 and the present approach to inflation targeting should not come as a surprise. Cassel, Davidson and Heckscher were intimately familiar with Knut Wicksell's theory from *Interest and Prices.* This theory is also the foundation for today's neo-Wicksellian approach to inflation targeting.

Table 1. Heckscher's proposed questionnaire of October 4, 1931

I. The first option is a fully independent, national currency, without any fixed relationship to the international monetary system or to the monetary system of any particular country.

A. Will such a solution bring more advantages than any other solution? If so, will the advantages be larger than the disadvantages? Does this hold:

a) under all circumstances or [only]

b) under present circumstances?

B. What rules (*normer*) should be applied for such a currency?[103]

1. If the stability of the present domestic price level is selected as the goal, how should it be determined (*fixeras*)? Through wholesale prices or retail prices or the cost-of-living, import- and (or) export prices?
2. If not, [through] which other goals (*grundvalar*) and which other rules?

II. The second option is a currency that is tied to the monetary systems of other countries in one way or another. The advantages and disadvantages of this option are likely to be the opposite to those mentioned under I. above.

A. Which arguments support a tie to an international currency, most immediately to the gold standard, and which for a tie to a specific foreign currency, most immediately to the gold exchange standard? To what extent does one argument dominate the others?

B. Which principles (*grundvalar*) should guide the transition (or return) to such a [monetary] system? The old parity with gold? To a specific foreign currency like the British pound? Or to an already attained level?

C. Should an eventual transition to this system be carried out as a temporary step or as a single once-and-for-all step?

D. Will a [monetary] connection to our neighbors, a revival of the Scandinavian currency union, bring about advantages or disadvantages? Should such an eventual arrangement include Finland or not? In this case, would it be advisable to improve the unification of the [Nordic] currencies by introducing the system that prevailed between 1885 and 1905?

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[103] Comments: The Swedish word *normer* is translated as rules in the above table, keeping to the meaning of rules in present monetary thinking.

III. Should the [monetary] system under various circumstances be based on a fixation (*fixering*) or a limitation, that is on a determination of a fixed rule (*norm*) or only on limits for the rule? [That is, should the target be a point or a range?]

IV. Should the Riksbank under all circumstances buy and sell gold at announced prices?

V. Which instruments (*metoder*) are available for the Riksbank to carry out a) the transition to and b) the maintenance of the established [monetary] system? Are any powers needed that the Riksbank a) is lacking for the moment or b) not using presently?

VI. How under various conditions should

A. The legal rules regarding the coverage of notes, and the actual note coverage be dealt with?

B. The legal rules regarding the minimum of the gold reserves, and their existence be dealt with?

VII. Which is the proper constitutional framework for the rules pertaining to the monetary system, the division between constitutional law and ordinary law, the power of the Government and the power of the Riksbank and the National Debt Office?

VIII. Which other issues should properly be addressed regarding the future organization of the Swedish monetary system?

Note: If it is considered more proper to treat all the questions concerning the different monetary systems under one heading, this could be done.

Table 2. The Riksbank questionnaire of October 8, 1931.

I. A. Under what international conditions would it be appropriate for the Swedish *krona* to be tied to the monetary systems of other countries?

B. What arguments can be advanced for tying the *krona* to an international currency, principally to a gold standard, and what arguments for tying it to a particular foreign currency?

C. What basic principles should guide the transition (or return) to such a system? Should the exchange rate of the *krona* be set equal to the old parity to gold, or to a particular foreign currency, for example the British pound, or to some other rate, already attained?

D. Should the eventual transition to this system be carried out as a temporary step or as a single once-and-for-all step?

E. What rules (*normer*) should guide the discount policy and the exchange rate policy of the Riksbank until such a transition or return is made?

F. How should the stability of the domestic price level be fixed (*fixeras*) under current circumstances? Through the use of wholesale or retail prices or of the cost of living, import and (or) export prices, or in any other way?

II. What instruments are available to the Riksbank to achieve

a) the transition to
b) the maintenance of the established system?

Is there a need for any powers that the Riksbank

a) currently lacks or
b) currently is not using?

III. Which other issues should properly be addressed regarding the future organization of the Swedish monetary system?

This questionnaire is not intended to be complete or to constitute an outline for the response.

Table 3. Summary of the economists' recommendations on price level stabilization in October 1931.

Issue	Heckscher	Cassel	Davidson
Price index to stabilize	Domestically produced goods	For the moment, the cost of living, later a consumer price index	Riksbank should monitor every type of index
Main policy instrument	Riksbank discount rate	Riksbank discount rate	Riksbank discount rate
Additional instruments	Exceptional use of credit restrictions and deposits with the Riksbank	No reply	Open market operations
Legislative measures to foster the new rule	Abolish all rules referring to the gold standard, reserve requirements and the note issue	Abolish legal restrictions on the note issue	No reply
Exchange rate of the krona	Free (floating)	Free (floating)	Free (floating)
Constitutional guarantees	In the future the paper standard might be anchored in the law	No reply	No reply
Period as basis for the price index	October 1931 price level	Mid-1931 cost of living	No reply
Threats to a successful price stabilization	Speculation, that is, expectations of inflation	No reply	No reply
Additional advice	Riksbank should not try to change the relationship among different price indices; government and parliament should endorse the new rule	Riksbank should ignore movements in the exchange rate of the *krona*	Riksbank should study the policy of the Federal Reserve in the 1920s

Table 4. Monetary policy announcements and actions 1931-1933.

1931 September 27	Suspension of the gold standard. Minister of Finance: Domestic price stabilization is the goal for the Riksbank
September 28	Discount rate increased from 6 to 8 percent
October	Discount rate lowered from 8 to 6 percent
November	The krona is pegged to the British pound for three days at the old parity of 18.15 kronor
1932 January	Minister of Finance: Price stabilization does not preclude a rise in wholesale prices.
February	Riksbank Board: Price and employment stabilization
March	Discount rate lowered from 6 to 5 percent
April	Riksbank Board: Price stabilization and low interest rates
May	Banking Committee of the Riksdag: Price stabilization combined with a rise in wholesale prices and the needs of business
September 2	Discount rate lowered from to 3.5 percent
1933 April	Expert committee: Moderate rise in wholesale prices Minister of Finance: Price stabilization and the needs of business
June	The krona is pegged to the British pound at 19.40 kronor per pound
December 6	The discount rate is lowered from 3.5 to 2.5 percent
1937	Riksbank Board: Exchange rate stabilization Banking committee of the Riksdag: Price stabilization and low interest rates Minister of Finance: Primary goal is price stabilization, secondary goal is exchange rate stabilization.

Sources: Fregert and Jonung (2004, Table 4.3) and *Riksbankens årsbok* (*Annual report*)

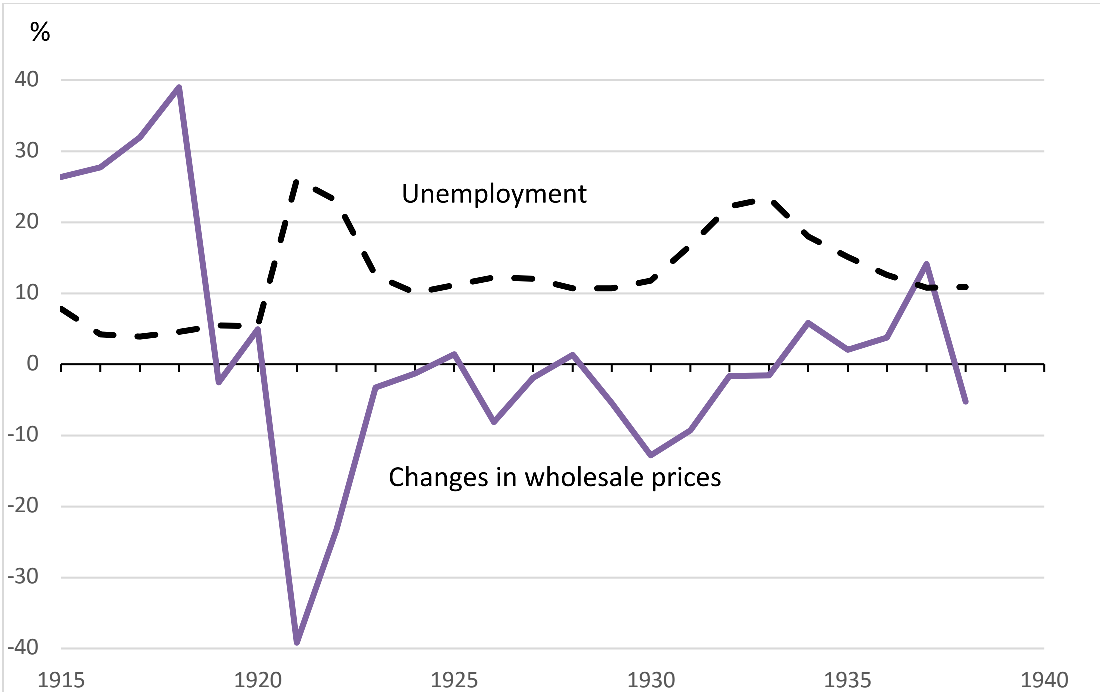

Figure 1. Changes in wholesale prices and the rate of unemployment, 1915-1935. Percent

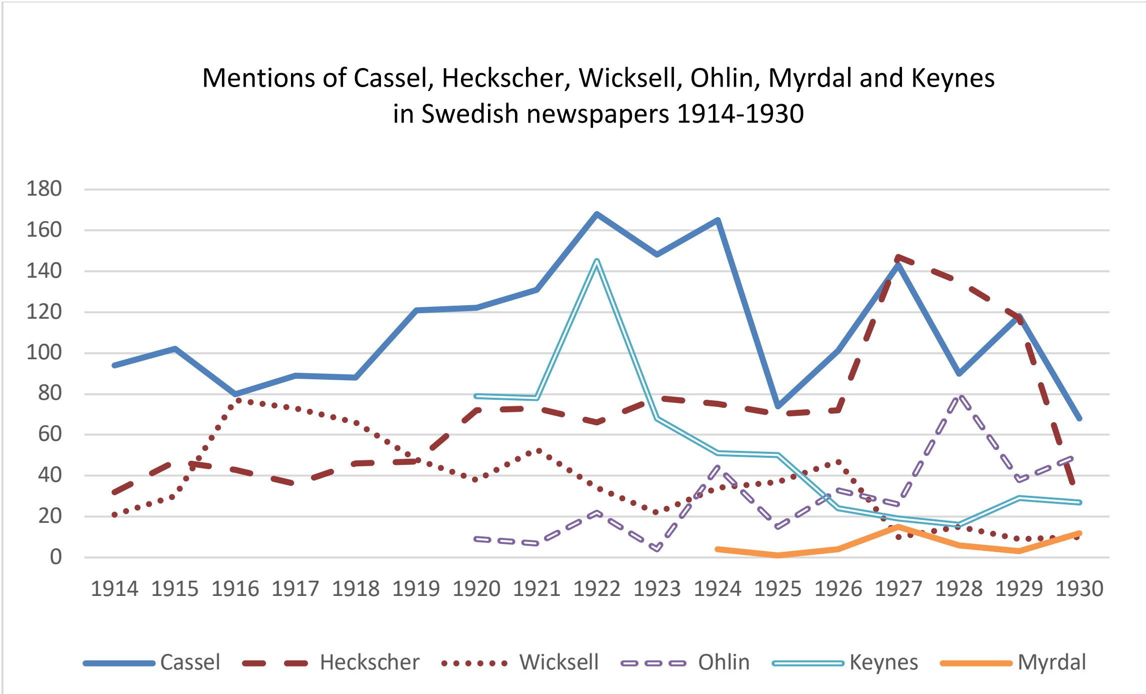

Figure 2. Mentions of Cassel, Heckscher, Keynes, Myrdal, Ohlin and Wicksell in Swedish newspapers, 1914-1930.

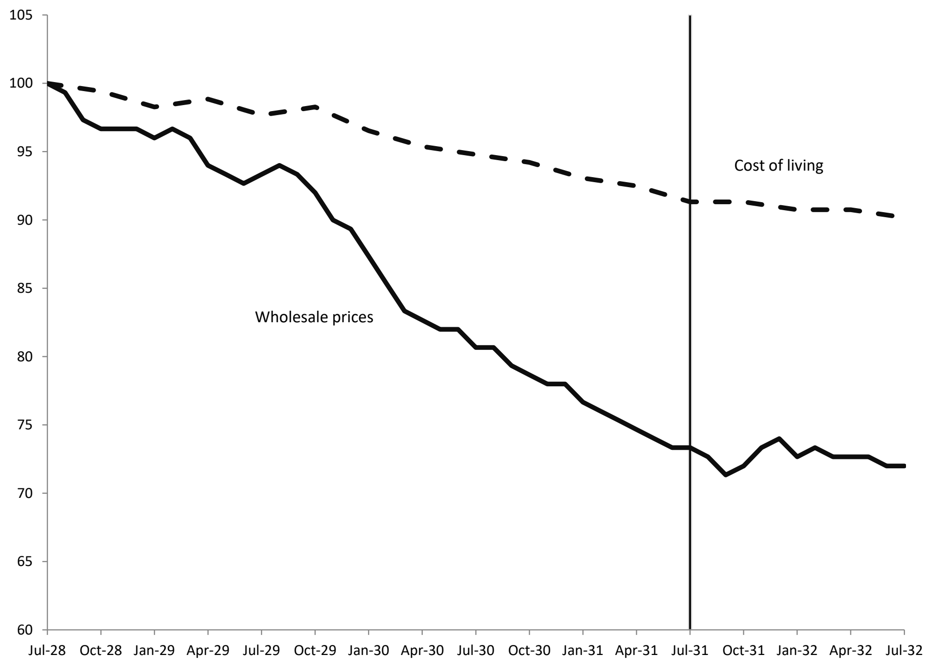

Figure 3. The cost-of-living and the wholesale price index, July 1928 – July 1932.
Sources: Statistics Sweden.

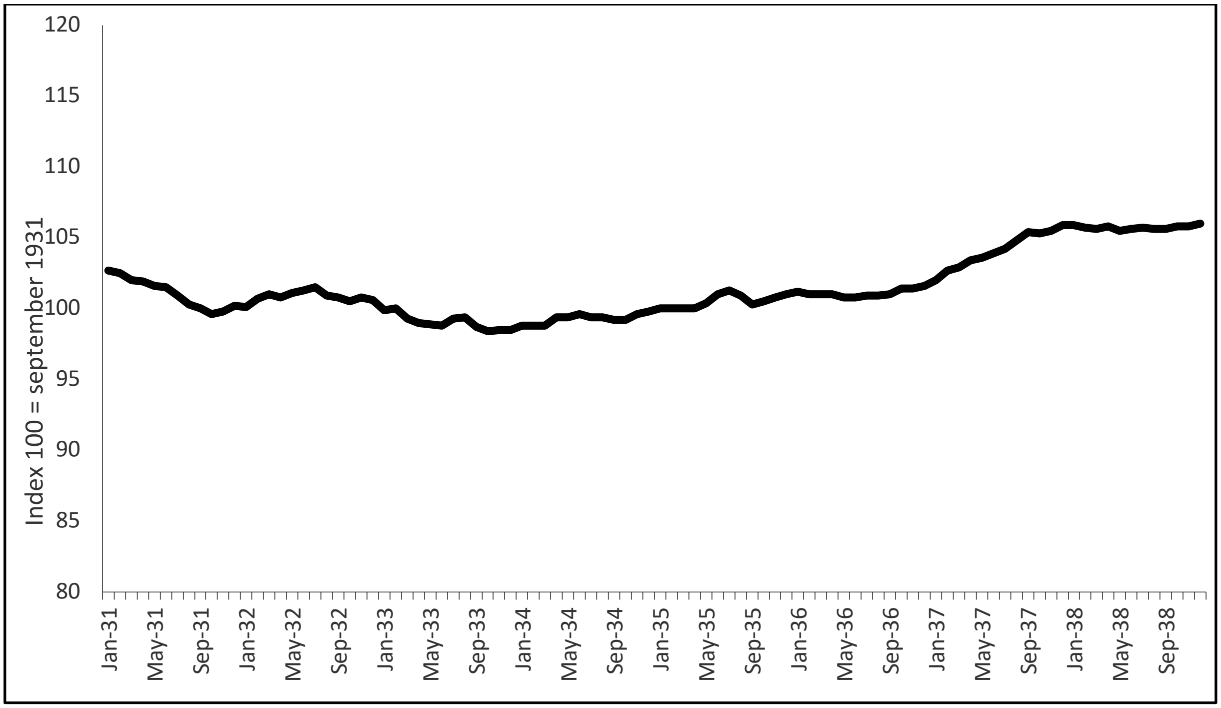

Figure 4. Riksbank consumer price index, 1931-1938.
Source: Riksbank annual report (*Riksbankens årsbok*).

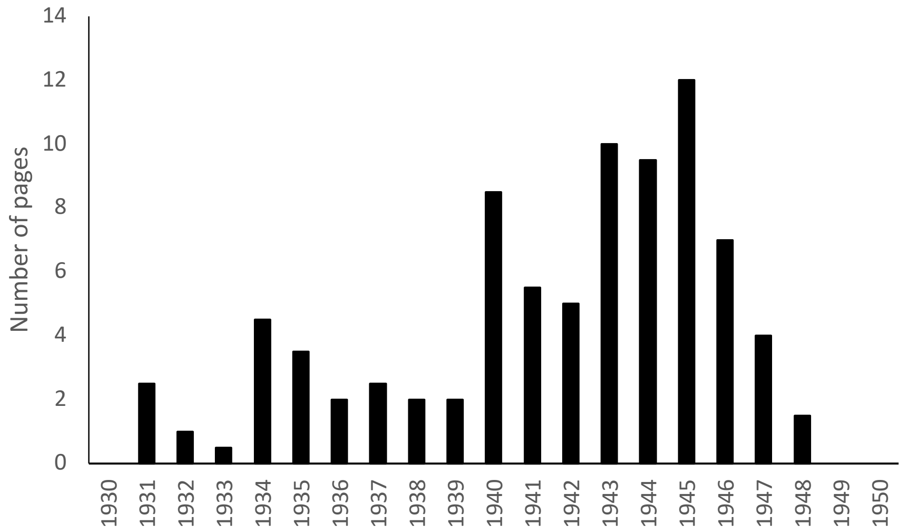

Figure 5. Pages on the Riksbank's consumer price index in its annual reports, 1930 – 1950.
Source: Riksbank annual report (*Riksbankens årsbok*).
Comment: The text of these pages is focused on the development of the retail prices for various categories of expenditures. Initially, the index was presented with two decimal points.

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