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Fregert, Klas

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Belling the cat: Eli F. Heckscher on the gold standard as a discipline device*

Klas Fregert

Department of Economics
Lund University
P.O. Box 7082, SE-220 07 Lund, Sweden

Mail: klas.fregert@nek.lu.se

URL: www.nek.lu.se/nekkfr

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Abstract
Unlike Knut Wicksell, Eli Heckscher did not believe the time had arrived for "managed money" to replace the gold standard after World War I. The war had shown that only a gold standard could bind the central bank to a time-consistent policy with reasonable price stability. Heckscher likened the problem of reinstating the gold standard to "Belling the cat" in Aesop's fable. When the international gold standard crumbled in the Great Depression, he supported the Swedish price stabilization regime as a temporary system. Heckscher was an early discoverer of the time-consistency problem in monetary policy and hence stressed the importance of the institutional framework of monetary policy.

Keywords: Heckscher; time-consistent policy; devaluation; deflation; gold standard
JEL: B22; E31; E42

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Belling the cat: Eli F. Heckscher on the gold standard as a discipline device

Eli F. Heckscher (1879-1952) was not the only economist to argue after World War I for a quick return to the gold standard at the prewar gold parity, but his arguments went beyond the standard ones. He developed his position in opposition to Knut Wicksell (1851-1926), who championed price stabilization under a fiat standard, and in reaction to the change from inflation to deflation in Sweden and abroad.

To Heckscher the Swedish experiences during World War I proved that a monetary regime based on fiat money, or incomplete adherence to the gold standard, could not be managed to provide stable prices. The war experience did not change Wicksell's opinions, nor Irving Fisher's, another champion of price stabilization.[1] Heckscher's disagreement with price stabilization was based on his prescient understanding of the need to bind the central bank to avoid inflation. Convertibility between notes and gold at a fixed rate, together with free gold imports and exports, provided an incentive mechanism for central banks to stick to a rule that would yield approximate long-run price stability, as opposed to managed money schemes which would lead to discretionary policy. Heckscher may have been the first to analyze monetary policy in this light, thus being a precursor to Kydland and Prescott (1978) and Bordo and Kydland (1995).[2] While

[1] See Patinkin (1993) on Fisher's compensated dollar plan, first presented 1911.
[2] Proving a first is of course impossible. The statement is intended as a challenge to find other early articulators of the gold standard as a time-consistent rule. In the United Kingdom, the key argument for the old parity appears to have been to preserve London as a world financial center (Eichengreen 1996, 60).

he believed that price stabilization was the best intermediary goal in theory for the ultimate goal of business cycle stabilization, it was beyond humans in practice.

Heckscher switched in 1931 to Wicksell's position by advocating price stabilization under a fiat standard after Sweden left the gold standard, at least as a temporary measure. His mode of analysis was, however, consistent. In both cases, he weighed the short-term cost of going back to the old parity against the long-term commitment gain of a time-consistent monetary rule. When the international gold standard crumbled, it could no longer provide long-run price stability. His analysis of the choice of monetary rule thus did not preclude price stabilization with fiat money, while he saw the dangers of it clearer than Wicksell and Fisher, who helped pave the way for managed money, beginning before World War I, as argued by Laidler (1991).

1. The return to gold 1920-1924

1.1 Heckscher and the run on the Riksbank

A Swedish peculiarity in an international context was that the convertibility of notes to gold was guaranteed by the constitution. Still convertibility was revoked without protest against the constitution when war broke out in 1914. To rectify the situation, the constitutional guarantee was amended in 1915 with an escape clause, given here in my italics:

> ... These notes shall at request be converted to gold according to their inscription; *but that an exception, when the consideration of war, danger of war or a severe money crises make it without doubt necessary, may for a certain time be allowed …* §72 Regeringsformen (Instrument of government).

Convertibility was reinstated in January 1916 at the pre-war parity. The gold standard was, however, effectively abandoned as gold exports had been forbidden since 1914. This allowed the krona to depreciate from the par value implied by the gold prices offered by the Riksbank and the Federal Reserve, which it did from the spring 1919.[3]

Heckscher invigorated the public debate on monetary policy, which had been ongoing in the newspapers since 1914, with an article on Thursday March 11, 1920 (Heckscher 1920a, 5).[4] He pointed out that the price of gold at the Federal Reserve gold window was 3,600 kronor per kilogram gold at the current depreciated krona-dollar exchange rate, while the price at the Riksbank was 2,480 kronor. Thus, *were* the gold export prohibition to be lifted, the public stood to gain 45 per cent by buying Swedish gold and selling it to the United States. He admonished "all private persons to provide a service, not only to

[3] Gold imports were prohibited, a "gold embargo", in February 1916 to forestall an inflow of gold due to an appreciation of the krona. Thus the krona was effectively a fiat currency from 1916 which value could deviate in any direction from the gold par values despite the convertibility between notes and gold.

[4] All quotations are translated by me. Heckscher's newspaper articles are included in his bibliography Ekonomisk-historiska institutet (1950). The monetary policy debate in Sweden was intense during and after the war with several economists writing in newspapers including, in addition to Heckscher and Wicksell, Gustav Cassel, Bertil Ohlin and David Davidson. At the time Cassel was well known internationally for his writings on exchange rates, monetary policy and the reparations problem, while the others were largely unknown outside Sweden, with the possible exception of Wicksell in Germany. Carlsson (2009) chronicles Cassel's world-fame by citations in *The Economist*. Heckscher (1926, [1930], 268) gave the following opinion of Cassel's contributions to the monetary discussion after the war: "Possibly Professor Cassel has considered it his first duty to substitute for ideas that are virtually dangerous, notions which are far from satisfactory from a scientific point of view, but simple enough to be easily understood and less likely to cause actual mischief; and his practical influence has been as great as it is well known." The Swedish debate is covered in Östlind (1945).

themselves, but even more to their fellow citizens, by using their constitutional right to withdraw gold." (Heckscher 1920a, 5).

Heckscher wished to stop the post-war inflation by forcing the Riksbank to increase the discount rate in order to protect its gold reserve. He sketched the injustices and social upheaval caused by the war inflation and concluded ominously: "The final result can hardly be anything else than the demise of the modern social organization and thereby worker disturbances, bolshevism, and economic and legal quackery are little more than symptoms of a revolution in the value of money." (Heckscher 1920a, 5).

The Riksbank board responded the same day with a request to the government to suspend note convertibility and was gratified with a government bill to that effect. The bill was presented to parliament on Saturday 13 March with the intention to hold the vote on Monday morning 15 March, before the Riksbank opened, but the debate on Saturday led instead to a postponement of the vote until Tuesday 16 March.[5] The public turned up at the Riksbank on Monday, forming a long line as the Riksbank tried to delay the outflow by slowing down the process of exchanging notes for gold. Thus just as Heckscher had hoped, the article caused a run on the Riksbank.

Heckscher spoke at a public meeting Monday March 15, the night before the suspension decision in parliament. It was reported that the meeting was attended by several parliamentary members and prominent people from the banking sector and that

[5] See Östlind (1945, 346-349).

Heckscher was greeted with a lively applause.[6] The warm feelings may have been reinforced by the charge by Prime Minister Branting in parliament on Saturday 13 March that his article on March 11 amounted to sabotage.[7]

On Tuesday March 16 the parliament debated and voted in favor of the government bill to Heckscher's dismay (Heckscher 1920b). Thus the suspension in 1920 was the first time the constitutional amendment from 1915 was invoked and hence Heckscher's disappointment, since it was not self-evident that there was a "severe money crisis". It was also decided that a government inquiry should investigate how and when to return to the gold standard. It was reported that ”during the whole session, Professor Heckscher leaned against the gallery with crossed arms, while Professor Wicksell's head with curly grey hair was perched on the barrier."[8] In Heckscher's (1920d, 5) opinion: "Such a parliamentary debate on central bank policy has not occurred in man's memory, and the question is if one may have to go back to the debates in 1828-1830 to find its like."

Note convertibility ended on Friday 19 March and the same day the Riksbank raised the discount rate from 7 to 8 per cent. Heckscher (1926, [1930], 244) summarized the event: "To that extent [the discount rate increase] the object of the intervention [his article] had been reached, though at the cost of the convertibility of the notes."

[6] *Stockholms Dagblad* 16 March 1920.
[7] Heckscher (1920c) replied to Branting 17 March 1920.
[8] *Nya Dagligt Allehanda*, 17 March 1920.

While the eventual return to gold was implied by the constitution, the convertibility rate could be changed on short notice since it was determined by law.[9] From the fall of 1920 a succession of Ministers of Finance and parliaments supported the restoration of the old parity until the final decision 1924. At the same time, significant minorities in the parliament, industrialists and economists had strong reservations, so the final convertibility rate was uncertain to the end. While the parliament voted for the eventual restoration of the old parity in 1922, resumption was delayed until April 1924, despite the old dollar parity having been reached in November 1922 (after which it was maintained by Riksbank intervention).

Three government expert committees were appointed to give recommendations. The first one reported in August 1920 and recommended the old parity after a gradual deflation; the second one in December 1920, when deflation had begun, expressed doubts about the final return to the old parity; and the third one, reporting in February 1922 when the deflation was over, recommended a return to the old parity conditional on other countries also returning to gold.[10]

[9] The inscription on the notes was: "The Swedish Riksbank will exchange on demand this note with gold coins according to the law of the 30 May 1873". A change in the constitution required the votes of two parliaments with an election in between.

[10] The Riksbank governor Victor Moll was a member of all three committees, while the economists changed. Wicksell was a member of the first committee (*Finanssakkunniga*, August 1920*)*. He dissented with a reservation outlining his own program. Cassel was member of the second committee (*Ekonomiska rådet*, December 1920), sharing the majority opinion against a definite goal of a return to the old parity. Heckscher was a member of the third committee (*Tull- och traktatkommittén*, February 1922). He dissented with a reservation arguing for an immediate return to the old parity. The Swedish monetary developments 1914-1924 are analyzed in Heckscher (1926), [1930], and Östlind (1946).

1.2 Heckscher's case for the return to the old gold parity

In April 1920 Heckscher (1920e) presented his own program for monetary policy. He noted that the continuing inflation in the United States would ease a transition to a return to the gold standard at the old parity as the krona would appreciate against the dollar towards the old parity. He suggested restoring convertibility between gold and notes immediately at the current rate of 3,000 kronor per kilogram gold, implied by the current depreciated krona-dollar exchange rate, to be gradually reduced to the old parity of 2,480 kronor according to a pre-announced plan. Together with a revocation of the export prohibition of gold, the gold value of the krona would be secure against further depreciation.

The benefit of the gold standard, he argued, is its automatic character: "Everything points to the inescapable necessity of a monetary system which is *self-regulatory*; since that those in power do not have the will and ability to even fulfill the elementary conditions for the preservation of economic society, is the sad lesson of the previous six years' experience. The only practical alternative among self-regulatory systems is the *gold standard*" Heckscher (1920e, 19, italics in original). This is the traditional argument for the gold standard, which does not in itself imply going back to the old parity.

Heckscher was, however, pessimistic, about the political feasibility of going back to gold soon:

> The plan suffers however from the same difficulty as the mice's famous war plan of putting a bell on the cat. *Quis custodiet ipsos custodes*? [Who will guard the guards?] How can the Riksbank be bound to such a policy? This would require a new legislation, and to implement that, as long as the government sees its role to be a handmaiden to the Riksbank board, is not the easiest of political tasks. Heckscher (1920e, 18).

In Aesop's fable "Belling the cat" the mice call a general meeting to discuss "How should we protect ourselves against the cat?" A young mouse suggests: "Let us put a bell on the cat and we will hear him coming". After general applause, an old mouse asks: "And who should bell the cat?" Reinstating the gold standard would discipline the board, like the bell on the cat, by subjecting discount policy to the overriding goal of preserving the convertibility between gold and notes. Yet Heckscher felt, like the old mouse, that the government was not able to "bell the Riksbank board" by reinstating gold convertibility. Heckscher put his hope in the upcoming elections in the fall of 1920, and that the public would take his message to heart and force a change to a government who could restore the gold standard at the old parity.

When Heckscher entered the debate again in January 1921, the international deflation emanating from the United States had reached Sweden. This led to calls for a devaluation of the krona to stop the deflation. When deflation began in the summer of 1920 in the United States and reaching Sweden in the late fall of 1920, the United States was the only major country on the gold standard. When deflation began in the United States in the summer of 1920, the debate turned into a choice between on the one hand *price stabilization* of the current price level implied by devaluation, and on the other hand *deflation* implied by a return to the prewar gold parity, or by following Wicksell's proposal of a return to the 1914 price level (see below), an even larger deflation. Heckscher's stand on restoring the old parity, implying some deflation, would put him in the middle position between the devaluationists and Wicksell's position. This forced Heckscher to defend and clarify his position against two alternatives.

In January 1921 Heckscher (1921a) argued for immediate action. The article was a response to the conclusions of the expert committee's (*Finanssakkunniga*) report in December 1920 and of the international Brussels conference 1920, which advocated the return to gold, but which left open whether it should be a return to the old parity and at what time. In Heckscher's mind this thinking amounted to "pious hopes" and specifically it missed the need to bind the Riksbank to a responsible monetary policy. Heckscher argued that a first step should be to stop any further deprecation of the krona by requiring the Riksbank to sell gold at a maximum price of 3,125 kronor per kilogram and dollars at 5 kronor. This immediate step could be taken without a decision on the final parity, which Heckscher repeated, should be the old parity.

In February 1921, in response to a call for devaluation by Jacobsson (1921), Heckscher (1921b) repeated his plea for an immediate binding at a depreciated rate as a first step, which ought to be accepted also by those who wanted a devaluation to avoid a further deflation. While acknowledging the costs of deflation, he still favored the restoration of the old parity as the ultimate goal. The new option of devaluation forced him to present an argument for restoring the old parity: devaluation would not be a time-consistent policy:

> It is now, and not far into the future, we need to bind the policy makers to an honorable monetary policy so that they do not, with regard to “depressed business conditions” or the insistence of finance ministers, or simply the inability to think of the future, let the value of the krona depreciate again. If one has established a gold standard at a devalued parity, then the Riksbank leadership may easily think, even if they do not say so, “Well, the worst that can happen is that we have to do the operation over again; we may have been led to set a lower value of the dollar than what was advisable, and now we set it at a higher value”. Heckscher (1921b, 5).

It is a succinct statement of how a central bank may have incentives to deviate from an announced convertibility rate in the absence of a binding rule.[11] That is, the optimal policy, a constant convertibility rate, would not be a credible or time-consistent policy. He specifies the two major incentives to deviate from the optimal monetary policy: raising economic activity (“depressed business activity”), and monetization of debt (”insistence of finance ministers”). The internal monologue of the Riksbank captures how

[11] Heckscher’s ability for succinct thinking and writing was noted by Paul Samuelson (1982), who called his statement of the Heckscher-Ohlin theory in Heckscher (1919c) “a work of genius”.

the outcome under discretion may be sequential devaluations, which in turn implies long-run inflation.[12]

The paragraph continues with why going back to the old parity would be a time-consistent policy:

> I think it will be difficult to deny the danger for this with devaluation, since the new gold value, which then is created, does not contain a traditional element, and lack, however superstitious, the aura which surrounds, especially in the field of monetary regimes, what is old and known. If one has reached the pure gold standard on the basis of its *old* parity, this will mean for 99 out of 100 among them who think about these things, a *definite* result and I would like to see that Riksbank board, who could stay on after having gambled away such a long sought-after situation. Heckscher (1921b, 5), italics in original.

Thus he argued that going back to the "*old* parity" would be a time-consistent solution, "a *definite* result". His solution involves an explicit incentive mechanism by identifying the punishment cost for deviating from the rule: the risk of dismissal of the central bank board. It is an example of the contract solution to the time-inconsistency problem of optimal monetary policy suggested by Walsh (1995), that is, by creating incentives for

[12] Horn and Persson (1986) shows, in the context of fixed exchange rates under a fiat standard, how a suboptimal "devaluation-price-wage spiral" can become the time-consistent policy in the absence of a rule.

the central bank board to fulfill a transparent goal.[13] Thus the old parity would function as the bell on the cat, if only the government could bring this about.

The time-consistency argument for the gold standard is distinctly different from the traditional argument for the gold standard based on its automaticity and impersonality, as stressed by Bordo and Kydland (1995). Specifically, it entails returning to the old parity, as realized by Heckscher, which is not an implication of the traditional argument. Bordo and Kydland (1995, 428-429) referred to reputation mechanisms or a constitutional guarantee to make it incentive compatible. One can interpret Heckscher as not believing in either a constitutional guarantee for the gold standard or the reputation mechanism, but rather in the (implicit) contract solution to the time-consistency problem. The constitutional guarantee was ignored in 1914 and proved ineffectual in 1920 when convertibility was revoked. Heckscher's general critical attitude of the Riksbank's record during the war would also make him skeptical of reputation mechanisms to discipline monetary policy as first suggested by Barro and Gordon (1983). His phrase "inability to think of the future", tallies well with his other criticisms of Riksbank policy.[14]

[13] The threat of dismissal is one way to implement an optimal contract between the principal, the government, and the agent, the central bank, as analyzed in Walsh (2002).
[14] Bordo and Kydland (1995) suggested that historical metal standards may be interpreted as monetary rules with escape clauses during war. Heckscher did not think of the possibility of an escape clause, such as was written in the Swedish constitution, as part of an optimal plan. This was not surprising as his frame of reference was World War I, which in his view was a period of suboptimal discretion. Heckscher's (1926, [1931]) book on the monetary developments 1914-1924 in Sweden backs up this evaluation of the period in great detail. The last paragraph of the book reads: "The above narrative consequently illustrates the lack of wisdom which has ruled the world of money since 1914: *Quantilla prudentia mundus monetarius regitur*", 267 [a paraphrase of Axel Oxenstierna's (1583-1654) letter to his son (An nescis, mi fili, quantilla prudentia mundus regátur? Don´t you know my son, with how little wisdom the world is governed?]

Heckscher did not, however, dismiss the case for devaluation to avoid further deflation and hence also weighed the long-term commitment gain against the short-run cost of resumption. In an interview in March 1921 (Heckscher 1921c, 5), admitted that: ”If we can hold out during the deflation until the American price level has stabilized, it will not be difficult to return to gold at its old parity, but the question is if we can hold out.”

Already before the deflation set in, Heckscher (1919a, b) in a lecture to the Swedish Banker’s association analyzed the costs of deflation prompted by the proposal of Knut Wicksell to go back to the 1914 price level. Wicksell first presented his plan in 1916 and then developed it over the years with contributions in the daily press and *Ekonomisk Tidskrift*. His purpose was to compensate lenders who had lost from the inflation during World War I. When the 1914 price level had been reached, the Riksbank should provide price stability through discount rate policy with fiat money as he had first proposed in Wicksell (1898). [15] Heckscher argued that the rise in the real value of debts from unexpected deflation would lead to widespread bankruptcies and a fall in real activity.[16] In October 1919 when he held his lecture, the price level had risen 166 per cent since 1914, which would entail a more than doubling of the real value of debts. While worthy,

[15] Wicksell’s final proposal included a one-time currency reform with indexation of all outstanding nominal contracts, including debt, to the price level to eliminate the effect of *unexpected* deflation and hence avoid redistributions and bankruptcy effects on real activity. He also suggested that a new court (*räntekammare*) could arrange compensations of wartime losses to lenders with completed contracts. To prevent the hoarding of notes due to *expected* deflation, which would depress spending and real activity, he proposed calling in all notes, according to a preset sequential plan, in return for new notes issued in proportion to the new, lower price level. See Boianovsky (1998) for a thorough treatment of Wicksell’s development of his proposal.

[16] Boianovsky (1998, 232) cites Heckscher’s critique and shows how he prompted Wicksell to refine his plan, including acknowledging an error in his earlier analysis (the false notion of high real costs using historical cost accounting).

Wicksell's goal of compensating the redistributive losses occurring from 1914, could in practice not be achieved.

Heckscher (1919a) referred to his ongoing work on the French attempt to compensate lenders after the demonetization of the hyper-inflated assignats in the 1790s (published in Heckscher 1921d). It was based on a careful study of the legislation, including some of the debates in parliament. In Heckscher (1919, a) he expressed some sympathy for such legislation based on this experience, but found that the restitution of already finished contracts would be impossible. The previous inflation would in itself have affected the real outcome in terms of what investments had been made, which could not be undone (and would also violate the legal doctrine of not changing finished contracts). He also compared the situation during the 1790s and the 1910s, and noted that during the 1790s it was common practice to calculate prices both in assignats and in a stable metal monetary unit. This habit simplified the task of compensation in the 1790s relative to the 1910s.

Further evidence of how Heckscher saw the trade-off between devaluation and deflation is given by his advice in Heckscher (1923) to the Bank of Finland to return to gold at a devalued parity. In this case, the weighing of costs and benefits clearly favored devaluation.[17] The Finnish monetary unit had gone to one-seventh of the pre-war parity and the implied deflation would be devastating referring to the effects of unexpected as well as expected deflation:

[17] Masson and Shukalev (2008) and Newby (2009) developed the analysis in Bordo and Kydland (1995) by investigating the choice of going back to the old parity or devaluation and thus endogenized the resumption decision. They showed that a devaluation maximizes long-run welfare, if the return costs are large enough to offset the long-run gain from having a commitment technology, as Heckcher argued for Finland.

> It must be said that such a revolution would ruin all borrowers, thus almost the whole of industry and also most of the banks, who would be drawn into their borrowers defaults, and in addition the speculation of the public in continuing price fall, what is usually called a “purchasing strike”, would paralyze even such activity as otherwise would be untouched by revolutions. Heckscher (1923, 18).

Heckscher also considered price level targeting as suggested by Wicksell as an alternative to the gold standard. In a public newspaper exchange in 1922, (Dagens Nyheter 1922), between him and Heckscher, Wicksell paraphrased and ridiculed Heckscher’s position:

> At this moment when the dollar automobile passes by [SEK/USD-rate being close to the old parity], so to speak, we should hitch our little sledge to it, then there is always time to talk to the driver so that he drives safely and does not throw us off course. Wicksell in Dagens Nyheter (1922, 4).

Wicksell’s own view was that “the value of gold was like wax in the hands of the Federal Reserve”. Heckscher in his reply took up two counterarguments. First, he regarded Wicksell’s belief in the central bank’s ability to regulate the price level as utopian. He pointed both to the lack of knowledge (the traditional competence argument) as well as to the political problem of resisting short-term pressures (his own time-inconsistency argument):

> It must take decades before the central bank has learned to feel the respect for the fluctuations in the index numbers, which would cause the same automatically correct changes in the discount rate as produced by the gold standard. Before this goal would have been attained, the central bank would not hesitate, with regard to this or that supposed social interest, to meddle with the fluctuations of the index numbers, that is, not adapt to them. Heckscher in Dagens Nyheter (1922, 4).

Both aspects had been amply illustrated, in Heckscher's view, by the experience with fiat money, not least in Sweden during the war. Second, a national fiat standard would lead to fluctuating exchange rates, which would impact on the price level and complicate price stabilization.

Heckscher developed these viewpoints in a pamphlet, Heckscher (1922a). He made a clear case for price stability as the overriding goal of monetary policy. In particular, he emphasized how changes in the price level contribute to the business cycle. The key aspect of a monetary economy is that "time must flow between the start and end of thousands and thousands of business agreements" and regarding inflation:

> A largely detrimental spirit of speculation arises, nobody can make sensible and planned calculations, all book-keeping must be erroneous when the numbers at the year's beginning mean something completely different at the end of the year, then the most ruthless and most anti-social movements in business life have the largest chances of succeeding. In particular, a strong tendency for capital to be

> bound in expensive production extensions, and capital is fixed in constructions, which lose all relevance as soon as the rush caused by the fall in the value of money subsides. Heckscher (1922a, 11.)

While price stability takes precedence over exchange rate stability, in practice the exchange rate stability of the gold standard is a benefit to be considered together with its price stability performance. He forecasted that the price level of goods in terms of gold would increase as more countries would join the gold standard and increase the demand for gold for monetary purposes. In addition, more countries on gold would imply smaller impact of national shifts in the demand for gold, in particular shifts in the monetary demand for gold caused by changing gold reserve requirements. This would create a positive network effect of more and more countries joining, but he also warned that this implied the risk of a slow start: "there will not be a return to the gold standard until somebody begins or as long as everybody is waiting on everybody else." Heckscher (1922a, 36). All the more reason for Sweden to go ahead, he continued, and it should avoid: "the restriction of the perspective caused by the small-state viewpoint, the view that Sweden can do nothing but to sail in the wake of the large nations." Heckscher (1922a, 35).

The American deflation subsided in the summer of 1921 and in the fall of 1921 in Sweden. In the beginning of 1922, an expert committee gave a definite support for going back to the old parity. At this time, the krona was between 5 and 10 percent depreciated relative to the exchange rate implied by the old krona-dollar parity, a natural measure of the krona's deprecation relative to gold as the United States had kept its old gold parity. The committee, however, conditioned the return on other countries also going back to gold. Heckscher (1922b), a member of the committee, dissented and urged an immediate return. The old parity was finally resumed in April 1924 with Sweden the first country to resume convertibility outside the United States.

Did Heckscher affect the outcome? Or, put differently, can an economist affect the outcome by articulating the welfare implications of different policies to the public? Heckscher's appeal to the public to buy gold in March 1920 in all likelihood forced the discount increase and the creation of the first government inquiry (*Finanssakkunniga*). Heckscher (1920d) noted a few days after the run on Riksbank in March 1920 that "It is a good English rule not to ´impute motives´, and one can limit oneself to note the unusual temporal connection [between his article and the discount increase], which may have been a happenstance, but looks like an unusually clear thought." We know that the leading economic spokesmen of the Social Democratic party (Wigforss, Örne, and Sandler) were all influenced by Heckscher and argued strongly for the old parity goal in the parliamentary debates in March 1920 (when in majority) and April 1921 (in minority), when the government asked for continued right to gold suspension as required by the constitution.[18] Heckscher himself appears to have put only an indirect weight on his own contribution to the final return to parity: "… this policy (return to parity) was in

[18] Östlind (1946, 347-349). The fact that the leading supporters for the old parity in parliament were Social Democrats questions the hypothesis that the increased franchise in the 1920s contributed to the demise of the gold standard. General and equal franchise was introduced in Sweden 1921. The argument is that the newly enfranchised majorities would favor short-run stabilization over convertibility, see Eichengreen (1996, chapter 2 and 3). While this may well be true for the long run, the World War I inflationary fiat standard was perceived in Sweden as having eroded real wages and changed the income distribution in favor of capitalists.

part not caused by conscious attempts, but a consequence of policy measures which had other causes: in particular the strong increase in the discount rate in the fall of 1920 and the unwillingness of the Riksbank to lower the discount rate in harmony with the changed world situation.“ Heckscher (1931b, 52).

2. The gold suspension 1931 and price stabilization

Sweden abandoned the gold standard on the 27 of September 1931 after failed attempts to fend off a speculative attack, one week after Great Britain left gold. The Finance minister issued a short statement declaring that the immediate goal of the government and the Riksbank would be a stable price level. On October 8, the Riksbank board asked three economists – Gustav Cassel, David Davidson, and Heckscher - to give advice on monetary policy through a questionnaire. On October 24, Heckscher finished his reply, Heckscher (1931a).[19] On November 28, he finished a book, Heckscher (1931b), stating his arguments in greater detail. It reached the public by Christmas of 1931.

Heckscher advocated price stabilization in line with the announcement of the Minister of Finance and the other economists’ replies. Heckscher’s starting point was that the demise of the gold standard was exogenously imposed by a speculative attack; that is, it was not

[19] The adoption and implementation of the price goal are described in Berg and Jonung (1999). The economists’ reports are presented and discussed in Jonung (1979, 2008).

induced by Riksbank mistakes or for want of trying to defend it. He described it as a possible "blessing in disguise", (Heckscher 1931b, 27).[20]

For the *long run*, he believed that the benefits of a fixed exchange rate system outweighed the potential benefits of a national fiat standard. He also thought that this belief was shared by "most observers" and hence he predicted that this would happen. "All likelihood speaks for a return to an international monetary system sooner or later for Sweden as for almost all other countries; if the system is called a gold standard or something else means very little." Heckscher 1931b, 50)

Foremost of the problems with a national fiat standard are the fluctuations in exchange rates, often caused by self-fulfilling expectations (Heckscher (1931b, 37). Experience showed that these could be substantial in the short run with a disturbing effect on international trade, in contrast to the gold standard which was characterized by stable exchange rates due to stabilizing exchange rate expectations, which in turn led to stabilizing capital movements.[21] Furthermore, speculative exchange rate changes could be self-fulfilling also in the long run, if the central bank accommodates the induced

[20] In the language of the modern literature on escape clauses (Bordo and Kydland 1995), it was a "viable escape" which would not set a bad precedent and cause new runs, when Sweden returned to a fixed exchange rate system. Heckscher does not make this argument explicitly, but it would fit with his other arguments.

[21] Heckscher saw the role of stabilizing capital movements due to mean-reverting exchange rate expectations as fundamental to the gold standard: "It seems impossible to understand at a first glance how it was possible to maintain fixed exchange rates without gold movements, in spite of that almost every day must have included events which should have changed the rates. The factor which played the main role was in all likelihood the *knowledge itself of the existence of fixed exchange rates and the faith in their continuance*. The person with a claim on another country which exchange rate is temporarily below its usual level would have an interest in not immediately withdrawing the amount, since he then would receive a smaller sum in his own currency than usual and the counterpart would normally not wish anything else." (Heckscher 1931b, 36, italics in original). This credibility-induced mechanism is also stressed in modern treatments of the gold standard, see e.g. Eichengreen (1996, 31-32).

movements in the national price level: “It is likely that in the absence of legally determined fixed exchange rates, …, the central bank, from lack of power, inclination or poor judgment would accept the new domestic price situation, corresponding to the exchange rate which speculation has driven it, in particular since a return will be equally irritating for a number of interests as with the original disturbance in its time”. (Heckscher 1931b, 39).

For the *short run*, however, he believed that “in the current situation almost any change in the international price level are possible”, which argued for a period of waiting “now that one has left one’s moorings”. The policy question concerned the goal and means to be used until a new international fixed exchange rate system had emerged. Heckscher made clear that stabilizing the value of gold or goods were only intermediate goals: “It is of utmost importance that no superstition creeps into the discussion of monetary policy. Gold, exchange rates, price levels etc are only means … The goal for economic welfare can only be the well-being of the society (*samhällets trevnad*).”, Heckscher (1931b, 30-31.) From a practical point, this meant “to the degree possible counteract booms and busts”, Heckscher (1931b, 45). This is the same viewpoint he expressed in Heckscher (1922).

Having dismissed a quick return to gold, the options left were stabilizing the price level or the exchange rate. The natural choice of currency to peg the krona to was the pound sterling. Pegging to the pound entailed the same type of problems as going back to gold. First, it was unclear what price developments would follow as the future of British monetary policy was unclear. Second, it was unclear how large a sterling area would be, both in terms of the number of countries pegging to the pound and as to the future role of pound as a reserve and vehicle currency. About a quarter of Swedish exports went to Great Britain and less than half to Great Britain and Scandinavia together should these countries also be in the sterling area. Thus the amount of exchange rate stability gained would be limited.

This left price stabilization as the interim solution until a new international monetary system would appear. While it was possible to proclaim stable exchange rates as an intermediary target even under a "free national currency", the price level was preferable as "Prices interact much more directly with economic life in its entirety than which is the case with exchange rates", Heckscher (1931a). He still imagined that exchange rates could be stabilized by intervention with a crawling peg arrangement: "The natural compromise therefore seems to be to let the price system determine the stance of monetary policy over rather long periods, but so to speak divide these periods into subsections, say a month or so, when one strives to keep exchange rates stable, to later raise or lower them with a well explained step to the degree that the price level seems to require it", Heckscher (1931a).

Heckscher also argued for taking a decision now on whether the old gold parity should be the goal or not for the future reconnection with the international system. The reason was that the price developments had to be planned with regard to a future parity to avoid "large displacements who nobody would want to take part in". His advice was to give up the old parity now, that is, an ex ante decision. Instead the future and unknown foreign price developments would determine the parity.

He made three arguments in favor of giving up the old parity for good. First, at the current international price level, a return to the old parity would benefit lenders at the expense of borrowers, due to a required deflation as the krona had depreciated, especially those who saved before the quickening of deflation in 1929 and previously also had gained from deflation. In contrast, the deflation in the 1920s, tended to redistribute wealth from borrowers who previously had gained from the war inflation. Thus there was rough justice in the early 1920s, which would be absent in the current situation, barring a future inflation in the gold countries. A second argument was that a deflation would cause unemployment, and in particular could cause more pain than in the 1920s due to more generous labor market programs at that time. The third and most important argument was the uncertain future price level in the gold countries, which could mean deflation or inflation with a return to the old parity. "The disarray of the current world monetary system is so great, and probably will be even greater, that it appears that the old parity is not worth any sacrifices", Heckscher (1931a).

He devoted a section of his report on how to make price level targeting credible: "A very difficult question is to what degree there can be any constitutional guarantees for a free [fiat] currency, similar to those that the constitution and general law, due to long and arduous experience, so far has been given to the gold standard in Sweden", Heckscher (1931a). This question was not posed in the questionnaire by the Riksbank, nor was it addressed by Cassel and Davidson. Heckscher stressed the transparency of the gold standard which could be checked by the public:

> It is in the nature of a free currency, that it has no simple and easy to grasp foundations, which makes the gold standard a system where anybody can check if it is followed or not; it is through this plastic character that the paper standard can catch up with the ups and downs of economic life, but also can lead to far more confusion than ever has been the case with a purely metallic currency. What little can be done to anchor the free currency constitutionally should without hesitation be done, and it is possible that one may in the future find better foundations than I am presently capable of. Heckscher 1931a.

Previous proponents of price level stabilization, like Wicksell in Sweden, had according to Heckscher simply assumed away the problem: "In earlier discussions, it appears to have been assumed in general that the central bank could be bound to a fixed price level and that this would be – almost – as safe as the central bank's obligation to convert the notes to gold." But this he considered a "dangerous simplification of the problem … as it would require giving constitutional status to a price index composed in a certain way", Heckscher 1931a. For the same reasons as central banks today use measures of underlying inflation, he argued that one specific price index could not be used to guide policy, and therefore ruled out that a certain price index would get a constitutional status.[22]

His positive suggestion was that the government and the parliament both should commit itself to the price stabilization through explicit statements of the goal, including a clear motivation. This should be done in connection with the revocation of the convertibility which according to the constitution (continuation of §72 quoted above) should be confirmed by each parliamentary meeting within 20 days of its opening. This also happened. The written commitments would help to create a check on the rule's fulfillment: "such a decision, pronounced in a solemn form, would be one of the best methods to achieve the stated goals", Heckscher (1931b, 126).

He also touched on the independence of the Riksbank. The Riksbank, since its start in 1668, has been an authority under the parliament, that is, not a government authority. The government's only formal power was its right to appoint the chairman of the Riksbank board. The independence of the Riksbank was in Heckscher's view reasonable under the gold standard, when the goal was fixed by the constitution, but not under a fiat standard. Since price stabilization could not be tied to a specific price index, the goal could not be part of the constitution. Giving Riksbank independence under a fiat standard would imply independence to determine both goals and means – a recipe for disaster as the World War I experience testifies to. He could not see a satisfactory legal solution to the problem, but advocated a better cooperation between the Ministry of Finance and the Riksbank, by appointing a monetary expert to work directly for the Minister of Finance.

[22] See the discussion in Berg and Jonung (1999) on the use of different price indexes to guide policy.

How did the price stabilization work out? The Swedish price level was stable until 1937. A first potential breach occurred in 1933, when the Riksbank pegged the krona to the pound. Hence exchange rate stability took precedence over price stability, but as long as the price level in the United Kingdom was stable, the exchange rate could be considered an intermediary target for price stability. The price level in the United Kingdom begun to rise in 1936 and the Riksbank had to choose between exchange rate and price stability. When the Swedish price level began to follow suit and there was no reaction from the Riksbank or the government, Heckscher demanded an appreciation of the exchange rate to fulfill the price stability goal. He argued that:

> When one now so strongly urges the current pound [exchange] rate´s continuation, an observer would have assumed that this was in any form expressed in the official monetary program. One is then surprised that this program does not have a word about a fixed pound rate, but on the contrary binds our monetary policy to the price evolution. The Riksbank operated on this basis for the first two years after the change to a fiat standard, and the policy did not hinder a clear recovery. That a fixed rate in itself is an advantage is incontrovertible, but there are more important goals; and it is those that now are at stake. A pound rate which can be raised but not lowered is on the other hand to no advantage at all; but it is this policy which now is urged and also so far has been applied. Heckscher (1937, 4).

The pound rate was not changed and the breach of the price stabilization program was definitive. Heckscher's concern of making price stabilization a time-consistent policy was borne out. The reputational check from the written pledges was not enough.

3. Conclusion

Heckscher´s campaign to restore the gold standard at the old parity in 1920-1922 was based on its historical ability to provide long-run price stability and the corresponding inability of fiat money to provide stability during World War I. Heckscher added to the debate by providing an explanation to this fact in arguing that monetary authorities, acting under discretion, have incentives to deviate from an optimal policy of price stability. The gold standard provides a transparent rule, which tends to be self-enforcing though the implicit threat of dismissal of those in charge, like the bell on the cat in Aesop's fable.

Heckscher was more prescient than his contemporaries in his analysis of fiat money systems, and at the same time more humble in admitting the difficulties in finding a new institutional framework. While he advocated price stabilization with fiat money in 1931 after the demise of the international gold standard, he foresaw the difficulties of creating an institutional framework to make it a time-consistent policy rule, which only now we know in its outlines.

Heckscher is known for his ability to marry economic history with economic theory. [23] His participation in the debate also shows that participation in policy debates can be inspired by as well as inspire to economic research. A significant, but less well known, part of his life's work deals with monetary history. His first article on monetary history was his article on the demonetization of the hyper-inflated assignats, which was inspired by Wicksell's proposal.[24] His participation in the debate likely inspired him to write a monograph on the monetary developments of Sweden during World War I and its aftermath, Heckscher (1926, [1930]), which contains significant contributions to the testing of the quantity theory and to the theory of exchange rates.

Heckscher's work on economic policy, history and theory reflect different, but related, aspects of his fertile mind. He came close to formulating the modern insights of the rules versus discretion debate in his policy contributions, but the time was not yet ripe to formulate these insights in a theoretical setting.

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[23] His influence on economic history with a focus on international trade is treated in Findlay et al (2006).
[24] Heckscher (1921d).

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