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Ragnar Nurkse and the international financial architecture*

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ABSTRACT

This lecture discusses the work by the Estonian economist Ragnar Nurkse (1907–1959). It focuses on the early Nurkse, who was concerned with exchange rates, capital flows and what today we call the international financial architecture. It asks how many of the conclusions of *International Currency Experience* [Nurkse, R. (1944). *International Currency Experience*. Geneva: League of Nations.] survive. How many of Nurkse's points about the interwar gold standard are confirmed by subsequent scholarship? How many of his points are still relevant to the international monetary problems of today?

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It is an honour to be asked to deliver the Ragnar Nurkse Lecture. I will be focusing on the early Ragnar Nurkse, who was concerned with exchange rates, capital flows and what today we call the international financial architecture. There was also a late Ragnar Nurkse, who made important contributions to the theory and practice of economic development. But it is with the early Nurkse, and his book from 1944, *International Currency Experience*, that my own interests coincide.

In this lecture I will ask how many of the conclusions of *International Currency Experience* survive. By survive I mean two things. First, how many of Nurkse's points about the interwar gold standard are confirmed by subsequent scholarship? And second, how many of his points are still relevant to the international monetary problems of today?¹ So what are those key points?

- First, a key difference between the gold standard before 1914 and the gold-exchange standard of the 1920s was the decline of confidence.

Although Nurkse never specified exactly what he meant by confidence, this point is central to our understanding of the fragility of the interwar gold-exchange standard

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*Editors' note: this article is based on the lecture given by Professor Barry Eichengreen for the 2017 Ragnar Nurkse Memorial Lecture on January 12, 2017. The lecture series dedicated to Ragnar Nurkse is organised by the Bank of Estonia and commenced in 2007. Ragnar Nurkse was born in Rapla County in Estonia in 1907 and studied at the University of Tartu, Edinburgh University and the University of Vienna. He worked on international financial issues at the League of Nations in 1934–1945; after the Second World War he became a professor at Columbia University and then at Princeton University. His research focused on monetary policy issues, international trade, international policy coordination, and development economics.

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and the operation of modern monetary systems. Subsequent histories framed the confidence problem of the 1920s and 1930s in terms of central bank credibility: were central banks willing to credibly elevate maintenance and defense of the exchange rate above all other goals of policy? Before 1914, the answer had generally been yes.² But in the changed political circumstances of the 1920s, when the franchise was broadened and the restoration of full employment had become a more important social goal, the answer was often no.³ Once upon a time, capital had flowed in stabilizing directions. When a currency weakened, capital would flow in, supporting the exchange rate, because investors anticipated that the central bank would raise interest rates and otherwise support it. But in the changed circumstances of the 1920s and 1930s, this was no longer true. Now capital movements might aggravate rather than ameliorate problems of exchange rate volatility. Consequently, pegged exchange rates became more fragile, and efforts to maintain them were more problematic. This meant that countries committed to free international capital mobility had to move to either greater exchange rate flexibility or monetary union.⁴ It took until 1991, with Paul Krugman's article on exchange rate target zones, for this mechanism to be formalized.⁵ We saw its operation more recently with the very different behaviour of capital flows before and after Mario Draghi's famous 'do whatever it takes' pledge to defend the integrity of the Eurozone.

- Closely related, when a central bank lacks credibility, efforts to defend a currency peg may be futile.

Worse than futile, the interest-rate defense may be counterproductive. 'When for any reason the balance of payments turned adverse,' Nurkse wrote, 'a rise in the bank rate would be taken as a danger signal and a fall in the exchange rate would create expectations of a further fall, so that funds would tend to move out instead of in.'⁶ A rise in the central bank's policy rate may so aggravate other problems, such as high unemployment, weak investment or fragility in the banking system, as to render that high rate unsustainable. In this environment a speculative attack on a pegged exchange rate can be self-fulfilling.⁷ This tradeoff, where a commitment to a currency peg was abandoned under duress for fear that higher interest rates would aggravate other domestic problems, was evident in 1992, when George Soros famously 'broke the Bank of England.' The Bank first raised interest rates to defend the peg but then revoked that decision, allowing the sterling exchange rate peg to fall, once the adverse consequences for the housing market and the economy became clear. The same dynamics were evident in Nurkse's period, in 1931, when the Bank of England hesitated to raise its policy rate to defend sterling because of the gravity of the unemployment problem.⁸ Nurkse's own analysis of the period points to the fragility of pegged exchange rates between separate national currencies in an environment of democratic politics and high international capital mobility.⁹

- The interwar system ultimately broke down because of the failure of central banks to 'play by the rules of the game.'

Before 1914 central banks had allowed capital inflows and outflows to increase and reduce domestic supplies of money and credit, but after 1919 they instead 'neutralized' (we would say 'sterilized') their impact. Not only was the expected positive correlation

between the domestic and foreign assets of central banks absent from Nurkse's annual central bank balance-sheet data, but more often than not a central bank's domestic and foreign assets moved in opposite directions. This was Nurkse's smoking gun. Later, doubt was cast on it by another leading scholar of the gold standard, Arthur Bloomfield, who showed in 1959 that exactly the same pattern was evident in annual data for the period before 1913.¹⁰ This surprising finding was the source of a large subsequent literature and considerable intellectual confusion. That confusion finally subsided in 1982, when John Pippinger published yet another analysis of the pre-World War I period, this one considering longer periods and showing that while central banks regularly violated the rules of the game by sterilizing capital and reserve flows in the short run, they adhered to the prescribed gold-standard rules in the long run, consistent with Nurkse's explanation for the contrast between the prewar and interwar systems.¹¹ Thus, subsequent scholarship shows the pre-1914 gold standard to have been more complicated and less credible than Nurkse himself posited while leaving his core explanation for the contrast intact.

- The international monetary system of the 1920s was deflationary.

This was not just because of the failure of global gold supplies to keep pace with an expanding world economy (the factor emphasized by the Gold Delegation of Nurkse's employer, the League of Nations) or the fact that governments, intent on turning back the clock, set the price of gold too low (the interpretation adopted by Robert Mundell in his presidential address to the American Economic Association).¹² As important as limited international reserves were increases in central banks' demands. Shocks were more asymmetric in the turbulent 1920s, requiring central banks to hold more reserves to finance larger external deficits vis-à-vis countries in different circumstances than their own. ('Asymmetric shocks' is of course another anachronistic term, this one from the theory of optimum currency areas.¹³ Nurkse himself referred instead to the synchronization of economic conditions across countries.) Similarly, capital flows were larger and more volatile. This raised the precautionary demand for reserves, not unlike the increase in Asia following the 1997–8 financial crisis.¹⁴ But with many countries seeking to accumulate reserves by running balance of payments surpluses, aggregate supply outstripped aggregate demand globally, resulting in deflation.

- But the value of reserves as balance-of-payments insurance was less than met the eye.

In practice, a substantial fraction of central bank reserve holdings were 'immobilized' by statutes requiring them to be held as backing for domestic liabilities. Even where a gold standard statute specified that cover requirements could be suspended under certain conditions, central banks were reluctant to suspend, since doing so might be taken as a signal of less than full commitment to convertibility. Before 1913, temporary suspensions of gold convertibility had been possible because the credibility of the underlying commitment reassured investors that the earlier gold parity would be restored at the first opportunity.¹⁵ Now that credibility was less and resumption was unlikely, suspensions and even reserve drawdowns were more problematic.¹⁶ This problem, that actually utilizing foreign reserves can undermine confidence, is familiar to modern observers. The Bank of Korea was famously reluctant to allow its reserves to decline below \$200 billion in the global crisis

in 2008 for fear of exciting investors. In 2015 the People's Bank of China hesitated to allow its reserves to decline to \$2.8 trillion, the figure that the IMF had identified, ironically, as a plausible ceiling on the level of prudent reserves, not a floor, for similar reasons. The difficulty of actually using reserves held at the national level has led to calls for expanding the global safety net of central bank swap lines and IMF credits as a supplement, or even a substitute, as Nurdse did toward the end of his book.

- More generally, the world economy between the wars suffered from the absence of a mechanism to adequately regulate international liquidity.

In practice, the main mechanism available for augmenting global liquidity was currency devaluation that raised the market value of gold. But governments were reluctant to devalue for credibility-related reasons, fearing that one devaluation would create expectations of another. Those devaluations that took place were uncoordinated and haphazard. This problem called for international agreement and a new institution to regulate exchange rate changes and augment global supplies of liquidity – another call that Nurdse made toward the end of his book. But even today we are still waiting for a solution to this problem. The world continued to rely on exchange rate changes to regulate the global supply of liquidity in the 1950s and 1960s. But the U.S. was reluctant to devalue and raise the dollar price of gold for fear that one devaluation would create expectations of another. While the IMF was supposed to pre-approve exchange rate changes, governments rarely gave it advance warning. While the Fund was empowered to issue Special Drawing Rights in 1969, the supply of SDRs has failed to keep pace with the growth of the global economy and cross-border financial transactions.¹⁷

- The resulting supply of international liquidity was procyclical.

When times were good and confidence was high, central banks accumulated reserves in the form of bank deposits in the reserve centres and bonds issued by the governments of those same centre countries. But when confidence was disturbed, central banks liquidated those exchange reserves and scrambled into gold. Their doing so caused gold losses for the reserve centres, which were forced to raise interest rates and restrict the supply of private bank credit to stem reserve losses. The result was further stringency just when economic activity was turning down. This phenomenon of procyclical liquidity will also be familiar to observers of our contemporary global economy, although the precise mechanisms today are different. We have seen it in the strongly procyclical lending and investment behaviour of international banks, first before the global crisis, when credit and leverage were rising strongly, and then at the deleveraging stage, reflecting the responsiveness of international bank lending to the cost and availability of the principal international asset, the U.S. dollar.¹⁸ We saw it in the boom period when energy and commodity prices were high, allowing oil-exporting countries to accumulate foreign exchange and invest it in emerging markets, and then in the period of low oil prices, when oil exporters experienced reserve losses and the market in emerging market debt was hit.¹⁹

- The interwar gold exchange standard suffered from the existence of multiple reserve currencies and reserve centres.

The existence of multiple reserve centres with liquid markets and convertible currencies caused small shocks to be amplified as investors shifted between them at the first sign of trouble.²⁰ Before 1913, Nurkse argued, sterling had reigned supreme. Now that the dollar was on par with sterling as an international currency, even limited doubts about Britain's exchange rate could cause investors to rush out of sterling and into dollars, as they did in the summer of 1931. Once Britain devalued, those same investors would rush out of dollars and into French francs or another unit more firmly pegged to gold. The result was the disastrous, deflationary liquidation of foreign exchange reserves at exactly the time they were needed to support international transactions. This interpretation of interwar experience continues to inform the view that a multipolar international monetary system organized around the dollar, euro and Chinese renminbi could be dangerously unstable.²¹ My own view is that history provides as many examples of stable as unstable multipolar systems (for example, the pre-1914 system, which was in fact organized around not just sterling but also the French franc and German mark).²² And to the extent that any future tripolar system will almost certainly see the dollar, euro and renminbi floating against one another, with other central banks shadowing one or more of these currencies, there will be two-way risk (the possibility of appreciation as well as depreciation) to eliminate one-way bets and limit speculative pressure.

- The centre country has special responsibility for the smooth operation of the international system.

As Nurkse put it, '... it is of vital importance for the centre country to keep up its demand for imports and/or its foreign lending, so as to maintain the liquidity of the member countries ...'²³ The U.S. in 1931–2 was a case in point. The U.S. had one of the worst Great Depressions of any economy. It refused to keep its market open to the distress goods of other countries, instead responding to the slump with the Smoot-Hawley Tariff. It failed to engage in countercyclical lending to other countries when countercyclical lending was most desperately needed. *International Currency Experience* devoted an entire chapter to the Sterling Area because it proved this point by counterexample. Britain had a milder Depression. It kept its markets open to the Commonwealth and members of the Sterling Area by negotiating the Ottawa Agreements. It engaged in countercyclical lending. As a result, the Sterling Area displayed a cohesiveness the 'Dollar Area' lacked ('Dollar Area' in quotes, because the phrase, revealingly, was rarely used). This theme, that the stabilizing influence of the centre country is critical to the cohesiveness of an international system, was later adopted by Charles Kindleberger in another influential book, *The World in Depression*.²⁴ The idea has a name in the literature on international relations, where it is referred to as 'hegemonic stability theory.' It is invoked to explain why the dollar and the United States remain disproportionately important for the operation of our contemporary international monetary and financial system. And it is pointed to as a source of worries about whether a future multipolar system, lacking a hegemon, would have desirable stability properties.

- Confidence and liquidity were problems for the international monetary system, but so too was adjustment.

The idea that confidence, stability and adjustment are the three essential attributes of a smoothly-functioning international monetary system is commonly attributed to the Princeton economist Fritz Machlup, but the triad appeared earlier in Nurkse's book.²⁵ (It is probably more than incidentally relevant that Nurkse, along with the rest of the Economic Section of the League of Nations, relocated to Princeton during World War II.) Nurkse identified two problems with the adjustment mechanism. First, exchange rate changes did not always cause the trade balance to move in expected directions. Second, the mechanism was asymmetric: while deficit countries come under pressure to adjust, surplus countries have the option of doing nothing. Both problems are of course still with us.²⁶ The asymmetry of the adjustment mechanism is a prominent issue in the Eurozone, where surplus countries like Germany come under less pressure to adjust than deficit countries like Greece, imparting a deflationary bias to the system.

- Competitive currency devaluation in the 1930s was beggar-thy-neighbor, leaving both the initiating countries and the world as a whole worse off.

This point is widely associated with Nurkse. It is invoked whenever a country in recession or experiencing deflation allows its currency to depreciate, as in the 1930s. More recently, the Federal Reserve was criticized for engaging in beggar-thy-neighbor currency wars when, in the wake of the financial crisis, it cut interest rates to zero, engaged in quantitative easing, and allowed the dollar to depreciate against emerging market currencies. The Bank of Japan has been criticized similarly for allowing the yen to depreciate as part of its campaign to defeat deflation. These policies do little for the initiating country, it is said, and only hurt their neighbours. They leave the world as a whole worse off. In fact, what Nurkse wrote is more nuanced. He first noted that no country recovered successfully from the Great Depression without jettisoning the gold standard, abandoning deflationary monetary policies, and allowing its currency to depreciate.²⁷ He then observed devaluation was not always and everywhere beggar-thy-neighbor. In fact, the cross-border effects depended on whether 'devaluation was followed by a domestic expansion of investment and national income [in which case] that expansion was a net expansion from the world point of view, tending to stimulate foreign trade all around.'²⁸ Finally, the haphazard way in which depreciation occurred raised uncertainty, which neutralized some of the beneficial effects.²⁹ In other words, Nurkse's analysis was not so much an indictment of currency devaluation, competitive or otherwise, as a lament about the absence of international coordination.³⁰ This is also a more insightful way of portraying quantitative easing by the Fed and the reflationary push of the Bank of Japan. If their actions constituted currency warfare, then what was needed in the deflationary aftermath of the global financial crisis was more 'warfare,' not less.³¹ None of this is to deny, of course, that coordinated reflationary initiatives would have been preferable. Nurkse would have said the same.

- Where devaluation was not possible for historical reasons, countries resorted to quotas, bilateral clearing arrangements, and capital and exchange controls.

Those historical reasons were of course the association of currency depreciation with high inflation. As Nurkse put it,

It may be recalled that in the last stage of hyper-inflation in Germany and elsewhere in Europe during the early 'twenties, exchange depreciation often became in fact if not in logic the leading element in the inflationary process. Memories of that experience played no doubt an important part in the popular identification of devaluation with inflation in Central and Eastern Europe in the 'thirties.³²

Unable to devalue, these countries sought policy room for maneuver by applying controls. Among countries that clung to the gold standard (the members of the so-called Gold Bloc), there was an equally unfortunate tendency to substitute tariffs and import quotas.³³

- The shift away from the gold standard in the 1930s was not in fact a shift toward freely floating exchange rates.

In practice, exchange rates were still heavily managed and displayed little more variability against their respective anchor currencies than before. This is a point documented for the 1930s by Scott Urban (2009).³⁴ It has been made more generally by Calvo and Reinhart (2002) and others emphasizing 'fear of floating' in our contemporary world. Nurkse's emphasis on continued management of currencies in the 1930s was a corollary of his observation that experience with freely fluctuating exchange rates in the 1920s was unsatisfactory. His assertion that floating rates had been destabilized by 'disequilibrating capital movements' was disputed, most famously by Milton Friedman.³⁵ The role of 'speculation' (Friedman's term, not Nurkse's) in destabilizing exchange rates in the 1920s continues to be debated, with different tests suggesting different conclusions.³⁶ Where there is agreement is that the prerequisites for successfully operating a regime of free exchange rate flexibility are far from non-negligible and that not all countries meet them.

- It followed from the extent of exchange rate management that the demand for international reserves did not fall with the shift from 'fixed' to 'flexible' exchange rates, as many observers had anticipated.

The demand for reserves remained strong in the 1930s because central banks, and governments operating through their exchange equalization accounts, continued to intervene in the foreign exchange market to limit currency variability. This important observation, emphasized by Nurkse, was largely forgotten by the time the Bretton Woods System collapsed in the 1970s. A number of prominent observers, Gottfried Haberler for example, anticipated a significant decline in the demand for reserves with the shift to 'greater flexibility' post Bretton Woods.³⁷ (There is no little irony in the fact that Haberler had been one of Nurkse's teachers.) In the event, exchange rates continued to be managed, and the demand for reserves remained largely unchanged.³⁸ The problem of reserve adequacy therefore remained.

- A better system would involve international agreement on the level of exchange rates, on the limited circumstances in which a country can devalue, and on the provision of emergency credits.³⁹

In basing these recommendations on his analysis of the 1920s and 1930s, Nurkse was providing analytical foundations for what became the Bretton Woods Agreement. Bretton

Woods obliged governments to declare par values in terms of dollars and created an International Monetary Fund whose assent governments were required to obtain before changing those par values but from which they could also borrow in the event of balance-of-payments problems. Agreement on the initial par values was designed to avoid over- and undervaluation. Multilateral oversight of changes in par values and the availability of emergency finance were needed to prevent countries from taking too frequent recourse to devaluation, which would destabilize expectations and give rise to disequilibrating capital flows, while causing other countries to tighten capital and trade controls.⁴⁰ But given the 'disequilibrating tendencies' of capital flows, the retention of at least some capital control was desirable. Indeed, it can be argued that it was essential for giving governments time to organize orderly realignments and avoid excessive rigidity in the exchange rate system.

Nurkse was writing before the Bretton Woods Conference, but after, it would appear, the publication of the preliminary 1943 draft outlines of both U.S. and UK experts on the design of the postwar monetary order. We do not know how much he influenced the negotiations at Bretton Woods versus how much he was influenced by the Keynes and White proposals. What is clear is that he supported a Bretton Woods-type agreement.

The Bretton Woods System functioned adequately for a time. But that time was short, from 1958 through 1971. With the reconstruction of financial markets, international capital flows recovered, overcoming governments' efforts to restrain them. With the recovery of capital flows, pegged-but-adjustable exchange rates became more difficult to maintain, as under the interwar gold standard. Governments accepted international capital mobility as a *fait accompli* and shifted to alternative exchange rate arrangements: hard pegs and monetary union in Europe, greater exchange rate flexibility in other parts of the world.

One wonders which of these alternatives Nurkse would have favoured. Because he was leery of disruptive currency movements, one suspects that he would have favoured monetary union. But he would have favoured it only if that monetary union was organized to facilitate a high level of international cooperation and only if the result avoided an asymmetric burden of adjustment and deflation. He would have observed that the Euro Area is still quite far from this desirable state of affairs.

Notes

1. I omit discussion of chapter 6 of the book, which is attributed to William A. Brown.
2. As analyzed at length by Bordo and MacDonald (2012).
3. This being a central point of Eichengreen (1992).
4. Members of an Estonian audience might prefer to include both currency boards and full monetary union at the 'hard fix' end of the spectrum. I made this 'bipolar view' the theme of Eichengreen (1994).
5. See Krugman (1991).
6. P. 16.
7. This is modeled formally in Obstfeld (1994).
8. As analyzed both theoretically and historically in Eichengreen and Jeane (2000).
9. The theme of my 1998 book, *Globalizing Capital*, is that the modern international monetary trilemma is that countries can have only two of three things: democratic politics, international capital mobility and pegged exchange rates.
10. See Bloomfield (1959).
11. See Pippinger (1982).

12. And published as Mundell (2000).
13. Mundell (1961).
14. On the Asian case see Aizenman and Lee (2007).
15. This mechanism is described and analyzed by Bordo and Kydland (1995).
16. As Nurkse put it, reserves were immobilized by the danger of ‘upsetting confidence’ if they slipped below a certain minimum even when this was permissible (p. 95).
17. The literature on whether there is a shortage of international safe assets (Gourinchas & Jeane, 2012) is fundamentally concerned with this problem.
18. This phenomenon has been emphasized by Hyun Shin in a series of papers (see for example Shin, 2016).
19. I have analyzed this last set of connections in Eichengreen and Gupta (2016).
20. P. 217.
21. See for example Williamson (2010).
22. As shown by Lindert (1969).
23. P. 46.
24. Kindleberger (1973).
25. See in particular Machlup (1966).
26. Ahmed, Appendino, and Ruta (2015), analyzing 46 countries over the period 1996–2012, find that the elasticity of exports with respect to the exchange rate is lower now than in the past. They attribute the change to the importance of trade in intermediate goods resulting from the growth of global supply chains, the argument being real depreciation does not reduce the cost of the imported-input component of a country’s exports. In addition, in a world of global supply chains, real depreciation will reduce the cost of a country’s intermediate exports to foreign producers, enhancing the competitiveness of the latter in turn and further reducing the effect on real net exports.
27. P. 128 and passim.
28. P. 129.
29. Pp. 19, 130.
30. These points are elaborated both theoretically and empirically in Eichengreen and Sachs (1985, 1986), which is, if you look back to the introduction to this lecture, where I came in.
31. As argued in Eichengreen (2013).
32. P. 167.
33. A point thoroughly documented by Eichengreen and Irwin (2010).
34. Nurkse was first to make the point. Nurkse also emphasized (p. 135) that, in practice, countries that were highly specialized in exporting certain products, primary products in particular, and whose export prices were especially volatile had the greatest need for exchange rate flexibility, a point made for the modern period by inter alia Frankel (2003).
35. See Friedman (1953). Nurkse himself wrote only that experience with freely flexible exchange rates in the 1920s ‘demonstrates ... the difficulty of maintaining a freely fluctuating exchange rate on an even keel, any movement in one direction being liable to create expectations of a further movement in that direction ...’ – p. 119).
36. See for example Aliber (1962), Krugman (1977), Eichengreen (1982) and MacDonald and Taylor (1991).
37. In Haberler (1977). Interestingly, Haberler had been one of Nurkse’s teachers in Vienna, where Nurkse studied before joining the League of Nations. Nurkse and Haberler maintained a close friendship subsequently.
38. See for example Heller and Khan (1978) and Frenkel (1980).
39. Pp. 139–141, 211.
40. As Nurkse wrote,

The more frequent the exchange adjustments, the stronger are likely to be the disequilibrating tendencies not only in the capital flow but also in the movement of trade; the more frequent and disturbing will be the internal shifts of labor and other resources; the more seriously will exchange risks hamper foreign trade. Changes in exchange rates

should therefore be made only in cases of persistent disequilibria in order to avoid alternative measures of adjustment, such as deflation or import restrictions, which are even costlier in terms of general economic stability and well being. P. 141.

Disclosure statement

No potential conflict of interest was reported by the author.

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