POST-COMMUNIST MONETARY PROBLEMS

Lessons from the End of the Austro-Hungarian Empire

Rudiger Dornbusch

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An International Center for Economic Growth Publication

ICS Press
San Francisco, California

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Publication of this Occasional Paper was funded by the United States Agency for International Development (AID) and the Starr Foundation.

Inquiries, book orders, and catalog requests should be addressed to ICS Press, 720 Market Street, San Francisco, California 94102, USA. Telephone: (415) 981-5353; fax: (415) 986-4878. Book orders within the contiguous United States: **(800) 326-0263**.

Library of Congress Cataloging-in-Publication Data

Dornbusch, Rudiger.
Post-communist monetary problems : lessons from the end of the Austro-Hungarian Empire / Rudiger Dornbusch.
p. cm. — (Occasional paper ; 49)
"An International Center for Economic Growth Publication."
Includes bibliographical references.
ISBN 1-55815-308-X
1. Former Soviet republics—Economic conditions. 2. Austria—Economic conditions—1918–1945. 3. Central Europe—Economic conditions. 4. Former Soviet republics—Economic policy. 5. Austria—Economic policy—1918–1945. 6. Central Europe—Economic policy. 7. Austria—History—1918–1938. 8. Central Europe—History. I. Title. II. Series: Occasional papers (International Center for Economic Growth) ; no. 49.
HC336.26.D654 1994
332.4'947—dc20 93-42767
CIP

PREFACE

The International Center for Economic Growth is pleased to publish *Post-Communist Monetary Problems: Lessons from the End of the Austro-Hungarian Empire* as the forty-ninth in our series of Occasional Papers, which feature reflections on broad policy issues by noted scholars and policy makers.

In this paper Rudiger Dornbusch argues that the breakup of the Austro-Hungarian empire from 1919 to 1924 gave rise to transition issues which are similar to those currently faced by the former Soviet Union.

He compares the monetary strategies adopted after the breakup by the three main countries of the empire. Czechoslovakia moved rapidly to monetary reform and independence, avoiding hyperinflation by focusing on a balanced budget, elimination of unnecessary spending, and a strong work-and-save ethic. The process of achieving stability, however, was difficult and took five years. Austrian monetary affairs were overshadowed by political instability. Extreme inflation and human suffering became so severe that Austrians were finally willing to accept the imposition by the League of Nations of a stabilization plan, full powers for the government, and a powerful Resident Commissioner. The plan was successful in a short period of time. Hungary's economic health eroded gradually until 1923, when complete reform became essential as well as politically acceptable. External loans, firm surveillance by the League, and an independent central bank brought stability.

Dr. Dornbusch details specific and practical lessons that can be gleaned from the Austro-Hungarian experience: the necessity of balancing the budget, fixing the exchange rate, eliminating exchange control, and ensuring the independence of the central bank. He suggests that Moscow should base a currency area on a stable currency, such as the dollar or the deutsche mark and that an explicit free trade zone be created. Dornbusch argues against the current IMF strategy and recommends a more forceful presence, equivalent to the League of Nations' Resident Commissioners. Finally he urges the West to give more loans for clearly specified programs, to offer more political support, and to mobilize its political and economic representation in the area.

The comparison the author draws is timely and persuasive. His perceptive analysis of a close historical precedent will be of great interest to those involved in the evolution toward financial stability of the new republics.

Nicolás Ardito-Barletta
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Panama City, Panama
January 1994

Rudiger Dornbusch

Post-Communist Monetary Problems

Lessons from the End of the Austro-Hungarian Empire

Over the past decades, the Kiel Institute has developed a high international profile with its message of what makes sound national and international economic policy: unfettered competition, hard money, free trade across the world—all without reservations or qualifications. My own predilections go only 90 percent that way. Thus, being awarded the Bernhard Harms Prize by the Kiel Institute was a pleasant surprise and a treasured privilege. I am aware of the distinguished list of predecessors who have achieved that recognition, some of whom have shown me great personal kindness at various stages of my career; I join them with pride. There is no better occasion than this one to express gratitude to my teachers; in Geneva, in Chicago, and along the way they have put me on the path to the honor of this prize.

The transition experience of the former Soviet Union seems to offer almost unrivaled challenges: if the politics are difficult, the economics seems almost unsurmountable. Yet, many of the transition issues faced

Expanded version of a lecture delivered at the Institute of World Economics, Kiel, on being awarded the Bernhard Harms Prize at the Kiel Institute on June 27, 1992. Thanks go to Horst Siebert, the president of the institute, and his colleagues for their warm hospitality and lively discussion. Guy Debelle provided helpful research assistance.

Reprinted with minor revisions from *Weltwirtschaftliches Archiv*, Band 128, 1992, Heft 3. Kiel Institute of World Economics, Kiel University. Used by permission.

by Russia and other republics of the CIS today are in fact precedented. The breakup of the Austro-Hungarian empire from 1919 to 1924 brings up many of the same questions and it is therefore interesting to review that experience and to ask what lessons from the 1920s have relevance for the CIS experience today.[1]

All too often, it is argued that a country's experience is so unique that outsiders cannot possibly understand exactly what the problem is and what good solutions might exist. More importantly, analogies from other countries, past or present, are invariably rejected as irrelevant or at best superficially similar, but failing in essential ways. It is all too common to be told, "You don't understand, this country is different." More often than not, however, the similarities with other experiments are striking, the mistakes are the same, and one cannot help commenting on this with some cynicism—even the rationalization for radically wrong strategies is the same.[2]

The case of the CIS does have a claim to novelty and perhaps for that reason might not lend itself to parallels. After all, the transition from a full-fledged command economy to the market is a totally new experiment and certainly has an important bearing on events and remedies that we prescribe. And there is another difference; Moscow is not Vienna. They may be comparable in the concentration of bureaucracy and intellectual talent in the capitals, but Moscow is rich with resources, notably oil, while Vienna had nothing to offer on its side of a bargain and by 1919 had lost everything except its debts and bureaucrats. Yet, in the area of macroeconomics, and beyond, analogies do apply and thus I propose here to explore what is relevant in the 1920s experience.

The case of the Austro-Hungarian empire is a profitable analogy for three reasons. First, many of the issues connected with the emer-

1. The Austro-Hungarian experience has, of course, been studied already from the perspective of hyperinflation. See notably Cagan [1956], Sargent [1982], and Dornbusch and Fischer [1986]. Dornbursch [1992a] and Dornbusch et al. [1990] review extreme inflation and its stabilization. Independent work by Flood et al. [1992] explores many of the points raised in this paper. The monetary history of Latvia, Lithuania, Estonia, and Poland also has relevance to what is happening today in these countries. See League of Nations [1945 and 1946].
2. Dornbusch and Edwards [1991] present this theme in the context of the Latin American macroeconomic populism paradigm.

gence of new states and the problems of nationalism were present at the time. Second, a major upheaval occurred with questions about the appropriate economic regime—socialism or communism then, the market today. Finally, the winners of the time had a major role to play in stabilization and normalization, just as the West does today.

Among the most interesting lessons are those concerning monetary arrangements and external intervention. The current IMF strategy of favoring a ruble zone, despite the lack of any structure for controlling deficits across new national borders (or even within), can only end in the uncontrolled disarray that occurred in 1919–20 in the former empire. Moreover, the appropriate intervention is more likely that which ultimately occurred in Austria and Hungary—League of Nations resident Commissioners, rather than timid IMF missions tendering $1 billion, more with a mind to elections in the United States than the determined and forceful reform and reconstruction of Russia.

Another lesson is that a nationalistic breakup can have grave effects and that the outside world can support constructive policies that recognize the new sovereignty of the parts, but also keep in perspective their interdependence. And there is a grave risk that Russia has learned all too quickly from Brazil; an IMF agreement need not grant more than a temporary good advertisement and some monetary aid and then, soon, another one. There is also a lesson which is relevant for the industrial countries as a group—effective assistance should come early, with a high level of engagement and with strong commitments on the part of recipient parliaments.

The Curses of Post-Communism

We can pessimistically, though accurately describe the present problems by naming the five curses of post-communist societies: unstable politics, budget deficits, nationalism, lack of economic institutions, and the withering interest of the West.

Unstable politics. Any young, active democracy has to find a center of gravity. Invariably, that task is difficult to achieve quickly. Argentina had a hard time, the Philippines is experiencing difficulty, Brazil has been in a lingering crisis for a decade, Weimar Germany had its trouble, and Russia today is no different.

In the CIS, there are pervasive remnants of the communist elite who hold power in the parliaments and even in the administration. In the Ukraine, the same communist president rules now as then, Byelorussia has not seen much change, and in Russia's parliament, conservative forces have significant influence. The mix of reactionary forces and a broad, divided group of parties ranging from nationalists to entrepreneurs makes it difficult to build a political coalition. In such a situation, reform measures that carry a heavy dose of discomfort or represent threats to the status quo are difficult to enact. Far easier is populism—promise the sky, full steam ahead.

Budget deficits. Budget deficits can be extremely large—5 to 10 percent of GNP or even more. The deficits are predominantly financed with money. Previous experience with extreme inflation shows that sooner or later deficit financing translates into accelerating inflation. From there, uncontrolled inflation easily sets in: erosion of the real yield from taxation, exchange collapse, indexation, and dollarization accelerate inflation from 500 percent to 1,000, 10,000 percent, and beyond.

For the time being, however, warnings fall mostly on deaf ears. "Politically impossible" has become the international way to dismiss out of hand the need for early and firm budget balancing. Because inflation has not exploded to phenomenal levels yet, complacency seems almost warranted. There is an old truth in this business, however; the economy takes much longer to explode than one thinks, but when it does, it happens much faster than one would have thought.

Nationalism. The repressive empire organized by Stalin and his successors left no room for dissent. With the breakdown, new republics have emerged. As they define themselves, nationalism is the central theme. To some extent that is normal and perhaps even good. But clearly, it is being carried to extremes in many places. Minorities are locked up in enclaves and want to assert their self-determination. Religious minorities want to give expression to their individuality. The communist elite is among the chief driving forces of this nationalist movement; putting themselves at the head has given them an extra lease on political and economic leadership.

In some places, nationalism has exploded into civil war with its obvious destructive consequences. In these regions, it will take decades to repair the damage and perhaps much more, as these feelings have been simmering underground for decades. In even more moderate cases, however, economic nationalism—turning away from Moscow's dominance and from trade—is costly enough. The breakdown of intra-CIS trade and the risk of tariff walls and quotas is a real possibility. Administrative disarray and backwardness are one reason we have not seen more economic nationalism. The other is that Russia has much to offer—cheap petroleum—and the other republics have much to lose.

Lack of economic institutions. The former Soviet economy is trapped between a command economy that no longer functions and a market economy that functions at best sporadically. Institutions are missing pervasively; there is no basic economic law that entitles people to pursue economic profit in any way not specifically denied; there are few, if any, legal institutions; and the ability to seek remedies under the law is more than limited. In fact, it is even hard to free people who are in jail for having pursued profit making too early or too successfully. While championing the free market, the government has not understood the basic message of free market economics, namely that it offers decentralization. Policymakers desperately hang on to control. There is no shortage of decrees, but there is a gaping shortage of commitment to letting a market economy actually emerge at the cost of political power and control.

Marz [1991, p. 102] comments on the lack of revolutionary preparedness of the new policy makers who came to power in Vienna in 1919: ". . . The socialist economic constitution of the future was defined by the empty notion of the 'socialization of the means of production,' which could be filled with co-operative, syndicalist, or Utopian ideas depending on individual attitudes." There is some of this same lack of revolutionary preparedness in the indecisive burning of bridges with communism, which is apparent in the former Soviet republics. The issue is not whether the blueprints have been prepared, but much more that the notion of a market economy is acceptable only as a principle, not in the details. In Vienna of 1919, socialization was a foregone conclusion, except it never happened, because nobody could agree on the details.

The withering interest of the West. The interest of the West was dramatic while daily events dominated the news and while the nuclear risk seemed large and plausible. By now, however, the West's interest is waning. The risk of nuclear accidents is diminished—either in reality or at least in wishful thinking—and the risks of conventional warfare from the East have all but vanished.

Now that the novelty and fear have declined, the West is losing interest. By now, it is already impossible to marshall the enthusiasm for a large program. The IMF is moving to the center of the stage so political leaders can disappear before the bad news arrives. There is no surprise in this disengagement. After all, Russia is no larger than Brazil; once the threat is gone, the excitement also vanishes and with it the willingness for major international action.

Against this background, what can we learn from the Austro-Hungarian experience, following World War I?

The Austro-Hungarian Transition

The empire was made up of a number of different ethnic groups, dominated by Austria and by Hungary. Austria and Hungary had some separation in the conduct of their affairs, but for the regions and minorities there was a strong subordination to Vienna and Budapest respectively. As Pasvolsky [1928] and Seton-Watson [1964] report, the political integration was precarious and the suppression of ethnic minorities vigorous. (Between Austria and Hungary the agreement was, "You keep a lid on your Slavs and we watch ours.")

Economic integration of the various groups was complete. For our purpose there are three decisive points:

1. There was a monetary union with full control vested in the Austro-Hungarian bank in Vienna.

2. The empire was run as a joint fiscal operation, with the separate budgets in Austria and Hungary contributing to the common imperial expenditures and the debt service.

3. The various parts of the empire formed a free trade area; the distribution of resources caused substantial economic integration.

Starting in 1916–1917, Austria increasingly lost control of the economic integration. In the face of food shortages and price controls, various regions held back supplies, thus putting Vienna into near-famine conditions. Political integration, too, broke down. In fact, in the last phase of the war, Czech troops sided with the Allies and some other ethnic groups did the same. The Austrian rulers lost political control as the communist revolution in Russia and the spread of radical political ideas to Central Europe and the West put the monarchy's role and the entire political system into question.

The disintegration. The fall of 1918 brought both the armistice and with it the end of the empire. Walre de Bordes [1924, p. 7] offers a vivid picture of the people's accumulated hatred and special disdain for Vienna:

> With the disruption of the Monarchy the barriers of all the long-standing national, political and economic jealousies had been broken. The Czechs, the Yugoslavs, the Poles and Hungarians hastened to seal up the issues of their new frontiers . . . Vienna was regarded as a gigantic parasite, the city of lotus-eating idlers.

In rapid succession, there were revolutions in various regions, declarations of independence, a brief attempt to sustain the monarchy in Austria, and then the declaration of the Austrian Republic. Provisional governments took over and tried to establish a new order.

By November 1919, there were *de facto* independent countries, even though it would take another year for the peace treaties of St. Germain and Trianon to recognize them.[3] In Austria, the Republic was

3. See Kerschagl [1920, 1929] and Zeuceanu [1924] for a discussion of the peace treaty provisions.

TABLE 1 *The Dismemberment of the Austro-Hungarian Empire*

	Austrian empire		Hungarian kingdom	
	territory[a]	population[b]	territory[a]	population[b]
Prewar status	300.0	28.6	324.4	20.9
Ceded to:				
Austria	79.6	6.6	5.1	0.4
Hungary	—	—	92.7	7.9
Czechoslovakia	77.8	9.8	62.9	3.6
Rumania	10.4	0.8	102.8	5.3
Yugoslavia	29.3	1.7	66.5	4.1
Poland	80.3	8.4	—	—
Italy	22.6	1.5	—	—

a. Square kilometers.
b. Population in millions.
Source: Pasvolsky [1928].

proclaimed with the avowed objective of joining Germany in a union. Table 1 shows the ultimate redistribution of territory and population. Czechoslovakia and Poland emerged from the war as new countries, Austria and Hungary were radically cut back, while Yugoslavia, Rumania, and Italy each gained some parts of the former empire.

Austria fared worst in the redistribution, being left without industry, without primary commodities, and without the rich agricultural lands. Of course, trade would have given them access to all of these goods, but what did Austria have to offer? Vienna was called the *water head* of the empire; it had the bureaucrats, the banks, and not much else. Moreover, the nationalism of the surrounding new nations, as already noted, led them to close Austria off and out. The question "Can Austria Survive?" would continue for years, even after stabilization [see Layton and Rist, 1925].

The monetary problem. During the war years, money and prices had grown at a rapid pace. While prices increased more than by a factor of 28, however, the exchange rate did not even quadruple (Table 2). Note, this is the free market rate in Zürich, not the controlled rate

TABLE 2 *Wartime Finance (Index 1914, July = 1)*

	Money[a]	Prices	Crown[b]
July 1914	1.0	1.0	1.0
July 1916	3.2	4.0	2.5
July 1917	5.2	8.2	2.6
Nov. 1918	13.2	16.4	3.0
Jan. 1919	14.3	28.4	3.5

a. Notes in circulation.
b. Crowns per Swiss franc in Zürich.
Source: Walre de Bordes [1924] and Statistisches Handbuch [1944].

in Vienna. Exchange control and the sheer physical obstacles to both capital flight and trade must account for the very large discrepancy between price inflation and currency depreciation.

The political separation of 1918–1919 and the creation of borders did not change the fact that the Austrian crown was the currency in use throughout the region. It was held by the public and there was no other currency, except in Poland where rubles and German marks were circulating along with crowns.[4] Thus, it was essential to find a way of reconciling the sovereign conduct of fiscal policy with foreign managed money. Table 3 shows an estimate of the distribution of money in various regions of the former empire.

To complicate matters, the immediate monetary problem of 1919 was that budgets were unbalanced and money creation was routine. However, there was an important difference between Austria and other countries. The Austro-Hungarian Bank, which had the monopoly on note issue, was located in Vienna and operated for the benefit of Austria. Note issue helped finance the government; war loans were discounted substantially near par, despite their depressed market price. As a result, note circulation expanded rapidly and prices rose. Austria effectively imposed seigniorage on the new countries, which were on the crown standard but did not have access to note issue or to discounting.

4. See Namier [1922] on a vivid picture of the monetary chaos and the prevailing sophistication.

TABLE 3 *Distribution of Austro-Hungarian Notes (Estimated percentage share in total issue)*

Czechoslovakia	31.1	Austrian Poland	2.6
Austria	20.8	Russian Poland & Ukraine	2.6
Hungary	18.2	Trentino & Istria	1.3
Yugoslavia	11.7	Foreign markets	6.5
Transylvania	5.2		

Source: Walre de Bordes [1924, p. 42].

The temporary solution to the problem originated in an agreement between Austria and Czechoslovakia; the Czechs would be represented on the bank board, and the bank would not finance the government or discount war loans. Predictably, the agreement did not work. Note issue continued at a rapid rate. Whether for nationalistic reasons or out of genuine economic concern, Czechoslovakia pulled out in February. The plan was put in effect to create monetary autonomy by stamping the crowns in the hands of residents on Czech territory, thus effectively creating a new and separate money.

Czechoslovakia was a new country and hence had to make some decision on how to handle its monetary affairs. The situation was different in countries that already had an established currency and needed to resolve the currency situation in newly acquired territories. Yugoslavia was the first to act in this regard. Already on January 8, the kingdom of Serbs, Croats, and Slovenes ordered the stamping of crown notes on its territory. Following Czechoslovakia and Yugoslavia, every country eventually stamped notes or replaced them with national issue, with or without capital levy or forced loan in the process. This process lasted until 1920. Moreover, simply introducing a national currency did not, of course, bring stability.

Rather than examining the Austro-Hungarian notes in all regions, we concentrate here on the three main countries—Austria, Czechoslovakia, and Hungary. Table 4 shows their very different experiences in the immediate postwar years. Figure 1 offers an overview of the three currencies' performances in Zürich.

Stabilization in Czechoslovakia. Czechoslovakia is the outstanding example of a country that avoided hyperinflation upon entering

TABLE 4 *Stabilization*

	Stamping	Stabilization	Level[a]
Austria	Mar. 12–14, 1919	Nov. 1922	14,000.0
Czechoslovakia	Mar. 3–9, 1919	Mar. 1919	6.5
Hungary	Mar. 18–27, 1920	June 1924	14,500.0

a. Level of final exchange rate index: 1914, June = 1.
Source: Kerschagl [1929] and League of Nations [1946].

statehood and democracy.[5] Finance Minister Rasin's leadership was an essential part of that experience. Foreign assistance played some role, particularly in the earliest phase, but it was in no way the defining characteristic of the experience. Rasin [1923, p. 77] identified three factors central to Czechoslovakia's success: a balanced budget, no unnecessary spending, and "that we must all work and save. We must save, save, and produce, otherwise our Czech crown will lose its value just at the Austrian crown did. . . ."

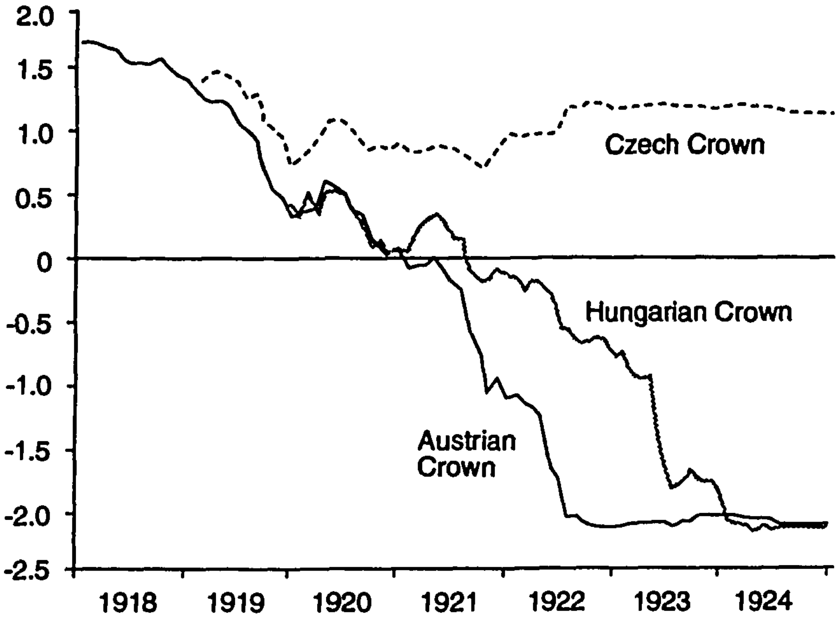
Czechoslovakia stopped inflation before it even started. With mounting disagreements over the management of the Austro-Hungarian Bank, Czechoslovakia moved rapidly to monetary independence. The government refused to consent to special Austro-Hungarian credits to Austria and then to Hungary, but to no avail; the government denied legal tender status to an issue of 25, 200, and 100,000 crown notes that Vienna was introducing to counter the currency shortage. They were easily recognizable, because in the rush they were poorly executed, being imprinted only on one side.

Under Finance Minister Rasin, Czechoslovakia moved to monetary reform and stabilization in the first few months of 1919. The key steps in the consolidation were:

- Stamping all notes on the territory and retaining 50 percent of these notes (and of deposits) withheld against payment of a future wealth and war gains tax.

5. See Rasin [1923], Cakrt [1926], Jack [1927], Chanal [1929], Schmidt-Friedlaender [1929], Hantos [1925], Englis [1937], Nogaro [1924], Pasvolsky [1928], Piot [1923], Rist [1927], Young [1925], and Sargent [1982]. Wolf [1992] compares Czechoslovakia in the 1920s and the 1990s.

FIGURE 1 Successor Currencies in Zürich (Swiss centimes; end of month; logs)



SOURCE: Schweizerische Nationalbank [1944] and Hantos [1925].

- Creating a national "banking office" (in the finance ministry, with an independent board) with the strict obligation not to issue credits to the government over and above an initial allocation implicit in the remaining note issue. The bank could discount private bills without restriction.
- Exchange control and surrender of external assets, including gold and silver coins and foreign exchange. Residents had to sell external assets to the "Devisenzentrale" at the current (Prague) rate or else lend them to the government at 4 percent, reimbursable in the initial currency after four years.[6]

6. The valuta loan yielded $11.5 million. See Rasin [1923, pp. 48–49].

- Imposing a drastic wealth tax with top rates of 30 percent on wealth and 40 percent on wartime gains, payable over three years with an immediate first installment.

- Pursuing currency appreciation and deflation to stop and reverse the potential inflation.

Rasin had planned to go much further. His initial plan was to withhold 80 percent of notes and to force a major appreciation with an external loan to back the currency. He felt that price and currency instability meant a lasting disease and a state of steady fever leading to recurrent wage fights, which would be more dangerous for a young republic than an outright operation [see Rasin, 1923, p. 29].

The actual plan was drastic enough. The stamping of notes proceeded with order and deliberation. Borders had been closed and an elaborate program put in place to effect the stamping in just a few days. When the Czech currency appeared for the first time on the Zürich exchange market, it opened with a premium of more than 60 percent over Austrian notes. Austria was considered the least likely state to achieve stability; Czechoslovakia looked a lot better [see Rasin, 1923; Schmidt-Friedlaender, 1929; and Chanal, 1929]. A decisive U.S. loan of $50 million helped support the currency. For a while, the crown was stable, but was then pulled down (though with a widening margin) by the pervasive bad news from Central Europe. Further budget tightening and credit reduction were put in place.

The road to stability was very arduous. Rasin himself became a victim of instability when he was assassinated in January of 1923. In an effort to break inflation, the government practiced *de*flation (Table 5). In fact, Rasin had planned to restore the prewar parity, but had to give up the goal in the face of a very costly deflation [see the discussion in Englis, 1937].

Following a currency low in November 1921, the government intervened to push the crown up and then let it fly. Tight money reinforced the nominal appreciation and real appreciation ensued (see Figure 2).

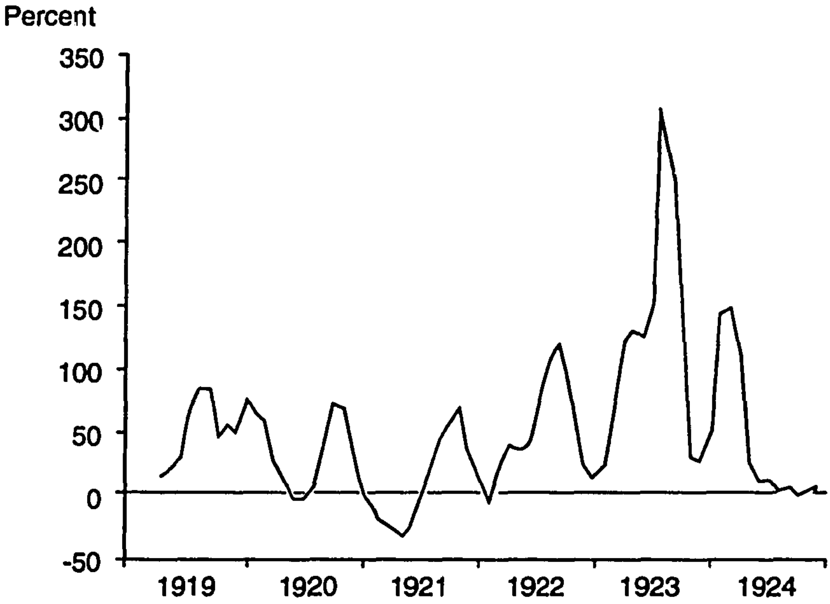
The result of the hard money strategy—reinforced by hyperinflation in Austria and then in Germany—was a massive appreciation and

TABLE 5 *Czechoslovakia: Dollar Price Level and Unemployment (Index 1921, Jan. = 100)*

	Dollar price level	Unemployment
1920	126	n.a.
1921	96	101
1922	164	179
1923	151	291
1924	155	135
1925	158	69

Source: Chanal [1929].

FIGURE 2 Czech Prices and Currency



SOURCE: Chanal [1929].

overvaluation, notably in 1922–1923, with a rapid and steady increase in unemployment. High-powered money was actually declining during this period (Table 6). The government drastically reduced discounts,

TABLE 6 *High-Powered Money and Reserves in Czechoslovakia (Million Czech crowns)*

	Money	Foreign assets	Domestic credit
1919	n.a.	n.a.	0.6
1920	12.4	0.9	4.3
1921	12.8	1.1	4.2
1922	10.6	1.5	2.2
1923	10.6	2.3	2.0
1924	10.0	1.6	2.5

Source: Schmidt-Friedlaender [1929, pp. 110–14].

so that despite reserve inflows, the *nominal* quantity of money was declining.[7] In this sense, money was consciously deflated.

Fiscal policy reinforced the monetary measures of stability. The deficit was small throughout—less than $50 million—and was financed by domestic debt and borrowing from those outside the country (Table 7).

By 1925, the "stabilization crisis" had passed, unemployment had returned to moderate levels, and a stable exchange rate and price level were in place. Even though the risk of inflation had been completely subdued, in hindsight, the deflation experience was not considered successful even by the Central Bank. Thus, Englis [1937, pp. 50–51], a former governor of the Central Bank, launched a stinging attack by noting:

> The situation was thus one of great difficulty. There was a crisis in industry, a banking crisis, unemployment, a financial crisis. . . . In making a critical survey of this period we cannot avoid coming to the conviction that the policy of deflation was a mistake. It was supported by the most varied arguments of an unscientific nature.

Summary. The Czech case makes the point that it is possible to establish stability even in a new democracy and in difficult circum-

7. Rasin rejected categorically the notion of the quantity theory of money, but he did practice it with a vengeance. Both Cakrt [1926, p. 71] and Schmidt-Friedlaender [1929] note that Rasin had been a student of Fisher.

TABLE 7 *The Czech Budget and Trade Balance (Billion Czech crowns)*

	1920	1921	1922	1923	1924
Budget[a]	−2.0	2.1	−1.6	−1.8	−0.8
Trade balance	4.2	4.9	5.4	2.4	1.2

a. Excluding investment.
Source: Chanal [1929].

stances. The case also shows that it is not easy to do this. Czechoslovakia started in 1919 with a series of bold moves. Because of a lack of stability in the region and genuine questions about its ability to stick to this policy (in Hungary, Finance Minister Hegedus looked much like Rasin, for a while, and then failed), credibility was not complete. Hence, the costs of stabilization were very large.[8] Within five years, however, the task was accomplished.

Austrian hyperinflation and stabilization.[9] Austrian monetary affairs were overshadowed by political instability. Early attempts to maintain a monetary area with the various successor countries failed, mostly because Vienna could not halt the printing press. The Yugoslav and Czech stamping of notes forced Austria's hands. To avoid an inflow of unstamped notes from the various countries, it proceeded in March 1919 to execute its own currency exchange, replacing the tendered notes with stamped bills. Of course, the mere stamping of bills did not establish price and exchange stability. The budget deficit was large and was covered by money issue. Not surprisingly, exchange depreciation and inflation were the counterparts.

8. Some put an interesting positive light on it: "Crises are selection processes. They teach industry to calculate with each fraction and prepare them for world market competition 'per aspera ad astra'" Cakrt [1926, p. 47]. Also, Cakrt [ibid., p. 69] notes of Rasin that "his principle enables him to easily endure the painful consequences of his policies because he sees that this moves his people tangibly close to a better future."
9. See Kniebock [1925], Heilperin [1931], Gaertner [1923], Walre de Bordes [1924], Pasvolsky [1928], League of Nations [1926a], and Kerschagl [1920; 1929].

The facts of the Austrian inflation are well known.[10] Of interest here is the brief role of Joseph Schumpeter, who was finance minister for six months in 1919.[11] Schumpeter recognized the need to bring public finance under control and, specifically, the overriding necessity of ending money creation in financing the state. His stabilization plan, published after he was forced out of office, opens in this way [see Seidl and Stolper, 1985, p. 344]:

> The leading principle of financial policy must be that no bank note or state note must be forthwith issued, directly or indirectly, to finance the needs of the State. German-Austria has doubtless reached that limit where further issue of uncovered paper money must lead to a complete anarchy in economic life. Productive activity in the economy will only resume when a stop is put to the depreciation of money and the resulting economic demoralization.

Schumpeter was also emphatic that external credit was the key to stabilization [Seidl and Stolper, 1985, p. 346]:

> Without external assets there can't be a stabilization of currency and hence no order in the public finances. The reverse sequence, first to establish internal order and then to seek external credit is a path of desperate dissipation (Verblutung) which has been taken all too often in financial history. The fateful vicious circle: no external credit, no internal order but without internal order no external credit, must be solved. The State must find external credit however severe the burdens that must be imposed on the citizens.

Schumpeter failed to convince the cabinet of his position. The main point of the plan was to continue debt service faithfully and to rely on large external support to rebuild stability. The external support was to come through a major wealth tax that was to be instituted (65 percent at the top!), but wealth holders could obtain advantages if they collaborated by mobilizing foreign credits in their own name and made them available to the government. The project was smart, but not practical. Moreover, Schumpeter's position conflicted with that of the

10. See Walre de Bordes [1924], Cagan [1956], Sargent [1982], and Dornbusch and Fischer [1986].
11. See Marz [1991] for an account and Seidl and Stolper [1985; 1992] for Schumpeter's speeches, transcripts of cabinet meetings, and the stabilization plan.

cabinet on a number of issues: he opposed the union with Germany, he opposed major socialization, and he plotted with foreign investors. The difficulties accumulated and soon he was out of office without having made much of an impression.

Marz [1991, p. 156] reports another of Schumpeter's schemes, in which he sought contact with Sir Francis Oppenheimer, the British financial expert, to discuss a reform project that would lead to a major external loan. As part of the agreement, the Western powers would manage the Austrian central bank "with the proviso that the sensibilities of the Austrian people be duly considered." By 1922, niceties such as the sensibilities of the Austrian people no longer mattered.

For the period 1920–1921, much of the currency story consists of failed stabilization, hopes for external loans, and squandering of credits when they did come. In the process, the economic conditions in Austria deteriorated sharply. Starting in mid-1921, a major collapse of the currency set off hyperinflation and, following a brief period of stability at the end of the year, another bout of depreciation moved Austria to the final phase.

The central partner in Austria's stabilization in 1922 was the League of Nations. Throughout 1919–1922, Austria had pleaded with the Supreme Council, major countries, and the League of Nations to obtain support for external loans to stabilize the currency. They did not offer this support, which increasingly undermined any expectations of stabilization. A critical step in promoting external support was political; Austria toured the capitals to secure agreements on removing the lien on Austrian assets to secure reparation so that these assets might serve as collateral for a new loan. But that was not enough. In August 1922, Austria's minister in London appealed to Lloyd George and the Council of the Allied Powers for an immediate loan guarantee. Should no such guarantee be forthcoming, the minister warned, the Austrian parliament would be convened and told that neither this nor any other Austrian government was capable of continuing to govern. Moreover, Austrian and world opinion would blame the powers of the Entente for the destruction of one of the oldest centers of civilization in the heart of Europe. The fate of Austria would be put in the hands of these powers. The appeal failed. The crown collapsed even further.

Weary of a sequence of loans to Austria, each of which had failed to change the situation, the Allied Powers did agree to refer Austria to the League of Nations [1926a, p. 15] to explore a program of reconstruction

> containing definite guarantees that further subscriptions would produce substantial improvement and not be thrown away like those made in the past. The representatives of the Allied Powers have reached the above decision with much reluctance and from no lack of sympathy with the Austrian people, but they have been obliged to take into consideration the crushing taxation which their respective countries already support in consequence of the war.

A direct and desparate appeal before the league by the Austrian chancellor, Monsignor Seipel, was publicly credited with the change of fortune. The real work was done behind the scenes, however; the monsignor had gone to Italy to offer that Austria become part of a Greater Italy. For Yugoslavia and Czechoslovakia, and for the Allied Powers, this was viewed as a great threat to whatever stability there was in Central Europe [see Bauer, 1923]. The league agreed through its financial committee to participate directly in the reform program and raise guarantees for a stabilization loan. The pace quickened; within a month, three key protocols were signed in October 1923. One provided for political and territorial integrity of Austria and an agreement of signatories not to seek special advantages. For Austria, this political agreement meant abandoning the idea of seeking a union with Germany or Italy. Another provided for loan guarantees. The key, though, was the third protocol, which described Austria's responsibilities.[12]

In the agreement, based on a preliminary report of the financial committee, Austria committed itself to working with the financial committee to design a detailed stabilization program. Central to the program would be a multiyear budget stabilization plan. The plan would include not only limits on the deficit, but also a spending ceiling. An independent Bank of Issue would be created. It was to have a foreign advisor. The Parliament would be required to grant the government full powers in executing this plan. A commissioner appointed by the guaranteeing country would supervise Austrian public finance.

12. See League of Nations [1926a], which gives the actual text of the agreements, as well as a narrative that Sir Arthur Salter drafted, and League of Nations [1945].

Specifically, the language of the protocol stipulated [League of Nations, 1926a, p. 192]:

> The Austrian Government will forthwith lay before the Austrian Parliament a draft law giving, during two years, to any Government which may then be in power, full authority to take all measures, within the limits of this programme, which in its opinion may be necessary to assure at the end of the period mentioned the reestablishment of budgetary equilibrium without there being any necessity to seek for further approval by Parliament.

Even though a loan was forthcoming, the league's financial committee left no illusion about the need for Austria to reform [see League of Nations, 1926a, pp. 26–27]:

> At best, the conditions of life in Austria must be worse next year, when she is painfully reestablishing her position, than last year, when she was devoting loans intended for that purpose to current consumption without reform.
>
> The alternative is not between continuing the conditions of life of last year or improving them. It is between enduring a period of perhaps greater hardship than she has known since 1919 (but with the prospect of real amelioration thereafter—the happier alternative) or collapsing into a chaos of destitution and starvation to which there is no modern analogy outside Russia.
>
> There is no hope for Austria unless she is prepared to endure and support an authority which must enforce reforms entailing harder conditions than those at present prevailing, knowing that in this way she can avoid an even worse fate.

The league's financial committee took a direct and active part in developing the reform program. The prospect of the league loan, and more importantly the reconstruction law which gave the government full powers, led to an immediate end to the depreciation. With a stabilized exchange rate, real tax collection quickly increased. Moreover, on the strength of the forthcoming loan and the stable currency, the government was able to raise a domestic loan to finance the budget deficit. The printing press was immediately stopped. The new Bank of Issue started in January 1923.

Of course, not everything was that easy. Unemployment increased sharply and budget cutting was hard [see Heilperin, 1931; Wicker, 1986; and Kniebock, 1925]. For example, employment in government and public sector enterprises was cut by 30 percent. The league's commissioner did play an important role, even if he was never actually forced to use his authority to block expenditures. By 1923 Austria was already well within the targets of the budget, by 1924 the budget was balanced, and in 1925 there was a surplus. The financial stabilization had been accomplished, even if the question "Can Austria survive?" remained.

Summary. The lesson from the Austrian example is clearly that stabilization needs the right political conditions. Austria endured complete disillusion with extreme inflation and misery. At that point, it became possible to trade full powers to the government and the commissioner in exchange for the prospect of stability and perhaps an improvement in living standards. There can be little doubt, judging from Bauer [1923], that without external support and enforcement, fiscal control on a lasting basis would not have been achieved. The socialists' idea of fixing the budget involved an emergency capital levy and a forced loan. As we will see in the case of Hungary, such measures cannot fill the place of lasting fiscal correction.

We should also note just how tough the league was. Not only did they draw up the stabilization plan and require full powers for the government, but they even required a resident commissioner who controlled the budget and had the last word. No wonder then that the plan worked, and that it worked so fast.

Hungarian hyperinflation and stabilization.[13] In its final stages, Hungary's stabilization paralleled that of Austria's, but its journey was far more colorful. As we saw in Figure 1 above, Hungary's stabilization came only in 1924. Early in 1919, a Soviet regime (the Red Terror) took over Hungary. The regime's objective was to install a full-fledged communist economy and link up with the Soviet Union. Printing money was an important means of achieving this goal.

Hungary continued, *de facto*, to be in a monetary area with

13. See von Fellner [1924], League of Nations [1926b], Graz [1935], Hantos [1925], Heilperin [1943], Kerschagl [1920; 1929], Pasvolsky [1928], Young [1925], Sargent [1982], Seton-Watson [1962], and Siklos [forthcoming].

Austria. The Austro-Hungarian notes circulated in Hungary as legal tender. Moreover, the Soviet regime found the plates for certain Austrian notes, which happened to be in the subsidiary of the Austro-Hungarian Bank in Budapest. The Soviet government immediately proceeded to issue money. But lacking the Austrian blue notepaper, however, they printed on white paper. They also used photomechanical processes to fake lower denomination Austrian notes [see Kerschagl, 1920; and Nagy, 1931]. Issuing money in the name of the Soviet government did not succeed, even when the death penalty was threatened for people who refused acceptance. A third means of issuing money was linked to the postal savings system, which issued small denomination notes.

The Soviet government's actual issue of Austrian money was probably less significant than the general breakdown of normal monetary relations. Of course, there was not much normality with the Red Terror in the streets. The next act of the Hungarian drama was an invasion by Rumanian troops who overthrew the Soviet government and occupied Budapest for three months. Upon evacuating the city, they took with them much of the capital stock. Finally, a royalist government came into office and, in late 1919, normalized monetary conditions. The easily recognizable fake Soviet notes were demoted to one-fifth of their face value.

Starting in January 1920, Hungary's currency was separately quoted in Zürich [see Nagy, 1931, p. 9]. Only in March 1920, however, was the currency stamped on Hungarian territory. Fifty percent of the tendered notes were withheld as a forced loan that carried 4 percent interest. There had been a general expectation, following the end of the Soviet regime and the Rumanian occupation, that stability would come and with it a strengthening of the currency. Hungary, it was believed, had far better prospects than Austria.

If weak government was the chief reason for Austria's failure to stabilize, the same cannot be said for Hungary. As the league [1926b, p. 9] notes in discussing the period after 1919, following the Red Terror and the Rumanian invasion "... the Right resumed power, and Hungary has since had a strong, stable and drastic government." In fact, however, Hungary's currency depreciated, though not quite on the scale of the Austrian money.

By 1921, there was a brief attempt at stabilization. Hegedus, a banker, became finance minister and was given full power. In public discussions of the time, the point was made that a depreciating exchange rate increases budget deficits and thereby feeds money creation. Hence, a strong currency was part of the package as much as the control of money issue. A wealth tax and consolidation of the debt, which reduced interest burdens, helped reduce the budget deficit, and the currency rose by nearly 200 percent in Zürich. Money creation was actually brought to a halt and a note issue institution was created with the obligation not to make advances to the state.

The budget improvement did not last long and the administration of the wealth tax was inefficient. Moreover, the strengthening of the currency did not bring the lasting fiscal bonus that had been expected. Disappointed with domestic and external politics and with the difficulty of carrying forward his stabilization, Hegedus resigned in the fall and another exchange collapse ensued. With continuing budget deficits, further rounds of money creation and depreciation soon followed [see Siklos, forthcoming; Graz, 1935; Kerschagl, 1929; and von Fellner, 1924].

In the face of a clearly successful Czech stabilization, why did bouts of depreciation and inflation linger on in Hungary? Boross [1984, p. 206] offers a simple political interpretation:

> . . . in a country such as Hungary where during the past three years two revolutions and a counterrevolution had taken place, and where the ruling regime's consolidation was far from accomplished, where instead of solving old social tensions even more were created (see the plight of 300,000 refugees from territories lost to Hungary) those responsible for the financial policy of the country—especially with the Czechoslovak example highlighting the difficulties—were reluctant, even unwilling to pursue a deflationary policy. The very potent 'real-political' consideration having been that the price of deflation in terms of unemployment, social unrest, political instability was far greater to the country than that of inflation.

In the league's [1926b, p. 10] autopsy:

> . . . Hungary at last presented a problem which in its main features was the same as Austria's—a rapidly depreciating currency and an unbalanced budget; an inability in the financial, economic and political forces of the country to achieve unaided restoration.

Inflation and depreciation continued in Hungary, after the successful stabilization in Austria. In the face of increasingly rapid exchange depreciation, Hungary took its turn to approach the League of Nations in April 1923. The reparation commission waived its lien and by early 1924 the protocols for a Hungarian loan were signed.

Hungary's stabilization proceeded on the basis of the following principles set forth by the league committee report [see League of Nations, 1926b, p. 18]: Stopping inflation with a view to stabilization of the crown, this being assited by an independent bank of issue that cannot finance the government, budget balance by June 30, 1926, a reconstruction loan, and control through a commissioner general.

Just as in the case of Austria, a condition for the loan was the Parliament's ratification of full powers for the government to execute the agreed program, including specifics for the increase in taxes, cuts in spending, and five half-yearly budgets for the period to 1926.

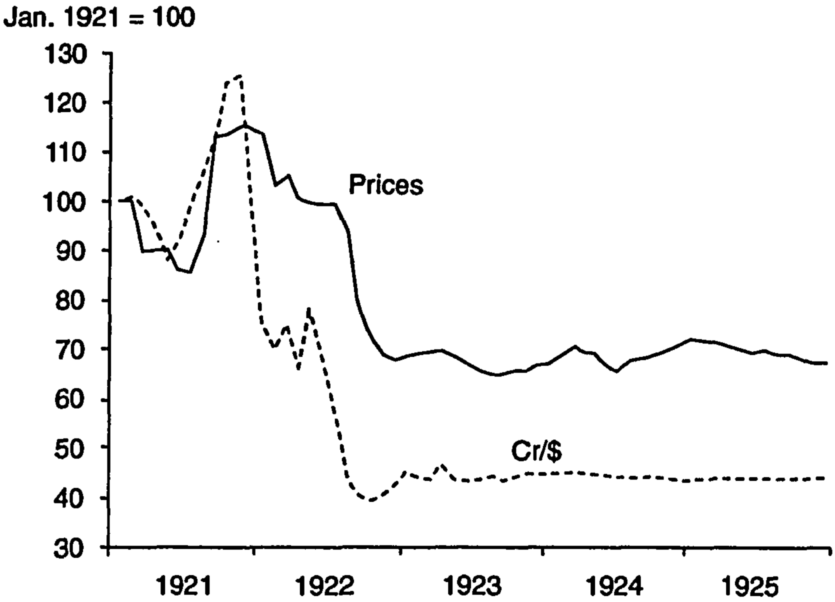
By June 1924, the currency had stabilized. Just as in Austria, money creation to finance the government stopped from one day to the next, although full convertibility had to wait for a while. A domestic loan covered the brief transition and by July 1924 the budget was already balanced.

Summary. The case of Hungary illustrates three points. The first point is that the erosion of a country's public finance over time is gradual and cumulative. Initially, Hungary did not manage to cut loose from Austria because of domestic turmoil. Then, it tried to stabilize but failed to follow this up with fiscal balance. Progressively, more and more bouts of depreciation occurred until the big explosion of 1923 ultimately created the political conditions for complete reform. No single event or mistake led to the great inflation; rather it was a process of erosion, the budget's increasing sensitivity, and the exchange rate's inflation (see Figure 3).

The second message overlaps with that of Austria. Once external loans flow in and the budget achieves credibility through the league's firm surveillance, stability quickly follows.

Third, the independent central bank with a limitation on financing the government creates an automatic block to any link between budget

FIGURE 3 Hungarian Inflation (Percent inflation over past 3 months)



SOURCE: Boross [1984].

deficits and money and hence between deficits and the exchange rate. Therefore, stability is more likely.

Coordination Problems

So far, we have looked separately at stabilization in three countries, disregarding the effects of interdependence that might have been there. But there are clearly three areas where interdependence does matter.

Economic and political confidence. The most immediate spillover effect arises from contamination. In the 1920s, each successor country was valued in the market in part on the strength of its own policies, but in part also for being in Central Europe, exposed to the same risks as those countries who were not doing well. In fact, if one country was doing poorly in economics or politics, it became plausible to project that very same scenario onto the adjacent countries. In currency markets this meant a strong common factor, however different the policies.

This fact is illustrated by the Czech currency. It is affected, for example, by Bolshevism in Hungary and by the declaration of the monarchy and the return of King Charles to Budapest. Likewise, when Germany, Hungary, and Austria collapse, Czechoslovakia is the place where hot money flees. The interdependence effect is significant, because stabilization is already hard enough without the extra bad news that comes from a neighbor's poor economics or politics.

Unstamped notes, fake notes, and monetary chaos. A large problem in the breakup of the Austro-Hungarian empire was the uncoordinated if not chaotic handling of notes. The peace treaties required countries to stamp notes on their territory and turn over any amount withdrawn from circulation (say to capital levy) to the reparation commission. The risk, then, was not the deliberate and organized attempt to use Austrian notes to buy Austrian goods, that is, to recover the seigniorage implicit in the notes. Rather, the problem was that the dates and details of note stamping were not synchronized or handled with equal efficiency. As a result, unstamped notes floated around from one country to another in search of the most favorable exchange rate. Moreover, once a multitude of notes were already circulating with various kinds of stamps, it became attractive to avoid capital levies or take advantage of favorable exchange rates by faking the stamps, the notes, or both.

Table 8 gives an impression of the variety of arrangements, ranging from very large capital levies—enforced by dramatic sentences, for example in Czechoslovakia—to conversion rates into existing currencies. The picture is further complicated by the fact that 1 and 2 crown notes, because of their quantities, were not stamped and hence became an important foreign exchange arbitrage vehicle. Finally, certain Austrian notes printed against the protests of successor states—for example 10,000 crown notes in Czechoslovakia—were excluded from

TABLE 8 *Stamping and Levies, Forced Loans, or Conversion*

	Date	Levy/Forced loans/Conversion
Czechoslovakia	3. 1919	50%
Austria	3. 1919	—
Hungary		
first	8. 1919	Write-down of Soviet notes
second	3. 1920	50%
Rumania		
first	6. 1919	2:1 to lei
second	8. 1920	40% + 5% premium
Poland	12. 1919–12. 1921	100:70 to Polish mark
Italy	11. 1919–12. 1921	10:4; 10:6 to lira
Yugoslavia		
first	1. 1919	—
second	11. 1919	4:1 to dinar

Source: Kerschagl [1920; 1929] and Schmidt-Friedlaender [1929].

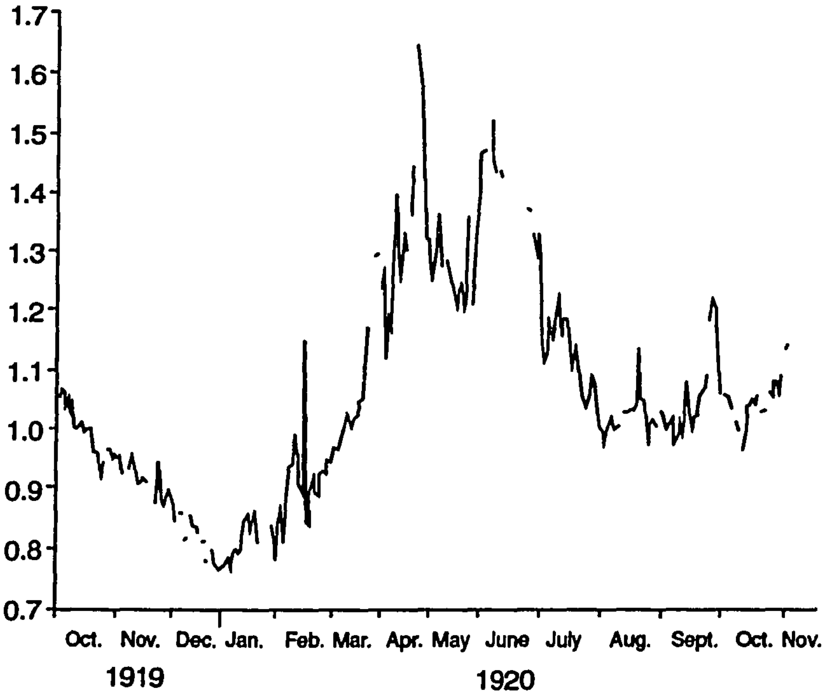
legal tender status and therefore were excluded from stamping altogether.

Impediments to travel and border control may have hampered the open arbitrage in notes among various countries. In fact, however, there was a thriving market in unstamped notes. Both stamped and unstamped Austrian crowns were quoted in Berlin. Figure 4 shows the premium or discount at various times on unstamped crowns.[14]

The reason to withhold notes from stamping was quite apparent at the outset. In Czechoslovakia, for example, 50 percent of the notes were withheld against a future capital levy. Presenting the notes withheld in Prague for stamping in Vienna was not so attractive, because the Austrian stamped crown traded in Zürich at a rate much below that of Czechoslovakia. Holding on to the notes offered the possibility of obtaining something better, ultimately, in Hungary. This prospect became far more attractive once the Red Terror was gone and Hungary seemed to move toward stability. But for those who had missed out on

14. The data are reported in Diesen [1922] and are calculated from cross rates of German marks per stamped and unstamped crowns.

FIGURE 4 *Unstamped Per Stamped Austrian Crown*



Source: Diesen [1922].

a stamp in the three countries, there seemed to be trouble—unstamped notes went to a 40 percent discount. But there were still possibilites in Poland, Rumania, and for a long time, Italy.[15] Better yet, for a while the Austro-Hungarian bank accepted unstamped notes at par to pay off pre–October 1918 debts.

It is doubtful that the confusion and trafficking arising out of the disorganized stamping arrangements materially contributed to the hyperinflation in some countries or the deflation in Czechoslovakia. More likely, it was merely a headache and a moral affront. The same is true

15. In those regions where conversions were offered at a fixed rate that was out of line with the Zürich cross exchange rate, there was also an incentive either to flood in or withhold, depending on the gain or loss from the arbitrage.

to a lesser extent of forgery, which created uncertainty as to which money was or was not genuine. Walre de Bordes [1924, p. 236] reports in an Austrian weekly:

> Our only hope—however absurd it may sound—is that the Hungarian and Polish crowns will soon rise higher than the Austrian crown, and that the Hungarian and Polish stamps can be counterfeited just as easily as the Austrian stamp, so that it will become again more profitable for the forgers to counterfeit them (just as was formerly the case with the Yugoslavian and Czechoslovakian stamps) and that we no longer be the victims of their favor.

In fact, the pressure of forgery was such that at one point Vienna issued notes that carried the designation "Echt Österreichisch" (Genuine Austrian)!

Nationalism. The most serious problem in the dissolution of the Austro-Hungarian empire was no doubt nationalism. Tariffs, quotas, exchange control, and transport barriers were all put in place to break the established trade linkages and develop the new economies to become far more autarchical [see Pasvolsky, 1928; and Graz, 1935]. Moreover, trade in services that had been the livelihood of Budapest and Vienna was basically cut off. In fact, "nostrification" policies called for corporations who had their head offices in Vienna but plants in Czechoslovakia to move there or else risk their assets.

In a wide open trading system with stable real exchange rates, the division of the empire into successor states would not have made much difference. With trade impediments abounding and unstable currencies, however, the arbitrary division created both economic and political problems. Pasvolsky [1928], for example, notes that the textile industry was broken up with the spindles in Czechoslovakia and the looms in Vienna, within tariffs and quotas between the two.

In an analysis of Austria's economic problems, Layton and Rist [1925, p. 25] highlight the trade issue:

> Post-war commercial policy . . . has largely been based upon the idea of economic self-sufficiency, and has sought to make the new national units independent, not merely in the political but also the economic sphere. The attempt to carry out this policy naturally pro-

duced chaotic results in an area such as Austria-Hungary, which had hitherto enjoyed complete freedom of trade.

Specifically, tariff rates on Austrian goods ranged between 21 and 31 percent in Czechoslovakia; 28 to 40 percent in Hungary; and 49 to 67 percent in Poland. Layton and Rist [1925, p. 27] estimated that restrictive commercial policy caused a 40 percent decline in Austrian and Czech exports to Hungary. Another conclusion was that the new protection created trade diversion; while exports increased, the new exports were to distant markets, not predominantly to the neighboring countries. The share of intra-Danubian trade in the region's exports fell sharply.

An early attempt to overcome these problems was the Portorose conference and protocol of 1921. Plans for a Danubian economic union were under discussion and the conference was an attempt to turn these into concrete moves to phase down restrictions. The key agreement provided for the removal of import restrictions and prohibitions by July 1922. In fact, the agreements were not ratified and hence this ambitious trade liberalization never came into its own. More conferences were held, but no progress was made.

The only progress that did materialize was on a bilateral basis under the pressure of the League of Nations in connection with the stabilization plans of Austria and Hungary. Central Europe had the worst of all worlds; the countries neither opened up on a regional basis nor on a multilateral basis. They remained substantially closed; industrialization was seen as the only means to provide a reasonable standard of living for an overcrowded region and no country was willing to sacrifice its own industrial project. There was not only economic opposition to an integration project, but the successor states were also reluctant to see Vienna regain a central and powerful role in the economic future of the region.

Lessons

What can be learned from the Austro-Hungarian experience that can be useful in guiding policies in the former Soviet Union? The lessons fall into three groups: how to stabilize, what economic relations to foster among the new countries, and how the outside world can best assist stabilization and reform.

Stabilization. In this area, the lessons are abundantly clear:

- Large, unbalanced budgets sooner or later lead to extreme inflation. It may take time and the march toward inflation may not be a steady acceleration, but ultimately it comes. Moreover, once inflation reaches a significant level of around 20 percent per month, going back will become extremely difficult.

- Stabilization requires three steps: fixing the exchange rate, balancing the budget, and ensuring the independence of the central bank. Each of these three steps is indispensable. Fixing the exchange rate immediately establishes a stabilizing force and inertia with beneficial effects for expectations, the budget, and politics. Balancing the budget provides the fundamentals that warrant fixing the exchange rate. Finally, the independence of the central bank acts as an insurance against relapse and thus helps improve expectations.

  All three conditions may not be achievable at the outset. Specifically, budget balancing may not be immediately possible or convenient, at least not fully. The answer, then, is for it to be financed not by money but by debt—domestic or preferably external—with a clear limitation on the deficits. Still, exchange rate fixing and the creation of central bank independence can and should proceed.[16]

- Exchange rate overvaluation is a grave risk. The risk may stem either from insufficient inflation control or from an overly ambitious nominal exchange rate pol-

16. Schweickert et al. [1992] come out strongly against fixed exchange rates.

icy. Overvaluation may help cool inflation, but it invariably leads to real and financial crisis. Overvaluation is not only a risk that arises in the context of an insufficiently conservative program; as the cases of Hungary (Hegedus) and especially Czechoslovakia (Rasin) demonstrate, it can also happen to the overly zealous. The solution is that when overvaluation becomes an issue, however painful the choice, one must move to a crawling peg.

- Exchange control is a contentious issue. Notwithstanding the Brussels conference recommendation favoring unfettered exchange markets, Austria, Hungary, and Czechoslovakia all maintained exchange controls well into their stabilizations. There may be a case for controlling capital flows (if administratively possible), but there is no plausible case for controlling commercial transactions. Given the administratively overburdened and backward situation in the former Soviet Union, all kinds of exchange control should be avoided.

Cooperation. The analogy with the end of the Austro-Hungarian empire provides two conclusions in this area:

1. It is quite an awful idea to maintain a currency area between sovereign nations based on an *un*stable center currency. Continued use of a depreciating crown strained relations after the breakup of the Austro-Hungarian empire and the same is the case today. Moscow is at the center and may control the note issue, but there is clearly no control of what might be printed elsewhere.[17]

   A clean break is far better and the sooner it is done, the better. The answer is to base a currency area on a

17. A recent press report gave a foretaste. The *Financial Times* [Lloyd and Volkov, 1992, p. 2] quote Mr. Yunosov, Uzbekistan's central bank chairman, to the effect that his country will have to issue coupons to make up for the ruble deficiency.

stable currency, for instance, the deutsche mark or the dollar. There is no conceivable reason why countries should not immediately adopt a Western currency as their money and thus avoid a few years of high inflation or hyperinflation and the resulting destitution.

2. In the trade and payments area, the case of the former Soviet Union quite strikingly matches the Austro-Hungarian story. The same misdirected policies are being put in place under the force of nationalism and in search of autarchy.

   There is an urgent need to create an explicit free trade area in the region. As the European Payments Union (EPU) has demonstrated amply, freeing regional trade and discriminating somewhat in favor of the region is a good development policy. It is natural to worry whether a regional trade and payments mechanism slows down the move to convertibility or whether,on balance, it advances trade. The experience with the EPU is still being evaluated, notably the question of whether it delayed the transition to convertibility! Presumably, one will conclude that while it may have slowed down the fastest members, it speeded up the slower ones. At least the Institut für Weltwirtschaft [1954] is firmly on record in support of the European Payments Union as a trade-creating device [see, too, Williamson, 1992; and Dornbusch, 1992b].

What the West can do. The Austro-Hungarian story is most striking in its relevance to the role of the outside world. Stabilizing these countries became ultimately a very important issue, because stability of the region was at risk. Driven by the force of this political motive, the League of Nations overcame its inertia and developed an important program. Four aspects of the league program deserve mention:

1. A requirement for League of Nations loan guarantees was the removal of the lien of the reparation commission. No fresh money will come if old money (dead money) has a

prior claim. The liens were removed and reparations became subordinate to the need for stabilization. The present day analogy is, of course, the external debts of the East. Even as late as the fall of 1991, the West was trying to collect loans, not recognizing that Russia was bankrupt and in clear need of a major support program.

2. The reform program included a substantial stabilization loan; the loan was to be *used*, not held for decoration. Specifically, the stabilization plan involved a multiyear progression toward budget balance with the external loan supplying both resources for the budget and the external gap. Here is the league's [1946, pp. 79–80] own analysis of what these loans can accomplish:

> Given a strong and competent administration, there is no doubt that inflation can be controlled by domestic measures alone. Reliance on foreign help may undermine a country's determination to set its house in order. . . . Yet it cannot be denied that foreign loans can help. . . . Foreign loans may help, firstly, in a technical way in checking the monetary mechanism of inflation; and they may help, secondly, in a more fundamental way by meeting the real capital needs of reconstruction and so relieving the underlying conditions which give rise to inflation.

3. The program came with exceptionally stiff *political* conditionality. This is something that has literally disappeared, but was clearly decisive at the time. The league required *full powers* for the government and, on top, installed a commissioner with significant discretion.[18] The foreign supervision of Austria's public finance, for example, lasted for four years, until financial stability was assured. It is no surprise then that the political deadlock was cut and stabilization could move ahead. The chief problem in stabilization is *not* technical; the prob-

18. Bauer [1923] notes that in Austria's case the full powers were actually vested not in the government but rather in a cabinet council which thus maintained the democratic control of the parliament.

lem is political and the league overcame these problems with a vast sweep.

4. The league participated in the stabilization at an extremely high level of personnel and with high visibility. The league's financial committee which developed the actual program included senior officials. The committee's reports went to the Council of the League.

In each of these areas, we are failing today in the most radical fashion. Loans are given without programs; political support is nonexistent; and the West has made no effort to mobilize its political and economic representation. The West, plainly, is trying to limit exposure.

The league was aware that the stakes were high—Austria had offered herself to Italy with dramatic consequences should such a deal occur. Today, the stakes are at least as high, but the vision is not there to match. More forgivable, but equally unwise is the lack of foresight of the Eastern countries who practice inflationary policies that inevitably lead to crisis.

We are still at a very early stage in the disintegration phase; hyperinflation is barely in sight and pervasive demoralization has not set in. Yet it is clear that there is a grave risk that things are going wrong. It is thus a good time to reflect on the League of Nations' [1946, p. 84] conclusions about their interwar stabilization efforts: "International financial assistance would have been much more effective, and would in the end have cost much less, had it been given in 1919 instead of, say, 1924. Only under the pressure of desperate necessity was it given at the later date."

Successful stabilization, reform, and reconstruction are always painful. That was the case in the 1920s and it also was the case in Europe and in Japan in the 1940s.[19] The former Soviet Union cannot escape from the fact that it will, under the most favorable conditions, look ahead to a decade of austerity. The more the political system recognizes and accommodates the need, the more hard work, saving and investment are the rule, the more fertile the contribution from the West can be.

19. See Giersch et al. [1992] and Dornbusch et al. [1992].

REFERENCES

Bauer, O. 1923. *Die Österreichische Revolution.* Vienna.

Boross, Elizabeth A. 1984. "The Role of the State Issuing Bank in the Course of Inflation in Hungary Between 1918 and 1924." In: Gerald D. Feldman et al, eds. *The Experience of Inflation.* New York, pp. 188–227.

Braun, Martha S. 1923. "Die Doppelnote. Währungspolitische Projekte der Nachkriegszeit 1918–1922." In: Melchior Palyi, ed. *Geschichte der Stabilisierungsversuche.* Schriften des Vereins für Socialpolitik, Vol. 165. Berlin, pp. 105–165.

Cagan, Phillip. 1956. "The Monetary Dynamics of Hyperinflation." In: Milton Friedman, ed. *Studies in the Quantity Theory of Money.* Chicago, pp. 23–117.

Cakrt, Jan. 1926. *Rasin als Währungsreformer.* Mährisch-Ostrau.

Chanal, A. 1929. *Monnaie et Economie Nationale en Tchécoslovaquie.* Montpellier.

Diesen, E. 1922. *Exchange Rates of the World.* Christiana.

Dornbusch, Rudiger. 1992a. "Lessons from Experience with High Inflation." *World Bank Economic Review.* Vol. 6, pp. 13–31.

———. 1992b. *A Payments Union for the Former Soviet Union.* Massachusetts Institute of Technology. Cambridge, Mass. Mimeo.

Dornbusch, R., R. Layard, and W. Nolling, eds. 1992. *Postwar Economic Reconstruction.* Cambridge, Mass.

Dornbusch, R., and Sebastian Edwards, eds. 1991. *The Macroeconomics of Populism in Latin America.* Chicago.

Dornbusch, R., and Stanley Fischer. 1986. "Stopping Hyperinflations Past and Present." *Weltwirtschaftliches Archiv,* Vol. 122, pp. 1–47.

Dornbusch, R., Federico Sturzenegger, and Holger C. Wolf. 1990. "Extreme Inflation: Dynamics and Stabilization." *Brookings Papers on Economic Activity,* Vol. 2, pp. 1–84.

Englis, Karel. 1937. "Outline of the Development of Czechoslovak Currency." In: National Bank of Czechoslovakia, *Ten Years of the National Bank of Czechoslovakia.* Prague, pp. 37–69.

Fellner, F. von. 1924. "La Situation Financière de l'Etat Hongrois." *Revue Economique Internationale,* Vol. 3, pp. 48–70.

Flood, Robert P., Peter M. Garber, and M. Spencer. 1992. *The Dissolution of the Austrian-Hungarian Empire: Lessons for Currency Reform.* International Monetary Fund. Washington, D.C. Mimeo.

Gaertner, Friedrich. 1923. "Die Stabilisierung der Österreichischen Krone." In: Melchior Palyi (Ed.), *Geschichte der Stabilisierungsversuche.* Schriften des Vereins für Socialpolitik, Vol. 165. Berlin, pp. 47–77.

Giersch, Herbert, Karl-Heinz Paqué, and Holger Schmieding. 1992. *The Fading Miracle: Four Decades of the Market Economy in Germany.* Cambridge.

Graz, G. 1935. "Die Wirtschaft Ungarns." *Zeitschrift für Politik,* Vol. 24, pp. 95–107.

Hantos, Elemér. 1925. *Das Geldproblem in Mitteleuropa.* Jena.

Heilperin, Michel A. 1931. *Le Problème Monétaire d'Apès-Guerre et sa Solution en Pologne, Autriche et en Tchécoslovaquie.* Paris.

Institut für Weltwirtschaft. 1954. *Zur Frage der Koexistenz von Konvertibilitätsländern und Inkonvertibilitätsländern im Raum der EZU.* Kiel.

Jack, D. 1927. *The Restoration of European Currencies.* London.

Kerschagl, Richard. 1920. *Die Währungstrennung in den Nationalstaaten.* Vienna.

———. 1929. *Die mitteleuropäischen Währungen und Notenbanken.* Vienna.

Kniebock, V. 1925. *Das Österreichische Sanierungswerk.* Stuttgart.

Layton, Sir Walter T., and Charles Rist. 1925. *The Economic Situation of Austria.* League of Nations. Geneva.

League of Nations. 1926a. *The Financial Reconstruction of Hungary.* Geneva.

———. 1926b. *The Financial Reconstruction of Austria.* Geneva.

———. 1945. *The League of Nations' Reconstruction Schemes in the Inter-War Period.* Geneva.
———. 1946. *The Course and Control of Inflation.* Geneva.
Lloyd, J., and D. Volkov. 1992. "Russia Cracks the Whip Over Rouble Zone." *Financial Times,* July 31, p. 2.
Marz, Edward. 1991. *Joseph Schumpeter.* New Haven.
Mitzakis, Michel. 1925. *Le Relèvement Financier de la Hongrie et la Société des Nations.* Paris.
Nagy, Tibor. 1931. *Die Ungarische Nationalbank.* München.
Namier, Lewis B. 1922. "Currencies and Exchanges in an East Galician Village." *Manchester Guardian (Reconstruction Supplements).* April, pp. 36–37.
Nogaro, Bertrand. 1924. "La Signification de l'Expérience Monétaire Tchécoslovaque." *Revue Economique Internationale,* Vol. 2, pp. 49–77.
Pasvolsky, Leo. 1928. *Economic Nationalism of the Danubian States.* New York.
Piot, André. 1923. *La Couronne Tchécoslovaque Jusqu'à la Mort de Rasin, 1918–1923.* Paris.
Pommery, Louis. 1926. *Changes et Monnaies.* Paris.
Popovics, Alexander. 1925. *Das Geldwesen im Kriege.* Vienna.
Rasin, A. 1922. "Currency Conditions in Czechoslovakia." *Manchester Guardian (Reconstruction Supplements).* April, pp. 39–41.
———. 1923. *Die Finanz und Wirtschaftspolitik der Tschechoslowakei.* München.
Rist, Charles. 1924. *La Déflation en Pratique.* Paris.
Sargent, Thomas J. 1982. "The Ends of Four Big Inflations." In: Robert E. Hall (Ed.), *Inflation: Causes and Effects.* Chicago, pp. 41–97.
Schmidt-Friedlaender, Reinhard. 1929. *Die Währungspolitik der Tschechoslowakei.* Reichenberg.
Schweickert, Rainer, Peter Nunnenkamp, and Ulrich Hiemenz. 1922. *Stabilisierung durch feste Wechselkurse: Fehlschlag in Entwicklungsländern—Erfolgsrezept für Osteuropa?* Kieler Diskussionsbeiträge, 181. Kiel.
Schweizerische Nationalbank. 1944. *Statistisches Handbuch des Schweizerischen Geld und Kapitalmarktes.* Zürich.

Seidl, Christian, and Wolfgang F. Stolper, eds. 1985. *Joseph A. Schumpeter. Aufsätze zur Wirtschaftspolitik.* Tübingen.

———. 1992. *Joseph A. Schumpeter. Politische Reden.* Tübingen.

Seton-Watson, Hugh. 1962. *Eastern Europe Between the Wars, 1918–1941.* Hamden, Conn.

Siklos, Pierre L. Forthcoming. "Interpreting a Change on Monetary Regimes: A Reappraisal of the First Hungarian Hyperinflation and Stabilization: 1921–28." In: Michael Bordo, and F. Caprie, eds. *Monetary Regimes in Transition.* Cambridge, Mass.

Tinbergen, Jan, ed. 1934. *International Abstract of Economic Statistics.* International Conference of Economic Services. London.

Urschitz von Usszich, Alois. 1928. *Die Entstehung der Österreichischen Nationalbank.* Charlottenburg.

Walre de Bordes, J. 1924. *The Austrian Crown.* London.

Wicker, Elmus R. 1986. "Terminating Hyperinflation in the Dismembered Habsburg Monarchy." *The American Economic Review.* Vol. 76, pp. 350–364.

Williamson, John. 1992. *Trade and Payments after Soviet Disintegration.* Institute for International Economics, Policy Analyses in International Economics No. 37. Washington, D.C.

Wolf, H. 1992. *Transition in Czechoslovakia: Then and Now.* Graduate School of Business, New York University. New York. Mimeo.

Young, John P. 1925. *European Currency and Finance.* U.S. Senate, Foreign Currency and Exchange Investigation Serial 9. Washington, D.C.

Zeuceanu, A. 1924. *La Liquidation de la Banque d'Autriche-Hongrie.* Vienna.

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