prices increased by 25 - 30 percent between 1945 and 1948 whereas the cost of living went up by 16 percent. Real wages were virtually stable.

I quote from Lieftinck's description of the accompanying tax reform:

"Since during the war years tax evasion had been practiced on a large scale and tax assessment had run into a backlog, supplementary tax declarations were imposed with respect to all existing direct taxes, and provisional tax assessments were made covering the year 1944 and the first eight months of 1945. In order to speed up the collection of tax arrears and in anticipation of the announced reconstruction taxes, a system of voluntary and obligatory tax deposits (advance payments to the Treasury) was introduced which by the end of 1946 amounted to over 1,800 million guilders. To supplement the revenue from normal taxes, two special reconstruction taxes were imposed:

- (1) a so-called capital increase levy on the accrual during the war years of all personal wealth (money holdings and all other assets taxable under the existing wealth tax), at a rate of 50 to 90 per cent differentiated on the basis of a propriety test of the nature of the acquisition and the amount of the increase:
- (2) a so-called once-for-all capital levy on all personal wealth at the end of the war, at a rate of 4 to 20 per cent by application of a progression scale.

The collection of these special taxes, the total yield of which amounted to over 3,000 million guilders, was spread over a number of years, and to the extent that they were not paid out of blocked accounts these levies contributed considerably to counteracting otherwise generated new inflationary pressures. With a view to making the Government budget a better policy instrument adjusted to the circumstances, its structure was for the time being modified. Instead of the traditional division in two parts, a current account and a capital account, the current budget was divided in an ordinary account, an extra-ordinary account and a separate budget chapter for the newly established Agricultural Equalization Fund. The ordinary account covered normal recurrent expenditures. The extra-ordinary account covered all expenditures that were directly connected with those functions of the Government that were undertaken to cope with the dislocation of the economy, including war damages, and, therefore, were considered to be of a temporary character (the administration and liquidation of the war heritage). The budget of the Agricultural Equalization Fund served to give an estimate of the balance of the cost of farm and consumer subsidies and the yield of agricultural export levies, the former being required to ensure a reasonable remuneration to the farmers while at the same time

keeping the food bill of the consumers down. Its actual outcome was highly dependent on changes in world market prices; and given the objectives just mentioned, the balance of this account could not be predicted reliably. The capital budget maintained its traditional character of covering expenditures that increased the 'rable assets of the public domain and the revenues derived from those assets. Particularly the introduction of the extra-ordinary account in the current budget proved to serve an extremely useful purpose because it avoided the mixing up of recurrent and non-recurrent expenditures, facilitated a special surveillance and an appropriate phasing of the latter, and embodied a constant reminder that those expenditures were temporary and should be abolished as soon as possible".

The Dutch government was not faced in 1945 with widespread use of foreign currency. Also, convertibility of the guilder was postponed until the next decade. In the 1950's the European Payments Union (EPU) remained the institutional mechanism for international payments until late 1958. The return to convertibility was postponed for so many years in Western Europe because of a perceived "dollar shortage". This term only makes sense if one assumes a general dollar overvaluation of the West-European currencies during the immediate post-war years. Because in Eastern Europe unofficial markets provide information about the exchange rate between local money and the DMark or US dollar, there should be no excuse for establishing an exchange rate that would undervalue the DMark or Dollar to such an extent that it would make sense to speak of a DMark or Dollar shortage. Hence, the historical experience in Western Europe with the EPU in the post-war period does not offer many direct lessons for Eastern Europe today, apart from the obvious one that it is hazardous to fix exchange rates in periods of great economic transition. However, the Dutch experience with a currency reform immediately after the War is of interest as a historical case-study of the removal of a monetary overhang larger than a full year's national income in a way that was democratically acceptable.

#### VI. Need for a Nominal Anchor

During the transition to a market economy forecasts of nominal national income at market prices will be subject to large forecasts errors. At the same time, the income velocity of money will depend on trends in economic growth and inflation, as well as on the availability of money substitutes,

<sup>&</sup>lt;sup>8</sup> See: Peter Bofinger: "A Multilateral Payments Union for Eastern Europe?", Discussion Paper nr. 458, Centre for Economic Policy Research, London 1990.

both in the form of domestic savings accounts and in the form of foreign currency. The Polish example has shown already how quickly the importance of foreign currency for domestic transactions can change over time, and this will make estimates of the velocity of money even more hazardous. With both national income and velocity being so hard to forecast, how can the Central Bank provide a nominal anchor for the economy if one rejects the option of fixing the exchange rate for a long period as I have done in this paper?

Perhaps the Dutch example may offer a useful suggestion. Lieftinck suggests in his book that the authorities were able to make continuous estimates of at least a very large proportion of national income by monitoring trends in wages. During the first few months after the currency reform the Central Bank apparently set a path for the money stock on the basis of its estimates of wages paid to workers.9 If indeed the quality of up-to-date statistics on wages is clearly superior to the statistics on output or domestic sales, than it may make sense for a brief period to use estimates on the incomes side for setting monetary policy. Assuming the authorities will continue to determine wages in the socialized sector, it should be possible to allow for free wage formation in the privatized sector of the economy and to free almost all domestic prices whilst maintaining a perspective on nominal developments in the economy by monitoring very closely trends in wages. During this first stage, an anti-inflationary policy would effectively mean a consistent policy on wages in the nationalized sector. In the Dutch case, the income velocity of money became remarkably stable from year-end 1945 onwards, i.e. no more than 8 months after the war. Once velocity has stabilized, the Central Bank could try to target the rate of growth of an appropriate monetary aggregate, using the type of feed-back rule advocated by many monetary economists.10

### VII. Envoi

The East European nations are discussing convertibility of their currencies under exciting but very difficult political conditions. The movement towards politically and economic freedom should in my view include the transition to a fully convertible currency, and I have tried to provide some arguments in favour of making the currency convertible as soon as it is political feasible to conduct a fiscal policy that does not require inflationary

finance of the budget deficit. Many of the points in this paper were well expressed in a recent conference contribution by *Hahn-Been Lee*, a former deputy Prime Minister of South Korea who spoke on "The change in the East Bloc". 11

"Once the Europeans achieve equalization of domestic prices with external prices, they will gain the confidence of their people, who will then be able to trust their own currency... Once people begin to have that valuable trust in their own currency, they begin to adopt the habit of saving, making investment possible. Saving is a prerequisite for the privatization of stateowned industries. Only after such successful economic management does popular democracy have a fair chance at stability..."

"Postscript: in February 1991 the Bulgarian authorities introduced a radical price reform and went most of the way to currency convertibility. The domestic price level went up by an estimated 150 - 200 percent, but subsequently fell by an estimated 15 percent in March. The Lev appreciated very substantially and the gap between the black market rate and the official rate virtually disappeared. At the time of writing – early April – foreign banks provide trade credits for Bulgaria, the current account deficit appears to have closed and spread between buy and sell rates of Lev in Vienna have narrowed to a few percent. The IMF has expressed strong support for the price and exchange rate policies of the Bulgarian authorities and the economy would seem ready for privatisation".

### Zusammenfassung

# Konvertierbarkeit der Währungen: wann und wie?

In dieser Arbeit führe ich die der Konvertierbarkeit der Währungen traditionell eigenen Vorteile unter besonderem Hinweis darauf auf, daß eine Liberalisierung des internationalen Handels zur Anpassung der relativen Binnenmarktpreise an den jeweiligen realen Wert beiträgt. Dies ist für die ehemals sozialistischen Länder in Mittel- und Osteuropa besonders wichtig, da sie für die Subventionierung von Vorleistungen, Konsumgütern und Energie bekannt sind. Auch erfordert die Einführung westlicher Buchführungskonzepte aussagekräftige relative Preise: In dieser Arbeit wird argumentiert, daß politischer Druck zugunsten einer Fortführung der Subventionspraxis sich leichter überwinden läßt, wenn die Konvertierbarkeit der Währung eine Anpassung der relativen Binnenmarktpreise an das international übliche Niveau erzwingt.

<sup>9</sup> In addition, as shown in the quotation above, the Central Bank helped to provide credit to enterprises.

<sup>10</sup> See for example, B. McCallum, Monetary Theory, MacMillan, 1989.

<sup>11</sup> Wall Street Journal, July 13, 1990.

Nach einer Erörterung mehrerer möglicher Szenarien für die Währungskonvertierbarkeit einschließlich Prof. Meltzers Vorschlag, dem Beispiel einer 100%igen Dekkung der Inlandswährung durch Devisen wie im Falle Hongkongs zu folgen, schließe ich die Arbeit mit einem Plädoyer für die volle Konvertierbarkeit von Zahlungen aus den laufenden Transaktionen bei gleichzeitiger Zielfestsetzung für gewisse nominale Binnenwirtschaftsgrößen ab. Zu Beginn könnte das Lohnniveau des Landes sich für eine solche Mengenzielfestsetzung als die geeignetste Größe erweisen; später könnte das Lohnniveau vom Nominaleinkommen oder der Inflationsrate abgelöst werden, nachdem sich die Einkommenskreislaufgeschwindigkeit des Geldes genügend stabilisiert hat, um eine Geldmengenzielfestsetzung zu ermöglichen.

#### Summary

## Currency Convertibility: When and How?

In this paper I list the traditional advantages of currency convertibility with special emphasis on the point that liberalization of international trade will help to adjust domestic relative prices to their correct world values. This is especially important for the formerly socialist countries in Central and Eastern Europe, because of their history of subsidization of inputs, consumer products, and energy. The introduction of Western-style accounting concepts also requires useful relative prices: the paper argues that political pressures in favour of continuation of subsidies will be easier to overcome if a convertible currency forces domestic relative prices to adjust to international standards.

After discussion of a number of possible scenarios for currency convertibility, including Professor Meltzer's suggestion to follow the Hong Kong example of 100% international reserve backing for the domestic money, I conclude the paper with a plea for full convertibility on current account, combined with the targeting of some domestic nominal magnitude. In the first stage, domestic wages might be the most appropriate target, to be replaced by nominal income or inflation when the income velocity of money has stabilized sufficiently to make monetary targeting feasible.

#### Résumé

# Convertibilité des monnaies: quand et comment?

Dans le présent travail, j'énumère les avantages traditionnels de la convertibilité des monnaies, en insistant spécialement sur le point que la libéralisation du commerce international aidera à ajuster les prix relatifs nationaux à leurs valeurs correctes mondiales. Ceci est particulièrement important pour les anciens pays socialistes d'Europe centrale et de l'Est à cause de leur histoire de subventionnement des inputs, des biens de consommation et de l'énergie. L'introduction de la compatibilité du style occidental requiert aussi des prix relatifs utiles: l'auteur prouve ici que les pressions politiques en faveur de la continuation de subsides seront plus faciles à surmonter si une monnaie convertible force les prix relatifs nationaux à s'ajuster aux standards internationaux.

Après avoir discuté un nombre de scénarios possibles pour la convertibilité des monnaies, y compris la suggestion du professeur *Meltzer* de suivre le modèle de Hong-Kong de réserve internationale à 100% pour soutenir la monnaie nationale, je conclus mon travail en sollicitant de facon pressante une pleine convertibilité sur comptes courants, combinée avec l'objectif de quelques grandeurs nominales nationales. Dans la première étape, les salaires nationaux seront probablement l'objectif le plus approprié, puis ce sera le revenu nominal ou l'inflation lorsque la vitesse de la monnaie par rapport au revenu aura été suffisamment stabilisée que pour permettre de réaliser des objectifs monétaires.

- Report 9001 Gerrit Antonides and Nico van der Sar, "Individual expectations, risk perception and preferences in relation to investment decision making".
- Report 9002 Angelien Kemna and Ton Vorst, "A pricing method for options based on average asset values".
- Report 9003 Kees G. Koedijk and Peter Schotman, "How to beat the random walk; An empirical model of real exchange rates".
- Report 9004 Simon Benninga and Aris Protopapadakis, "The valuation of fixed income securities in a recursive pricing model".
- Report 9005 William Poole, "Economic policy coordination among nations; prospects, pitfalls and prattle".
- Report 9006 Kees G. Koedijk and Clemens J.M. Kool, "Betting against the EMS".
- Report 9007 Henk Berkman, "The market spread, limit orders and options".
- Report 9101 Eduard J. Bomhoff, "Stability of velocity in the major industrial countries".
- Report 9102 Eduard J. Bomhoff, "Currency convertibility: When and how? A contribution to the Bulgarian Debate".