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Debt/Equity Swaps

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Abstract

This paper describes the development of debt/equity swaps in the years following the emergence of the international debt crisis. It discusses some of the possible advantages and disadvantages offered by such swaps to three groups of participants--the commercial banks, the investing companies, and the indebted countries. It also provides an analysis of how these swaps are treated in the balance of payments accounts of an indebted country and discusses their possible effects on that country's money supply, foreign exchange rate and economic growth. The paper concludes that debt/equity swaps can help to make a country's debt burden more manageable and can contribute to economic growth, but only to a limited extent.

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A Note on Sources

Some of the information in this paper is attributed to "banking sources;" this term is applied to the several employees of commercial banks who provided information to the authors but preferred not to be identified.

Summary

This paper describes the development of debt/equity swaps in the years following the emergence of the international debt crisis in 1982 and discusses some of the possible advantages and disadvantages offered by such swaps to commercial banks, investing companies, and indebted countries.

For the banks the most important advantage of the sale or conversion of their debt paper is the opportunity it provides for clearing their books of problematic loans or diversifying their credit exposure. The most important disadvantage for the banks is the potential loss incurred on their balance sheets, which may not always be offset against tax.

For investors the main advantage of debt/equity swaps is the possibility of obtaining the currency of a debtor country at a rate that is effectively lower than the official foreign exchange rate. This advantage, however, may be offset to varying extents by restrictions on the type of investments that can be made and on profit and capital repatriation.

Those countries permitting the swap of their external debt obligations for domestic equity have done so because they perceive a number of advantages. These advantages include: the replacement of fixed external payment obligations with a repayment stream that depends on the profitability of the equity investment, the stimulation of growth in export-oriented or import-substituting industries and the concomitant improvement in the country's trade performance, its balance of payments, and, ultimately, its overall external position, and the possible stimulus to the development of local equity markets, which subsequently can provide attractive uses for domestic savings and reduce the motivation for capital flight.

Nevertheless, the financing of debt/equity swaps presents a number of potential problems for participating countries. Probably the most important of these is the fact that as no additional foreign capital is provided directly by these swaps, the resources for any increase in gross investment must come from the domestic economy. In countries in which the economy is operating close to capacity, such investment spending associated with debt/equity swaps can crowd out other domestic expenditure as a result of higher prices or higher interest rates.



I. Introduction

Considerable attention has focussed recently on the conversion of debt into equity as a means of alleviating the debt burden of heavily indebted countries. Such conversion has figured prominently in "menus" of financial options for dealing with debt problems and is the subject of a growing body of literature. This paper provides a general overview of the development of debt/equity swaps and the manner in which such swaps affect each of the three major parties involved--commercial banks, investing companies and debtor countries. The paper is in part analytical, but the breadth of its scope has meant that in some parts its objective has had to be limited to the identification of areas in which more detailed research might be merited.

The regulations governing the ways in which countries permit the swap of their commercial bank debt for equity in particular sectors of their economies differ importantly from country to country; even within individual countries, conditions applied to such transactions can vary according to the purpose for which the swap is undertaken, monetary policy considerations, and other factors. However, whatever the differences in the often arcane regulations and the actual forms of such transactions, most debt/equity swaps conform to the following basic pattern: first, a bank sells at a discount an outstanding loan made to a public sector agency--or sometimes to a private sector enterprise--in an indebted country that is experiencing difficulty in adhering to an agreed repayment schedule; second, an investor, most often a multinational manufacturing company, buys the loan paper at a discount and presents it to the central bank of the indebted country, which redeems all or most of the face value of the loan in domestic currency at the prevailing market exchange rate; and third, the investor acquires equity using this domestic currency, which it has in effect purchased on terms that are more favorable than can be obtained through regular foreign exchange market transactions. This paper focuses primarily on this type of debt/equity swap, although some reference will be made to other related uses of discounted debt paper.

The growth in the volume of debt/equity swaps in recent years has drawn its impetus not only from increasing recognition in debtor countries that foreign investment can make an important contribution to economic growth, but also from the development of a flourishing secondary market in country debt obligations among the international banks and from the current global trend toward the securitization of debt. More particularly, the growth in the volume of debt/equity swaps can also be attributed to the fact that such transactions would appear to offer benefits for each of the three participating parties. The international bank that sells an outstanding loan at a loss, which reflects the difference between its face value and its existing value in the secondary debt market, can realize the cash value of a problematic asset, liquidate any reserves set aside to cover possible losses on the loan, and employ these resources more profitably in other investments

at its own discretion. The indebted country is able to reduce its total interest payment obligations and shift the risk of servicing the claim on domestic resources to the foreign investor; moreover, depending on the buyer of the debt, the conversion of debt to equity may provide a mechanism for the repatriation of flight capital and generate enhanced interest in domestic investment. Finally, the investing company is able to acquire investment capital on terms that are more favorable than those available through direct exchange market purchases of domestic currency.

Although certain advantages may be realized by participants in the debt/equity swap, there are also potential difficulties and costs. For example, for banks the sale of outstanding loans at a discount may require provisioning and ultimately the writing down of value of other assets, which in turn may give rise to a number of regulatory and accounting problems. For investing companies, debt/equity swaps can be associated with more onerous conditions concerning capital repatriation and profit remittances than would have been associated with regular direct investment. For the debtor countries, as will be discussed in detail in Section V, debt/equity swaps can have adverse budgetary and monetary consequences and may be regarded by these countries' governments as infringing on national economic sovereignty.

These advantages and disadvantages of debt/equity swaps for each of the three parties involved are addressed in more detail in the body of the paper. The next section first identifies the countries that have participated in debt/equity swaps over the past few years and describes briefly some of the main features of their policies in this area; it then goes on to give some indication of the present volume of such swaps and to discuss possible future trends. Section III identifies the types of banks that are most involved in debt/equity swaps, describes the workings of the secondary market in debt, discusses the regulatory and accounting constraints on debt/equity swaps, and makes some assessment of the benefits that the banks may derive from such transactions. Section IV analyzes the possible advantages and disadvantages for international companies using debt/equity swaps. Section V focuses on the indebted countries and provides an analysis of how debt/equity swaps are treated in the balance of payments accounts and a discussion of possible effects in these countries on the money supply, the foreign exchange rate and economic growth. Section VI provides some concluding remarks.

II. An Overview

This section first sketches the development of debt/equity swap arrangements in different countries in the years following the onset of the debt crisis. It then discusses the size of the market for such swaps and the reasons why more have taken place in some countries than in others. It goes on to identify possible future developments with

regard to debt conversion and concludes with some brief remarks about the views on this subject held by intergovernmental financial institutions and by creditor governments.

1. The development of debt/equity swaps

The emergence of the present debt/equity swaps market dates back to the onset of the debt crisis in the summer of 1982. However, a number of isolated instances of such swaps had been recorded even earlier; for example, in Brazil from as early as 1965, certain non-residents had been allowed to convert external debt into equity investments at face value and at the official exchange rate. The latest example predating the debt crisis was that of Turkey, where in 1980 the authorities enacted legislation dealing with the settlement of some \$1.4 billion of foreign arrears claims. This legislation provided that creditors could be paid either in foreign exchange over ten years or in local currency on demand. It was specified that the local currency could be used for a wide variety of purposes, including the purchase of equity. Soon after the enactment of this legislation a certain amount of trading in Turkish debt began, with debt paper being sold at a discount from its face value. 1/

The first debt/equity swaps to take place after the emergence of the debt crisis were in Brazil in 1983. As part of a major rescheduling package agreed that year, private sector borrowers were required to deposit with the Central Bank of Brazil the cruzeiro equivalent of their foreign currency borrowings when those borrowings became due for repayment. Some creditors decided to relend this money in Brazil and some decided to use it for the purchase of equity. Several creditors, however, decided to sell their loans, and thus the right to use the corresponding cruzeiro deposits, to a multinational corporation or similar institution that was planning to invest in Brazil. In this manner the first of the post-debt crisis debt/equity swaps was introduced.

The Central Bank of Brazil imposed conditions on debt/equity transactions designed to ensure that there would be no repatriation of capital before the scheduled date for the repayment of the loan and that, in the interim, there would be no repatriation of any profits from the venture that would exceed interest payments on the original loan. 2/ In the summer of 1984, the Brazilian authorities became concerned that the scheme might discourage the inflow of new money from direct investors and they restricted authorizations for debt/equity swaps to the original creditors. In the period from 1983 to mid-1987,

1/ UNCTAD (1984) p. 13. See also Dillon (1985).

2/ These conditions applied only to debt/equity conversions tied to the rescheduling agreement with banks. For other conversions, the same rules on repatriation applied as to foreign investment.

almost \$2 billion worth of Brazil's external debt was converted into equity. In November 1987, the authorities introduced a new debt/equity swap scheme that was intended to increase the volume of transactions. Detailed regulations on various aspects of the scheme had not been issued by the end of 1987. Sentiment in the U.S. banking and investment community is that because of the wide and active stock market in that country, Brazil could provide good opportunities for debt/equity swaps.

Toward the end of 1984, Argentina became the next country to engage in debt/equity swaps. The Argentine scheme was also related to a rescheduling package but took a different form. The Argentine authorities issued promissory notes (BONODS) for debt covered by the package and then permitted the conversion of these notes to equity on a case-by-case basis. This scheme provided the only mechanism by which creditors that had been provided with an exchange rate guarantee could realize immediately the capital gain that was associated with this guarantee. This particular debt/equity swap arrangement was discontinued before the end of 1985 after about \$500 million worth of debt had been converted. According to banking sources, the reason for terminating the scheme reflected a concern, as in Brazil, that the investment associated with debt/equity swaps would substitute for inflows which would have taken place in any event. There was also apparently some concern that such swaps would lead to increased credit expansion. In June 1987, the Argentine authorities introduced a new scheme that allowed debt/equity swaps as long as the face value of the swapped debt was matched by the investment of an identical amount of "new" money. The features of this scheme had been the subject of considerable discussion at the debt rescheduling negotiations that were concluded in April 1987. 1/ Reportedly, bankers reluctantly accepted the scheme but remained generally unhappy with the requirement for new money, believing that it severely reduced the attraction of the scheme as a whole. The limited demand for debt/equity swaps in Argentina during the ensuing months seemed to substantiate this view, and in the series of economic reforms announced in October 1987, the 50/50 ratio of debt to new money was raised to 70/30 with the means of satisfying the new money requirement extended to local as well as foreign currency. It was also specified that when the amount of project cost to be financed through debt/equity conversion is calculated, the cost of imported equipment will have to be excluded and these imports financed with foreign exchange. The effective requirement for new money from abroad will, therefore, vary according to the local content of the costs of each project. The authorities also extended the debt/equity swap arrangements to some service projects.

1/ Andersen (1987), pp. E1, E3.

In May 1985, Chile introduced a more comprehensive scheme than those then operated by Brazil and Argentina. ^{1/} Under this scheme, debt/equity conversions could be made according to the provisions of Chapters 18 or 19 of the Compendium of Rules on International Exchange issued by the Chilean Central Bank. Under the provisions of Chapter 18, the Central Bank holds a monthly auction at which local banks bid for the right to engage in transactions to convert a specific limited amount of foreign debt into domestic currency. The banks act as agents by assisting the holders of the foreign debt to convert it, with the consent of the local debtor, into cash or a peso-denominated asset which can be resold. These provisions were the first to permit a country's own residents to exchange foreign debt obligations purchased at a discount for domestic currency or instruments denominated in domestic currency. The proceeds of the conversion may be used to repay debts to local financial institutions, acquire assets of those institutions, or be held as an investment. Under certain conditions, the proceeds may be used to acquire equity in local firms without going through the auction process. It seems that several Chilean interests have used the provisions of Chapter 18 to repatriate capital sent out of the country as part of the capital flight of earlier years. On the one hand, Chapter 18 does not require that the domestic currency obtained be used for specific types of investment; on the other hand, it does not provide for any transfer abroad of capital or dividends.

The provisions of Chapter 19 allow nonresidents to convert into equity certain external debt claims which can be purchased on the secondary market without going through the auction mechanism. However, the domestic currency obtained must be used for approved investments, and repatriation of capital or dividends is subject to a number of conditions.

The Chilean scheme is still operating and by the end of August 1987 some \$2.1 billion worth of debt had been converted through these and related mechanisms. In September 1987, Chile's Central Bank announced an extension of the country's debt for equity scheme to allow the formation of foreign investment societies, whose funds--obtained through the purchase of discounted debt--could be invested in a range of Chilean shares and financial instruments. The investment societies will be required to maintain 60 percent of their portfolios in shares, while the remainder can be invested in local bonds and other financial instruments. No society will be allowed to take a majority holding in any company.

In 1986, three other countries introduced arrangements for making debt/equity swaps. The first, and probably the most significant, of these schemes came into effect in Mexico in May. Under the Mexican

^{1/} Chile had a type of debt/equity conversion scheme in place as early as 1977, under which the original creditor could directly convert its claims into equity of the original debtor.

arrangement, the Bank of Mexico is empowered to redeem foreign currency public sector debt at a discount that is related to the perceived utility to the economy of the proposed investment of the proceeds of the swap: the Bank of Mexico can purchase Mexican debt paper at face value when the domestic currency is to be used to acquire state-owned firms; at 95 percent of face value when it is to be used for investment that will create new employment and introduce new technology in a firm that exports 80 percent or more of its production; and at other fractions of the face value down to 75 percent. By the end of 1986, according to banking sources, the Mexican authorities had received about 100 applications under the scheme and had authorized the conversion of more than \$1 billion worth of debt into equity. Demand for such transactions surged early in 1987 when 132 firms filed applications in the first six weeks alone. According to the same sources, by mid-March 1987 there were \$2 billion worth of applications outstanding while the authorities' stated policy was to limit the amount of swaps to \$100 million a month.

In the Philippines, the authorities introduced in August 1986 a program for debt/equity swaps which was intended to provide incentives for investment in designated priority sectors, to reverse capital flight and to reduce the burden of external debt. As amended in October 1987, the program provides that specified types of debt paper can be exchanged for domestic currency at face value with a conversion fee amounting to 0.0 percent to 20.0 percent for investment in certain preferred sectors and to 0.0 percent to 24.0 percent for investment in less preferred sectors. The amount of the fee is determined by the amount of "fresh money" accompanying the investment. For example, in the preferred sectors an investment financed entirely by debt/equity conversion would incur a conversion fee equivalent to 20 percent of the face value of the debt, whereas no conversion fee would be charged where the amount of debt to be converted is matched by the same amount of "fresh money." (There are four intermediate points between these two extremes.) Investors are free to choose their own combination of conversion fee and fresh money. The investor's choice will be influenced by the magnitude of the discount in the secondary market. At a discount of 40 percent in the secondary market, and with the present conversion fee schedule, an investor will keep half of that discount if investing in the preferred sectors and rather less if investing in the less-preferred sectors. For discounts less than 40 percent, it becomes more profitable for an investor to fund as much as possible with fresh money to bring down the level of the conversion fee. For discounts larger than 40 percent, the opposite is the case. Since fees cannot be funded from the peso proceeds of the converted debt, every conversion will involve some fresh money unless the investor is able to borrow from the Philippine banking system or has other peso funds available. The conversion fee and fresh money requirement ensure that the Philippine

authorities obtain some benefit from the secondary market discount on the country's external bank debt. Gradual capital repatriation is allowed after three years for investments in the most preferred sectors and after five years for those in the less preferred sectors. Dividend payments abroad can be made out of profits realized from the outset in the most preferred sectors and after four years in the less preferred.

In determining whether to approve proposals, the objective of the authorities is to ensure that the swap will increase the availability of foreign resources to the economy rather than merely providing a means for converting at a more beneficial rate to the investor those funds already intended for investment in the Philippines. In general, therefore, approval is not given for the purchase of claims of current stockholders to existing assets, or for increasing working capital or paying off the obligations of existing firms. Attention is also paid to the monetary impact of the debt/equity swap, particularly with regard to the conversion of central bank debt instruments.

In Ecuador, the authorities announced in November 1986 that they intended to pursue debt/equity swaps vigorously. Regulations were issued in February 1987 with all applications under the scheme to be handled on a case-by-case basis. Total operations under the scheme are projected to amount to over \$100 million in 1987. However, the scheme has recently been suspended because most of the operations originated from domestic residents which, in the authorities' view, tended to put excessive pressure on the exchange rate. The authorities intend to resume implementation of the scheme soon after incorporating certain changes that might include ceilings on the amount of debt/equity operations to be approved monthly.

In April 1987, the Venezuelan authorities issued a number of rules covering the conversion of public external debt into foreign direct investment. Essentially, conversion can be authorized if the proceeds are invested in import substituting or export industries or in industries in one of 11 designated priority sectors. The proceeds can also be used to invest in enterprises in danger of being closed down. The rules limit profit remittances to a maximum of 10 percent of the converted debt during the first three years and to 20 percent plus LIBOR thereafter. No capital repatriation from converted equity is allowed during the first five years; afterwards, repatriation can be made in eight equal yearly installments.

A number of other countries are also introducing or are contemplating the introduction of debt/equity swap schemes. These countries include Colombia, Costa Rica, Dominican Republic, Jamaica, Morocco, Nigeria, Peru, and Uruguay. ^{1/}

^{1/} See, for example, Houghton (March 1987), pp. 151-157, Bruce (May 1987), p. 117, and Debs (1987), p. 22.

In comparing the debt/equity swap arrangements in these countries, it becomes apparent that although there are many differences in the details from country to country, the arrangements have a number of common features. Most arrangements provide some opportunity for the debtor country to share part of the discount on the debt, either through auction proceeds or through redemption charges; most give some direction with regard to the sectors of the economy from which equity can be purchased; and most place some restrictions on the volume and frequency of payments that can be made abroad in the form of dividends or repatriated capital.

An attempt was made to see if a country's propensity to engage in debt/equity swaps could be correlated with the country's market capitalization, its volume of direct and portfolio investments, and its outstanding debt. Excluding Chile from Table 1 and looking at absolute values, it would appear that there might be a positive correlation between the amount of debt converted and each of these indicators. However, in normalizing these figures in terms of GNP these correlations disappear. This would tend to confirm the view of the banking community in the industrial countries that a commitment to debt/equity swaps depends not so much on economic and financial considerations as on the political climate in the country concerned.

Table 1. Selected Indicators for Countries Engaged
in Debt/Equity Swaps

(In billions of U.S. dollars and in percent 1/)

Country	Debt conversion 1983-1987 <u>2/</u>	Market capital- ization 1985) <u>3/</u>	Direct and portfolio investment inflows (1980-85) <u>4/</u>	Total debt outstanding to commer- cial banks <u>5/</u>
Chile	2.6 (16.6)	2.0 (12.5)	1.3 (8.1)	13.9 (86.7)
Brazil	2.2 (1.1)	42.9 (21.6)	40.7 (20.5)	78.8 (39.8)
Mexico	1.8 (1.1)	4.2 (2.6)	7.6 (4.8)	73.7 (46.3)
Argentina	0.5 (0.88)	1.4 (2.8)	7.6 (12.9)	31.3 (53.0)
Philippines	0.2 (0.77)	.7 (2.4)	n.a.	14.1 (48.0)

1/ Percentage value in relation to 1985 GNP in U.S. dollars.

2/ Estimates from various sources.

3/ Source: International Finance Corporation.

4/ Source: International Monetary Fund--Balance of Payments
Statistics--Volume 37, Yearbook, Part 1, 1986.

5/ Estimated from U.S. Federal Financial Institution Council and Bank
for International Settlements quoted by Cline (1987).

2. Market volume

In early 1987, it was estimated by commercial banking sources that some \$2.5 billion of debt could be expected to be converted into equity each year--an amount equivalent to less than one percent of the total developing country bank debt outstanding. The amount of debt conversions for 1987 might well be somewhat higher, reflecting the direct participation of some of the U.S. banks that, during the course of the year, set aside reserves to cover potential losses from international loans, an action that was perceived to open the way for the banks to convert more of their own debt into equity. 1/

Table 2. Debt Conversion and Total External
Debt Outstanding

(In billions of U.S. dollars)

Country	Total debt out- standing to indus- trial country banks <u>1/</u> (1)	Debt conversion	
		1983-86 (2) <u>2/</u>	1987 (projection) (3) <u>2/</u>
Argentina	31.3	0.5	0.00
Brazil	78.8	1.9	0.38
Chile	13.9	1.3	1.30
Ecuador	5.3	0.0	0.10
Mexico	73.7	0.6	1.20
Philippines	<u>14.1</u>	<u>0.015</u>	<u>0.187</u>
Total	217.1	4.315	3.167

1/ Estimates from U.S. Federal Financial Institution Council and Bank for International Settlements quoted by Cline (1987).

2/ Estimates from various sources. In the case of Argentina, the projection for 1987 is the ceiling figure included in the re-scheduling agreement with the creditor banks which is yet to be ratified. The annual ceiling figure for the years 1988 to 1991 is \$0.4 billion.

While the volume of conversion of debt into equity is likely to make only a very modest contribution to the reduction of debt, and therefore contractual interest repayments, of developing countries as a whole, it is not necessarily insignificant for particular countries. In Chile, for example, it has been estimated that almost \$1 billion

1/ This action is discussed in more detail below; see pp. 17-18.

worth of debt was converted into equity in 1986, thus reducing Chile's external debt by about 5 percent. Table 2 lists some of the countries that have been engaged in debt/equity swaps over the past few years and gives some indication of the volume of debt being converted into equity in comparison with total debt outstanding.

3. Possible future developments

As for the future of debt/equity swaps, the consensus among banking sources seems to be that the volume of debt/equity swap transactions could well expand from present levels but is unlikely to advance much beyond \$3-5 billion per year. Even the strongest proponents of debt/equity swaps doubt that more than 10 percent of developing country debt will ever be swapped for equity. As is explained in detail below, there are limits on the volume of such transactions that reflect debtor countries' need to contain the potentially adverse financial consequences of converting foreign debt into domestic currency and their concern over the consequences of increasing the foreign ownership of profitable domestic industries. The commercial banks may also limit the volume of their transactions for accounting and balance sheet considerations and, possibly, because of the limited opportunities for substantial profitable investment in the most heavily indebted countries.

The difficulty in identifying suitable investment opportunities for which debt can be swapped--either because there are none available or because the authorities withhold permission--could well lead to the swapping of debt for other assets. According to banking sources, a few countries--including Mexico--are contemplating the introduction of debt-for-products and debt-for-commodities schemes. Peru has pioneered this type of transaction, and in the late summer of 1987 announced deals in which the Midland Bank and First Interstate Trading Company would arrange for the sale of Peruvian export goods and retain about one third of the receipts to repay outstanding debt. 1/

Perhaps of greater potential significance is the development of trust funds that can at least in part be financed by the proceeds of debt to equity conversion. In late 1987, the International Finance Corporation (IFC) was in the process of establishing trust funds in which some of its own resources would be added to loan claims from a number of banks for the purchase of investments or shares in private companies in debtor countries. These funds, which will be managed professionally, will work in the same way as established country-specific mutual funds.

1/ According to Reuters (September 16, 1987), the Midland Bank agreed to arrange for the sale of \$23 million worth of Peruvian goods in international markets, to retain \$8.8 million of the proceeds to cancel part of Peru's outstanding debt, and to return the remaining cash to the Peruvian authorities.

A different type of scheme was muted by the U.S. investment firm of Drexel Burnham Lambert in the late summer of 1987 and involved packaging Latin American loans purchased on the secondary market and selling them to investors as high-risk yet potentially high-yield investments--along lines similar to the domestic "junk" bonds this firm had been active in promoting for several years. The attraction of such schemes to investors would be that if they could buy debt at 50 cents on the dollar, the interest rate they would receive--assuming the debtor country were current on its debt obligations--would be doubled, as would the amount of their investment should the debt paper ever be redeemed at par. However, the chances of such schemes succeeding would appear doubtful as debtor countries would probably object to their loans being transferred to private investors who have no interest in providing additional investment to the country; moreover, investors would probably not be greatly attracted by claims on which the terms could change and which might never be repaid.

Another approach to debt conversion that has become the focus of increasing attention involves the swapping of debt paper for equity which is then sold to a syndicate of buyers, with the returns on the investment determined by the profits realized by the equity involved. Investments in the hotel and tourist industries has been particularly attractive in this context. The success of any of these schemes for mutual funds depends above all on the willingness of the creditor banks to sell significant amounts of debt paper at a substantial discount, an action that most major banks still seem reluctant to take.

In the summer of 1987, Brazil, as part of a menu of alternatives for the resolution of its debt problem, proposed that some \$30 billion of its bank debt should be converted into tradable securities. This proposal was not accepted by the banks involved, which were concerned by the magnitude of the losses they would have to bear.

Finally, it is possible that some of the poorest countries might follow the example of Bolivia. This country has set up a program under which it will use concessional foreign aid resources to buy back its debt obligations at a heavily discounted price.

Opinions are divided with regard to the length of time the debt/equity swap market will be active. Martin Schubert, chairman of one of the most active finance corporations in this field, concluded at a recent conference on debt/equity swaps:

"At best, the debt equity conversion may have a useful life of two to three more years. During that time, what major investment opportunities have not already been taken up, will have been grabbed by shrewd venturesome entrepreneurs, both locally and externally. Valuable government properties which have been set out for privatization will have been privatized. As in the case of the forestry industry in Chile, important undervalued properties will have been taken up or their market values driven up by anticipation, or by government discount practices, to where they no longer have the same attraction. One should not expect that governments will massively give over their resources in exchange for debt which they more and more are coming to the conclusion that they cannot, and will never be able to repay." 1/

These remarks were probably designed to encourage listeners from the multinational corporations to reach more rapid decisions about their investment plans, but they nevertheless contain several valid points. One further point that could be made is that debt/equity swaps will no doubt be discontinued in countries which regain liberal access to the capital markets, since presumably at that time the discounts on those countries' existing debts in the secondary market would have disappeared.

4. Views of intergovernmental institutions and creditor governments

The conversion of debt into equity has been encouraged by the major international financial institutions. The Fund's Executive Board, for example, has referred to the subject in a number of its meetings. At the conclusion of a Board discussion on developments in the international capital markets in September 1986, the Chairman stated in his summing up that the schemes for debt/equity swaps and, in particular, the arrangements for the conversion of debt to equity in Chile, were welcomed because such arrangements could make a contribution to solving the debt-servicing problems of the indebted countries. At its meeting in April 1987, the IMF Interim Committee expressed concern over delays in arranging "concerted financial packages" and "welcomed the exploration of a wider range of procedures and financing techniques by commercial bank creditors as appropriate, such as debt/equity swaps...." The World Bank has also shown considerable interest in the development of different types of debt conversion schemes and, as explained in the previous section, the IFC has taken active steps to encourage the exchange of loan claims to purchase investments in debtor countries. The Multilateral Investment Guarantee Agency (MIGA) is expected to begin operation during 1988. This agency, which will work closely with

1/ Schubert (1987).

the World Bank, will pursue the goal of improving and stabilizing the conditions for productive foreign investments in those developing countries that are members, and therefore it would be expected to take considerable interest in the operation of schemes for debt/equity conversion. MIGA's main function will be to guarantee investors of all member nations against non-commercial risks including, in particular, restrictions on the transfer of dividends and on repatriation of capital, expropriation, breach of contract by host governments, and losses due to war and civil disturbances.

In its meeting in March 1987, the 25 members of the Latin American Economic System (SELA) called for the continuation of debt/equity swaps as part of a strategy to deal with the region's debt burden and faltering growth. 1/ The authorities of several creditor governments have also encouraged the use of debt/equity swaps. At the September 1987 Annual Meeting of the Fund and the World Bank, the U.S. Secretary of the Treasury, James A. Baker, included debt/equity swaps in his "menu" of recommended financial options to facilitate commercial bank financing packages and noted that such swaps helped to reduce debt and debt-servicing burdens. He also announced that the U.S. Federal Reserve Board had recently introduced measures specifically designed to facilitate greater use of debt/equity swaps (see page 18).

III. The Banks

This section describes the development of the interbank market for debt obligations and then discusses the accounting and regulatory constraints that can inhibit the use of these obligations for conversion into equity. It identifies the types of bank most active in debt/equity swaps and concludes with a brief discussion of factors affecting the discount at which these debt obligations are sold in the secondary market.

1. The interbank market for debt obligations

Since the onset of the debt crisis in 1982, commercial banks with large exposures to financially troubled countries have engaged in sales or swaps of loan claims with the principal objective of reducing or diversifying their credit exposures. Several commercial and investment banks set up special departments to serve as intermediaries in such deals; eight of these banks account for about 85 percent of the volume of all transactions. 2/ According to market sources, between \$6 billion and \$10 billion worth of loans were traded at least once in 1986--more than double the 1985 level--and some, but not all market analysts, expect the volume to be higher in 1987. 3/ Probably 60 percent or more

1/ Reuters, March 18, 1987.

2/ Schubert (1987), p. 4.

3/ Economist (March 1987) pp. 87-90.

of the transactions are part of a chain leading ultimately to the actual conversion of debt held by commercial banks into equity. 1/

Banks often seek to reduce their credit exposure in order to avoid or reduce the need to increase it later during a country debt rescheduling arrangement. In many rescheduling programs, a creditor bank is expected not only to accept postponement of overdue principal repayments but also to join other creditor banks in committing new loans in order to cover the debtor country's financing needs during an agreed adjustment period. A failure to comply with the rescheduling agreement could result in a creditor bank's original loan being placed in a non-accrual or non-performing status, with adverse implications for the bank's earning statement.

Moreover, even if a bank is prepared to increase the amount it is willing to loan a particular country, the combined impact of rescheduling existing loans and making a new loan might cause it to contravene the limits on lending or on country exposure set by internal or regulatory capital requirement policies. Another reason for engaging in a loan sale is that a bank may from time to time experience liquidity constraints which will force it to scale down its asset base. Finally, a bank's management may find it to be more profitable to sell debt paper at a discount and reinvest the proceeds than to hold onto the debt with uncertain prospects for repayment of interest and capital. By selling such a loan, the bank could improve its capital assets ratio as the amount of loan loss reserves set aside previously would grow in relation to the stock of outstanding problematic assets.

Parallel to the outright sale of loans, banks have also actively engaged in asset trading. In this type of transaction, two or more parties agree to assign to each other debt obligations of different borrowers, with a possible cash settlement reflecting the different market values of the loans exchanged. Banks that are willing to maintain their current level of outstanding credit but wish to diversify their loan portfolio or concentrate it in more familiar markets have found asset swaps to be extremely advantageous. Some banks pursuing portfolio readjustment programs may find specific loans more appealing than others; they may, for example, be able to take advantage of the inefficiency of the secondary market in pricing loans arising from differences in perception of country risk and expectations of the collectability of the loan. There are various reasons why one bank may find a particular loan asset more appealing than its current owner; for example, different banks can have different views about the prospects for a particular debtor country making an orderly return to debt service. In addition, some banks might feel that the special relationship they enjoy with the government of a country might increase their chances of exercising their credit rights. Also, where banks are required by regulators to write down the loans of a particular country, they may find it useful to swap all or part of their loans to that

1/ Ibid.

country for loans to another country that do not require a mandatory reserve increase, even if this entails a cash settlement to close the transaction. Finally, a bank wishing to obtain equity in a particular country may swap loans against debt paper suitable for a debt/equity conversion in that country. For these reasons, banks have shown an increasing interest in swapping assets as a means of fine tuning their asset management practices in order to achieve their desired credit exposure.

Following the success of many debt/equity conversions, the swapping of debts has become much more frequently an early and preparatory step in the debt/equity conversion process. Banks that are prepared to participate in the sale of a loan at a discount generally try to avoid publicity; they do not want the news that they are selling off a customer's paper to convey disturbing signals to the market, which could lower the perceived value of similar assets remaining in their portfolios and which could, in addition, undermine their relation with the borrower concerned. By swapping loans in the interbank market instead, banks are able to reach a desired level of confidentiality and reduce the risk of sending any disturbing signals. It is generally acknowledged in the market that behind each series of asset swap transactions, there is probably an outright buyer of a loan.

As participants have gained experience in the secondary debt market, they have gone beyond the straightforward debt/debt and debt/equity transactions and have used the market for increasingly more sophisticated deals. Some banks, for example, have traded LDC debt paper for U.S. domestic debt paper, junk bonds or zero coupon Treasury bonds; some have swapped debt paper, with a cash adjustment, for debt paper of a perceived different quality of the same country; and some have donated debt paper to charities for tax deductions based on the local currency received at the swap. A similar related action has been donations of debt paper for rain forest preservation, as in the Bolivian "nature swap". ^{1/}

2. Accounting and regulatory constraints

While debt/equity swaps have certain advantages for banks, as described above, they do not provide a comprehensive solution for lowering or diversifying a bank's credit exposure. When it first began, activity on the secondary market for the debt obligations of financially troubled countries was relatively unimpeded, but it soon became constrained by a number of legal, accounting, and regulatory factors, particularly in the United States.

First, it became evident that an original lender might not be absolved from the obligations attached to a loan that it had swapped or sold. As was noted above, a creditor bank participating in a rescheduling program may be required to commit new funds in an amount

^{1/} Schubert (1987) p. 16.

equal to the percentage of its total credit exposure in the rescheduling country. This percentage is calculated on the basis of the outstanding credit at a particular base date, which is normally, but not always, the day on which the debtor country announces a moratorium on its debts. Consequently, some banks engaged in loan sales or swaps may later find out that they have not been released from these obligations to provide new funds, as they had engaged in such transactions prior to the base date. Some banks have tried to overcome this problem by entering into agreements whereby the purchaser relieves the original lender of any future obligation to contribute new funds to the rescheduling country. The legal validity of such agreements in some regulatory environments has not been established, and therefore the incentive to sell or swap loans as a way of avoiding both future increases in credit exposure and the burden of participating in rescheduling programs has been somewhat reduced. However, according to some banking sources, a consensus is growing that debt converted under official debt/equity conversion schemes will be excluded from future new money packages--at least on a case-by-case basis.

The single most important factor constraining U.S. banks from actively participating in loan sales and swap transactions was the release in May 1985 by the American Institute of Certified Public Accountants (AICPA) of a "Note to Practitioners Regarding Accounting for Loan Swaps." ^{1/} The premise of the AICPA note is that an asset swap represents a market transaction which should be accounted for by banks at current fair value. If the value of the proceeds from a swap is less than the recorded original investment, the bank should record a loss equal to the difference between the amount of the acquired loan, plus any cash paid, and the current fair value of the original loan, plus any cash received. The determination of the current fair value is, however, difficult and subjective. The AICPA itself has recognized in its document that the determination of this value is difficult to make because of the highly judgmental nature of the valuation process in the swap transaction. In fact, the various parties involved may very well reach different conclusions on the value of the asset they are exchanging. Even if the loan is swapped at a particular agreed price, it could be legally recorded at different prices in the books of the two banks involved in the transaction. Moreover, under normal accounting rules, a bank may be perfectly correct in recording the face value of the loan it acquired at a discount, if the bank's management intends to, and is considered able to, hold the loan to maturity.

In its "Note" the AICPA also suggested that when the swap involves loans to countries experiencing financial difficulties, the estimated fair value of the asset acquired will generally be less than its original face value, resulting therefore in a loss for the banks participating in the swap. The recognition of a loss, however, has raised

^{1/} Although the AICPA had jurisdiction only over U.S. accounting practice, its positions are often influential in the shaping of policies in other accounting environments.

the question of whether the exchange of loans at a discount should trigger a reassessment of the value of assets similar to those swapped, but that are still retained in the bank's portfolio, on the grounds that if a bank is selling a loan at discount because of its management's concern about the loan's ultimate collectibility, then it seems plausible that other assets with similar credit characteristics should be written down or provided for in order to reflect their current market value. As a result, many banks have interpreted the AICPA rules as implying that if they record a loss on one specific loan that has been swapped, they should provide for possible losses on the value of similar assets held on their balance sheets.

Shortly after the publication of the AICPA document, the U.S. Comptroller of the Currency (OCC) published a banking circular on the same subject 1/ which took an even more explicit position on the appropriateness of recording discounted loans acquired through swaps at face value. This circular made clear the presumption of the OCC that swapping debts of financially troubled countries at market value could result in a loss for the creditor and in that case banks under its jurisdiction should reconsider the level of their provisions 2/ against loan losses with respect to other similar assets retained in their portfolio.

As a result of the potential need to recognize losses in conformity with the publications of the AICPA and the OCC, sales or swaps of loans by commercial banks were sharply reduced in the United States and because of the influence of these two institutions in other regulatory environments, in other creditor countries as well. Major U.S. banks in particular were concerned that if they sold a specific loan at a discount from their own portfolio, and consequently recorded a loss, they might ultimately have to adjust (mark-to-market) the value of similar assets remaining in their portfolios. This would have had a direct and substantial impact on banks with large credit exposures and, therefore, a large potential need to increase capital in order to comply with minimum reserve requirements. In other words, the financial benefit of selling or swapping a loan could have been more than offset by the potential loss.

Citibank's decision in May 1987 to increase its loan loss reserves by an unprecedented amount of \$3 billion, which was followed by similar moves in other banks, indicated a change in the attitude of major banks toward their credit exposure in financially troubled countries and removed some of the constraints imposed by accounting regulations. Specifically, they are in a better position to absorb losses that may be occasioned by any requirement to mark-to-market their portfolio.

1/ Office of the Comptroller of the Currency, "Accounting for Loan Swaps," Bank Circular-200, May 22, 1985.

2/ The term "provisions," as it is utilized throughout this paper, refers only to the amount of capital set aside as a reserve against loan losses.

Setting aside large voluntary provisions has therefore opened up to the banks the possibility of swapping their own debt paper for equity or of selling it outright at a discount.

Another constraint on U.S. banks that are contemplating debt/equity swaps relates to the operation of Regulation K of the Federal Reserve Board. Until August 1987, this Regulation prohibited U.S. banks from owning more than 19.9 percent of any foreign nonfinancial company. In August, the Regulation was liberalized to permit a U.S. banking organization to acquire as much as 100 percent of the shares of a foreign nonfinancial company as long as that company was in the process of being transferred from public to private ownership and was located in a heavily indebted developing country. It also required that shares in the company should be acquired through a debt/equity swap and be held by the bank holding company or its subsidiaries, and, finally, that the ownership interest would be divested within five years unless the Federal Reserve Board extended the period for good cause, but, in any event, within ten years. Although the banks welcomed this liberalization, most found that it did not go far enough and have made representations to the Federal Reserve Board asking for the Regulation to be liberalized further.

Finally, uncertainty about tax considerations has also constrained debt sales by U.S. banks. The Internal Revenue Service has not yet made any ruling on the tax treatment of debt/equity swaps. There is some concern in banking circles, however, that in determining whether the sale of a debt obligation at a discount qualifies for a tax deduction, the Service may well wish to consider the face value of the foreign exchange received in exchange for that debt obligation.

As a general rule, commercial banks outside the United States have been rather less constrained in the sale of their debt paper. In the United Kingdom, the sale of one or more debt obligations from one country is not considered a cause for marking-to-market other loans to the same country still held in the portfolio of the bank concerned. In addition, the difference between the face value of the debt paper and the sale price in the secondary market is considered by the tax authorities as a realized loss that can be offset against profits. With regard to provisioning, the Bank of England has recently encouraged banks to increase their provisions against their LDC debts. The Bank of England suggested that the level of provisions should be set on the basis of fifteen factors grouped into three areas: present repayment record, past repayment record, and the economic prospects for the country concerned. In the United Kingdom, according to banking sources, the major banks have provisioned against about 30 percent of the value of their LDC debt portfolios. On the European continent, provisions are generally much higher, in some countries exceeding 60 percent.

3. The market players

At present, banks account for almost all transactions in the secondary debt market, with European and small U.S. regional banks being virtually the only net sellers of loans at a discount. Because of the decline in prices for debt paper, some banks have suffered losses in this market and are now not prepared to take positions. The need to recognize losses has made the large U.S. commercial banks and banks with substantial exposure in financially troubled countries reluctant to sell of swap transactions at a market-determined discount could trigger a reassessment of the remaining assets with similar credit characteristics still held at face value in a bank's balance sheet. Obviously, the consequent losses resulting from the strict application of this accounting rule would be proportional to the level of outstanding credit, i.e., the larger the exposure, the larger the losses. The substantial negative impact on the balance sheet of banks with large exposure would therefore largely offset any potential advantage of selling part of a portfolio of problematic loans at a discount. Only banks with a limited exposure in debtor countries can afford to absorb such losses. According to commercial banking sources, many small regional U.S. banks which began lending to developing countries shortly before the emergence of the debt crisis have by now sold or written off a substantial portion of their portfolios. Because of their small exposure, and the consequent small losses entailed in a complete write-down of their portfolio, they have been able to "clear" their balance sheet of problematic assets.

The reserve policies exercised in the various regulatory environments have also played an important role in shaping the supply side of the market. Because of their high level of provisioning (both mandatory and voluntary), European banks have been able to absorb larger losses resulting from the sale of a loan at a discount. In fact, banks in some European countries have accumulated such a high level of reserves against nonperforming loans that the sale or swap of a loan at the prevailing market discount rates could result in a profit. For example, should a bank have provisioned for a 40 percent loss against a particular loan and then sells that loan at a discount of only 20 percent--assuming that such a sale would be possible under the existing accounting regulations--then the net effect would be a profit of 20 percent.

U.S. financial institutions have not left the market entirely. Large commercial banks and investment banks alike have in fact come to see debt/equity conversions as a sizable source of income. Partly reflecting the accounting constraints described above, the larger banks have been active in the market as intermediaries. They have specialized in arranging a complex series of transactions ranging from the acquisition of debt paper on the secondary market to the negotiation of the conversion terms with the authorities of the debtor country without

utilizing any loans or assets recorded in their own books. Banking analysts have estimated that currently 90 percent of the activity of major U.S. financial institutions in debt/equity swapping is that of a broker rather than of a principal. Fees for arranging typical transactions are reportedly running as high as \$1 million for every \$100 million of debts converted.

4. Factors affecting the discount on bank loans

The discount applied to the sale of bank loans is largely linked to the market's perception of the creditworthiness of the debtor country. Dooley has argued in a recent paper ^{1/} that the market value of a debt will tend to equal the market's expectation of the future cash flow to the holder of the debt. This factor, however, is only a benchmark. There are other factors which enter into play. For example, the discount will tend to vary according to the different provisioning policies implemented by bank regulators. If these policies are adjusted to require a greater amount of capital reserves to be set aside against doubtful loans, the discount on the secondary market may deepen, as the banks will be less constrained by potential losses in selling their debt paper. Even within the same regulatory environment, different risk assessments or repayment expectations by bank officials could result in different prices on similar debt instruments in the same market. The level of the discount will also respond to supply and demand forces; for example, the easier it is to convert debts into equity, the higher will be the demand for the discounted debt in the secondary market and the lower the discount will become.

In light of the above considerations, it is difficult to identify a single market price for loans to a particular country. There is only a relatively small number of financial institutions actively engaged in this market and the volume of transactions is still quite small. Even though a few banks regularly post quotes for the sale of debt paper, most transactions, especially outright sales, result from individual case-by-case negotiations. Spreads and discounts can be highly misleading as the market remains volatile and relatively illiquid. Some bankers have in fact said that the outright purchase of as little as \$50 million worth of paper of a particular country could radically move the market. Finally, a debt/equity swap incorporates a number of different financial goals and strategies chosen by different players. The complexity of each individual transaction, the lack of information on similar potential deals, and the lack of standardized procedures can understandably lead to wide variation in the pricing of debt obligations.

Table 3 shows some prices quoted over the past two years by a New York investment bank (Shearson Lehman Brothers) for debt obligations of major debtor countries. These quotes are purely indicative and the generally declining trend shown in the table does not necessarily

^{1/} Dooley (1987).

Table 3. Price of Debt Obligations on the Secondary Market

(In percent of face value)

	January 1986	June 1986	December 1986	June 1987	October 1987	December 1987
Argentina	62-66	63-67	62-66	58-60	34-38	35-38
Brazil	75-81	73-76	74-77	62-65	35-40	45-47.5
Chile	65-69	64-67	65-68	67-70	50-53	60-63
Colombia	82-84	80-82	n.a.	85-88	75-80	67-72
Ecuador	68-71	63-66	63-65	52-55	31-34	34-38
Mexico	69-73	55-59	54-57	57-60	46-49	51-54
Peru	25-30	17-23	16-19	14-18	2-7	2-7
Philippines	n.a.	n.a.	72-76	70-72.5	57-60	49-52
Poland	50-53	43-46	41-43.5	43-45.5	41-43	41-43
Romania	91-94	89-92	86-89	86-89	86-89	81-83
Venezuela	80-82	75-78	72-74	72-74	50-54	49-52
Yugoslavia	78-81	77-79	77-81	77-80	57-62	

Source: Shearson Lehman Brothers.

reflect fundamental changes in the market. It is generally believed, however, that the sharp decline since May 1987 reflects the decision taken by several U.S. banks during that month to set aside reserves against potential loan losses, a decision that was interpreted as a tacit recognition by these banks that their LDC loans were unlikely to be repaid in full.

IV. The Investing Companies

This section discusses the possible advantages and disadvantages for investing companies using debt/equity swap arrangements.

A company wishing to invest in an indebted country stands to derive considerable benefits from a debt/equity swap scheme, the most obvious being the possibility of obtaining local currency for investment on terms more favorable than can be obtained through regular foreign exchange market transactions. There are, however, some possible disadvantages that companies following this investment path need to take into consideration.

Probably the most serious potential disadvantage is that the recipient indebted country may impose stricter conditions regarding capital repatriation and profit remittances on investment financed by debt

conversion than on regular foreign direct investment. Some countries have, for example, specified that foreign capital repatriated must not exceed the amount that would have been repatriated in repayment of the original debt before it had been swapped for equity. Another possible disadvantage is that the debtor country might place restrictions on the type of equity it is prepared to sell in exchange for debt paper that it would not place on sales of equity for "new" foreign investment. In Mexico, for example, the rate at which the authorities buy back their country's debt is related directly to their assessment of the degree to which the intended investment will meet government priorities and objectives. Moreover, the paperwork and other formalities connected with the completion of debt/equity swaps may be more burdensome and time consuming than regular direct investment transactions. Finally, there are a number of unresolved tax issues; it is possible, for example, that the difference between the purchase price and the redemption price of the debt paper, measured in terms of the currency of the country in which the company is headquartered, might be considered as a profit subject to tax.

The benefits to an investing company are illustrated by what has become the classic case study of a debt/equity swap--the Nissan/Citicorp/Mexico deal. In this transaction Nissan, through the offices of Citicorp, was able to obtain \$54 million worth of pesos for \$40 million, i.e., at a discount of some 26 percent from the free market exchange rate at the time of the transaction. It would therefore appear that Nissan's action was more advantageous than the two other basic options available: borrowing pesos in the domestic market at the very high nominal rates of interest then prevailing in Mexico (and that prevail in most indebted countries) or buying pesos at the current market exchange rate with "new" money.

The most often quoted case of a bank swapping its own debt holdings into equity is the transaction in which Bankers Trust swapped about \$44 million worth of debt for a controlling share in the Provida Pension Fund and an affiliated insurance company in Chile. U.S. banks swapping their own debt for equity are likely to concentrate their attention on financial institutions such as these, not only because this is the sector in which they have expertise but also because, notwithstanding the liberalization of Regulation K, banking regulations still limit the range of companies in which banks can hold more than 19.9 percent of the equity and act as anything more than passive investors.

The major question of concern for a company investing in an indebted country through means of debt/equity swap is whether the regulations concerning the repatriation of profits earned by the new investment or concerning the investment capital itself will be tighter than had the investment been made with "new" money. In many cases regulations governing repatriation have been more restrictive; for example, in Brazil the authorities specified that for debt/equity swaps tied to rescheduling agreements with banks, the repatriation of profits and capital could not exceed the scheduled payment of interest

and capital on the particular debt that was swapped. In Mexico, the authorities do not allow debt/equity swaps to be made for investments that benefit from guaranteed dividends payable irrespective of earnings and profits, but otherwise they are trying to apply the scheme without restrictions. In some countries conditions of repatriation are worked out on a case-by-case basis.

In general terms, the more an investment is perceived by the host country to stimulate economic growth, the more favorable the conditions of the debt/equity conversion are likely to be for the investor. In the final analysis, however, the decision on whether or not to invest can only be taken on a case-by-case basis with the overall costs and likely returns on each scheme carefully assessed by the management of the investing company.

V. The Effects on the Indebted Country

This section discusses the impact of debt/equity swaps on the domestic economy of an indebted country. It first analyzes the way in which the financial transactions associated with the swap are recorded in the balance of payments and describes the resulting changes in the country's external financial position. It then discusses possible effects on the money supply, the foreign exchange rate, and economic growth.

1. Impact on the balance of payments

The following analysis is based on an example of a country that borrows \$100 million abroad in order to finance its public sector deficit. The manner in which the debt-to-equity conversion is recorded in the balance of payments depends on the value at which the country redeems the paper presented by the foreign investor (i.e., the redemption value of the loan). It is useful to consider the three cases indicated below, which are illustrative examples of transactions denominated in foreign currency, namely, U.S. dollars.

Case	Loan face value	Discounted value 1/	Redemption value 2/
		(In millions of dollars)	
1	100	70	100
2	100	70	90
3	100	70	70

1/ The discounted value is the market price that the foreign investor pays to acquire the debt on the secondary market--a transaction that does not involve the indebted country directly.

2/ The redemption price is the price that the government agrees to pay in order to redeem its external liability.

In recording the transaction in the balance of payments, it is necessary to decide which redemption value is to be used. On this point, the Balance of Payments Manual is clear. Paragraph 75 states that the market price is the only value at which transactions should be recorded. This criterion excludes the possibility of recording the face value of the loan, leaving a choice between the discounted value and the redemption value of the loan. Although one of the partners to the swap is a government agent, it seems reasonable to regard this transaction as market determined in that it takes place between an independent and voluntary buyer and an independent and voluntary seller, both of whom are motivated by commercial and financial considerations. ^{1/} As the redemption price is what is paid by the government, it should therefore be considered to be the value at which the debt-to-equity conversion is recorded.

To simplify the analysis, it is assumed that both the original loan and the subsequent debt/equity conversion are carried out in the same period covered by the balance of payments statistics so that the net result of the transactions can be considered as the flow affecting the stock of the country's external liabilities ^{2/} in that period. When the initial loan transaction is executed, it would be recorded in the capital account (including reserves) in the following way:

Debit:	foreign exchange assets	\$100 million
Credit:	external liabilities	\$100 million

At the next stage when the conversion of the debt into equity takes place, no cash payment in foreign currency is required by the debtor for the redemption of the debt. It is, therefore, simpler to view the two transactions taken together in terms of balance of payments statistics as an exchange of two financial claims, i.e., an external debt and a direct investment. For case 1, the balance of payments transactions would appear as follows:

Debit:	external liabilities	\$100 million
Credit:	direct investment	\$100 million

Consolidating this with the loan record gives the following:

Credit:	external liabilities	0.0
Debit:	foreign exchange assets	\$100 million
Credit:	direct investment	\$100 million

^{1/} These are the considerations that are in paragraph 76 of the Balance of Payments Manual which are used to identify the "market price".

^{2/} The term "external liabilities" is not consistent with the terminology adopted in the Balance of Payments Manual, but has been used here in the interests of simplicity.

The net results for the debtor country are a reduction in its external liabilities, an equivalent increase of foreign direct investment, and an unchanged amount of foreign exchange assets. It would appear that the evaluation of the impact of a debt-to-equity conversion is simply a comparative analysis of two forms of external obligations: debt vs. equity. However, the net effect on the economy will also depend on how the debtor country finances the domestic currency counterpart of the conversion of the debt into equity. This topic is analyzed below.

In case 2, the results will be slightly different. When the debt/equity swap takes place, the record on the balance of payments will be as follows:

Debit:	external liabilities	\$90 million
Credit:	direct investment	\$90 million

Consolidating this entry with the loan record gives the following:

Credit:	external liabilities	\$10 million
Debit:	foreign exchange assets	\$100 million
Credit:	direct investment	\$90 million

The residual in the external liabilities account needs some explanation. According to the Balance of Payments Manual, ^{1/} changes in the market value of financial instruments are recorded in the balance of payments only when their ownership is transferred, in which case there will be a realized gain or loss. In the above example, not only is the ownership of the external liability temporarily transferred but also the debt is reclassified under a different heading, i.e., direct investment. It is, therefore, more appropriate to credit the \$10 million to a contra account called "realized capital gain" after having debited the full face value of the loan to the external liabilities account. The consolidation will now be as follows:

Credit:	external liabilities	0.0
Credit:	realized capital gain	\$10 million
Debit:	foreign exchange assets	\$100 million
Credit:	direct investment	\$90 million

The net result will be an unchanged amount of foreign exchange, a realized gain of \$10 million, and a simultaneous change, i.e., a swap, of external debt for direct investment and reduction in liabilities to the rest of the world.

Thus far the analysis has referred to balance of payments figures recorded in terms of U.S. dollars. However, a country will usually compile its balance of payments in national currency. In such a case,

^{1/} Par. 373i, op. cit.

assuming a foreign exchange rate of two units of domestic currency (d.c.) for every U.S. dollar, when the loan takes place the following will be recorded in the balance of payments:

Debit:	foreign exchange assets (@ 2 d.c./\$)	200 million
Credit:	external liabilities (@ 2 d.c./\$)	200 million

When the debt-to-equity conversion is carried out, the price paid by the country in foreign currency terms will still be the market price, but in this case the redemption value of the loan will reflect an implicit foreign exchange rate that is different from the official rate. The records will be as follows:

Debit:	external liabilities (@ 2.22 d.c./\$) <u>1/</u>	200 million
Credit:	direct investment (@ 2.22 d.c./\$)	200 million

The net consolidation will now be:

Credit:	external liabilities	0.0
Debit:	foreign exchange assets	200 million
Credit:	direct investment	200 million

The result will be a "swap" of external liabilities for direct investment with exactly the same entries as in case 1 but evaluated in domestic currency. The explanation of these results can be found in the Balance of Payments Manual. 2/ If there are two or more exchange rates for the same currency but for different classes of transactions, the net effect of the difference between rates can be seen as equivalent to a tax on or subsidy to a domestic economic agent. This amount will be equal to the difference between the exchange rate at which the transaction is valued and the official exchange rate prevailing in the market. The profit or loss realized by the country following the application by the government of a multiple exchange rate system will have, essentially, a domestic origin; for this reason, it will not be included in the balance of payments.

1/ $\frac{200 \text{ million of d.c.}}{90 \text{ million of \$}} = 2.22.$

However, it should be noted that this is not the relevant implicit exchange rate for the foreign investor. This rate is equal to $\frac{\text{redemption value} \times \text{official exchange rate}}{\text{discounted value}}$

i.e., $(\$90 \times 2) / (\$70) = 2.57.$

2/ Pars. 129-130, op. cit.

Case 3, while unlikely to be realized, raises a few interesting points. Recording the transactions gives:

Debit: external liabilities	\$70 million
Credit: direct investment	\$70 million

The net consolidation will provide the following results:

Credit: external liabilities	0.0
Debit: unrealized capital gain	\$30 million
Credit: foreign exchange assets	\$100 million
Debit: direct investment	\$70 million

There is no obvious advantage for the foreign investor to enter into a debt-to-equity conversion agreement on these terms compared to investing \$70 million of "new" money in the debtor country. Thus the foreign investor would be unlikely to engage in a swap of this kind. For the debtor country the unrealized capital gain would be quite substantial. However, by explicitly admitting a diminished value of its own external liabilities, the debtor country could jeopardize its relationship with major creditors and its credit rating in the international capital market, which could increase the cost of future external finance and offset the initial capital gain.

The accounting analysis described above has shown that a swap of equity for debt has little or no effect on a country's net liability position. In most cases, the claims of the rest of the world on the country are merely reclassified, i.e., there is no net capital inflow. Through a debt/equity swap a country simply exchanges one form of external liability for another--a debt with fixed service and continuing repayment obligations for direct investment.

The conversion of debt into equity may have an impact, however, on the balance of payments through the overall cumulative effect on net factor payments. If no restrictions are applied to the direct investment--for example, with regard to repatriation of capital or remittance of dividends--the balance of payments could be adversely affected to the extent that the payments abroad associated with the equity investment exceed the interest payments on the redeemed external debt. However, instead of having to service its debts at a rate of interest which is determined largely by factors beyond its control, the dividends and profits remitted by the debtor country would be influenced by the profitability of the investment and this would be more directly linked to its capacity to service its obligations to the rest of the world. In this way, a swap could alleviate the debt service burden of an indebted country.

2. Impact on the money supply

A useful first step in evaluating the financial implications of a debt to equity swap is to consider the highly simplified balance sheet of the consolidated banking system (central bank plus commercial banks) that is set out below. This type of presentation has the advantage of focusing on the banking system's acquisition of net foreign assets and permits a closer tracking of possible "swaps" between domestic and external sources of finance in the debtor country's economy.

Assets	Liabilities
Net foreign assets (NFA ^b)	
Net domestic assets (NDA ^b)	Monetary aggregate (M)

From this we have the following accounting identity:

$$(1) \quad M = NDA^b + NFA^b$$

Net domestic assets can be further disaggregated into claims on the government (DC^g) and claims on the nonbanking sector (DC^{nb}):

$$(2) \quad NDA^b = DC^g + DC^{nb}$$

Substituting the right-hand side of this equation into (1) gives:

$$(1A) \quad M = DC^g + DC^{nb} + NFA^b$$

This equation shows that the monetary aggregate depends on the claims of the consolidated banking system on domestic and foreign residents.

On the assumption that the government is running a deficit, two possible sources of finance--domestic and foreign--can be identified. These two sources appear in the government's budget constraint:

$$(3) \quad G - T = \Delta DC^g - \Delta NFA^g$$

where G is public spending, T is total government revenue, and NFA^g denotes net foreign assets of the government. Note that when there is net foreign borrowing by the public sector, there will be a decline in NFA^g. Rewriting (3) in terms of DC^g gives:

$$(3A) \quad \Delta DC^g = G - T + \Delta NFA^g$$

Equations 1A and 3A can be used to derive a particularly useful relationship between the financing of the government deficit and the change in the monetary aggregate:

$$(4) \quad \Delta M = G - T + \Delta NFA^g + \Delta DC^{nb} + \Delta NFA^b$$

This accounting identity can be used to analyze the effects on the money supply of first borrowing abroad by the government to finance a deficit, and then the conversion of the foreign debt of the government into domestic equity. For simplicity, the assumption will be made that the exchange rate is set at two units of domestic currency per dollar and that it does not vary from the time the loan is contracted, and that the government redeems the full face value of the government debt. When the government borrows on the external credit market, so that there is a decline in NFA^g , and transfers the proceeds of the borrowing to the banking system, then the net effect will be an increase in NFA^b of d.c. 200 million (\$100 million @ 2 d.c./\$) and an equivalent increase in M that is associated with the foreign financing of the government deficit:

$$\Delta M = (G - T) + \Delta NFA^g + \Delta DC^{nb} + \Delta NFA^b \text{ or}$$

$$200 = 200 - 200 + 0 + 200$$

At the second stage when the debt-to-equity conversion is carried out, the government's external liabilities will decrease by d.c. 200 million (\$100 million face value of the loan @ 2 d.c./\$), i.e., NFA^g will be equal to +200 million. This is matched, as shown above, by a 200 million increase in equity claims. The effect on M will depend on whether or not the government finances the domestic transaction, i.e., the domestic currency counterpart of the equity investment, through the consolidated banking system. If it chooses to do so, the domestic claims on the government (DC^g) will increase by an equivalent amount, i.e., +200 million, and there will be a direct effect on the monetary aggregate. This can be seen directly in equation (1A), where a change in DC^g is matched by an equivalent change in M. If instead the government finances the transaction through the non-banking system by selling securities to the public, then none of the variables included in (1A) will be affected, and consequently, there will be no effect on the domestic money supply.

Debt/equity swaps can therefore have a significant impact on the monetary and fiscal policies of the country redeeming the debt, particularly if a substantial volume of swaps take place. However, if the swap involves the conversion of private sector debt into private sector equity, there will be no monetary impact. The net result will be a transfer of existing liquidity from the private debtor to the equity holder without the intermediation of the banking system and without domestic credit creation or pressure on the domestic capital market.

Nonetheless, as most debt/equity swaps involve central bank or government liabilities, there will typically be some monetary or fiscal policy action. In such cases, the monetary impact will depend on how the domestic side of the transaction is financed. On the one hand, if the government issues a bond and floats it in the private sector, there will be no net monetary impact. However, the additional demand on the domestic capital market could well lead to upward pressures on interest rates. On the other hand, if the government finances the transaction through the consolidated banking system, there will be an equivalent increase in the monetary aggregate and possible inflationary pressures. In both cases, therefore, there are domestic financial effects of debt/equity swaps that may place constraints on the amounts that can be accommodated by the indebted country.

In many countries, resorting to domestic credit creation for the conversion of even a small proportion of external debt into equity could result in a significant increase in the money supply. Cline illustrated this point by relating the amount of external debt to existing money supply levels. ^{1/} Following this approach, Table 4 shows the impact on the domestic money supply of a group of selected indebted countries that could be associated with the conversion of 5 percent of their outstanding debt to commercial banks.

Table 4. Potential Monetary Impact of Converting Debt to Equity Through the Creation of Money

Country	Total debts ^{1/} outstanding to commer- cial banks (billion \$) (1)	Money supply (M) ^{2/} (billion \$) (2)	Potential effect on M of 5 percent conversion ^{3/} (percent) (3)
Argentina	31.3	4.5	35.8
Brazil	78.8	12.08	32.62
Mexico	73.7	6.3	58.5
Philippines	14.1	2.1	33.6

^{1/} Estimates from U.S. Federal Financial Institutions Council and Bank for International Settlements quoted by Cline (1987).

^{2/} With the exception of Brazil, figures are estimates for end-1986 quoted in dollars. The money stock is considered as the sum of currency outside banks plus demand deposits held with the monetary system by the rest of the domestic economy, other than the central government. For Brazil, figures are for September 1987.

^{3/} $[(1) \times 0.05 \times 100] / (2) = (3)$.

^{1/} Cline (1987).

The figures in column 3 indicate the dimension of the problem faced by the domestic monetary authorities. The most significant example is Mexico, where the conversion of 5 percent of outstanding external debt to commercial banks could result, other things remaining equal, in an increase of almost 60 percent in the money supply.

However, even if the authorities of the debtor country take a different approach and decide to finance the swaps directly by selling public bonds to the private sector, they will not necessarily avoid difficult financial problems. Financing debt/equity conversion by drawing on domestic capital markets could well result in substantial crowding-out effects by placing upward pressures on interest rates and thereby squeezing out domestic economic agents. The limited size of the domestic capital markets existing in most major debtor countries would appear to offer little scope for the absorption of public debt that would be required for substantial debt/equity conversions. Domestic monetary authorities would, therefore, appear to face limitations with regard to the volume of debt/equity conversions that they can reasonably accommodate.

On the fiscal side, the substitution of foreign liabilities with domestic obligations--whether to the consolidated banking system or the private sector--may result in an increase in the domestic-currency debt service obligation of the government to the extent that the domestic real interest rate is higher than the rate applied to the external debt. This cost, as well as the financial implications of the early repayment of external debts, must be taken into account in the government's financial program.

3. Impact on the foreign exchange rate and reserves

It is difficult to make a general statement regarding the impact of debt/equity conversions on the foreign exchange value of the domestic currency concerned. In most cases, the debt/equity swap is not settled in or through the foreign exchange market, and so there is unlikely to be any direct linkage with the foreign exchange rate of the debtor country involved. However, if net factor payments decrease as a result of the conversion, then the consequent reduction of foreign currency disbursements, even if marginal, could ease possible pressures on official reserves. This short-term improvement in the reserve position could prove to be beneficial in helping to restore the international creditworthiness of the country, particularly in present circumstances when many debtor countries do not have access to new bank lending. This beneficial effect on reserves could, however, be offset to some extent by the fact that when investment is made through debt/equity conversion instead of through direct purchases of domestic currency in the foreign exchange market, potential additions to foreign currency reserves will have to be foregone.

The longer-term impact of debt/equity swaps on the foreign exchange rate will depend on a combination of different factors, such as the

overall volume of debt converted into equities, the impact on the monetary aggregates and the domestic capital market and, ultimately, on the profitability of the investments. As described above, there could be either an increase in the money supply or an increase in domestic interest rates, both of which developments could exert substantial, although divergent, pressures on the exchange rate.

4. Impact on economic growth

All debt/equity swaps, whether they involve the conversion of public or private debt, are significantly influenced by the policies of the government of the indebted country concerned. The government can screen potential investors and decide which ones it will allow to engage in debt/equity swaps. It can decide to redeem the debt paper at less than face value and thus reduce the incentive to the foreign investor to engage in particular transactions. More importantly, when a government specifies into which sectors the local currency proceeds of a debt conversion can be channeled, it is in effect pursuing an investment program that is not guided by purely market signals. The investment activities associated with such a program may not reflect an efficient allocation of resources and could, therefore, lead to distortions.

However, it should also be noted that the direct investment may confer certain advantages to the economy. Direct investment is often concentrated in import-substituting or export-oriented industries where it can contribute to improvements in the trade performance of the recipient country. Successful investment of this nature can create employment either directly or indirectly through increasing demand for domestically produced inputs and can, in consequence, expand the country's tax revenue base. Moreover, direct investment often includes new technology and management expertise, which can bring significant increases in productivity. For this reason, the financial value of direct investment may understate its overall benefits to the recipient country.

In assessing the benefits of debt/equity swap programs, the debtor countries have focused much attention on the question of whether or not such swaps substitute for the flow of "new" money for direct investment, i.e., whether or not they create additional direct investment. According to banking sources, concern that there would be such a deterrent effect was the reason why Brazil restricted its program in 1984 and why Argentina formulated a program in which the debt swapped for equity would have to be accompanied by "new" money. This concern has some backing in the academic community; for example, Rudiger Dornbusch of MIT has claimed that some investments financed by swaps would have happened anyway and that for the others only the subsidy makes them artificially viable. ^{1/}

^{1/} The Economist, March 7, 1987, pp. 87-90.

Not all countries accept these arguments. For example, after the March 1987 announcement that American Express Bank would convert \$100 million of its debt for an equity share in new Mexican hotels, Mexican officials claimed that the project would create 15,000 jobs, would attract 240,000 extra tourists each year, and would lead to annual foreign exchange earnings of \$80 million. Chile and Mexico appear to share the view expressed by some investment bankers that many companies are not prepared to invest in the debtor countries at prevailing market exchange rates but that they might well do so if the price were right, i.e., if the discount on the debt were great enough to provide what would in effect be a subsidized exchange rate.

One reason why the authorities of some countries are reticent in promoting debt/equity swap programs comes from their anxiety not to cede any sovereignty in the control of their domestic economies. It was partly this concern that made foreign bank lending more attractive than equity investment during the 1970s. The authorities of those countries that believe that the domestic resources must remain in national hands are less likely to encourage debt/equity swaps.

VI. Concluding Remarks

This paper has attempted to identify some of the potential advantages and disadvantages of debt/equity swap programs for the three groups of participants: commercial banks, foreign direct investors, and the indebted countries. In doing so the paper draws some conclusions with regard to the limited role such swaps might play in the resolution of the debt crisis.

For the banks participating in debt/equity swaps, probably the most important advantage is the opportunity of clearing their books of problematic loans that might still confer upon them an obligation to commit new funds to the same debtor country in any rescheduling agreement. At first, European and small U.S. regional banks were virtually alone in being net sellers of loans in the interbank market. The major U.S. banks largely refrained from making such sales because of accounting and regulatory policies they believed could ultimately oblige them, after the sale of a loan at a discount, to mark down the value of all their remaining loans to the relevant country to the same extent. However, in the early summer of 1987, a number of these banks decided to set aside additional and relatively substantial reserves in recognition of the problematic nature of loans to certain developing countries. This action would tend to suggest that the accounting and regulatory constraints are losing some of their significance; if this is the case, it is quite possible that in the near future some of the major U.S. banks might become net sellers in the secondary debt market.

Those countries permitting the swap of their external debt obligations for domestic equity have done so because they perceive a number of advantages, including notably: the replacement of fixed external payment obligations with a repayment stream that depends on the profitability of the equity investment; the stimulation of growth in export-oriented or import-substituting industries and the concomitant improvements in the country's trade performance, its balance of payments and, ultimately, its overall external position; and the possible stimulus to the development of local equity markets, which subsequently can provide attractive uses for domestic savings and reduce the motivation for, if not reverse altogether, capital flight.

However, in appraising the possible advantages that may be associated with debt/equity swaps for indebted countries, a number of considerations must be borne in mind. First, as discussed in Part V, the conversion of foreign debt into equity does not in and of itself provide additional foreign resources to the country; there is only a change in the form of foreign claims on the resources of the indebted country. This change in form may confer certain benefits in that the fixed repayment obligations of interest and principal to banks is replaced by the remittance of profits and dividends and the repatriation of capital that depends on the profitability of the investment itself and, in addition, on regulations affecting such remittances and capital repatriation that the host country chooses to implement. Thus the risk of not meeting an international repayment obligation is shifted somewhat from the borrower to the foreign investor. To the extent that the terms on which the borrowing country can service its foreign obligations become more favorable, as measured by the change in the present discounted value of net factor payments abroad associated with the shift from bank loans to equity investment, a debt/equity swap may appear to be advantageous to the indebted country.

However, it is also necessary to consider the transaction from the point of view of the equity investor, who presumably engages in the transaction expecting to make a profit on the investment in the host country and at some point to be able to remit that profit as well as the original investment. There are numerous factors which influence the investor's decision, among the most important of which are the discount at which the debt is purchased and the redemption price at which this principal can be converted into local currency. The more attractive the redemption price and the larger the discount, the greater the incentive to engage in the transaction. The difference in costs between a debt/equity swap transaction and a regular foreign direct investment transaction, i.e., the effective subsidy, may have to be quite high to compensate the investor for the economic risks associated with the particular investment as well as those arising from possible changes in government policies affecting the profitability of the local investment or the repatriation of profits and capital.

The effective subsidy involved may involve a cost to the country to the extent that the swap of debt for equity substitutes for investment that would have been made in any event without the incentive provided by the swap. Such investment would add to the foreign exchange resources of the country; to the extent that these investment flows qualify for access to domestic currency by means of the swap arrangement, there would be a decline in the foreign exchange that would be converted into domestic currency. A debt/equity swap may therefore involve a cost to the country in the form of reduced demand for its currency in the foreign exchange market.

There is another issue associated with the effective subsidy to foreign investment provided by the swap, namely the reallocation of investment that may be involved. Debt/equity swap arrangements lower the cost of capital to particular qualifying sectors of the economy and it can be seen as part of an "industrial policy" on the part of the countries involved. Viewed against the standard of a well-functioning capital market that allocates funds efficiently to their most productive uses, the incentives for investment that are the essential feature of swap arrangements should be regarded with some caution. However, where there already exist considerable distortions in domestic capital markets, it is difficult to judge whether an additional distortion will result in a substantial misallocation of resources. In any case, in appraising the usefulness of debt/equity swaps, it is important to view them as providing subsidies to particular sectors of the economy in the sense that investors in these sectors can acquire funds more cheaply than otherwise, and therefore it is necessary to consider whether there are not more efficient ways of achieving the same objectives.

In addition to the microeconomic aspects of debt/equity swaps, there are important macroeconomic implications. The analysis in Part V pointed out the need to take account of the monetary and financial effects associated with the domestic financing of the swaps. As the conversion of debt into equity does not necessarily provide any additional foreign capital (indeed, the swap may substitute for additional foreign funds), some portion of the resources for any increase in gross investment will need to come from the domestic economy. To the extent that these are unemployed resources, the additional expenditure generated by the swaps can perhaps be accommodated with little increase in the price level or domestic interest rates. However, if the economy is operating close to capacity, any increase in investment spending must either crowd out other domestic expenditure as a result of higher prices and/or higher interest rates, or result in an increase in imports. An increase in the share of output (or expenditure) devoted to investment is no doubt desirable, but the consequences for the rest of the economy must be taken into account.

Overall, debt/equity swaps can to some extent alleviate the debt burden by making more manageable the servicing of obligations to foreigners. They can also make a contribution to economic growth to the extent that aggregate investment in efficient sectors of the economy is increased as a share of domestic output or spending. However, the magnitude of this contribution of swaps in these two areas would appear to be rather limited.

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