DEPRECIATION OF MONEY

IAN F. G. BAXTER*

Toronto

Introduction

A disturbing aspect of the high inflation rates in the Western world at the present time, is their uneven effect on different people. Since high inflation rates are general features of the economy, contributed to by international causes, it seems unfair and arbitrary that depreciation in the purchasing value of the monetary unit should fall heavily on one person and lightly on another, perhaps depending merely on their circumstances and the strength of their bargaining power. There are inflation rates of around ten per cent or more at the present time in North America and Europe (and some Latin-American and Asian countries seem to have rates as high as thirty per cent).

By the principle of nominalism, a monetary obligation has no other value than that which it expresses, and, in a domestic contract, the parties are presumed to bargain with reference to legal tender.[1] This means that the risk of inflation falls on the creditor. Members of the public are creditors (wholly or partially) in many types of monetary contract, for example, bank deposits; government, municipal, or other bonds; life insurance, pensions; annuities. A creditor may be able to insert a protective clause, such as a cost of living clause, but in the absence of this, the creditor is deemed to have accepted the risk.[2] In some employment contracts, for example, there are cost of living clauses, but John Doe is less likely to obtain a cost of living clause when he lends money to a government or municipality, or to a large financial institution. In times of inflation, monetary obligations "have a congenital infirmity",[3] which affects the payee in most cases. Con-

* Ian F. G. Baxter, of the Faculty of Law, University of Toronto.

[1] Nussbaum, Money in the Law (1950), p. 17; Dicey and Morris, Conflict of Laws (9th ed., 1973), pp. 877-883; Kariv, Contracts under Monetary Fluctuations (1970), 65 Nw. U.L. Rev. 533, at p. 539; *Willard* v. *Tayloe* (1870), 75 U.S. 557; F. A. Mann, The Legal Aspect of Money (3rd ed., 1971), chap. 3.

[2] Nussbaum, *op. cit., ibid.*, pp. 299-309; Mann, *op. cit., ibid.*, chap. 4.

[3] *Norman* v. *Baltimore and Ohio Railroad Co.* (1934), 294 U.S. 240, at pp. 307-308.

tinued high money depreciation favours a borrower, and so the classical central bank remedy of raising interest rates must overcome this extra attraction, as well as the high conditioning of people in North America to the use of credit.

"Money serves the twofold function of a means of measurement and of a medium of payment. Hence a distinction must be drawn between the currency in which a debt is expressed or a liability to pay damages is calculated and the currency in which such debt or liability is to be discharged."[4] The first is the "money of account" and the second is the "money of payment". In domestic currency obligations, the money of account is the same as the money of payment.[5] The convenience of keeping an obligation numerically constant is easy to see, but the effects can be very damaging to a creditor of modest means and inelastic income, in a long-term obligation with high inflation. There are good arguments for spreading the depreciation of money more evenly among the people of a country. At present, those who, for one reason or another, can keep their incomes elastic to inflation, are able to compensate for the fall in purchasing value, and so the burden of depreciation tends to be transferred to those with inelastic incomes, who in many cases, are likely to be in the poorer sections of the community, with weak bargaining positions. It is an important duty of government to prevent the risk of inflation having an unfair impact on different people in the community. Since inflation is a world-wide problem, which may exist for some years, its even distribution should have high priority in government planning.

A constant annual inflation rate gives rise to an exponential growth curve, because the quantity of purchasing power is increasing more quickly than the quantity of goods and services.[6] This means that the annual increase, as a percentage of the original, spreads out from year to year. For example, if $100.00 grows at seven per cent compounded annually for twenty years, the increase during the first year is $7.00, but the increase during the twenty-first year is $27.00 and the increase during the thirty-

[4] Dicey and Morris, *op. cit.*, footnote 1, p. 895.

[5] In earlier times this rule did not always apply. "En France, pendant tout le moyen âge, la monnaie de compte fut la livre qui se divisait en vingt sous; mais pour former une valeur d'une livre ou d'un sou, il fallait un nombre sans cesse variable de monnaies réelles." Engel and Serrure, Traité de numismatique du moyen âge (1890), Vol 1, pp. XXXVI.

[6] The Limits to Growth, Report of the Club of Rome (1972), chap. 1; Meadows, Introduction to the Project, chap. 2, Towards Global Equilibrium: Collected Papers (1973). See generally: International Encyclopedia of the Social Sciences (1968): Bronfenbrenner, Inflation and Deflation, Vol. 7, p. 289; Friedman, Money: Quantity Theory, Vol. 10, p. 432; Hume's Essays, "Of Money".

first year is $54.00.[7] In Great Britain, between 1963 and 1973, domestic liabilities of the banking system to the community (which are purchasing power in the hands of the community) apparently increased by three hundred and seventy four per cent, whereas during the same period, the physical output of goods and services available for purchase increased by forty-one per cent.[8] Any law on monetary depreciation must be sensitive to the risks of increasing purchasing power or reducing the attractions of saving money.[9]

I. *Protective Clauses.*

We are concerned in this part with individual contracts and special clauses agreed to by the parties, such as gold clauses, index clauses, commodity clauses, and the like.[10] These are particular, negotiated forms of protection against money depreciation, and agreement to such clauses will depend on the bargaining strength of the party who will lose by depreciation. In many cases, of course, these protective clauses are used in international obligations where more than one currency is involved, and where there is a risk of an exchange loss by movements between a currency of account and a currency of payment. Although this article is concerned with domestic money and not foreign currency problems, the principles of international protective clauses are usually relevant to domestic contracts also. In general terms, a protective clause is one in which the parties have contracted out of the principle of nominalism, by providing a measure for the obligation which will be independent of the variations in value of the money of payment. The measure of the monetary obligation is no longer expressed, therefore, as a given number of units of the money of payment.

[7] The amount at the end of 20 years is $387.00, and the amount at the end of 30 years is $761.00.

[8] Stewart, Britain's Financial System and the Problem of Inflation, [1974] Certified Accountant 279. The problem has been compared oversimplistically to a kettle threatening to boil over, where the basic remedies are: (a) increase production ("more cold water"); (b) wage and price controls ("solder down the lid"); (c) reduce the quantity of money in circulation ("turn down the gas").

[9] In addition to bank deposits, there are, for example, large amounts of federal government bonds which can be converted into cash. According to the Globe and Mail, 30th July, 1974, the weekly redemption rate of Canada Savings Bonds "was once considered normal at $10-million to $15-million. In the early part of this year it was averaging $24-million. In the last three months it has occasionally jumped to more than $100-million and been frequently above $50-million".

[10] See generally: Dicey and Morris, *op. cit.*, footnote 1, pp. 886-894; Nussbaum, *op. cit.*, footnote 1, pp. 223-309; Kariv, *op. cit.*, footnote 1; Hirschberg, February 1973 Devaluation of the Dollar and Gold Value Clauses (1973), 12 Duquesne L. Rev. 222; Gold Clause Values and Public Policy in the United States (1972), 89 Banking L.J. 99; Index Value Clauses (1971), 88 Banking L.J. 867; Pasquesi, Protecting Clients From Inflation (1973), 19 Prac. L. 83. Inflation indexing of Canadian personal income taxes was introduced for the 1974 tax year.

A protective clause governs the amount of a particular liability and is different from a change in a system of currency and legal tender. Sometimes a currency change is made for greater ease in calculation, for example, by replacing an "old" 100 unit note with a "new" one unit note, but in Germany in 1924 it was surgery to reactivate a collapsed monetary system. In the German inflation of 1918-1923 the courts had to consider the payment of debts where the purchasing value of the mark had dropped to a small fraction of its value at the date of the obligation.[11] Normally, parties are presumed to intend the principle of nominalism in their contracts, but should this presumption be maintained if there is a severe depreciation in the purchasing value of the monetary unit? In year one, A lends B 10,000 units of currency repayable in seven years. The annual rate of inflation is zero during the first two years, but is thirty per cent during the remaining five years (due mainly to international causes). The purchasing value of the unit at the due date is about a quarter of its purchasing value on the date of the contract. Is it a reasonable interpretation of the obligation that A must bear this heavy depreciation? In the German inflation, the courts adopted a principle of revalorisation of debts, by interpreting a provision of the Civil Code that the debtor must perform as good faith requires, taking into account general usage.[12] "Debts expressed in the old currency which had become worthless were revalorised, that is converted into debts expressed in the new currency at a rate dependent on what appeared to be just and equitable between the parties."[13]

In the past, the "gold clause" has been the typical protective clause, especially for international monetary obligations.[14] A gold clause which fixes the amount of the debt (value clause) is to be distinguished from a clause which fixes the mode of payment (modality clause), since the first does not determine the money of payment, which, subject to the contract, may be the legal tender of the place of payment. Both types of gold causes have been affected by legislation.[15]

---

[11] Nussbaum, *op. cit., ibid.*, pp. 199-204; Whale, Joint Stock Banking in Germany (1968), chap. 7.

[12] Art. 242. Nussbaum, *op. cit., ibid.*, p. 203.

[13] Cohn, Manual of German Law (1968), Vol. 1, s. 194. *Cf. Franklin* v. *Westminster Bank*, The Times Newspaper, May 14th, 1931; *In re Schnapper, Schnapper* v. *Westminster Bank*, [1936] 1 All E.R. 322; *Kornatzki* v. *Oppenheimer*, [1937] 4 All E.R. 133 (the court applied the German revalorisation law because German Law was the proper law of the contract).

[14] Dicey and Morris, *op. cit.*, footnote 1, pp. 886-892 (and references cited there).

[15] Gold Clauses Act, R.S.C., 1970, c. G-4; Joint Resolution of the U.S. Congress, June 5th, 1933.

The "commodity" clause has a long history as a protective device against inflation, because its roots are found in primitive systems of barter. Again, a distinction must be made between a value clause, which determines the amount of a debt according to the current price of a commodity, and a modality clause, which provides for payment in a commodity. During the German inflation of 1918-1923 bonds were issued for amounts to be determined by the current prices of commodities such as rye or coal, and emergency legislation permitted the prices of certain commodities to be used as "pure money of account", in fixing the amount of a mortgage debt.[16] The obvious disadvantage of commodity value clauses or legislation is the uncertainty in prices of most basic commodities at the present time.

The "index clause" is a form of escalation clause which is important in a number of countries, particularly as an element in the negotiation of collective labour contracts. In a sense, the index clause is a generalization of the commodity clause, since it associates the value of the dollar with the cost of a set of basic goods and services. It might make index clauses easier to use if a legal index figure were published annually by the federal government, so that the protective clause in a contract could refer to this index figure.[17] An index clause, like other protective clauses, transfers the risk of inflation from the creditor to the debtor. Also, in times of persistent inflation, it tends to increase significantly the amount of money paid in the discharge of monetary obligations, and this can increase purchasing-power and inflation. But if significant inflation is a more or less standard part of the economy of a particular country, a "legal" index clause might be useful as a basis for the construction of more sophisticated clauses for sharing the inflationary risk between debtor and creditor, instead of throwing the whole risk on the creditor, which happens at present under the principle of nominalism.

II. *Anchoring Money Obligations to the Cost of Living.*

The foregoing devices against inflation are, of course, clauses in particular contracts, depending upon the agreement of particular contracting parties. They are not general devices for spreading the risk of inflation evenly within a country, and indeed may create inequality of distribution by enabling certain individuals or groups (whose bargaining positions are strong enough to require

[16] Nussbaum, *op. cit.*, footnote 1, pp. 301-302. The use of "commodity rubles" in the Soviet Union in 1922-1923 is another example.

[17] There might be an interesting question as to whether such a clause would give a "sum certain in money" within s. 17(1) of the Bills of Exchange Act, R.S.C., 1970, c. B-5.

the insertion of such clauses) to attain high income elasticity with regard to inflation. Where a creditor or employer agrees to a protective clause (or consents to frequent re-negotiations on the ground of cost of living rises) he may be able to pass some at least of the monetary depreciation on to others, for example, to the consumer, or in the case of the public services, to the taxpayer.

But what about the feasibility of a general device, operated by a federal law, which would adjust all monetary obligations, from time to time, in accordance with changes in a cost of living index? This would mean that all monetary obligations would be taken out of the nominalistic principle by statute and tied to a cost of living index as the measure of their value, so that the amount due in dollars would be a function of time and the index figure. The argument is that inflation becomes much more acceptable if it is distributed according to an equitable scheme, and if everyone, whoever they are or whatever their circumstances, carries a just share of the burden, no more and no less. Inflation is particularly distasteful to A if B's income goes up with a rise in prices, but A's income does not. The whole thing might be more palatable if everyone's income in the country was tied to a cost of living index and rose automatically with it, because any decline in standard of living due to monetary depreciation would be shared by all. Paying income tax is distasteful, but how much more so would it be if there were no national scheme or national rules for the assessment of liability. If national money drops in domestic value, there ought to be national rules for sharing the loss equitably. It is better that all should suffer together (and blame the government) than that each group should rip off the next to beat inflation.

The idea of a pure money of account which is not represented by any circulating currency is not new,[18] and there seems to be some interest, at the present time, in expressing the measurement of monetary obligations in "cost of living" dollars, "real" dollars, "constant" dollars, or some other alternative to nominal money with its fluctuating purchasing value. One of the problems of nominal money accounting, in times of significant value fluctuations, is the difficulty of knowing how things are going and the danger of financial statements becoming a high-class numbers game. A corporation may show a fifteen per cent rise in profits as compared with the previous year, but the annual inflation rate may be twenty per cent. A bank may offer its depositors ten per cent per annum on savings accounts, but the annual inflation rate may be twelve per cent, so that (in cost of living terms) the lender (the depositor) is paying interest to the borrower (the bank).

[18] It existed in thirteenth century Florence.

There is also the argument that, cut down to the grass roots, modern commercial transactions are only a form of "super-barter", and that the final objective of the whole complicated exercise, with its imposing institutions, is to allow John Doe to exchange some goods and services for other goods and services. The exchange is effected by converting goods and services into money and money into other goods and services, but if the purchasing value of the monetary unit fluctuates significantly with time, people are confused as to what is being exchanged for what. Can these problems be solved by introducing by law a "pure money of account" by which monetary obligations would be measured, while the paper dollar remained the money of payment? The pure money of account could be constructed from a number of selected price variables basic to the cost of living, adjusted regionally or otherwise for differences in the cost of living within a country, and published regularly by the federal government. In year one a "unit" of pure money of account would be set equal to $1.00, and the rate between the "unit" and the dollar would be published annually by the federal government. This rate would be deemed to be the legal annual rate of depreciation (or appreciation) of the dollar as a purchasing medium for goods and services. Publication of financial statements in "units" as well as dollars would give a clearer picture of what was really happening in regard to changes in value, profits, and so on.

Should such depreciation be taken into account for tax purposes? Even a rate of seven per cent annual inflation for ten years will reduce the purchasing value of one dollar by half, and it is arguable that this is just as real a depreciation as the diminution in value of a machine or a vehicle. Should a capital gain be taxed on a nominalistic principle when the dollar has depreciated between the time of acquisition and the time of sale? X acquires an asset at the current market price of $10,000.00, and after ten years, sells it at the then current market price of $20,000.00. The annual rate of inflation during this period has been seven per cent and the purchasing value of a dollar at the end of the period is half what it was at the beginning. Thus the end value, measured in "beginning" dollars, is $10,000.00, and the capital gain of $10,000.00 is due to inflation. Such examples raise interesting points as to what is fair in that part of the tax structure. If there were a legal "unit" of pure money of account based on cost of living, the effect of dollar depreciation on a monetary asset could be calculated from it and the fairness or not of monetary depreciation allowances would require consideration in tax and other areas.

If continued inflation hits people differently, and is not distributed according to a fair and organised scheme, social prob-

lems can result. Those without inflation-elasticity of income move towards poverty; those who do have it become richer, in relative terms. Inflation rates of twenty to thirty per cent, cannot continue for a period of years without causing severe injustice and unrest. At thirty per cent inflation, a monetary unit loses about three quarters of its purchasing value in five years.

Can a legal money of account based on cost of living help to level out inflation-elasticity within a community? A domestic change in value of the paper dollar by federal law, in relation to a "unit" of cost of living, would amount to revalorisation of monetary obligations. This would mean that a debtor would be liable for an additional payment to a creditor based upon the domestic depreciation of the dollar, and the effect of full revalorisation is to transfer the burden of money depreciation from the creditor to the debtor. A partial or intermediate revalorisation rate, however, could equalise the burden of money depreciation between the debtor and the creditor. This would be fairer than the present system in which the whole risk falls on the creditor, who is often a small investor. A domestic law of revalorisation would not affect the dollar as money of payment, or its position as legal tender. As explained in an English case, a revalorisation law does not affect the currency, but the contracts within it, since it is the monetary obligation that is revalorised and not the currency.[19] An obligation where the debtor takes the risk of money depreciation is similar in principle to the loan of a chattel subject to a clause to return the same chattel in the same condition. A lends B $1,000.00 at a time when $1,000.00 buys x units of goods and services. The loan is to be repaid in five years by A paying to B a sum in dollars that will then buy x units of goods and services. A loan where the creditor takes the risk of money depreciation is not a loan of a number of units of purchasing-power, but a loan of a number of pieces of paper currency. The creation of a legal "unit" of pure money of account based on cost of living would be necessary if, as some suggest at the present time, the monetary obligation of the next century will be measured by law in units of purchasing-power instead of in pieces of paper currency. This may be called a principle of "valorisation" in contrast to the principle of nominalism. Under a principle of valorisation, federal law might provide that all monetary obligations extending beyond one year must be expressed in statutory cost of living "units", and the dollar value of a "unit" would be declared annually, also by federal law. The dollar would be the money of payment, whereas the "units" would be the money of

[19] *Anderson* v. *Equitable Assurance Society of the United States* (1926), 134 L.T. 557, 42 T.L.R. 123, 302.

account. Such a system would be "super-barter"—the futurist analogue of primitive barter—since the purchasing-power value of the obligation is constant in time. There are advocates of a new financial system based on paying and lending units of cost-of-living instead of paper currency, but this idea would involve very radical and traumatic changes, and would mean a new system and psychology.

III. *Equalizing Inflation by Income Tax Reform.*

Are there less complex and more immediately feasible ways of spreading the risk of monetary depreciation, than those discussed in the previous section? The most direct way of achieving the objective is by the adjustment of incomes, rather than by taking obligations out of the principle of nominalism. A considerable amount of income adjustment exists, of course, already in response to inflation, but this does not apply uniformly, and depends on circumstances or bargaining strength from one group or individual to another. A national scheme for spreading the impact of inflation equitably over all incomes would be comparable to a state counter-inflation insurance scheme. "Benefits" would depend on how inelastic a person's income was in response to rises in the cost of living, and the scheme would be essentially a means of transferring funds so as to equalize the inflation-elasticity of incomes.

A national scheme for equalizing the effect of inflation on incomes would need a legal measure of the annual depreciation in purchasing value of the monetary unit. A particular cost of living index figure would have to be prepared according to rules prescribed by federal law, and adjusted for variations in the cost of living in different parts of the country. Let us assume that this has been done, and, for brevity, let us call the index figure the "Legal Index". The percentage change in this index from one year to another would be the legal measure of inflation (or deflation) for that year, and, therefore, the percentage by which a person's income should rise to maintain its cost-of-living purchasing-power. The next question is to find out whether the change during the year in a particular individual's income has fallen short of the inflationary percentage, and if so by how much. A possible source of data is to be found in the federal tax system by comparing incomes for consecutive years in order to see how the change in a person's income compares with the change for the same year in the Legal Index. Suppose that, in a particular year the Legal Index rises by A per cent. We are now concerned with those whose incomes have risen by less than A per cent during the same year. If the income has fallen during the year, this is counted as a zero

rise. Suppose that the difference in X's income between two consecutive tax returns is B per cent of the income for the second year. The object of the scheme is to give X an allowance or payment based on the amount by which B is less than A. This payment will be X's share in the process of spreading out evenly, over all incomes, the loss of dollar purchasing-power due to inflation. The payment is like a benefit under a state insurance scheme against inflation. The money to make the payments would be obtained by raising the tax rates, and so the whole scheme is self-contained in the tax system, and is a means of making money transfers to level out the impact of inflation within a country. The extra taxes which are assessed, are all distributed in "benefits", which are set against income tax liability (the "benefits" being taxable). In some cases, the "benefit" will exceed the income tax liability, so that the income tax assessment will be negative, and payment of the negative amount will be made by the government to the person making the return.

If income adjustments for inflation are made through such a national "benefits" scheme, operated by the income tax system, negotiations and disputes on cost-of-living raises may tend to diminish considerably and may even virtually disappear in time. If so, much time, trouble, and frustration will be saved, and business will have fewer wage demands based on inflation, since this problem will tend to be transferred into the tax system and spread over the whole community. In consequence price rises may be modified. If this happens, it will reduce the amount of extra income taxes to be assessed to pay the "benefits", because if incomes are all the same in year two as in year one, everyone will be entitled to a full inflationary "benefit" which will more or less cancel the extra income tax assessment except in the case of high incomes. This seems to be a desirable result, because it means that the "benefits" and so also the "premiums" tend to a minimum when incomes and prices are stable.

A scheme of income adjustments, such as the foregoing, is not a "cure" for inflation, but an attempt to produce equitable sharing of a general economic problem. It can be regarded as an elementary model, and one starting point from which sophisticated methods for sharing depreciation more equitably could be constructed, In the above scheme, loss of "real" income due to depreciation in the domestic value of the dollar is compensated, and gain of "real" income due to appreciation would be dealt with conversely. The income tax system is used to cancel fluctuations in the cost-of-living value of the dollar, and so to stabilize the "real" value of incomes, in terms of goods and services. This kind of approach seems to be the most promising of those considered in this article,

in attempting to deal with the present *ad hoc* distribution of the effects of inflation, a problem that can become very important, if serious inflation continues for a number of years, and may cause a great deal of injustice and hardship.