

INFLATION AND THE LAW OF CONTRACTS AND TORTS

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I. INTRODUCTION

Inflation, with its potentially serious repercussions on economic relationships, raises at least three main issues in the common law of contracts. First, inflation prior to performance may make performance unprofitable. Should courts intervene to rescind or alter contracts if inflation makes performance unprofitable? Second, inflation between the date of breach and the date of judgment alters the measure of damages. Who should bear the risk of price changes, the plaintiff or the defendant? Third, inflation affects future losses. How should future inflation affect the assessed damages? These issues will be analyzed using an economic approach to contract law, and where appropriate the analysis will be extended to tort law.

Before considering the specific issues raised by inflation, it is useful to define certain terms. First, one must distinguish inflation from relative price changes. If the price of oil increases, there will be an increase in the price of oil *relative* to other goods. Inflation refers to rising prices of all goods and services. Second, one must distinguish between anticipated and unanticipated inflation. If inflation is correctly anticipated, it causes few problems because the actors in the economy can take account of inflation in their contracts. Unanticipated inflation is the difference between actual and anticipated inflation. It is unanticipated inflation that is a major source of concern because it creates risk for market participants.

II. INFLATION PRIOR TO COMPLETION OF A CONTRACT

Inflation can fundamentally affect the terms of a contract. If two parties agree that one will perform in the future at a predetermined price, inflation will lower the real price and benefit the payer. To the extent that inflation is anticipated, the parties will incorporate the predicted inflation into the bargain. The price will be set higher than otherwise, and as long as the forecast of inflation is correct, it has no impact on the two parties. If, however, inflation is higher than anticipated, it redistributes wealth from the payee to the payer.

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In a loan contract, the interest rate reflects the anticipated inflation rate. The higher the rate of inflation, the greater the interest rate that will be paid to encourage lenders to accept repayment in depreciated currency. The interest rate that is observed in the market is called a *nominal* rate of interest because it reflects not only the real return on capital (the real rate of interest) but also the anticipated rate of inflation. At any point in time the nominal rate of interest will equal the sum of the anticipated real rate of interest and the anticipated rate of inflation.¹ Any unanticipated inflation that occurs will redistribute wealth from creditor to debtor.² When the loan contract matures, the real rate of return will be larger or smaller than anticipated, depending on the accuracy of the inflation forecast.

There is both a winner and a loser whenever unanticipated inflation occurs, and the loser might ask the court to excuse him from his obligation. Courts could view this as they would any intervening event that might render a contract impossible, impracticable or frustrated, but they have not done so. The reluctance of the courts to intervene can be supported by strong economic and legal arguments.³ In many situations the purpose of a fixed price contract is to allocate the risk of price changes, and it is difficult for the payee to argue that he did not understand that the payer would benefit from price increases. Given the enormous price fluctuations that have taken place over the last century the payee cannot claim that the threat of inflation was unforeseeable.

In view of the history of price fluctuation, it is conceivable that contracting parties might want to index every contract to the Consumer Price Index. However, as long as the variability of inflation is not too great, firms generally prefer to have fixed price contracts since these contracts reduce the variability of cash flow and avoid the transaction costs of indexing.⁴ If the inflation rate becomes sufficiently variable, contracting parties might agree on an indexing formula.⁵

¹ More precisely, $i = r + p + rp/100$ where i equals the nominal rate of interest, r equals the real rate of interest and p equals the expected rate of inflation, all three expressed as percentages.

² A. NUSSBAUM, *MONEY IN THE LAW NATIONAL AND INTERNATIONAL* 188 (1950) argues that there should be a distinction made between bilateral executory contracts and debts. There is no economic difference between the two types of contracts.

³ Perloff, *The Effects of Breaches of Forward Contracts Due to Unanticipated Price Changes*, 10 J. LEGAL STUD. 221 (1981) presents a model in which it may be optimal for courts to intervene when price swings are sufficiently great. The model applies to contracts in which the price and quantity produced by the promisor are negatively correlated. This may be true in agriculture.

⁴ See Carlton, *Contracts, Wage Rigidity and Market Equilibrium*, 87 J. POL. ECON. 1034 (1979).

⁵ The available indices may not reflect the price changes that are of interest to the parties. In one situation the contract became unprofitable despite the use of the wholesale price index, a construction cost index and a labour cost index to adjust the price: *Aluminum Co. v. Essex Group Inc.*, 499 F. Supp. 53 (W.D. Pa. 1980).

Some commentators feel that there is something unfair about allowing one party to benefit from inflation gains. Schwartz suggests that courts might excuse performance under fixed price contracts to prevent the buyer from making "undeserved" gains.⁶ In practice, it is not at all clear that there are undeserved gains, even if it is agreed that the inflation was unforeseen by the two parties. The buyer might have contracted with his customers and his workers at a fixed price. If the buyer is made to bear the inflationary component of any cost increase, fairness would require that all his other contracts be rewritten.

Anglo-American courts have taken the view that some price fluctuation is expected and is an integral part of doing business,⁷ but is there some rate of inflation which is so great that the contract is frustrated? In periods of extreme inflation there is such massive redistribution of wealth that it is difficult to argue that the parties allocated the risk of this inflation. In post-World War I Germany, the notion that inflation might alter contracts first arose when inflation was about 400% per annum.⁸ Prices subsequently stabilized for a year or so before the final bout of hyper-inflation. The courts began to intervene when the rate of inflation reached 500% per year and continued to accelerate.⁹ The ensuing total collapse of the value of the currency led to judicial and statutory revision of contractual obligations. Following the American Civil War a similar approach was taken with contracts expressed in Confederate dollars.¹⁰ In both periods the process of rewriting contracts proved to be extremely difficult, and only very crude justice was done.

It is submitted that courts should not intervene to give *ex post facto* indexation of contracts. The parties themselves can index at relatively low cost if they wish to re-allocate the risk of price change. The fact that everyone does not index may indicate that most businesses are protected to some extent from inflation by a set of contracts, all of which have fixed prices that anticipate inflationary changes. The court cannot equitably re-allocate inflationary gains without re-evaluating all contracts. Unanticipated inflation in Canada has not come even close to the point where such a policy is necessary.

⁶ *Sales Law and Inflation*, 50 S. CAL. L. REV. 1 (1976).

⁷ The closest a British court has come to applying frustration to inflation is the *dictum* of Viscount Simon in *British Movietonews v. London & Dist. Cinemas Ltd.*, [1952] A.C. 166, at 185, [1951] 2 All E.R. 617, at 625 (1951). For a discussion see E. HIRSCHBERG, *THE IMPACT OF INFLATION AND DEVALUATION ON PRIVATE LEGAL OBLIGATIONS* (1976).

⁸ Dawson, *Effects of Inflation on Private Contracts: Germany 1914-1924*, 33 MICHIGAN L. REV. 171 at 184-85 (1935).

⁹ This is the annualized rate of inflation in Feb. 1922. The price index is shown in Dawson, *id.* at 183.

¹⁰ Dawson & Cooper, *The Effect of Inflation on Private Contracts: United States 1861-1879*, 33 MICHIGAN L. REV. 706 (1935).

III. PRICE CHANGES BETWEEN BREACH AND JUDGMENT

Price changes between the time a contract is breached and the date of judgment make compensation of the plaintiff more difficult because it is not clear at what point in time losses should be measured.¹¹ The economic approach to law helps focus on the reasons for a particular method of damage assessment. For simplicity, only damages arising from contractual breaches will be considered, but the same principles also apply to torts. The argument that will be developed is that the rule in *Asamera Oil Corp. v. Sea Oil & General Corp.*¹² is justified on economic grounds. This rule states that damages crystallize at the time at which it is reasonable for the plaintiff to mitigate his losses.¹³

The economic model of contract damages stresses that damages have two primary roles: first, to encourage efficient breach of contract (and discourage inefficient breach); second, to allocate risk efficiently between the parties. For the purposes of the problem addressed here, the risk allocation objective can be ignored, at least as far as pre-breach risk is concerned.

Efficient breach is encouraged when damages are set equal to the loss suffered by the victim; that is, promisors will breach if the value of breach exceeds the loss to the victim and will not breach if the value of breach is less than the loss to the victim. The efficient breach objective thus leads to the same damages as the compensation objective, but the measure of compensation should be evaluated as of the date of breach. Implementation of the compensation rule is not straightforward because the extent of damages is only revealed over time, and the operation of the judicial system may be very slow. Consequently, the list of contract law objectives should be expanded to include post-breach efficiency. This means that the method of damage assessment must encourage mitigation of losses by the plaintiff. The damages should be sufficient to leave the plaintiff in the same position as he would have been had the breach not occurred, but the method of damage assessment should be one that minimizes the cost of providing that level of utility. Since specific performance raises additional issues, it will be assumed for the moment that damages are the only available remedy.

¹¹ This issue has been discussed in several recent articles: Waddams, *The Date for the Assessment of Damages*, 97 L.Q.R. 445 (1981); Swan, *Damages, Specific Performance, Inflation and Interest*, 10 R.P.R. 267 (1980); Wallace, *Cost of Repair and Inflation*, 96 L.Q.R. 101 (1980); Feldman & Libling, *Inflation and the Duty to Mitigate*, 95 L.Q.R. 270 (1979).

¹² [1979] 1 S.C.R. 633, 89 D.L.R. (3d) 1 (1978).

¹³ *Id.* at 664, 89 D.L.R. (3d) at 23.

A. *Specific Performance Not Available*

In the common situation of a stockbroker's failure to buy a particular stock as requested, the damages should reflect the loss to the customer so as to deter carelessness of this kind by other stockbrokers. At the point at which the breach becomes known to the customer, he has suffered a loss equal to the increase in the value of the stock, less the interest that he earned by not buying the stock. If the stock has fallen in value, the stockbroker can replace it at a profit to himself. If the damages are assessed at the moment that the breach becomes known to the customer, the correct incentives will be given to the stockbroker, and the customer can decide whether or not he wishes to buy the stock in the market.¹⁴

If the value of the stock at the date of judgment is used to calculate damages, the customer effectively has a call option on the stock, with the execution price equal to the market price at the date of breach. He also has the funds that he would have invested in the stock. It might be argued that valuation as of the date of judgment could have the effect of encouraging a plaintiff to pursue his claim actively in court whenever the price rises, and delay the proceedings whenever the price falls. This concern is not justified because the value of an option is increased by extending the exercise date. Even though the stock has increased in value, it might increase further. In the absence of dividends, the value of a call option that has no limit on the exercise date equals the value of the stock itself, and the value of the option is reduced as the exercise date becomes more imminent.¹⁵ Consequently, the plaintiff will want to delay the trial for as long as possible. The plaintiff is over-compensated as of the date of breach if he has his funds plus a call option on the stock as he is protected against the risk of price decreases. He would have faced that risk had there been no breach.

What is the real economic cost of a rule that would assess damages at the date of judgment? First, it over-compensates the plaintiff and over-deters breach; second, it wastes judicial resources because the plaintiff will delay judgment to keep his option alive (although some plaintiffs will settle if the amount offered is sufficiently attractive to compensate for the loss of the call privilege). However, the rule in *Asamera Oil* leads to more efficient behaviour than a rule that would

¹⁴ In *Asamera Oil, id.*, the damages were the "median price" during the period of time in which the plaintiff would be expected to replace the shares. The "New York Rule" uses the highest price between the time of conversion and a reasonable time after the owner has received notice of it: *Galigher v. Jones*, 192 U.S. 193, at 201 (1899). In *Madison Fund Inc. v. Charter Co.*, 427 F. Supp. 597 (S.D.N.Y. 1977) the average value in the month following breach was used. This is consistent with *Asamera Oil* rather than the New York Rule.

¹⁵ Black & Scholes, *The Pricing of Options and Corporate Liabilities*, 81 J. POL. ECON. 637 (1973).

evaluate the damages at the date of judgment.¹⁶ The loss is crystallized whether or not the plaintiff buys the stock.

Once the loss has crystallized, inflation may occur prior to judgment. The situation is the same as one in which a debtor fails to repay a debt on schedule. Inflation between the due date and the judgment date will reduce the value of the repayment, and the creditor will lose the real interest that could have been earned during the period. To encourage efficient repayment of debts, the delinquent debtor should be required to pay damages which equal the cost of breach that was *expected* at the date of breach. It remains to be determined whether the debtor should be liable for the *actual* cost of breach. Assume for the moment that there is a one-year delay between the time that the funds are due and the time at which the creditor obtains judgment. At the time of breach, the interest rate on one-year loans comprises the expected real rate of return and the expected rate of inflation. At the end of the year, the actual rate of inflation may be larger or smaller than expected. If it is larger, the creditor will receive a lower real rate of return than expected. Should the damages be based on the expected real rate of return at the time of breach or the actual real return? If the damages are based on the rate of interest at the time of breach, the creditor will earn an uncertain real return with expected value \bar{r} . To guarantee the real rate of return, the damages would be set equal to $(\text{amount due}) \times (1 + \text{actual inflation rate}) \times (1 + \bar{r})$. In other words, the obligation would be indexed to the Consumer Price Index. This approach is advocated by the Manitoba Law Reform Commission.¹⁷ The indexation over-compensates the creditor. If he is willing to lend at a rate of interest that gives him an *uncertain* real rate of return with expected value \bar{r} , he will be better off if his debtors postpone repayment and pay him a *guaranteed* real rate of return equal to \bar{r} . Use of this excessive damage measure over-deters breach. It also leads to excessive use of court facilities because the creditor will want the guaranteed interest to continue indefinitely. The appropriate measure of damages is determined by charging the debtor the market rate of interest on the funds, rather than having the debtor insure the creditor's real rate of return. Compound interest should be awarded to compensate the plaintiff fully.

¹⁶ The conclusion that the rule in *Asamera Oil*, *supra* note 12, is efficient was reached without reference to the issue of who should bear the risk of breach or of post-breach changes in value. In some situations risk aversion can lead the parties to prefer (at the time of contracting) that the losses be shared between the two parties. Such a sharing of losses will not be efficient as long as the following circumstances exist: (1) the breacher is risk neutral (because he is diversified); (2) the breach is a deliberate act, not a random event; or (3) the breach is an "accident", but a court is able to determine that the breacher took inadequate care. Rea, *Non-Pecuniary Loss and Breach of Contract*, 11 J. LEGAL STUD. 35 (1982).

¹⁷ REPORT ON PREJUDGMENT COMPENSATION OF MONEY AWARDS: ALTERNATIVE TO INTEREST (1981). This approach is also suggested by K. ROSENN, *LAW AND INFLATION* 237 (1982).

The conclusion that damages for delayed payment should earn interest but should not be indexed crystallizes the losses due to inflation at a date prior to judgment. The plaintiff will be put in the position of making his own investment decisions, just as he would in the absence of breach. For example, if he expects inflation to be greater than anticipated by others in the market, he can borrow against the future judgment, consume immediately, and ultimately repay the loan with depreciated currency. If he expects inflation to be lower than expected by others in the market, he can lend in order to earn the higher (expected) rate of return. His post-breach "loan" to his delinquent debtor serves this purpose.

A similar analysis applies to tort cases in which there is damage to property that can be repaired. The primary economic objectives of tort damages are to encourage efficient care by making tortfeasors bear the expected social costs of their actions and to insure potential victims. As in contracts, the law should also encourage the tort victim to mitigate his losses. In addition, legal rules should encourage potential victims to take an efficient account of care.

In *Dodd Properties v. Canterbury City Council*¹⁸ the defendants damaged a building and the plaintiff did not make the necessary repairs before trial. Between the time of the damage and the time of the trial, the cost of repairs rose considerably, and the Court held that costs as of the date of judgment would be awarded. During the ten-year period in question in *Dodd Properties*, the price of repairs rose by 180 per cent in absolute terms, but all consumer prices rose by 202%.¹⁹ Therefore, relative to the price of other goods, the price of repairs fell by eleven per cent. Regardless of the cause of a change in price, whether it is due to a relative price increase or inflation, the damages rule must be the same. Economic arguments suggest the same approach for both types of price change; that is, the loss should be crystallized at the time that the repairs can reasonably be made.

Consider the plaintiff's position if he faces a risk of a change in the value of a repaired building or the cost of repairs. With valuation of damages as of the date of judgment, he will be compensated for the cost of repairs, regardless of whether it is economical to make the repairs. If the cost of repairs exceeds the value that repairs add to the building, he can use the funds for other purposes and will be better off than if the damage had not occurred. If it is economical to make the repairs, he will be just as well off. Viewed at the time of the damage, he is over-compensated if he gets the cost of repairs as of the date of judgment. Viewed at the date of judgment he may or may not be over-compensated, depending on what has actually happened to prices. As in the stock case, the loss should be crystallized at an earlier date to encourage efficient

¹⁸ [1980] 1 All E.R. 928, [1980] 1 W.L.R. 433 (C.A. 1979).

¹⁹ Price data are from the INTERNATIONAL MONETARY FUND, INTERNATIONAL FINANCIAL STATISTICS YEARBOOK (1981).

care by potential tortfeasors and reduce wasteful use of the judicial system.

If the only source of a change in the cost of repairs or the value of the repaired building is inflation, the plaintiff will want to repair the building and will have no reason to postpone repairs. Earlier repairs will give him the use of an improved building during the period prior to trial. If this consideration is not important and the plaintiff postpones repairs, the defendant bears the risk of inflationary changes in the cost of repairs under the judgment date rule. This risk can be eliminated at no cost to the plaintiff if the plaintiff borrows the funds to make the repairs. The risk of unanticipated inflation is thus passed on to the lender, who is prepared to bear this risk voluntarily. In the interest of efficiency, it is submitted that damages should be measured as of the date at which repairs can reasonably be made, and that interest to the date of judgment should be paid by the defendant.

There are at least two other concerns that may have motivated the Court of Appeal to use judgment date costs in *Dodd Properties*. Lord Justice Megaw may have been concerned that the plaintiff did not have the funds to carry out the repairs.²⁰ It is suggested, however, that the plaintiff's cash deficiency could have been overcome by borrowing the funds, and the interest cost could have been included in the damage award.²¹ If the plaintiff had been unable to borrow, this could have been taken into account in determining the point at which it was reasonable for him to mitigate his loss.

Another concern of the Court in *Dodd Properties* might have been that the plaintiff faced the risk of a decrease in his wealth if he had lost the case. The decline in his wealth might have made mitigation undesirable. For example, a homebuyer whose purchase has fallen through in a rising market may be well advised to delay purchase of a substitute home, pending judgment, if his funds are sufficiently limited.²² This argument is difficult to assess without more information on the source of litigation risk. Litigation risk might arise because the plaintiff has trouble proving that breach has occurred. Consequently, some undeserving defendants will escape liability. This type of error suggests that courts should award punitive damages to encourage efficient breach. For example, if one out of three defendants escape liability, the damages should be increased by fifty per cent for those defendants who are liable.

On the other hand, the litigation risk might arise because there is genuine doubt as to whether or not there was a breach. In this situation it

²⁰ See *Dodd Properties*, *supra* note 18, at 935, [1980] 1 W.L.R. at 453. Megaw L.J. states that he agrees with Oliver J. in *Radford v. De Froberville*, [1978] 1 All E.R. 33, [1977] 1 W.L.R. 1262 (Ch. 1977). Oliver J. expressed doubt as to the duty of the plaintiff to make expenditures pending judgment.

²¹ *Wadsworth v. Lydall*, [1981] 2 All E.R. 401, [1981] 1 W.L.R. 598 (C.A.).

²² *Waddams*, *supra* note 11, at 460 is correct that a business's mitigation decision should not be affected by litigation risk.

is not efficient to place all of the consequences of litigation risk on the defendant. If this were done, the expected cost of any action that might be considered a breach would exceed the social cost. Generally speaking, legal scholars tend to ignore litigation risk, but it has important implications for the efficacy of legal rules.

The discussion up to this point has focused on cases in which services can be purchased in the market to offset a breach of contract or tort. A disabled tort victim will have most of his losses in the form of lost earnings. The tort victim will not be over-compensated if he is given the actual wages paid in his job during the pre-judgment period rather than the wages expected at the time of the tort, provided that the court can determine if the plaintiff has in fact suffered a loss in earning capacity. In the case of a breach of contract, the plaintiff can borrow against the judgment to place himself in the same position that he would have been in had no breach occurred. The tort victim may be able to borrow, but he cannot buy an annuity tied to the wages in his job because such annuities do not exist. Therefore, the tort victim is not over-compensated by being paid actual, rather than expected, wages. Ideally, tort damages for continuing losses should reflect actual, rather than expected, post-judgment losses, as well as actual pre-judgment losses. However, given that the plaintiff can change the observed losses (by varying his hours of work, for example) and that monitoring mitigation is costly, it is probably efficient to use lump sum damages based on expected losses.²³

The foreign currency cases also are related to the problem of post-breach changes in value. If the exchange rate fluctuates between the date of breach and the date of judgment, a judgment in domestic currency may over-compensate or under-compensate a plaintiff who has been promised payment in a foreign currency. In *Miliangos v. George Frank (Textiles) Ltd.*,²⁴ an English decision, the plaintiff was owed an amount in Swiss francs. In the three years that elapsed between the date of breach and the trial, the value of the Swiss franc had risen by sixty-five per cent relative to sterling.²⁵

The risk of currency fluctuation must be assigned to one party or the other, but there is one other element to the foreign currency case, that is, Britain's interest in encouraging the use of sterling as the currency for carrying out transactions in Britain. As long as sterling is the legal tender, participants in market exchange will find it advantageous to hold sterling rather than some alternative currency. If the British economy were run with Swiss francs, Britons would have to pay for their money supply by selling goods and services to Switzerland. With a national currency, they can simply print a money supply, and create one through

²³ Rea, *Lump-Sum versus Periodic Damage Awards*, 10 J. LEGAL STUD. 131 (1981). One could apply this argument to pre-judgment losses as well. Judgment date measurement of losses is justified if courts are better able to monitor pre-judgment mitigation than are insurance companies.

²⁴ [1976] A.C. 443, [1975] 3 All E.R. 801 (1975).

²⁵ [1975] Q.B. 487, at 500. [1975] 1 All E.R. 1076, at 1082.

bank deposits, at virtually no cost. The added cost of using a foreign currency is a measure of the "seigniorage". It has been estimated that the value of the seigniorage is about seven per cent of the Gross National Product for industrialized countries.²⁶ By making sterling the legal tender, Britain avoids the costly use of foreign currency.²⁷ This explains why the principle of issuing judgments in sterling had been in existence for 380 years.²⁸

The legal tender argument suggests that damages should be assessed in domestic currency for domestic contracts, but it is questionable whether the same principle should apply to international contracts. Nevertheless, if the legal tender argument were invoked, the court could make an award in pounds based on the exchange rate at the date of judgment. In other words, the question of who should bear the exchange risk still remains.

There are two reasonable methods of assessment in the *Miliangos* case.²⁹ First, the award could be made in Swiss francs, with pre-judgment interest accumulating at the Swiss rate of interest. Second, it could be made in sterling, with interest accumulating at the British rate of interest. If the second method is used, the plaintiff must hedge against a decline in the value of the pound if he has no future need for sterling. If he is heavily involved in foreign trade, he may also have to hedge under the first method if he does not wish to be long on Swiss francs. In choosing between the two methods, there are two considerations which tip the balance toward an award in foreign currency or its value at the judgment date. First, the fact that the contract was in francs suggests that the plaintiff intended to be long in that currency. Second, uncertainty over the date of judgment makes it more difficult for the plaintiff to hedge perfectly. The cost of hedging should be borne by the defendant to encourage efficient breach. This line of reasoning suggests a general rule that contract and tort damages in international cases should be in the

²⁶ Fischer, *Seigniorage and the Case for a National Money*, 90 J. POL. ECON. 295, at 305 (1982).

²⁷ There is another advantage to having a domestic currency: the government can "tax" holders of money by inflationary increases in the domestic currency. In situations in which the government is not able to capture part of the nation's output by any other means, this is an attractive option. The incidence of this tax falls upon holders of money balances, suggesting that the tax is roughly proportional to wealth. Complete indexation of contracts does not eliminate the government's ability to tax in this manner. If courts were to refuse to allow indexation of contracts, they would alter the incidence of this tax in arbitrary ways and induce parties to make more costly substitute transactions.

²⁸ *Supra* note 25, at 501, [1975] 1 All E.R. at 1082. The previous case was *Bagshaw v. Playn*, 1 Cro. Eliz. 536, 78 E.R. 783 (1595).

²⁹ The foreign currency cases are discussed in LAW REFORM COMMISSION OF BRITISH COLUMBIA, FOREIGN MONEY LIABILITIES, WORKING PAPER NO. 33 (1981) and Waddams, *Foreign Money Liabilities: Law Reform Commission of British Columbia, Working Paper No. 33*, 6 CAN. BUS. L.J. 352 (1982).

“plaintiff’s currency” (the currency in which he generally operates) unless a contract specifies otherwise.³⁰

In *Miliangos*, interest was ultimately awarded using Swiss rates of interest.³¹ If there had been no unexpected change in the rate of inflation, Swiss interest rates would have been less than British rates by exactly the difference in the rate of inflation between the two countries. This difference in interest rates would have exactly offset the appreciation of the Swiss franc if the “purchasing power parity” theory of exchange rates had held during the period. Under these extreme assumptions either of the two methods of damage assessment would have led to the same result.

B. *Specific Performance*

The discussion above applied to cases in which there is no right to specific performance. Specific performance is equivalent to measuring the value at the date of judgment. The conflict between the rule in *Asamera Oil* and the use of specific performance does not result from a defect in the logic of the rule but rather from the inherent difference between specific performance and damages.³² What follows is a summary of some of the discussion of this issue found in the law and economics literature.³³

Specific performance leads to inefficient breach whenever the cost of performance exceeds the value of performance to the promisee. This might happen when either the cost of the promisee’s demand for performance falls or the promisor’s cost of performance rises. In situations in which the cost of performance might change after breach, specific performance leads to inefficient breach because it is equivalent to giving damages calculated at the date of judgment, a procedure which has been shown to over-compensate the plaintiff. It was argued earlier that compensatory damages would be efficient, but this was based on the assumptions that the courts could accurately measure damages and that risk sharing was not an objective of the contract. In some circumstances risk aversion may lead the contracting party to favour specific

³⁰ *Owners of M.V. Eleftherotria v. M.V. Despina R*, [1979] A.C. 685, [1979] 1 All E.R. 421 (H.L. 1978). The case involves a contract which specified payment in United States dollars. The House of Lords chose the plaintiff’s currency, French francs, as the currency for measuring damages.

³¹ *Miliangos v. George Frank (Textiles) Ltd. (No. 2)*, [1977] 1 Q.B. 489, [1976] 3 All E.R. 599 (1976).

³² Sharpe, *Specific Relief for Contract Breach*, in *STUDIES IN CONTRACT LAW* 123, at 141 (B. Reiter & J. Swan eds. 1980) points out the conflict between mitigation and specific performance.

³³ Kronman, *Specific Performance*, 45 U. CHI. L. REV. 351 (1978); Schwartz, *The Case for Specific Performance*, 89 YALE L.J. 271 (1979); Shavell, Notes on Contracts (unpublished manuscript 1981); Polinsky, *Risk Sharing Through Breach of Contract Remedies* (forthcoming in *J. LEGAL STUD.* (1983)).

performance at the time of contract formation, despite the fact that this leads to inefficient breach.³⁴ The inability of courts to assess damages accurately also favours specific performance and is said to be the reason for the special treatment of land, which tends to be non-fungible and difficult to value.

The inefficient breach associated with specific performance may be tolerable if it leads to a more efficient allocation of risk or if, in the particular circumstances, the court is not able to assess damages accurately. In other words, there may be cases in which the disadvantages of specific performance, including the over-compensation implicit in performance at the date of judgment as opposed to performance at the date of breach, are outweighed by the advantages. The Supreme Court's requirement in *Asamera Oil* that "the action for performance must be instituted and carried on with due diligence"³⁵ may eliminate the inefficiency associated with excessive use of courts, if the requirement is enforceable, but the requirement does not eliminate the over-compensation of plaintiffs that is inherent in judgment date performance.³⁶

IV. FUTURE LOSSES

To restore the aggrieved party to the position in which he would have been had the tortious act or breach of contract not occurred some estimates of future economic variables must be made. Predictions of future price levels are extremely uncertain, but knowledge of the relationship between interest rates and inflation helps the court to avoid making a forecast of inflation rates. It is necessary to distinguish between the real rate of interest and the nominal rate of interest.³⁷ The rate observed in the market is the nominal rate, which roughly equals the sum of the expected real rate of interest and the expected rate of inflation during the period of the debt.³⁸ Economists and investors expect that the real rate of return on capital will remain relatively constant over long periods of time, but the inflation rate may increase or decrease, causing the realized real rate of return to vary. Generally, the longer the period of the debt, the greater the variability in the realized real rate of return and, consequently, the greater the risk premium that borrowers must pay. An estimate of the expected real rate of return is the historical real rate of

³⁴ The parties could negotiate a settlement in lieu of specific performance but the negotiations are not costless.

³⁵ *Supra* note 12, at 668, 89 D.L.R. (3d) at 26.

³⁶ Equitable damages should also take account of interest costs, as demonstrated by Swan, *supra* note 11, at 270.

³⁷ Rea, *Inflation, Taxation and Damage Assessment*, 58 CAN. B. REV. 280 (1980).

³⁸ *Supra* note 1.

return, which roughly equals the amount by which the nominal interest rates have exceeded the inflation rate in the past.³⁹

The relationship between the nominal and real rates of interest helps the court in two ways. First, it indicates that if the plaintiff invests in short term bonds, he can partially isolate himself from inflation because interest rates will rise or fall with future rates of inflation. Second, the relationship between nominal and real rates of interest indicates the rate of inflation that is predicted by those in the capital market. For example, if the long term bond rate is fifteen per cent and historically long term bonds have yielded a real rate of return of three per cent, market participants are probably forecasting a twelve per cent rate of inflation.⁴⁰ The court can use this forecast to inflate future lost earnings or lost profits, prior to discounting with the fifteen per cent interest rate. Alternatively, the same answer can be obtained by ignoring inflation when forecasting future earnings or lost profits and discounting using the real rate of interest.

Lord Diplock was heading in the right direction when he suggested that the interest rate that prevails during "stable" periods should be used,⁴¹ but he would have been more correct to advocate the use of the interest rate that prevails when inflation is expected to be zero. In its 1978 judgments on tort damages, the Supreme Court of Canada endorsed that approach,⁴² but made an error in its use.⁴³ The Court correctly implemented the approach in a more recent case, *Lewis v. Todd*.⁴⁴

Once one accepts the principle that future inflation can be incorporated in the calculation by the use of a real discount rate, it becomes clear that there is no need to hear testimony on the historical real rate of return in every case. Ontario⁴⁵ and Nova Scotia⁴⁶ have implemented rules that a two and one-half per cent real rate of interest should be used. In *McLeod v. Palardy*, Monnin J.A. advocated a similar rule in Manitoba, after noting that testimony on the discount rate filled sixty pages of trial transcript.⁴⁷

Courts have been relatively swift in adapting to the new approach for discounting future losses of earnings but there have been some

³⁹ This method is based on the idea that past errors in forecasting the rate of interest tended to cancel each other out.

⁴⁰ More precisely, the expected rate of inflation should be 11.65% based on the formula in note 1. *supra*.

⁴¹ *Mallett v. McMonagle*, [1970] A.C. 166, at 176, [1969] 2 All E.R. 178, at 190 (1969).

⁴² *Andrews v. Grand & Toy (Alta.) Ltd.*, [1978] 2 S.C.R. 229, 83 D.L.R. (3d) 452; *Thornton v. Board of School Trustees of School Dist. No. 57 (Prince George)*, [1978] 2 S.C.R. 267, 83 D.L.R. (3d) 480; *Arnold v. Teno*, [1978] 2 S.C.R. 287, 83 D.L.R. (3d) 609; *Keizer v. Hanna*, [1978] 2 S.C.R. 342, 82 D.L.R. (3d) 449.

⁴³ See *Rea*, *supra* note 37, at 284.

⁴⁴ [1980] 2 S.C.R. 694, 115 D.L.R. (3d) 257.

⁴⁵ *Judicature Act*, R.S.O. 1980, c. 223, s. 36.

⁴⁶ N.S.C.P.R. 31.15.

⁴⁷ 17 C.C.L.T. 62, at 70, 124 D.L.R. (3d) 506, at 511 (Man. C.A. 1981).

instances in other contexts which indicate that the relationship between interest rates and inflation is not completely understood. The following cases are examples of this misunderstanding.

A. *Shaw's Estate v. Roemer*⁴⁸

Following the wrongful death of Mr. Shaw, his survivors received an estate (most of which consisted of Mr. Shaw's company) valued at \$880,000. The defendant's actuary testified that the premature receipt of this amount represented a \$841,165 benefit for the survivors. For this calculation he assumed a thirteen per cent rate of discount. Richard J. considered the possibility that the assets might have grown because of the diligence of Mr. Shaw but did not discuss inflation. When the present value of the lost earnings was calculated, the amount (a maximum of \$672,000 before contingencies⁴⁹) was less than the value of the advancement of the inheritance, suggesting that the survivors were better off as a result of Mr. Shaw's death. After several alternative calculations, Richard J. gave up on his attempt at itemizing the source of the loss and simply awarded \$90,000 to be divided among the deceased's wife and four children.

Why did the calculations indicate that Mr. Shaw's survivors were better off after his death? The use of a thirteen per cent discount rate to calculate the advancement of the inheritance implicitly assumed that the value of the estate would have remained constant in nominal terms. With a ten per cent rate of inflation, this implies that the value of the company would have fallen by ten per cent per year. It would be more reasonable to assume that the real value of the company would have remained constant; that is, the company's assets would have appreciated along with the rate of inflation. On this assumption, the advancement of the inheritance can be calculated using a real rate of interest such as three per cent.⁵⁰ This lowers the benefit from the advancement of the inheritance by fifty per cent. After considering the loss of annual earnings, taxes and contingencies, the net loss suffered by the plaintiffs is similar to the amount actually awarded.

B. *McDermid v. Food-Vale Stores (1972) Ltd.*⁵¹

Food-Vale Stores agreed to supply heat and utilities to McDermid for a ten-year period, and both parties were to share these expenses. Five months after the signing of the contract, the food store was destroyed by fire. As a result, McDermid lost its supply of heat and utilities and was

⁴⁸ 46 N.S.R. (2d) 629 (S.C. 1981), *aff'd* 134 D.L.R. (3d) 590 (C.A. 1982).

⁴⁹ 46 N.S.R. (2d) at 664.

⁵⁰ This calculation assumes that the rate of taxation on the income from the estate would equal the rate of taxation on the assets of the deceased.

⁵¹ 25 A.R. 301, 117 D.L.R. (3d) 483 (Q.B. 1980).

forced to spend \$20,194 to install heating equipment and utilities. Had the contract not been breached, these expenditures would have occurred nine years and five months later. The damages were calculated by the Court to be \$21,181, an amount which exceeded the actual amount spent by McDermid. Not only did McDermid make a profit on the installation but it would have a furnace that had depreciated by only a half of its original value by the end of the contract period.

Where did the Court make its mistake? First, the Court added up the interest over the period rather than taking the present value. This exaggerated the award. Second, it awarded fifty per cent depreciation for the furnace as if the depreciation had occurred immediately rather than almost ten years later. Third, the Court ignored inflation. A furnace purchased nine years and five months later would have cost much more because of inflation. If the Court had wanted to use a nominal rate such as the twelve per cent that it chose, its calculation should have taken account of the higher future price of the furnace. Alternatively, the Court could have used a real rate of interest and ignored inflation. Using a real rate of interest of three per cent, the award would have been \$10,399 rather than \$21,181.⁵²

It is important to note that the above calculation evaluates the loss at the time that the expenditures were incurred according to the prices that prevailed at that time. The trial took place over two years later, during which time the plaintiff lost the use of \$10,399 and suffered a decline in the purchasing power of these funds. The interest from the date of breach to the date of judgment should have been awarded at the market (nominal) rate of interest, not the real interest rate.

V. CONCLUSION

The economic perspective indicates that by and large Canadian courts have evolved efficient rules in response to the challenge posed by inflation. For example, the refusal of courts to rewrite contracts because of inflation is efficient given the magnitude of the anticipated inflation that Canada has experienced. The economic analysis of damage measurement after a tort or breach of contract suggests that courts should attempt to set the damages so as to encourage efficient performance of contract obligations or precautions against accidents, encourage efficient behaviour by plaintiffs and encourage efficient use of courts. The rule that contract damages are crystallized prior to judgment will accomplish these objectives. A similar analysis suggests that it is appropriate to calculate loss of interest using market rates of interest rather than the forecast real rate of interest, as proposed by the Manitoba Law Reform

⁵² The \$20,194 consisted of two components: \$14,510 for capital equipment plus an additional \$5,684. The latter was not subject to depreciation. The damages should be $\$5,684 [1 - (1/(1.03)^{9.42})] + 14,510 [1 - (.5/(1.03)^{9.42})] = \$10,399$.

Commission.⁵³ Specific performance is analogous to judgment date damages, but it may be appropriate in some circumstances, despite the inefficiencies of judgment date measurement.

The Canadian courts have been somewhat less successful in making specific economic calculations, as illustrated by the confusion over discount rates prior to *Lewis v. Todd*⁵⁴ and the mistakes made in two recent cases discussed above.

One can conclude that an economic approach to law leads to a unified perspective on numerous issues that have confronted courts. Although the economic viewpoint does not lead to contrary conclusions with respect to most of the issues raised by inflation, it helps to isolate the relevant issues more effectively and facilitates the actual calculation of damages.

⁵³ *Supra* note 17.

⁵⁴ *Supra* note 44.