Managing the Enterprise in Transition while Coping with Inflation

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Foreword

The following papers are edited versions of lectures presented on July 11, 1992, at a conference entitled “Managing the Transition While Coping with Inflation,” held at the French Management Training Center in Warsaw, Poland.

The conference was attended by the participants of the Economic Development Institute’s Training of Trainers seminar on “Enterprise Management in the Ex-Socialist Economies: Managing the Transition,” held in Pultusk, Poland, from July 5–17, 1992. In addition, participants from a previous EDI seminar in Poland, a group that meets periodically and constitutes the core of a management club hosted by the French Management Training Center, were present. The conference was also attended by the deans of Poland’s major business schools. The lectures were given by the seminar resource people.

Most ex-socialist countries have experienced a high rate of inflation during the transition period from a socialist to a market economy. Much has been written about the causes of high inflation during the transition as well as about the policies to control it. However, the facts are that most attempts to control the high inflation in economies in transition have had limited success. So far very little has been published on the ways an individual company can survive in the inflationary environment. The company can do little to change the macroeconomic variables, but it must cope with them to survive. Since this topic is of importance in all ex-socialist economies, and most issues discussed are not specific to the Polish economy, the publication of the conference proceedings may be useful to practicing financial executives and trainers in other countries.

Amnon Golan, Director
Economic Development Institute
The Effect of Inflation on Transition Economies

Itzhak Goldberg
The World Bank

Lenin is said to have declared that the best way to destroy the capitalist system was to debauch the currency, destroy the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens.¹

With this quotation from J. M. Keynes, Paul Samuelson opens his chapter on inflation in his famous textbook entitled Macroeconomics. It is most appropriate to begin a conference on inflation in an economy such as Poland's with this quotation. Unfortunately, inflation and the transition from a centrally planned economy to a market economy go hand in hand, as can be noted in Poland and in other previously socialist economies. This creates confusion about what distortions should be attributed to the remnants of the central planning system and what distortions should be attributed to the high level of inflation. Both are sources of distortion in the price structure, and therefore such a mix-up is not surprising. To people whose exposure to a market economy is combined with exposure to high inflation, capitalism and inflation seem inseparable.

Poland has become a model for high inflation in a transitional economy. In Samuelson's basic macroeconomics textbook, Poland is mentioned twice. First, it is described as being, in 1989, on the verge between galloping and hyperinflation.² Later Professor Samuelson mentions Poland as an example of the soaring inflation that occurs in the transition

². Ibid., p. 260, figure 14.4.
economies. Prices in Poland rose more than 1,000 percent in 1989 and 1990 combined.

Inflation is defined as a rise in the general price level of commodities and services. If inflation is balanced and anticipated—to use Samuelson's terminology—then there would be very little to worry about (see table 1.1). Although in theory inflation affects all prices, in practice all prices do not rise by the same amount or at the same rate. An unbalanced inflation is one in which changes in relative prices are observed during the rise in the general price level.

**Table 1.1. Two Dimensions of Inflation's Costs**

<table>
<thead>
<tr>
<th>Inflation</th>
<th>Balanced inflation</th>
<th>Unbalanced inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated</td>
<td>Inflation has no cost</td>
<td>Efficiency losses</td>
</tr>
<tr>
<td>Unanticipated</td>
<td>Income and wealth redistribution</td>
<td>Efficiency losses and redistribution</td>
</tr>
</tbody>
</table>

Another aspect of inflation, and perhaps even a more important one, is uncertainty. Samuelson asks whether the level of inflation is anticipated or unanticipated. If the level of inflation is anticipated but unbalanced, changes occur in relative prices, and there is an efficiency loss. If inflation is balanced but unanticipated, then income is redistributed. And if we have unbalanced and unanticipated inflation, the most usual case, we witness both effects together. That is the source of the problems at the microeconomic level.

Another problem is loss of information. Prices serve as signals in the market economy, and once the unit of measurement loses its informational value, at least without adjustment, an important aspect of the market economy is lost: the function of prices as information, as signals to factors of production to move in the right directions. For managers, it is not enough to devise complex indexation formulas to make prices comparable. Samuelson, in the above-mentioned chapter, states that perfect price indexes are conceptually impossible to construct, and all indexes are only approximations.

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3. Ibid., p. 262.
4. Ibid., p. 266.
From the point of view of managers, it is not enough to use an index because they need prices as quick reference points, the same way we need a telephone number. Samuelson uses the example of inflation of telephone numbers. Let us assume that because of a growing need for additional numbers, the telephone company changes the telephone numbers of every subscriber every month. Can we live with such changes? The same thing is relevant for prices.

Take, for example, the price of an important input for your company. You need the price of this input in your managerial decisionmaking, and therefore it is an important component in your accounting system and information system. Can you imagine going to the production floor to convince the floor managers to be more financially minded and then telling them that the price of electricity is a number multiplied by an index number for this month, divided by the same index in the base period twelve months ago. This may be a nice academic indexation formula, but it is useless in everyday management practice. Therefore, managerial accounting in many countries will be based, not on indexation, but on prices expressed in foreign currency as an indicator.

Although foreign currency prices are easy to use, they are not the ideal solution. Using foreign currency as the key will work as long as the rate of devaluation is similar to the rate of inflation. Once the government applies a system of monetary anchor, like it did in Poland, and keeps the exchange rate fixed while prices increase, inflation goes on, but the exchange rate stays fixed. Then you face major distortion in using foreign currency prices. Despite these reservations, I would like to say that we need different indexation formulas for different purposes. We need to distinguish between financial accounting (which is more formal, and complex adjustment formulas can be adopted) and managerial accounting or management information systems (which have to be user friendly, simple, and done in a way that will not deter managers from using them).

One of the important effects of inflation is a change in the incentive system for managers regarding the financial function in an enterprise. The function of making sure that the company is not losing financially from inflation becomes too important vis-à-vis the functions of production, development, and marketing. In an inflationary economy, if you do not take good care of your money, you may, in some extreme cases, lose a lot of money overnight, not to mention over a week or over a month. Here I take issue with Samuelson’s approach. He assumes that the main waste from inflation is wearing out the soles of our shoes going frequently to the bank and the frequent reprinting of the restaurants’ menus. I think the damage is much greater. With inflation, the resources required of management are very large. Elaborate precautions are needed in long-term contracting, using indexation to protect the lender, to protect fixed-
income agreements, to protect the long-term fixed price contracts. All of these measures are very expensive, require a lot of time, and certainly are not productive.

Another result of inflation is the growing interfirm credit, which is experienced in Poland and in most countries that once were socialist. One may think that all of the growth in interfirm credit is a result of the bad situation of firms. But one aspect, which is not being discussed much, is that in an inflationary economy, you are much better off to pay later than on time. After a couple of weeks last year organizing cash management for a Polish company, I realized the damage of *interfirm debt*. The defacto way of life is that people try to pay later because, with inflation, when you pay later you pay less in real terms. Even if the agreement calls for the payment of interest on deferred payments, you can avoid the interest payment in many instances.

Inflation also has a major long-run effect on investment in physical capital. Investment decisions are easier under certainty because the decisions are based on more predictable future results. Since inflation increases uncertainty, it affects the amounts invested and, more importantly, the kinds of projects undertaken. Many high-inflation countries witness heavy investments in real estate. The standard belief is that you can never lose if you have your wealth in the form of a house. There is also a lot of capital flight abroad and hoarding of foreign currency.

Finally, high inflation affects investments in human capital. It changes the incentives of people in terms of choosing the activities that they think will be profitable and therefore are prepared to invest in studying. Because inflation requires spending so much effort to keep the value of monetary assets, people find the financial professions, banking and all kind of brokerage activities, much more profitable than other professions. We can observe a shift of skilled and talented people that choose to study for an MBA rather than for a master's degree in engineering. In the transition economy, MBAs are needed—no doubt about that—but there is a limit to how many MBAs are needed relative to engineers. Inflation causes transitional economies to attribute too much importance to the financial professions. Indeed, I dare to say to this audience, despite all the directors of business schools present, that because of inflation there is overshooting in the investments in the financial professions.
The Impact of Inflation on Financial Activities

Yaaqov Goldschmidt
Consultant

During a period of inflation, the purchasing power of money decreases. This phenomenon is expressed by an increase in the general price level.

Decrease in the Purchasing Power of Money

During 1991, prices in Poland increased by a factor of 1.45, as shown by the change in the consumer price index (CPI). The interpretation of this factor is that zloty 1.45 in January 1992 had the same purchasing power as one zloty in January 1991. The value of the zloty, which serves as a unit of measurement of economic activities, changed as a result of inflation. But the name, zloty, did not change. Therefore, financial figures recorded at different dates are not comparable unless all figures are stated in zlotys of a given date. In other words, for comparison purposes, the financial figures pertaining to past periods must be "restated" or "updated" to the current price level, or to value of the zloty today. Otherwise, the comparison will not be valid.

Distorted Financial Statements

Conventional accounting procedures assume that the money unit is stable. During inflation, because this assumption is violated, certain values in the financial statements are distorted: mainly the values of nonmonetary assets (fixed assets and inventories) and equity. Correction for this type of distortion is usually made by inflation-adjustments of the financial statements, and these adjustments are made by restating the values of nonmonetary assets.

In Poland, the assets are revalued by using specific price indices. This procedure provides an estimate of the true economic value of the assets, which is important for managerial purposes. In the West, a general price
index, the consumer price index, is used to restate nonmonetary assets. For example, International Accounting Standard No. 29 recommends using the CPI for this purpose. Restating the historical values of the assets by the CPI adjusts only for the change in the unit of measurement (that is, the change in the purchasing power of the money). It does not adjust for changes in the real (true) value of the assets. Thus, it is consistent with the historical cost basis of accounting and is suitable for external reporting.

Inflation also affects monetary items, such as accounts receivable and loans. Although this effect is often ignored, doing so is not a good policy. The examples of two extremely simplified companies illustrate why this is the case. In the examples, only opening balance sheets and two income statements for different inflation scenarios are presented.

Unique Behavior of Interest Expense During Inflation

During inflation, the market interest rate is determined by adding the expected inflation rate to the no-inflation real interest rate. As a result, interest expense is affected by inflation much more than are other cost items. In turn, interest expense has a significant impact on reported profit and on cash flows, and it introduces uncertainty into business operations and planning.

The impact of inflation on interest expense is illustrated by an extremely simplified example: Company X. Table 2.1 presents the opening balance sheet and the conventional income statements under two alternative scenarios: 0 percent inflation and 50 percent inflation.

Under inflation, sales as well as expenses increased by 50 percent, but depreciation did not change. This result occurs because the value of the assets has not been restated. The main point of the illustration, however, is that the interest rate rose from 5 percent without inflation to 55 percent under inflation. Thus, interest expenses jumped by a factor of 11, and the reported profit declined accordingly.

To derive the figure for inflation-adjusted profit, a closing balance sheet is required so that the effects of inflation on balance sheet items can be considered. This is an important subject, but I do not have time to discuss it here. Let me only mention that corresponding to the increase in interest expense under inflation, the real value of the outstanding loan decreases. There is a tradeoff between the increase in interest expense, which is recorded in the income statement, and a decline of the loan's real value, which is recorded in the balance sheet.

The numerical example illustrates several outcomes of the unique behavior of interest expenses during inflation:

1. The conventional income statement does not provide a true picture of the financial results. The recorded profit is understated.
Table 2.1. The Unique Behavior of Interest Expense: Company X

<table>
<thead>
<tr>
<th>Opening balance sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed assets</td>
</tr>
<tr>
<td>Current assets</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Equity capital</td>
</tr>
<tr>
<td>Loans</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income statements, two alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inflation</strong></td>
</tr>
<tr>
<td><strong>0%</strong></td>
</tr>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Depreciation</td>
</tr>
<tr>
<td>Interest$^1$</td>
</tr>
<tr>
<td>Total costs</td>
</tr>
<tr>
<td>Profit</td>
</tr>
</tbody>
</table>

1. At 0 percent inflation, 5 percent.
   At 50 percent inflation, 55 percent.

2. Because income tax is levied on the reported profit, tax liabilities are reduced.

3. Because the recorded costs increase by more than the inflation rate (1.7 in the example, disregarding revalued depreciation), there is pressure to raise prices by an amount in excess of what would be dictated by inflation. This tendency to overadjust prices further inflames the inflation.

4. Because interest expenses increase considerably, the resulting net cash inflow decreases, thus weakening the company’s liquidity position.

5. The combination of decreased net cash inflow and the tax shield effect of debt capital pushes management toward increasing the debt-to-equity ratio. This, in turn, increases company risk.
A Case of Equity Erosion by Overtaxation

Income tax is usually levied on the profits reported in the conventional income statement. For a company whose assets are composed mainly of monetary items (and fixed assets in the case that they are not revalued for the computation of depreciation costs), and whose financing consists mainly of equity capital, the income statement will report overstated profit during a period of inflation. Thus, the company will be overtaxed—a situation that causes equity erosion. This phenomenon is illustrated in table 2.2 using the main items from the example of Company X in table 2.1 to create another simplified example: Company Y. The opening balance sheet and two conventional income statements under the same alternative scenarios, 0 percent inflation and 50 percent inflation, are presented.

Table 2.2. Equity Erosion by Overtaxation: Company Y

<table>
<thead>
<tr>
<th>Opening balance sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables</td>
</tr>
<tr>
<td>Equity capital</td>
</tr>
</tbody>
</table>

Income statements, two alternatives

<table>
<thead>
<tr>
<th>Inflation</th>
<th>0%</th>
<th>50%</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>500</td>
<td>750</td>
<td>1.5</td>
</tr>
<tr>
<td>Expenses</td>
<td>(400)</td>
<td>(600)</td>
<td>1.5</td>
</tr>
<tr>
<td>Profit</td>
<td>100</td>
<td>150</td>
<td>—</td>
</tr>
<tr>
<td>Income tax, 40 percent</td>
<td>(40)</td>
<td>(60)</td>
<td></td>
</tr>
<tr>
<td>After-tax income</td>
<td>60</td>
<td>90</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Preservation of equity (300 x 0.50) = 150

As can be seen from the income statement under the 50 percent inflation scenario, all items increased by 50 percent when compared with the no-inflation scenario. But this is only a partial picture. To compute an inflation-adjusted profit figure, a closing balance sheet is required, and the effect of inflation on balance sheet items must be considered.

If the after-tax income is retained (not distributed as cash dividends), it is added to the equity capital. Thus, the total net worth at the end of the year will be złoty 390 (300 opening value plus 90 retained earnings). To preserve the purchasing power of the opening equity capital, we must add
zloty 150 (opening value of zloty 300 times 50 percent inflation) to the opening value. In other words, the total net worth must be at least zloty 450. Thus, the level of equity capital, in real terms, declined by at least zloty 60 (450 - 390). This distortion is caused by the fact that income tax is levied on the nominal profit as reported in the conventional income statement.

Note that the pre-tax profit under the 50 percent inflation scenario (zloty 150) is just sufficient to cover the preservation on the real equity value. Even this amount does not leave any real profit, and then this sum is taxed.

Table 2.2 shows that inflation can lead to effects that are the opposite of those presented in table 2.1. The reason for this contrary outcome is the different composition of the capital and assets in the two examples.

**Summary**

The two numerical examples illustrate an important effect of inflation on conventional financial statements: the distortion of recorded profit. Depending on the structure of both capital and assets, this distortion may be up or down. When the company is financed mainly by debt capital (and most of the assets are fixed), the profit is understated. When the company is financed mainly by equity capital (and most of the assets are current), the profit is overstated.

Conventional financial statements—balance sheets and income statements—are distorted by inflation. Such distortion can mislead management as well as external parties who use the information provided by these statements.

Inflation distorts taxation, pricing, cash flows, and capital structure. Such distortions create a substantial amount of uncertainty that has a negative impact on the business community. The distortive impacts of inflation, as described earlier, relate mainly to financial statements that provide information on the company's past activities. These same distortive impacts of inflation should be taken into account in the evaluation of proposed new projects and investments.

Two suggestions for overcoming most of the damaging impacts of inflation are as follows:

1. Establish a standard for inflation-adjusted accounting, suitable for Poland, in order to prepare external reports.

2. Create procedures for inflation-adjusting accounting and financial reports in order to provide meaningful information to management.
When inflation is discussed, the best advice always given is to take the necessary measures to stop it. However, it is probably not very easy to stop inflation quickly, even with the best intentions. We have to distinguish between government policy and macroeconomics on the one hand, and the situation of the business firm on the other hand. When we talk about an enterprise, a company, or any business entity, we are talking about a microeconomic unit that operates within the economy and has very little effect on government policies and the macroeconomic variables. These variables must be taken as given, and the enterprise has to operate within the given environment. What must be done to successfully manage the financial affairs of a company in a high-inflation environment? In this chapter I will attempt to list the major phenomena resulting from the inflationary economic situation, and then I will discuss the action points that relate to practical issues that must be resolved.

What Are Companies Facing?

The phenomena that companies face are interrelated, but from the company’s standpoint each of them has its own consequences. The first one is the most obvious—prices change. Information as a basis for making decisions becomes obsolete very quickly. Decisionmaking is even harder when prices move at different paces. What companies face is a change in relative prices. Some of them are structural changes, especially in economies where prices of certain services and products, when they were centrally controlled, were completely unrelated to international prices. This is the situation in Poland: both the general price level and relative prices keep changing. This dual change affects you whenever you try to estimate current costs and set future prices or when you want to estimate future costs. The first issue is therefore prices.

The second issue is also a price, but it is a very special price because of its importance, and because it is much more affected by government pol-
The Managerial Aspects of Inflation

The rate of exchange of foreign currency. Government can decide to let the market set the exchange rate, to devaluate the national currency, or to support a fixed exchange rate, and later at one time to devaluate by a high percentage. There is a variety of policy options. The enterprise is not the policymaker, but it has to live with what the policymaker decides and does. The rate of exchange is therefore different from the other prices.

The third issue is the level of interest rates. Although in real terms interest rates may not change much, in nominal terms they can change a great deal. Let us assume a 10 percent real interest rate with an inflation of 100 percent. The annual nominal interest charge will be higher than the principal. And that is a huge number when it has to be interpreted, not in terms of profit and loss in real terms, but in terms of cash flows for the next period. The company has to pay this interest. Therefore, interest payments become a major issue in terms of their impact on the nominal cash flow.

The fourth issue is taxation under high inflation. The enterprise is taxed according to its nominal income, which is not necessarily the real profit. This may cause a confiscation of the equity investment. It can also provide a lot of benefits to companies that know how to use all the protection available under the existing laws. We are not talking about cheating; we are talking about using legitimate ways of avoiding tax.

The last issue is a result of all the issues mentioned earlier. They create a high-risk environment, and in an environment in which the uncertainty is great and the risks are high, companies must be cautious when making decisions that will affect them for a long period. In most circumstances, they will be reluctant to make long-term commitments, to make new investments, and to commit a high percentage of their available resources for any length of time.

In summary, five issues face companies in a high-inflation environment: changes in the general price level and in relative prices, the exchange rate, the high nominal interest rates, tax on nominal profits, and the increase in the risks and the uncertainty under which the company operates.

Action Points for Management in Inflation

High inflation creates a very hostile environment for business activities. And when operating in such a hostile environment, companies must try and defend themselves, and that means they must act differently than they would under stable conditions.

Cash Management. The first point is the importance of cash management. Because of the uncertainty and the high interest rates, companies must attempt to decrease their borrowing and to keep their assets-to-
Dan Mozes

turnover ratio as low as possible. You cannot change quickly the amount of fixed assets, but you can change the levels of receivables and inventories for a given level of sales. You have to make sure that you carry the smallest possible inventories and the smallest possible receivables at any point of time because keeping large inventories and receivables results in huge interest payments that may not affect the real level of profit but will affect severely your cash flow since interest must be paid. On the receivables there is an additional consideration. Because of the risky environment, not all companies do well. Smart companies may survive, but others will not. If you operate in an economy where many enterprises are on the verge of bankruptcy, or on the verge of insolvency, or about to stop operations or cease payments, and they owe you a lot of money, you are bound to be in the domino chain, and you may fall when they fall. To avoid the “domino effect,” you must be careful about how much credit you allow your clients, and you must put in place for receivables an aggressive, detailed, and up-to-date management system. First, you have to insist on a short payment period for your customers. Second, you have to fix a maximum amount of credit allowed to each customer and not allow any shipments beyond that limit. You have to monitor weekly the list of your receivables and make sure that the shipping department is not shipping any products to customers who reached their limit or who are late in their payment, even by a few days. Otherwise, you will be in the “domino chain,” and when the first piece falls, you will find yourself falling with the others.

If a company has to stop supplying some of its customers, and it does not adjust right away the rate of manufacturing, it will end up with large inventories. Large inventories, just like large receivables, affect the total requirement for working capital and therefore the level of interest expenses. Up-to-date daily or weekly coordination is needed between finance (which deals with the collections), marketing or sales (which deals with the shipments), and manufacturing. A company should not keep manufacturing just for inventory or keep supplying just for the sake of recording sales if it cannot properly collect the revenue.

Cash-Based Budgeting. The second point is the importance of a company’s cash position. Cash is the blood in the arteries and veins of a company, but it can live for a long period without making a profit. And if you use a nominal system of accounting, you do not know anyway the level of your real profits. You do not even know if you are profitable or not. So why bother so much about profitability; you should bother more about your cash position than about your profitability. You can live for quite some time even if you lose money, as long as you are liquid enough, as long as you can pay your bills, and as long as you have the money to pay
wages. And you can evaluate your profitability in accounting terms a little later on. By the way, if you are liquid and you increase your cash instead of decreasing it, you probably are also profitable. But because of the distortion in the nominal numbers, and because of all the problems discussed before, what really counts is cash, and cash is nominal.

The company must prepare plans and monitor plans by performance reporting based on cash for very short periods. When annual inflation is 100 percent or higher, budgets must be prepared on a monthly basis for a whole year and then revised every quarter. The numbers in nominal terms change so quickly that the numbers for June that were prepared in January may be way off. If the budget for June is prepared in April, it is more likely that there will be some relationship between the plan and reality when budgets are compared with actuals.

The most important aspect in the planning is to have enough money to meet payments and never reach a situation that obligations cannot be met. Some obligations can be postponed, but others must be met, and when the economy becomes more free-market oriented, default on payment commitments may lead to bankruptcy. This is the great danger of not being liquid in a market economy. Nobody will take you to court for not making a profit, but you may be taken to court if you do not pay your bills.

Budgeting should be done on a cash basis and very frequently. In certain lines of business that handle retailing of consumer products or perishable products, there may be a need to budget on a weekly basis. If the products are more durable, budgeting may be on a monthly basis. Definitely it cannot be on a quarterly basis; this is too long a horizon for planning and monitoring in an inflationary economy.

Reporting should be in the same cash terms as budgeting. You don't have to have a sophisticated, fully computerized, and graphics-capable information system. This comes later; it is nice to have but not essential. The essential element is to have basic indicators that relate to cash flows as soon as possible after the end of each month. And the most worrying reports would show that you collect less than your sales. Although one may be excited about the increase in sales, if you do not quickly increase your cash receipts, the increase in sales may be a very bad sign, not a good one.

Cash-terms reporting for the same short periods used for budgeting is essential when managing day-to-day operations in an inflationary environment. Because we are talking only about cash and not about physical assets or inventories, it is much easier to have these numbers available a few days after the month is over. The nice numbers that come from accounting and involve going to the storerooms, counting inventories, and putting value on them take two to three weeks at the least. Do not bother
about them; first, take your cash budgeting and your cash flow actuals and compare them. They are the basis for decisions that relate to survival with enough liquidity in the hostile inflationary environment. So this is the most important tool, which by the way is easier to implement than accounting adjusted for inflation, and it may be much more meaningful in the short run.

**Contracts and Prices.** The next point relates to contracts and prices. When the company is selling its products, it must make sure that the prices reflect today's prices of inputs and today's requirement for profit and not yesterday's numbers. If you sell at prices based on previous input prices, you may have to shrink production because of lack of working capital. Pricing must be based on replacement cost for labor inputs and for material inputs, so that the company can finance the next production cycle in the same quantity or volume from its sale receipts. Otherwise, the company will start losing the real value of its working capital, and it will have to shrink the volume it can manufacture and sell.

From this point of view, the most dangerous kind of sales are long-term contracts. In a stable economy, if you have a buyer who is willing to commit himself to certain quantities for certain future periods, you have a better position because that saves a lot of marketing and selling expenses. If you have one contract that covers 20 percent to 30 percent of the production capacity at a decent profit, it will keep you going with high sales and production volumes. But under inflation and under changes in relative prices, long-term contracts may be very dangerous. If exchange rates do not move while local costs soar, and if you have local expenses but receipts in foreign currency, you become very vulnerable. If the energy component, the prices of which are government controlled, constitutes an important cost element (and therefore you expect a higher than average increase in the cost of these inputs), you may be taking your company into a very dangerous situation. Under stable conditions, a long-term sales contract or long-term supply contract are a good way to deal with uncertainty, to decrease transaction costs, to support a high volume of operations, and to increase efficiency. But such a contract may be very dangerous in inflation, especially in high and volatile inflation, and even more so in inflation that together with the transition situation causes changes in relative prices of certain raw materials and services. There is no easy solution to these problems. One way to decrease exposure when you make long-term contracts is to always have escape clauses, to provide for price revisions quite often, and to have the price adjusted to certain relevant price indexes. But even if you have all the safeguards provided by price revisions and so on, you should also have escape clauses that say that if conditions change the whole contract can be renegotiated.
Long-term commitments may look good because they give the company a market or source of materials for a long period. Under inflationary conditions, such commitments may be a trap. You want to have the order, you want to keep the customer, you want to have the certainty about quantities. But you must not be caught with prices that grow at a slower pace than the cost of your inputs. Be sophisticated and careful when entering long-term contracts.

**The High Cost of Money.** From a discussion on pricing, we can proceed to the problem of the high cost of money. This reflects back on what I said before. You have to keep your working capital needs as low as possible to avoid the huge expense of high nominal interest rates. The very high nominal interest expense translates into a real interest rate that may be reasonable by international standards. But there are two issues that we have to remember.

First, when you borrow for a short term and interest rates are fixed at the beginning of the period, you may be surprised at the end of the period. The banking industry adjusts itself to inflation, but it takes time. Therefore, when the inflation rate goes up, the level of nominal interest rates increases, but the real interest rate remains low or is negative. Let us consider some examples. Nominal interest rates are the rates paid to the bank; the real interest rate is the rate paid divided by the rate of inflation. If the inflation rate is 100 percent, and you pay 100 percent nominal interest, the real rate of interest is zero. If the previous inflation was 100 percent, and you agreed to borrow money for 100 percent and at the end of the period actual inflation was higher, let us say 120 percent, you got the loan for 9 percent negative real interest. But what happens when inflation slows down to only 50 percent. Then the real interest you paid is very high. When you borrow, you do not know the real interest rate you are committed to pay. The fact that the interest rates for short-term borrowing are fixed at the beginning of the term and do not reflect what really happened during the duration of the loans creates this risk. Therefore, when inflation picks up speed you get a bargain, but you pay dearly when inflation slows down.

**Exchange Risks.** This takes us to a second question. Is it better to borrow in local currency or in foreign currency? Sometimes it may be advisable to borrow in foreign currency because the interest rates, when quoted for a foreign currency loan, are much lower. But then there is the risk of devaluation. And there is a tradeoff between the risk of paying a high nominal interest rate and the risk of being caught by devaluation. This discussion links the issue of high interest rates with the issue of foreign exchange rates. If the company only does business locally—you sell locally, you buy locally, you employ local labor, you have little relationship with
firms abroad, you have little or no revenue in foreign currency and hardly any direct expenses in foreign currency—then, of course, the only reason to borrow in foreign currency is speculation. You speculate that by the time the loan is paid back, you have paid less than you would have paid if you had taken the money in local currency and paid the high nominal interest.

The risks are smaller for an exporter who borrows part of his money in foreign currency because some of his future income, or let us say a high percentage of his future revenue, is in foreign currency, out of which he can always pay his foreign exchange loans. Therefore, an exporter borrowing for his working capital in foreign exchange is not creating high risk because he has revenue in foreign currency that covers the risk of devaluation.

When you are dealing substantially with foreign currency, you usually have foreign currency assets—money that customers owe you and inventories of imported goods. You also have foreign exchange commitments. These commitments include debt to the banks, and they also may include commitments to manufacture and to ship certain goods for a fixed price in foreign currency. So you have assets and liabilities, you have other commitments and other inflows, and what you must watch very carefully is the net exposure to the exchange rate.

To gain from foreign currency exposure, you must review daily or weekly your net exposure to foreign exchange and adjust it according to your evaluation of the risk of immediate devaluation. The art of doing it is complicated, but you can gain if you succeed in correctly evaluating and predicting the government policies, decreasing substantially the exposure in foreign currency when the risk of devaluation is substantial, and increasing your commitment in foreign currency (and at the same time decreasing your nominal interest payments on local borrowing) when you expect the government to keep the exchange rate fixed. You take advantage of what the government is doing; there is nothing illegal about it. There is a relation between the high cost of money, the risk of devaluation, and the exposure on foreign currency you want to take.

TAXATION. Now we come to taxation. Taxation can eat up the real value of the company’s equity, but all nominal taxation laws also provide opportunities to avoid this situation. For example, certain assets keep their real value and still do not create a taxable income. If you have, let us say, fixed assets that increase in value, their appreciation is not considered an income. In one country I know, the government issued bonds with both principle and interest linked to the cost of living. The nominal appreciation of these inflation-safe investment instruments was not considered taxable income. So you could protect yourself against inflation without
paying tax on the value appreciation of these assets. On the other hand, all other current assets, such as inventory when recorded as increased nominal sales, created bigger nominal gross margin which are taxed. So what did companies do? They placed all their equity, in order to protect it from inflation, in government bonds; then they took these government bonds to the bank as collateral and borrowed money at high nominal interest rates to cover their working capital needs. In this way they incurred large interest expenses for income tax purposes, and their real income was sheltered by the increase in the value of the bonds. Thus, they succeeded in avoiding most of the nominal taxes. The same can apply to buying real estate and mortgaging it as collateral for working capital loans.

Although high nominal taxation creates a tendency or an incentive for people to cheat on their taxes, a lot can be done in a completely legitimate way by exploiting the tools that the government provides within the tax laws. Of course, there is a lot to be said against spending a lot of the company’s time and energy on trying to avoid the taxation of nominal profits, but the environment is hostile, and a company has to defend itself. In most countries, companies can defend themselves against high nominal taxation by using all the tools that are available within the tax laws, provided proper actions are taken. This is a major issue that financial executives must consider. If you ignore the tax situation, you will pay taxes on profits that never existed and face the danger of eroding the real value of the company’s net worth.

**Nominal Profits.** A company will show high nominal profits if it does not pay a lot of interest, has a relatively high ratio of equity to liabilities, and is managed properly. These profits are not real profits—they may be less than what is needed just to keep the real value of the equity—but they are the numbers shown on paper, and most people believe in numbers they see on paper. Many interested groups, such as the shareholders or the unions, will say that because you have done so well this year, you should pay higher dividends or increase wages. The financial executive knows that the company needs this money and that if the company increases the labor cost by a certain percentage, it will be in bad shape in the competitive markets, especially if it has to sell in the international market.

What can be done? One solution is to adjust the accounting to show real profit instead of nominal profit. This way the workers, the unions, and the shareholders see meaningful numbers, and they do not think the company is making a lot of money that it is not really making. From the points of view of public relations, shareholder relations, and labor relations, it is very important to have an adjusted accounting system, and not to give these groups the illusion that the company is making money, prompting everybody to ask for their fair share.
NEW INVESTMENTS. Let us turn now from the problems of day-to-day management to other responsibilities of the chief financial executive of the company. We will consider investments and the evaluation of the value of the company.

The characteristics of investment are that you spend a lot of resources today, mainly capital but also managerial time, intellectual capability, management focus, and labor training; there is a lot going on when you are involved in substantial investments. And investment decisions will affect the company for a relatively long period. The theory is very simple: you make cash flow projections in real terms, avoiding inflation, and calculate the present value at the real cost of capital arriving at a positive or a negative number for net present value.

But what are the pitfalls when you make the evaluation under very high inflation? The first pitfall is wrong assumptions about relative prices. If you are wrong on the relative prices, you may be doomed. The reason is simple. Assume that you are evaluating a project immediately after the last big devaluation, and you take the prices of labor and the prices of energy, and the prices of materials, and then you check what the price of your product will be in the West German and North Italian markets and come to the conclusion that you found a very good project, and the investment will have a large positive real net present value. The company then invests a substantial percentage of its resources in a new production facility for the promising new product. The problem in this example is that energy prices are still below international prices and within the ten years of the project’s life, the price of energy will probably increase relative to the price of other inputs and relative to the international prices of your products. Therefore, if energy is now 10 percent of your expenses, it may become 25 percent in the future, thus eating up all your projected profit.

We assumed that the evaluation is made immediately after a big devaluation. Later on, after the company makes the decision to invest, prices may go up 25 percent with no devaluation to compensate for it. So we have to guess: When is the next devaluation due, and how big will it be? If we draw a line describing the price level against time, inflation will be in the form of a relatively smooth curve (see figure 3.1). With a fixed rate of inflation, we get a smooth curve. The rate of exchange will look like steps; at each devaluation we climb one step. In the very long run, inflation and the exchange rate may reach the same level, but your evaluation takes
place at a specific point, and the current relationship between local prices and the exchange rate may be very different from the long-run average.

There is a real danger of overestimating the local currency real value of your foreign exchange receipts. This is a major problem, and I do not know any solution, except to be careful and evaluate the project under different assumptions. Make a sensitivity analysis assuming the worst possible conditions. If the last devaluation was two months ago, check the project with the relative prices of three months ago. You have to be on the alert because the sales people are advocating the project, and the general manager wants to bring to the board a big investment program that is export oriented. And in a government-owned enterprise, the general manager would like to tell the Minister about a big project that is going to really help the country solve its foreign exchange shortage. Everything looks great, except for one thing: all the calculations may be wrong. Unfortunately, the bad guy in the company is always the financial executive. He has to stand up and say, “Wait a minute. It is nice to have a project, it is nice to export and earn foreign currency, but let us not bring our company to bankruptcy.” And if you are the financial executive, you have to be the bad guy, and you have to make the careful evaluations.
EVALUATION OF COMPANIES. Evaluating companies is the name of the game in Poland. Because of privatization, corporatization, and issuing the shares of companies on the stock exchange, everybody is in the process of evaluating companies. In theory it is very simple. You take the monetary items on the balance sheet, you take the liabilities, and you take the monetary assets. You evaluate the quality of the receivables and the value of the inventory—relatively easy issues to deal with. Then you evaluate the adjusted values of real assets. By subtracting the liabilities from the assets, you derive the book value of the company. We also know other methods of evaluation. We use future estimated cash flows. We cannot use inflationary cash flows because they will bring ridiculous results. So we use fixed prices and adjust only for expected changes in relative prices, and we project real variables in today's prices. This evaluation is very elegant and can be done relatively quickly, but it ignores two important issues.

Doing the evaluation in real terms is the right approach, but there are two issues that cannot be ignored: (1) the high rate of nominal interest, which affects the cash flow, and (2) the effects of nominal taxation. If you ignore the effect of the nominal interest rate and taxation, the evaluation of the company will be incorrect. It is very difficult to predict the rate of inflation, and therefore the impact of taxation and interest on the real flows of the company. The valuation of companies is not an easy job.

In short, managing the financial affairs of a company in a highly inflationary environment requires skill, good planning and reporting, and sensitivity to the changes in economic conditions.
Thus far in this analysis the impact of inflation on the management of enterprises has been discussed. Yaaqov Goldschmidt presented an explanation of how high inflation affects reported accounting numbers. He suggested that a fundamental prerequisite for proper interpretation of accounting numbers is the use of the same unit of measurement for every period when preparing operating reports. All of a company’s reports may be denominated in zlotys, but it needs to ensure that one zloty represents the same amount of value or purchasing power in each period. Otherwise, it might as well use dollars one year, deutschmarks the next, and French francs the third year, and then try to analyze the trends over time without adjusting for the different currency units. It cannot be done legitimately with multiple currencies, and it cannot be done with zlotys that have different values each period.

Economists sometimes say that when inflation is high, managers need to look at the underlying economic cash flows of the enterprise more than at the accounting numbers and the way they are recorded. There is an element of truth in this view; economic cash flows are critical elements of financial viability. Even then, however, accounting data are a primary source of reasonably objective information about how the company is operating. Therefore, we should not ignore accounting numbers but, as Yaaqov said, we have to make very certain that we understand exactly what they mean before we try to use them.

Dan Mozes has explained very eloquently the problems caused by inflation from the perspective of the financial manager of the corporation. I will return to this theme shortly, but first I would like to present some ideas about the impact of high inflation at the level of the capital markets.
Capital Markets

Capital markets, or financial markets as they are sometimes called, are important transmitters of economic information that increase both the efficiency and the flexibility of commercial activities within a country. One of the pressing tasks in Poland today is the creation of an efficient capital market. The Warsaw Stock Exchange is one component of such a market and is a step in the right direction. The hope and, I think, the expectation are that over time this stock exchange and similar markets for debt capital will develop into major sources of economic information. This information will be generated by market participants who, through their buying and selling activities, signal their evaluation of economic phenomena as these relate to enterprises.

Capital markets also serve as financial buffers within an economy. They allow corporations and individuals to borrow and lend (invest) in order to break the linkage between the pattern of earnings or wages and the pattern of their usage or consumption. This breaking of the direct connection between wages and consumption is a very significant attribute of capital markets, an attribute that increases the value of economic activities. It also allows for the separation of ownership and management without damaging the economic efficiency of commercial activities.

Who uses data from this marketplace? The answer is many people. Suppliers of equity (or ownership) capital as well as suppliers of debt capital (banks, individuals, insurance companies, and other enterprises) rely on capital market signals. Information from the capital markets is used in deciding questions such as: Do I want to allocate my limited resources to this or to some other use? If I take this action, will I make a profit or lose money? Should I borrow in deutschmarks or French francs?

An enterprise’s suppliers and customers also look at the capital markets for information in order to evaluate the enterprise and answer questions such as: Do I want to buy from this company? Will it be around for the long run so that it will be a reliable supplier? Do I want to sell on credit to this company? Should I price my goods as if we will have a long-term economic relationship, or is the relationship more likely to end quickly?

It is easy to see why a supplier would like to know the financial condition of a customer before extending credit. But often it is also necessary for the customer to know something about the supplier. To show how important these questions may be to a customer evaluating a supplier, assume that you are planning to fly to the United States, and you have a choice of airlines. If Airline A offered the cheapest ticket, would you fly it? I do not know about you, but some people might be hesitant to buy an Airline A ticket. Airline A is now in bankruptcy (as several other airlines are), and the market is not convinced that it will survive. Thus, it might not
be in business when you are ready to return to Warsaw. You might be in
the United States and read that Airline A has ceased operations. Your
ticket to get back to Warsaw might then be totally worthless. This example
demonstrates that before making purchasing decisions, customers need to
know something about the financial viability of suppliers. Capital markets,
and their reaction to information about companies, are very important
sources of relevant data for many participants in a market environment.

Let us now look at the impact of inflation as it relates to the capital
markets and the activities of investors and managers who are reacting to
that inflation. How a capital market works can be explained fairly easily in
terms of two different dimensions: the return that an investor would ex-
pect to earn from an investment in financial assets and the risk associated
with that investment. Let us consider what I would call the first fundamen-
tal theorem of finance:

Never take a risk unless you receive adequate compensation for taking it.
The higher the risk, the higher the compensation—in the form of higher re-
turns—you should demand. The tradeoff between risk and return will be an
upward-sloping (curve) as shown in figure 4.1.

Figure 4.1. The Return-Risk Tradeoff

Whether the return-risk relationship is a straight line or a complex
nonlinear function is not terribly important for our purposes here. The
only thing that matters is that, in general, the slope is upward from low to
high risk. In addition to the upward slope, notice that at a point represent-
ing no risk in the investment (where the curve crosses the vertical axis), we
still demand a positive return, designated as $R_f$. 
Why would an investor demand a positive return when there is no risk? Yaaqov Goldschmidt mentioned that the return we demand in the marketplace is a function of several things. He gave an example where the no-inflation scenario had a return of 5 percent in order to compensate investors simply for postponing their consumption until later and forgoing the current enjoyment of that consumption. This is called the real (no inflation) risk-free return, or the pure time value of money. He then added a 50 percent inflation premium in the second example. Therefore, in this case, we must earn a 50 percent return just to stay even in terms of purchasing power. Then we need an additional 5 percent to compensate for postponing consumption (as in the first case).

The Effect of Inflation on the Capital Markets

What has this to do with our return-risk tradeoff? As shown in figure 4.2, higher inflation pushes the curve upward even when risk is absent. The higher the inflation, the higher the vertical intercept of the curve. Assume now that there is an expectation in the marketplace that inflation is going to be 30 percent. The Government Statistical Office then reports other information. Investors evaluate it and decide that inflation is not going to be 30 percent; it is going to be 40 percent. Based on this reevaluation, investors demand a higher return, and the entire curve goes up.

Figure 4.2. The Impact of Higher Inflation

What does it mean for the curve to go up? For some level of risk, the cost of capital—the return we have to pay to use money—is going to go up as inflation increases. Interest rates will be higher for debt, and the rate
we have to pay (or to promise) our shareholders—the owners of the company—in order to get the use of their monies also increases. Thus, the enterprise must have higher earnings to cover its higher capital costs. This vertical upward shift of the return-risk curve is the first effect of higher inflation on the capital markets. Obviously, if inflation expectations decrease, the curve shifts downward.

Recall the Samuelson matrix that Itzhak Goldberg presented in table 1.1. The bottom righthand quadrant was labeled “unanticipated inflation,” and it was “unbalanced.” Balance means that the prices charged by your suppliers (your costs) and the prices you charge your customers are going up together, so you really do not feel the impact of inflation. If inflation is unbalanced, costs and prices do not increase at the same rate. Some market participants will realize higher profits because of the imbalance, but others will have lower profits or none at all. This creates serious financial problems and reduces the economic efficiency of the country.

Similarly, if we do not anticipate inflation correctly—for instance, if we think it is going to be 50 percent and it actually turns out to be 55 percent—then we have a redistribution of wealth in addition to the reduction of economic efficiency. This is one of the things that causes uncertainty or risk—an inability to forecast accurately the inflation rates for our costs and prices that could reduce our wealth if we guess wrong.

People do not like risk, and they try to avoid it if they can. Today in the Polish economy you can see changes everywhere. There are many significant uncertainties. Managers are often afraid of change; it is the unknown; it is risky. The least risky course of action is to go back into our comfortable little shells where we know how to operate and to interact with the world. We are comfortable in our shell; we may not be as rich as we could possibly be, but at least we are not threatened. But taking prudent risks is the essence of entrepreneurship, of good management, of capitalism itself.

To convince people to take on more risk, you must pay them a higher risk premium. This truism was called the first fundamental theorem of finance, and it leads to the second impact of higher inflation on capital markets. In addition to the vertical shift in the return-risk curve, the slope of the curve may get steeper. In other words, you may have to pay more per unit of risk, as the level of risk in the economy is perceived to increase (see figure 4.3). All of these inflationary impacts are very difficult to estimate. This causes higher uncertainty, and people interpret it as involving higher risk. When the slope of the curve gets steeper, we need an even higher return per unit of additional risk. Therefore, investor demands for a high-risk premium will go up, and the enterprise will experience a double impact on interest rates and on required rates of return on stock.
Figure 4.3. The Impact of Higher Inflation and Higher Risk

Coping with Inflation

As managers of enterprises, how might you be able to cope with some of these problems? It is incredibly difficult in an inflationary environment to do the forecasting that is necessary for good financial projections. If you conduct a real analysis, you ignore some of the nominal impacts of inflation on taxation and interest. If you do a nominal analysis, you have a whole different set of problems. The difficulty is in trying to forecast with the needed degree of precision. My philosophy is that if your ability to forecast is no better than you can do by flipping a coin, perhaps you should not spend too many resources forecasting what might be random numbers. Instead, you should try to manage the firm without having to rely so much on these forecasts.

The last point made by Dan Mozes is very insightful. He mentioned that you do not need to know your profit in an accounting sense all the time. Instead, you should look at your cash flow and at those activities or items that are important for survival in the long run. In this way you can get some very important signals.

In implementing this strategy, you should frame the management problem in terms of concepts that are equivalent to return and risk, but do it in a way that avoids the need for accurate quantification. For example, as a manager, you might forecast your return to be 42.3 percent. But that estimate is probably highly uncertain, and it may have little if any economic significance. Maybe what you need to do is to move your com-
pany in the right direction without having to worry if it is 42.3 percent or 50 percent or something else. In other words, in a period of great uncertainty caused either by inflation or by something else, what you need to do is to shift to a management strategy where you look at the underlying determinants of return and the underlying determinants of risk, and then try to focus on managing those determinants in a broad, perhaps even nonquantitative way, but which move you in the right direction.

Moving in the Right Direction

Let me describe how you might be able to move in the right direction to create value in an enterprise.

*Return* and *Risk*—in finance and economics these words are associated with numbers. Because it may be very difficult to come up with reasonable numbers when inflation is high and uncertainty is significant, I want to use different terms for these concepts—terms that do not have that same numerical connotation. Instead of return, let us focus our attention as managers on the potential of our enterprise, the potential that we could have a very high return if we manage it correctly. Risk is negative. As managers, what we need to do is to manage that risk. So, instead of focusing on risk, let us look at the resilience of the enterprise. The resilience of the enterprise is its ability to withstand shocks from the economy, to bounce back, to survive in the long run—in other words, to manage effectively whatever risk exists. If we divide return and risk into these two components, then we can start to say, I want a high return, how much potential do I have? I want to minimize and then manage risk to the extent possible, so how high is my resilience?

We can divide potential into two dimensions: innovation and implementation. First, how innovative are the people who work for this enterprise? Does the enterprise have good research and development capability? Does it have people in management who see an opportunity for generating a profit and then find a way to exploit it?

In the summer of 1991 I was at an electronics company in one of the eastern European countries other than Poland. This company manufactured stereo systems, tape recorders, testing equipment, and similar products. It was very proud of itself because at a trade show in Germany one of its engineers had discovered that the primary supplier of hand-held fire extinguishers in the Warsaw Pact countries was an East German company. After the consolidation of Germany, its costs had gone up 400 percent. The engineer said, “Aha! We have the machine shops, and I bet that we can make these fire extinguishers and sell them at a cheaper price than the German company because our cost is going to be less.” He went back to his company, and in less than a week it had designed a hand-held fire extinguisher. In less than a month a working prototype was ready, and the
company was shopping it around to potential customers. In a few months the company had a tremendous order book. Its sales increased dramatically; it did not need to lay-off anyone, and it even employed new workers.

This is what I mean by innovation—finding new ways to make money even when it is not in your usual line of business. How innovative is your company, not only in isolation, but relative to all of your competitors? If you are the most innovative company in the industry, you may not be able to quantify that fact, but you are probably going to be better off than your competitors.

Innovation is necessary, but it is not sufficient. You must also be able to take an idea from conception through product design to manufacturing. This is the implementation factor. Do you have the capability, the capacity, to move an idea from the drawing board to the product shelf? Do you have access to the raw materials at a reasonable price? Do you have access to the technology that you need to do it competitively? Do you have the skills and the trained and educated employees that are needed to do it efficiently? Do you have the management expertise and the accounting systems necessary to manage it properly and to make sure you are staying on the right track? Again, you can compare yourself to others in the industry, and, even if you are doing this on a qualitative basis, you can position yourself relative to the competition.

You can start to think about what it is going to take to get your products to the market and how much you think that you can make on them. But before you start to quantify these feelings, you should ask the right questions as managers. What can I do to create a product that has high potential returns? Can I really bring it from conception to market? Do I lack resources? Do I have to fill in some things? Unless both of these factors—innovation and implementation—are present and relatively strong, you will never realize your potential and you will not generate high returns.

On the risk side—resilience—there are also two factors: the reaction factor and the reserve factor. Unlike risk, which has a negative connotation, resilience has a positive connotation. We want high resilience, or the ability to bounce back after suffering stressful shocks and losses. This is the reaction factor. You will confront challenges in the environment. You will face threats. The question is: How much flexibility do you have to isolate damage and protect your company against the external threats?

Dan Mozes mentioned several things that are defensive in this regard. If you have long-term contracts with proper price adjustments instead of having to rely on customers coming through the door, you build in value. If you manage your foreign exchange effectively so that you do not get
caught in a negative position, this is reaction. How can you structure your operations so you will get warning early that one of your products is going down? It is going to have a negative margin very soon, and probably it is a good candidate for shifting resources out and into one of the higher growth potential products. How much flexibility do you have, as manager, to confront environmental challenges, to react to them in the short run, and to engage in damage control? You need to minimize the damage from environmental threats while taking advantage of any opportunities that come along. This is the first dimension of resilience.

But in spite of your best plans, in spite of thinking ahead and having great flexibility, occasionally a worst-case scenario happens and you are going to say, "I am in big trouble!" How much reaction capacity do you have in reserve? How much liquidity do you have? How much money do you have in the bank to draw upon in the short run to survive and to give yourself breathing room? Are you able to use your flexibility to get out of the threatening situation? What if you owe money to your suppliers, and they give you an ultimatum: pay within twenty-four hours, or we cut you off. If you have no money or other source of liquidity in the short run, you may have to shut down your operations and go out of business. Having resources that you can draw upon in an emergency such as this is what I mean by the reserve factor.

In the West, one of the primary reserve components is unused borrowing capacity. Do you have a relationship with your bank or with some other financial institution where you can get access to money very quickly? Efficient capital markets are vital. In Poland, relationships like this need to be developed or, if that is not possible, companies are going to have to take management decisions that increase their reserves. Remember, if something threatening happens to your company, you have to survive the short run before you can enjoy the long run.

My suggestion to you is to look carefully at your enterprises. Ask how much innovation they have. Can they be more innovative? What can they do to take advantage of the opportunities in the marketplace? Do they have the resources and capabilities to implement these ideas once they come up with them? If they are lacking, how can they correct the deficiency? If they are strong in these areas, they probably have high potential and that is going to lead toward a high rate of return. On the risk side, ask questions such as the following: Do we have the flexibility? Can we adjust to minimize damages and position ourselves to take advantage of opportunities? Can we survive the short run to enjoy the long run? If we can adjust quickly to environmental threats and have the reserves to survive in the short run, we will have lower risk and thus higher value.
Where does inflation fit in? Inflation tends to erode the profitability of certain types of operations. Inflation probably affects the potential side even more than the resilience side. But inflation management can be very expensive. The amount of management time and activity expended on creative ways to get around the problems caused by inflation is not a productive use of resources for the economy. If you have high inflation you must engage in these activities to survive, but really the best solution is to get rid of the inflation.

Let me close with an example of the type of activities in which management engages in order to get around rules or to get around inflation. In the United States, the Financial Accounting Standards Board, the rule-making organization that sets financial accounting standards, came up with a procedure that companies with foreign exchange-denominated accounts had to follow in translating them from the local currency into dollars. This required procedure was called FAS No. 8, Accounting for Foreign Currency Translation Gains and Losses. It had enlightened aspects, but it also had one requirement that managers considered to be very threatening. It required that they recognize immediately any foreign exchange paper losses in the income statement, thereby increasing the variability of reported earnings.

Managers probably disliked and commented more negatively on this standard than on anything else the accounting profession has done since the invention of double-entry bookkeeping in 1492. We now have FAS 52 that replaced FAS 8 and dropped the objectionable requirement. This change was made because, regardless of the merits of the FAS 8 technique, companies expended millions of dollars to play games with the accounting statements in order to cancel out what were totally phantom accounting losses.

Managers do expend scarce resources in an attempt to get around such perceived threats, and inflation operates in exactly the same way. So getting rid of the inflation is the key. In the meantime, go back and start asking questions like the ones suggested above. Even if you cannot completely quantify your answers, at least point yourself in the right direction. Then manage your cash flow very carefully to make sure you have enough in the bank to pay your bills as they come due and creditors do not throw you into bankruptcy. This is more of a short-run survival strategy than one for maximizing long-run value, but until the inflation problem is overcome, it is probably appropriate.
Accounting and Inflation in Poland

Alicja Jaruga
University of Lodz

The changes taking place in Poland and in other central and eastern European countries mean a comeback of the free market economy and require changes in accounting practices. Accounting in centrally planned economies was treated as an administrative instrument for monitoring the implementation of central plans by state-owned enterprises, and for computing nominal profitability for the purpose of determining the enterprise required contribution to the state budget.¹

With the transition from socialism to market economy, accounting is seen more and more as an active instrument of economic calculations as well as an internationally understood business language facilitating the role of markets in economic coordination and growth. Some of the most important accounting concepts are the concepts of maintaining the real value of capital and of income determination under inflation. Since 1989, Poland has experienced a high inflation rate. Both a rise in the general price level and changes in relative prices have taken place (see table 5.1).

Conventional accounting is based on the nominal historical cost concept, and many accountants still believe in the “absolute truth” of nominal accounts. In Poland, all inflation adjustments of accounting records are regulated by the state agencies in order to maintain uniformity and objectivity. There were several periodic updates and value adjustments during the past forty-four years. Their emphasis was on fixed assets revaluation.

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Table 5.1. Price and Cost Indexes, 1985–91

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed assets price index, machine prices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index</td>
<td>100</td>
<td>120</td>
<td>164</td>
<td>277</td>
<td>828</td>
<td>5,501</td>
<td>6,904</td>
</tr>
<tr>
<td>Annual percentage change</td>
<td>20</td>
<td>36</td>
<td>68</td>
<td>199</td>
<td>564</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of living index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index</td>
<td>100</td>
<td>117</td>
<td>147</td>
<td>233</td>
<td>841</td>
<td>5,515</td>
<td>9,431</td>
</tr>
<tr>
<td>Annual percentage change</td>
<td>17</td>
<td>26</td>
<td>59</td>
<td>261</td>
<td>556</td>
<td>71</td>
<td></td>
</tr>
</tbody>
</table>


Fixed Assets Revaluation, 1945–91

The first revaluation of fixed assets took place in 1948. It was concerned with prewar fixed assets recorded in 1938/39 in old zloty. The fixed assets value was increased eighty times.2

The second general revaluation of fixed assets followed a general stock taking in 1960. The adjusted values were incorporated into the balance sheets on January 1, 1961, based on current prices as of July 1, 1960, and adjusted depreciation. The revaluation difference was to be recorded as an increase in the Statutory Fund.3

The third revaluation of fixed assets started with a general stock taking in all state-owned enterprises on July 31, 1982. The General Statistical Office provided enterprises with specific price indices for given groups and subgroups of fixed assets based on the replacement value as of January 1, 1983.

With this revaluation the average value of all fixed assets in the Polish economy increased by about 310 percent.4 The gross book value of buildings increased by 402 percent and of machines by 130 percent.5

In one state enterprise we studied (Enterprise M), the gross book value of fixed assets increased from Z1,317 million to Z4,165 million, bringing

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3. Zarządzenie Ministra Finansów z dnia 12.11.1960r. w sprawie zasad wprowadzania do ksiąg przecenionej wartości środków trwałych, Monitor Polski nr 86, poz.393.

4. To clarify the terms used: If a price was Z1m (100 percent) in t1 and is Z3m (300 percent) in t2, the increase was 200 percent and the multiplier is 3.

the average general increase to 216 percent (see table 5.2). The increase in depreciation charges was deferred for four years according to regulation specified in an anti-inflation program.

**Table 5.2. Revaluation of Fixed Assets, 1982: Enterprise M**

<table>
<thead>
<tr>
<th></th>
<th><strong>Value multiplier</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Gross book value</strong></td>
<td><strong>Depreciation</strong></td>
</tr>
<tr>
<td>Buildings</td>
<td>4.42</td>
<td>5.14</td>
</tr>
<tr>
<td>Machines (energy)</td>
<td>3.80</td>
<td>3.76</td>
</tr>
<tr>
<td>Machines (general)</td>
<td>1.95</td>
<td>3.05</td>
</tr>
<tr>
<td>Machines (specific)</td>
<td>2.87</td>
<td>3.36</td>
</tr>
<tr>
<td>Equipment</td>
<td>2.07</td>
<td>2.21</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>2.57</td>
<td>2.68</td>
</tr>
</tbody>
</table>

The fourth value adjustment of fixed assets took place in 1987 based on replacement prices for the end of 1986. The General Statistical Office provided group indices.  

Adjusted book values were incorporated in the balance sheet for January 1, 1988. The increase in depreciation charges was deferred for two years.

In our case study of Enterprise M, the gross book value of all fixed assets rose from Z4,694 million to Z9,113 million, an increase of 94.6 percent, and depreciation was increased by 112 percent.

The fifth and highest adjustment of fixed assets was done on January 1, 1990, the first year of the transition from a centrally controlled economy to a market-based economy. Group indices were provided by the General Statistical Office.

In Enterprise M, our case study, the updating resulted in the gross book value increasing from Z10,393 million to Z132,039 million, an increase of 1,170 percent; depreciation increased from Z5,657 million to Z80,793 million, an increase of 1,328 percent; and the enterprise had to pay four times higher dividends to the state budget.

Another general value adjustment or updating of fixed assets took place on January 1, 1991. It was based on the estimated replacement prices for September 1990, as provided by the General Statistical Office, establishing indices for groups of assets. Enterprises could use current

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prices, if available to them, instead of the adjusted value according to the indices. In Enterprise M, the adjustment multipliers were 2.77 for gross book value and 2.84 for depreciation.

**New Regulations**

In March 1992, the Ministry of Finance promulgated a new system concerning fixed assets recognition and valuation. The system requires up-to-date valuation adjustment. The preferred method is item-by-item adjustment of gross book value and depreciation, using indices for fixed assets values published by the General Statistical Office. If current prices are available, adjustment can be made according to them as long as they diverge no more than 10 percent from the values calculated according to the indices. The resulting net additional value is credited to the "revaluation reserve" in the liability side of the balance sheet.

In a case of change in the legal status of state-owned enterprise (ownership change), value adjustment is required on the day before ownership changes. For this adjustment, enterprises can use General Statistical Office indices for fixed assets for the last quarter, or current valuation as long as they diverge no more than 10 percent from the relevant index.

**Other Assets**

With regard to monetary items, monetary nominalism still prevails. Only interest rates are adjusted due to anticipated inflation (60 percent in 1990). The Civil Code was amended to say that, because of change in the purchasing power of zloty, the court can change the level or terms of debt repayment.

Generally speaking, the rules applied in Poland are based on the concept of physical capital maintenance (capital = physical productive capacity). All price changes are viewed as changes in the measurement of the value of the physical productive capacity of the enterprise.

The Ministry of Finance regulations on accounting have made an optimistic assumption about the rate of inflation. Let us hope that they are right. Otherwise, much more sophisticated rules and procedures will be appropriate, including the adjustment of tax laws.

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