Suppliers of industrial machinery and equipment would reap great benefits from a general regularization of capital expenditures because their products constitute a large part of total capital expenditures. However, the opportunity for regularization of investment on the part of the manufacturer of capital goods appears to be exceedingly limited. To a very large degree, he is the victim of the failure of business generally to adopt policies calling for an even flow of purchases of capital goods. The resulting violent fluctuations in demand for machinery and equipment create problems of wide variations in employment and earnings, even during periods which are not influenced by wars and rumors of wars.

The impact of war and defense programs on the manufacturers of machine tools has been particularly devastating during the past decade. During the early forties machine tool builders were called upon to produce many times their normal output, in order to provide the necessary machinery for war preparations and to manufacture war materiel for World War II. At the close of the war they were not only faced with the adjustments required by the disappearance of this abnormal demand, but in addition thousands of government-owned machine tools were dumped on the market at a small fraction of their original cost and an even smaller fraction of the current selling price of new machines. The net result was a severe depression in this industry at a time when many other suppliers of machinery and other capital goods were enjoying a lush market because their normal products had been discontinued during the war. This situation continued until mid-1950, when the Korean outbreak sharply reversed the situation and the machine tool producer was again asked to make a prodigious effort to turn out machine tools for the new defense effort.

In addition to these extreme fluctuations, there is the impact of renegotiation and excess profits taxes, which siphoned off most of the profits earned in the high volume years, so that the position of the machinery builder has been precarious indeed in recent years.
INDUSTRIAL MACHINERY AND EQUIPMENT

It is only natural that the thinking on regularization of capital expenditures in an industry with this history is colored by these recent experiences.

It is common for people to think that medicine should be taken by the other fellow, but that their own case is unique. It seems, however, that this is indeed the case when considering the possibilities of regularizing capital expenditures in an industry like the manufacture of machine tools and, to a somewhat lesser degree, for manufacturers of industrial machinery and equipment generally. These manufacturers would be the main beneficiaries of a successful program for the regularization of capital expenditures, but, unfortunately, such a program must start with the purchasers of machinery. Only in this way can the demand for equipment become more stable.

A review of the reasons for purchasing new machinery and equipment indicates that all of the buying motives are strongest during periods of high business activity. By far the major portion of our own sales are made when our customers intend to expand or when they intend to produce new products or new designs of old products. Obviously, business expansion and the introduction of new products occur overwhelmingly during periods when business activity is at a high level.

Sales for modernization and cost reduction have always been a small part of the total. The replacement of obsolete or worn-out equipment with new and more productive machines is one area that has been sadly neglected. Such purchases are based on economic motives, but there has been a curious lack of reliable techniques for determining when a given machine has outlived its usefulness and should be replaced. Much progress has recently been made in this field; yet there is still a tremendous amount of educational effort needed to persuade industry generally to give this important problem the attention it deserves. Even if such techniques were in general use, there would be only a limited beneficial effect on the rate of machinery purchasing, particularly during periods of low business activity. The main reason for this is the need to conserve financial liquidity during periods of low earnings, which causes extreme caution in authorizing capital expenditures. Also, when machinery is sometimes idle and there is no immediate prospect for high use of new equipment, even needed modernization is likely to be deferred until the outlook improves. Of course, if we must look forward to a continuation of recent inflationary trends, it is possible that ulti-
mately business concerns will decide that it is safer to invest any idle 
funds in productive machinery than to keep them in the bank 
account. At best this would have limited application, because when 
losses are being incurred, liquidity must be maintained to meet 
current operating costs, and those expenditures that need not be 
made immediately will be postponed.

This background has been presented in order to define the 
business environment in which the producer of industrial machinery 
and equipment must operate. It should be obvious that in a business 
characterized by feast or famine, capital expenditures are inevitably 
going to be made during periods of good business when cash is 
available and there is a ready demand for the product. In times of 
recession or depression, these manufacturers are occupied with 
problems of curtailing costs and insuring the survival of the enter-
prise. During such periods it is unfortunately necessary to curtail 
dramatically all expenditures that are not immediately essential.

There are certain limited opportunities for regularizing capital 
expenditures. The first and most important is the development of a 
program of continuing modernization and replacement studies that 
can be pursued most effectively when operations are at a low level. 
Such studies lead to the identification of those items of equipment 
that can profitably be replaced either immediately or when the busi-
ness outlook improves. The opportunity for such studies is greatest 
when activity is low and the production organization has enough 
time to assist in originating and reviewing modernization programs. 
During these periods, also, the sales engineers of equipment manu-
facturers have more time available to assist customers with their 
analyses. By pursuing such programs while activity is depressed, 
the manufacturer of industrial machinery can, to a degree, help to 
regularize his outlays for new machinery and equipment. In many 
cases, however, the actual purchase is likely to be deferred until 
the business outlook improves.

The second area in which some regularization is possible is in 
maintenance that can be postponed. By holding back in times of 
good business on such programs as internal painting and major 
overhauls of equipment, a considerable residue of work can be 
accumulated for the time when activity is low and the machinery 
can be spared for major repairs. While the results of such a program 
are not likely to make a major contribution to regularization, they 
can have a beneficial effect and help to provide continued employ-
ment if the period of recession is reasonably short.
In conclusion, it must be recognized that the very nature of the industrial machinery business prevents any ambitious program of regularizing capital expenditures. Most new plants and plant additions built by machine tool manufacturers during recent years have been undertaken only with the assistance provided by special amortization, which means automatically that they have been constructed during periods of exceptionally active business. By the nature of his operations, the machinery manufacturer has little alternative.

We fervently hope for the day when a practical solution to the problem of regularizing capital expenditures can be found within the limits of a free economy, because we should probably derive greater benefits than any other industry. We are forced to the conclusion, however, that we are not in a position to assist materially in finding this solution or in carrying out such a program.