SYNTHESIS REPORT ON THE SEMINAR
THE STEEL INDUSTRY IN TRANSITION: FINANCIAL AND PRIVATISATION ISSUES

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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On 25 and 26 October 1993, the OECD Centre for Co-operation with the Economies in Transition and the OECD Steel Committee organised a seminar with the Central and Eastern European countries and the New Independent States of the former USSR on "The Steel Industry in Transition: Financial and Privatisation Issues". In addition to representatives from OECD countries, the following non-member economies and international organisations participated in the meeting: the Czech Republic, Hungary, Poland, Romania, the Federation of Russia, the Slovak Republic, the European Bank for Reconstruction and Development, the International Iron and Steel Institute, the United Nations Economic Commission for Europe and the World Bank. Industry and trade union representatives also attended, either as members of national delegations or as members of the delegations formed by the Trade Union Advisory Committee to the OECD and the Business and Industry Advisory Committee to the OECD.

The synthesis report provides an overview of the major issues discussed, including the comparative costs of restructuring and different approaches to privatisation, as well as the conclusions reached at the seminar. In the latter, the elements critical to the success of restructuring programmes are identified. While the report draws principally on material presented at the seminar, it also includes information drawn from OECD work in related areas, and statistical information from EUROSTAT and the European Coal and Steel Community.

This report on the seminar "The Steel Industry in Transition: Financial and Privatisation Issues" is made publicly available on the responsibility of the Secretary-General.

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Introduction

In his opening statement, the Chairman of the Steel Committee touched on a number of key developments in steel during 1993. He pointed out that conditions in the steel industry in the OECD area had improved in some regions, but worsened or remained weak in others. In general, the pressures to streamline operations through the closure of facilities had remained great, or intensified. The social and economic cost of continued restructuring was posing difficult problems for companies and governments.

In the economies in transition (EIT)\(^1\), conditions in steel markets had remained depressed. Most of these countries had studied the situation in their industries and some had adopted restructuring programmes. Privatisation in the industry was receiving a great deal of attention.

Internationally, trade issues had continued to command a great deal of attention. Many had been encouraged by the efforts to negotiate a multilateral steel agreement in the GATT. Such an agreement was viewed as offering the best long term solution to the frequent problems that had been experienced in steel trade. As events in 1993 had demonstrated, these problems had continued.

Steel market conditions

Further information was provided by the OECD Secretariat, which reported on market conditions world-wide and the outlook, and by Delegations participating in the seminar. The OECD presentation indicated that world apparent steel consumption would probably fall in 1993, but that a turn-around was likely to occur in 1994 (Table 1). The improvement was not, however, expected to be uniform, as steel consumption in non-OECD market economies would probably grow by about 5.5 per cent, while the steel markets in the Central and Eastern European Countries (CEECs)\(^2\) and the New Independent States of the former USSR (NIS)\(^3\) would continue to decline, albeit at a lower rate of 2 per cent.

Reports on conditions in the steel markets of western Europe indicated that consumption, which was at relatively low levels, was showing signs of improving in some, but not all, areas (Table 2). In the EC, consumption was expected to fall in 1993 for the fourth consecutive year; prices, however, were increasing from low levels, reflecting the positive effects of industry restructuring, Commission measures, and increased demand from Asia. In North America, steel markets were improving, with capacity utilisation reaching a relatively high level of 87.2 per cent in the United States. The improvement was expected to help return the industry to profitability by the year’s end.

Conditions in Asia were the most promising, due largely to strong demand in a number of non-OECD economies, such as China. This situation had had a positive effect on steel exports from Japan, whose domestic market had weakened, and the Republic of Korea, whose domestic market was rebounding from the decline experienced in 1992. The Delegate of Japan reported, however, that changing conditions in China were resulting in declining exports to that country.
The situation in the economies in transition was improving in many, but not all, countries. Increased steel production was expected in 1993 in Hungary, Poland and Romania, while declines were anticipated in the Russian Federation and the Slovak Republic. The actual outcome was as expected in all cases except the Slovak Republic, where production increased slightly.

The cost and financing of restructuring: practical considerations

Steel industry viability

The structural problems facing the steel industry in many regions due to over-capacity, the lack of profits, and a history that indicates that even in the best of times financial results are mediocre, suggested to some delegates that more companies should be considering exiting the industry altogether.

From the perspective of one of the economies in transition, however, the rationale for maintaining a steel industry is strong. In this context, the industrial sectors in which the EITs are able to compete effectively with the OECD countries are limited. Steel, especially commercial quality products, happens to be one in which they could compete. In order for the transition to succeed, the EITs would have to focus attention on such areas since they could provide an important means for raising capital, which is in short supply, through exports. The increased liquidity would enable their economies to grow more rapidly; pent-up demand for cars, housing and investments to improve the countries' infrastructures, it was noted, is great. Moreover, the absence of an industry would require countries to import steel from other areas, at considerable cost.

One delegate noted that growth in the eastern economies would lead to increased demand for imports, such as machinery and equipment and high value steel products, from the OECD countries. In this case, there would be a net gain to all countries. Under these conditions, he queried, would it not be beneficial for the OECD countries to explore ways to accommodate increased steel imports from the eastern countries, perhaps by reducing the threat of unfair trade cases, or by sanctioning barter agreements?

Goals of restructuring

There appears to be consensus that the goal of restructuring in steel is to establish viable, competitive firms. As discussed at the seminar, competitiveness is a term that can be defined in different ways. To the financial analyst, a firm's competitiveness is evaluated in terms of its longer term ability to finance investment from internal-generated cash flow, while making adequate provision for the payment of dividends to shareholders. To corporate managers, competitiveness is all too often defined in terms of technical performance, such as energy efficiency, yields and labour productivity.

While the two are closely related, there are important differences. A company that borrows heavily to improve technical performance will not be viable in the long run if it is unable to generate sufficient cash flow to
maintain facilities and repay creditors. On the other hand, technical performance cannot be neglected since it affects operating costs, which, in turn, directly affect cash flow.

The role of government

Presentations by the OECD countries indicate that restructuring can be approached effectively in different ways. In Europe, governments were often actively involved in overseeing and co-ordinating restructuring activities, while in the United States and Japan, companies were required to develop their own restructuring plans independently with little government involvement. Although the methods differed, the structural adjustment that was required appears to have been achieved in each of the areas. One point on which there was general consensus was the need to involve trade unions in restructuring efforts. The understanding of the trade unions and, to the extent possible, their support are seen as essential if plans are to succeed. It was suggested that more attention should probably be paid to this in the economies in transition.

Presentations made by the economies in transition indicate that most have chosen to involve their governments actively in restructuring, at least in the initial phases. In addition to examining the situation from a national perspective, which most have done, it was recommended that governments study the position of each steel facility to determine its prospects; those that will continue to operate should then be required to develop business plans that, when implemented, will result in viable, self-sustaining enterprises. Without such business plans, it was noted, it will be difficult to attract the capital needed for restructuring from private sources.

The restructuring programmes being developed in the EITs indicate that governments are reorganising their industries with a view towards meeting domestic needs. In doing so they will close capacity to bring it more in line with domestic consumption levels, adjust their product mix, and modernise facilities so as to make them more competitive with producers world-wide in terms of costs, technologies employed, and quality. While focusing on domestic needs, provision is being made for exports, which for some countries will probably continue to account for a relatively high share of total production. It appears that governments will not be providing significant financial assistance directly to companies, but that they may act as loan guarantors. One delegate cautioned that extreme care should be exercised even in guaranteeing loans, as the state could well become liable if companies are unable to repay borrowed funds.

The plans that countries have proposed assume certain outcomes in domestic and foreign markets. As one steel company executive from the OECD area pointed out, nothing should be taken for granted. If markets are open, competitive pressures are likely to be great in domestic as well as export markets. His own company’s experience had shown a marked deviation between expected and actual results in the field of exports. Another delegate commented that companies should define the domestic and export markets that they intend to serve with precision and avoid the temptation to produce products under the assumption that they could be sold indiscriminately in unspecified, undefined foreign markets.
**Implementation of restructuring programmes**

Most of the economies in transition have established overall goals for their steel industries for the year 2000, or thereabouts. The goals typically include capacity and production objectives as well as indications of what the level of imports and exports might be. As discussed at the seminar, how these goals will be reached has not been clearly established. One delegate suggested that difficulties are likely to be greatest in countries where there are numerous, independent enterprises, each of which may have strong local political support. In these instances, co-ordination between enterprises may be difficult, particularly when interests conflict. The danger appears to be that adjustment could be slowed, and that it could evolve in ways that are sub-optimal from a national perspective.

**Restructuring costs**

A number of the economies in transition participating in the seminar provided information on the cost of restructuring their steel industries. The totals, which represent multi-billion dollar undertakings for each country, are similar to each other when adjusted to account for the different size of the industries. At close to $20 per tonne of raw steel capacity per year, the totals are equivalent to the expenditures made on plant and equipment in the United States and the European Community during the 1980s (Tables 3 and 4), but less than half the level spent in Sweden and Australia during their restructuring (see country summaries in Appendix 1 for further details).

Whether the economies in transition will be able to generate, borrow or attract the funds needed for restructuring is not clear (Table 5). Representatives from international lending institutions who participated in the seminar were not optimistic. Few steel concerns world-wide, it was noted, would currently meet the criteria that bankers are using to establish credit worthiness.

The presentations made by OECD countries provided a good deal of information on the methods that were used in countries to restructure steel companies, but relatively little information on the nature and magnitude of the social and economic costs involved and the techniques that were employed to finance the restructuring.

**International solutions**

All of the economies in transition that commented on financial issues indicated that foreign investment would have to play an important role in financing steel industry restructuring in their countries. As the representatives from the lending institutions stated, this may be difficult to achieve -- particularly in steel, which has lagged behind most industries in internationalising operations. In addition, over-capacity, which is expected to continue to have a depressing effect on financial performance, is a factor that would tend to lower investor interest.
While there are impediments to transnational partnerships in steel (including the traditionally strong national character of many steel companies), such partnerships should, it was noted, be pursued as they offer an important means through which restructuring efforts could succeed. The partnerships would enable western companies to reduce steelmaking costs (which are lower on the economies in transition), while providing eastern steelmakers with capital and technical assistance; it might also prove easier for the eastern steelmakers to develop export markets in the west. While not mentioned at the seminar, most of the major integrated steel producers in the United States entered into partnerships with Japanese, Korean and European steelmakers during the 1980s. Closer examination of these and similar partnerships could provide insights that would be useful to the EITs as they implement their restructuring plans.

**Multilateral co-operation**

In the OECD countries, intergovernmental co-operation on steel issues has occurred in a number of ways. In the case of Europe, the nine countries comprising the European Community (which grew to twelve during the 1980s) worked closely together on restructuring issues through the Commission of the European Communities under the terms of the ECSC Treaty, which was adopted in 1951. More extensive multilateral co-operation was achieved through the OECD Steel Committee, which has met regularly during the past 15 years to exchange views and information on market, industry and policy developments and to explore solutions to trade and adjustment problems. Multilateral co-operation was broadened in the late 1980s, when efforts were undertaken to negotiate binding disciplines specific to steel in the GATT.

In the economies in transition, the close co-operation that existed in the pre-transition period appears to have collapsed in most instances, though there are attempts now being made to re-establish certain links. In the CIS states, an agreement along similar lines to the ECSC Treaty, has been adopted to create the Eurasian Association of Coal and Metal whose purpose is to liberalise trade in a range of metallurgical products, including raw materials, and to facilitate co-operation in other areas. Re-establishing links among companies, however, is reportedly proving more difficult. It is hoped that progress can be made in this area through the creation of inter-state holding companies. Eventually, it was noted, other Eastern European companies would be able to participate in the inter-state companies.

Co-operation is also taking place through the United Nations Economic Commission for Europe, which maintains a Working Party on Steel, and the International Iron and Steel Institute, which brings executives from steel companies together to explore issues of mutual interest. These two organisations, together with the Commission of the European Communities, the European Bank for Reconstruction and Development and the World Bank, are currently overseeing a study of steel capacity, supply, demand, production and trade in Eastern, Central and Western Europe.

The magnitude of the changes that are occurring in steel markets and industries throughout Europe, and elsewhere, have suggested that there is much to be gained through co-operation, which at the very least should include a commitment to share and discuss information on national developments with
interested parties. This sort of transparency would enable government officials and industry executives to make more informed decisions concerning their national industries. Without such transparency, the chances for making costly mistakes could rise, as could the likelihood of regional disagreements over trade and adjustment issues. In this context, one delegate was convinced that national solutions would be ineffective; the regional character of the steel market indicated that restructuring would have to be considered more broadly without regard to national boundaries if success was to be achieved.

Privatisation

The rationale for privatisation

Privatisation of the steel industries in certain OECD countries (i.e., in Germany, Mexico, the United Kingdom) and the economies in transition shares an important feature -- it is, or was, part of an overall shift in national economic priorities affecting a broad range of activities. What distinguishes the economies in transition from the OECD countries is the scale and magnitude of the changes being undertaken and the resources available to governments to facilitate the transition.

There appears to be consensus that privatisation, or steps taken to reorganise companies into entities that operate like privatised companies, is critical to effective restructuring. Such transformation will help ensure that capital is directed towards economic activities that have the highest potential to increase aggregate national wealth. Government ownership, it appears, frequently introduces a political dimension into business decisions that can easily result in mistakes being made that have serious long term social and economic consequences. Political and social considerations might, for example, outweigh economic factors leading to sub-optimal, or uneconomical investments; such considerations could also delay or reverse decisions to close or phase out non-competitive facilities.

On the other hand, it was noted, the important role that governments play in their economies should not be ignored. Their responsibility for maintaining an economic and regulatory climate that is conducive to economic growth and is responsive to the problems experienced by workers and their communities when major changes occur, is generally accepted. One delegate suggested that the role of governments should be extended to other areas. Their role vis-a-vis companies that operate globally was a case in point. While decisions made by managers of global-active firms might be advantageous from the perspective of their companies, these decisions might have significant adverse effects on affected communities. This suggested that there should be a balance between strict laissez-faire policies and highly regulated economies. Mixed economies are in fact, he noted, what operate in OECD countries.

How actively governments should be involved in the economy depends on a number of factors. In the case of the economies in transition, the lack of sophisticated financial markets suggested to one delegate that the role of the state might be more significant in initial periods than in subsequent ones.
Industry organisation

Reorganising the steel industry for the purposes of restructuring and privatisation has been approached from different perspectives in OECD countries and the economies in transition. In Mexico, state-owned steelworks were split into different lines of business prior to privatisation to help increase the level of interest among potential buyers. The decision to do this was based on the international recession, existence of excess capacity and the low level of productivity in the country’s steelworks. A similar approach was employed in Germany.

On the other hand, British Steel Corporation, a multi-facility company with 17.1 million tonnes of crude steel capacity, was privatised as a single entity. This was also the case in the Swedish steel industry. In the latter instance, the country’s three integrated producers were reorganised into a single operating unit. Without such a unified structure, it was noted, it would have been difficult to make and implement optimal investment and closure decisions (which were carried out prior to privatisation). The presentation made by US Steel might also be examined in this light; the company’s unified structure may have been an important aspect of the company’s extensive restructuring, which resulted in reducing the number of its plants producing crude steel from 13 to 3 during the 1980s. The need for a strong and independent management team to support restructuring efforts was also stressed.

Reports from the economies in transition indicate that the approach adopted in Mexico and Germany is the more common. Combinats are being dissolved and individual steel operations are then being given a great deal of autonomy to develop and implement business plans, while being privatised or being prepared for privatisation. In the case of Russia, a similar approach is being used, except that combinats are being privatised as single entities, without being subdivided into different lines of business. The government found that breaking up the combinats did not generally work. On the other hand, keeping the combinats intact has allowed managers to direct overall cash flow from the combinats’ activities into the most promising areas in an efficient manner; success has also been achieved in shifting the combinats’ human resources away from steel to other activities.

Time required for privatisation

The period over which steel facilities could realistically be restructured and privatised might, it was noted, be quite lengthy. In the case of British Steel, the process, even with the strong support of the government, took 11 years. In the case of Mexico, six to seven years was required, while in Germany the process took two to three years. In the economies in transition, several approaches are being used. In the Russian Federation and the Slovak Republic, privatisation has advanced quite rapidly, while in the Czech Republic, Hungary, Poland and Romania the process is expected to take more time.

While privatisation (or requiring companies to operate like private companies) is seen as an essential condition for attracting private capital, it might not be sufficient. As one delegate pointed out, foreign investment in steel in the economies in transition is likely to take place initially on a
small scale with a view towards limiting risk. Prior to such investment occurring, however, the legal framework in the countries would have to be clearly defined.

**Privatisation techniques**

In the case of Mexico and Germany, government-owned steelmaking facilities were sold to investors on the basis of competitive bids. In both instances, offers from foreign investors were accepted. The bids were evaluated on a number of bases, including investment commitments made by prospective owners. British Steel and the Swedish firm SSAB, on the other hand, were sold using mass privatisation techniques. Shares in British Steel were sold at a pre-established price to foreign and domestic interests alike, while SSAB was privatised when the Swedish Government offered a combination of risk-free bonds and warrants to the public. Unlike the Mexican and German experiences, the new owners of British Steel and SSAB (i.e., the general public) were not subject to investment guarantees.

Prior to the sales in Mexico and the United Kingdom, the two governments engaged outside experts to assess the value of the facilities to be sold. When privatised, offers for the Mexican facilities, which included cash, investment commitments and assumption of debt, totalled $1.5 billion (more than $300 per tonne of crude steelmaking capacity); the proceeds from the sale of shares in British Steel totalled £2.5 billion (or about $260 per tonne of capacity).

In the economies in transition, a number of techniques are being used to privatise steel facilities. In the case of the Czech Republic, the Russian Federation and the Slovak Republic, privatisation often involves the sale of a portion of a company (or combinat) to pre-selected parties (including workers and management and/or other interested investors) and selling another portion to the public through mass privatisation methods (such as vouchers). Existing management structures are apparently remaining essentially intact. The companies are, however, reportedly under great pressure from shareholders to produce profits.

In Poland, companies are being commercialised (i.e., transformed into joint stock companies) in anticipation of eventual privatisation. One company has already been privatised in partnership with a foreign steelmaker, while four are to be sold using mass privatisation techniques. The fate of the the country’s other facilities will be decided at a later date, once a number of other decisions related to restructuring are made. Hungary, similarly, intends to explore privatisation following further industry restructuring.

In a number of instances, governments are retaining certain prerogatives in previously state-owned firms through a "golden share", which essentially permits the state to override various types of corporate decisions. This was the case in British Steel, and is currently the case in the Russian Federation and in the steel facility that has been privatised in Poland. Governments were cautioned that they should exercise these rights judiciously; should they be abused, private capital will reportedly be difficult, if not impossible, to attract.
Issues for further consideration

A review of the seminar proceedings suggests that it could be beneficial to deepen the consideration of financial issues. In support of this, more comprehensive information might be developed in the following areas:

-- information on the nature and magnitude of restructuring costs, including costs associated with:
  - plant closures
  - social adaptation (including retraining and compensation to displaced workers)
  - facility modernisation and
  - environmental regulations;

-- information on the sources of the capital that was used (or is to be used) to fund industry restructuring, including information on the terms and conditions under which funding was (or is being) secured; and

-- information on financial conditions in the industry (including profitability, cash flow, investment, indebtedness, etc.).

Other issues that could be explored include the following:

-- in drawing up their national restructuring programmes, the economies in transition have made a number of assumptions concerning domestic steel consumption, the role that steel imports are likely to play in their domestic economies, and their ability to export steel. Are these national programmes currently compatible on a regional basis? If they are not, what are the short and long term implications?

-- there appears to be consensus that the problems facing the steel industry can only be solved effectively if steel companies become more global (or transnational) in their outlook and operations. A number of initiatives have been taken with this in mind. The CIS states, for example, have agreed on the need to set-up inter-state joint stock companies, and other EITs have expressed their interest in attracting foreign investment. Much of the interest in transnational activities focuses on transactions between the EITs and companies in the OECD area. What are the prospects for inter-state agreements among companies within the EIT area? How would a growing number of inter-state companies affect trade and adjustment in steel in the region? To what extent would it still be possible to pursue national steel programmes?

-- in restructuring their steel industries, the economies in transition generally appear to be giving individual steelworks a high degree of autonomy. How will this independence affect the ability of governments to carry out restructuring programmes?

-- the financing of steel industry restructuring in the economies in transition will require substantial funding from sources above and beyond those generated from steel operations. Discussions at the
seminar indicate that such funding may not be available. If this is the case, what alternatives are available? What are the short and long term implications?

-- the competitive advantage that steelmakers in the CEEC/NIS area have enjoyed due to favourable labour and raw material costs is reportedly narrowing. How are changes in competitive conditions likely to affect trade flows? To what extent can exports to the Far East (which accounted for about one-third of steel exports in 1992) be maintained? At what point will interest in trade between EIT states, which only accounted for 10 per cent of their exports in 1992, increase? How can regional trade problems be avoided?

Conclusions

In his report on the proceedings, the discussion leader concluded that the seminar had been an effective forum for developing information on current conditions in the steel industry and the policy approaches that have been used, and are currently being used, to facilitate structural adaptation. The discussions had suggested that there are three critical elements that have to be present in restructuring programmes if these programmes are to succeed, namely:

-- someone (or some body) has to be in charge of the restructuring process;

-- business plans have to be developed that have as their basic underlying principle the creation of commercially viable, independent companies which serve clearly defined markets; and

-- employees and trade unions have to be actively involved in the planning and implementation of restructuring programmes.

The latter point -- concerning the need to involve employees and their trade unions -- was commented on by a number of delegates. Without such involvement, restructuring programmes could not, it was argued, succeed.

As for future work, delegates agreed that it would be beneficial to examine the social and economic problems that restructuring poses for workers and communities more closely, with a view towards identifying effective policies that companies and governments could pursue. Since traditional approaches were not likely to work in the EITs due to the profound changes that were occurring in most sectors of their economies, efforts should, it was suggested, focus on new and innovative solutions.
Appendix 1

Summary of Statements on Restructuring

Australia

Severe conditions in the Australian industry in 1982 prompted discussions between government officials (at the federal and state levels), the industry and trade union officials. The discussions resulted in the conclusion of a tripartite agreement in August 1983. The agreement, which covered the period from 1984 to 1988, contained the following commitments:

Industry agreed to:

-- continue to operate the country's three integrated steel works;
-- invest a specified sum to modernise facilities;
-- increase productivity at a rate higher than the national average; and
-- not to enforce further compulsory labour reductions.

Government agreed to:

-- exercise restraint in taxes and charges levied on the industry;
-- provide payments to steel consumers;
-- develop a safety mechanism to review assistance measures under certain conditions;
-- implement a "fast track" anti-dumping mechanism; and
-- provide a labour adjustment training programme to assist displaced workers.

Trade unions agreed to:

-- not seek wages or conditions above community standards;
-- co-operate in efforts to increase productivity; and
-- strictly observe commitment to follow dispute settlement procedures.

The impact of the investment programme on the workforce was reportedly enormous as it resulted in a large increase in the demand for jobs requiring higher levels of process understanding and judgement. As a result, the industry now requires a higher proportion of highly-skilled and adaptable employees, a trend that is expected to continue. Table 6 provides data on conditions in the Australian industry during the restructuring period.

The plan was viewed by the industry as successful in establishing the types of stability in conditions that were necessary to support the major investment decisions that were to be made. There were, however, some drawbacks. In particular, the plan was negotiated at a national level without local involvement; as a result commitment to, or understanding of, the
objectives or processes of the plan was lacking. Moreover, the plan set
industry wide targets but failed to set supporting local targets or to suggest
ways for achieving them. The result was that while there was general
acceptance of the need for change, there was a good deal of local resistance to
the implementation of specific measures.

While the unions favoured an extension of the tripartite arrangement
beyond 1988, the government’s view was that the industry and its workers should
accept full responsibility for the steel industry’s viability. In place of the
tripartite arrangement, the union and the industry have therefore decided to
negotiate agreements with each other that focus on restructuring issues,
capital investment, job classifications and training. Such agreements are
being concluded both at the national level, where overall objectives are
established, and at the local level where the broad commitments are translated
into specific targets and plans for each enterprise.

In conclusion, the restructuring has reportedly been successful as the
improvements made since 1982 have enabled the industry, which is now expanding
its capacity, to manage its operations profitably without government
involvement.

European Bank for Reconstruction and Development (EBRD)

The willingness of lending institutions to provide loans to enterprises,
the EBRD noted, depends on the ability of the enterprises to demonstrate their
credit worthiness. This reflects the fact that the loans are being made to
companies and not to governments. Care is taken at the outset to evaluate the
overall context in which companies requesting funds compete. This includes an
analysis of the regional and national situations as well as a company’s
specific situation.

In general, steel companies throughout the world would currently have a
difficult time meeting the criteria used by financial institutions to determine
credit worthiness. To date, in fact, the EBRD has approved only one project in
the economies in transition (in Poland). The plans being developed by the
economies in transition reportedly share a number of characteristics. First,
they propose that there should be a central government restructuring
initiative, which in itself is not without merit. The plans then often go on
to identify the costly investments that will be required to restructure,
without identifying the sources from which investment capital could be
generated.

The investment plans reportedly tend to outline technical solutions to
improve competitiveness, without sufficient attention to commercial realities.
As had been emphasised in meetings, investment strategies had to be developed
with these commercial realities, such as cash flow, in mind. Consideration
also had to be given as to how loans would be repaid. It was essential that
companies have managers who were able to think in these commercial terms.

Evaluations of requests for loans, it was noted, include a rigorous
review of a company’s domestic and export markets, as well a close examination
of costs. The EBRD is conscious of the distortions in costs that have existed
in the economies in transition in energy and other areas, and therefore examine
them on a normalised basis. Break-even points are established, with a view towards determining the extent to which companies could be successful in bad as well as mediocre periods.

The Bank is reportedly aware of the social and political problems associated with restructuring; in general these seem to be underrated by the economies in transition. Unless financial resources are available to assist with social, and for that matter environmental purposes, restructuring plans are unlikely to be viable.

One way to improve industry prospects might be to approach restructuring from an international perspective. The steel industry world-wide is not, it was noted, one that has exploited international joint ventures and arrangements to the extent that other industries have. The most successful companies, it was argued, would be transnational. In the case of the economies in transition, investment in steel in these economies by western steelmakers could provide opportunities for these producers to lower their steelmaking costs. The economies in transition would benefit from more investment capital, and, as a result, it might be easier to develop foreign markets for their steel.

**European Community**

In the European Community, restructuring pressures have reportedly increased in recent years as a result of overcapacity and increased import competition, which together have resulted in low steel prices. The industry was not profitable in 1992, and was expected to experience even bigger financial losses in 1993. Problems in the industry have been explored in discussions with producers, steel consumers and the unions.

At the Community level, three types of policy responses to the current situation could have been adopted. First, the Community could have decided not to intervene. The consequences, however, were viewed as negative since price competition would have intensified, leading perhaps to bankruptcies and a greater risk of government subsidies. The social and political problems would also have been high. A second option would have been to intervene in the manner that occurred in the 1980s (i.e., with production quotas, etc.). The earlier experience, however, suggested that this could well slow the restructuring that is required. Moreover, such an approach would not be compatible with current views on the role of industrial policy.

The option chosen is instead one of shared responsibility between government and the private sector. Overcapacity, which has been estimated at 30 to 40 million tonnes of crude steelmaking capacity and 20 to 25 million tonnes of hot rolling capacity, would be diminished on a voluntary basis, with those agreeing to close capacity being compensated by those that continued to operate; a solidarity fund would then be created for this purpose. An effort to identify companies which would close facilities had been undertaken and appeared to be close to completion.

The Community would support the restructuring, provided that the industry’s restructuring plan was satisfactory. The support would include financial support for social measures associated with restructuring, stricter control of sensitive imports, more precise market guidance (including
non-binding recommendations to companies), and a positive approach to joint venture and merger proposals. The cost of the assistance would be in the order of 6 to 7 billion ECUs, compared to the 40 billion ECUs of state aid that had been authorised by the Commission during the 1980s.

Hungary

In light of the serious structural problems in ferrous metallurgy and the implications for employment, the Hungarian Government has taken an active role in helping to stabilise conditions in the industry. At the time of the seminar a restructuring plan was being drawn up that would be considered in the near term by the Ministry of Industry and Trade. The plan would recommend the creation of a ferrous metallurgy restructuring fund, a proposal that would require searching for capital for loans from foreign as well as Hungarian sources; state guarantees would also be required. The adoption of a plan, and growth in steel demand would help to establish the conditions required to attract foreign capital. The country has had difficulties with previous efforts at privatisation of steel facilities; future initiatives would most likely be taken following the revival of the industry.

To be in conformity with GATT obligations, support measures in steel would likely focus on environmental projects, certain technical projects, and the costs associated with social adaptation. Concerning employment, more than half the jobs in the industry have been lost. Employment has fallen from 50 000 in the mid-1980s to 22 000 currently, with an additional 4 000 jobs likely to be lost as steel facilities are modernised or closed. Increasing the efficiency of training is expected to receive high priority.

The industry’s restructuring would be based on domestic steel needs, which are expected to be on the order of 2 million tonnes of steel per year by the year 2000. In the near term, preparation for the World Expo to be held in Hungary in 1996 is expected to result in substantial spending on projects to improve the country’s transportation infrastructure. In general, the industry would work towards raising the proportion of value-added and finished steel products that are manufactured, so as to meet domestic needs more effectively. Producing higher quality products that meet Western European standards has a high priority. To meet these needs, existing facilities will have to be replaced by smaller units with more modern technology; no additions to capacity, however, would be required.

In the field of international trade, measures would be taken to protect the industry from foreign producers that are subsidised by the state. The maintenance and stability of exports was an important factor that would require diplomacy.

Japan

Japanese steel companies were required to develop restructuring plans in response to the economic recession that occurred in 1986, following a sharp appreciation in the value of the yen vis-à-vis the dollar. Their plans shared the essential objective of building up a business structure that would enable
steelmakers to be profitable in an environment in which the yen was strong while production was relatively low. There were four basic elements to these plans:

-- the closure of surplus or inefficient capacity;
-- the rationalisation of the workforce;
-- the diversification of the companies into non-steel activities such as advanced materials, electronic information and communications, social and urban development, biotechnology, and servicing; and
-- financial restructuring aimed at cost-reduction (such as reduced investment).

The restructuring of the industry was notable in that:

-- the restructuring plans were developed autonomously by individual steelmakers;
-- the plans were to be fully implemented over a relatively short period of time (3 to 5 years);
-- government involvement was minimal, focusing on support for affected workers; and
-- reductions in the work force were phased in without resorting to layoffs (the reductions were instead achieved through natural attrition and through the dispatch of workers to affiliated firms).

The adjustment is viewed as having succeeded as the measures taken enabled the industry to earn record high profits during the late 1980s, when steel market conditions improved. The current recession in Japan, however, is again requiring Japanese steel companies to develop restructuring plans that will be implemented during the next two fiscal years. Table 7 provides data on conditions in the Japanese industry during the restructuring period.

Poland

The Polish Government has concluded that without restructuring, most Polish steel mills would go bankrupt. The country would then be required to import steel products at an annual cost of $4 to 5 billion. The principal competitive problems that needed to be addressed are:

-- obsolete technology;
-- unfavourable product mix (share of flat products is relatively low);
-- high raw material and energy consumption;
-- production facilities which do not correspond with market needs;
-- overmanning; and
-- environmental pollution.

After studying the problem, the Polish Government approved a restructuring plan that will cost an estimated $2 650 million over ten years, two-thirds of which represents expenditures on new plant and equipment. Funding is to be generated internally by companies; foreign credits and other financial assistance will, however, also reportedly be required.

It is being proposed that a co-ordinating body be formed to oversee the implementation of the restructuring plan. This body would, in turn, be
supervised by a Programme Council consisting of the representatives of involved ministries and the authorities of the regions where the steel industry is concentrated. The Ministry of Industry and Trade would take a lead role in the Council, which would report regularly to the Council of Ministers. The first task of the co-ordinating body would be the development of detailed restructuring plans for the steel sector, including the preparation of supporting analysis, feasibility studies and business plans for all the steel mills.

Romania

The restructuring needs of the Romanian steel industry have been studied and were to be considered by the government, which, at the time of the seminar, was expected to take a final decision on restructuring measures in November 1993. Among the actions expected to be taken are:

-- closure of excess and obsolete capacity;
-- separation and reduction of auxiliary activities and services;
-- modernisation (including increases in the use of continuous casting and BOF steelmaking technologies);
-- professional training; and
-- an increase in marketing activities.

As a result of the restructuring, the number of jobs in the industry is expected to fall from 135,000 currently (in steel) to 85,000 in 1996 and 45,000 by 2002, at which time the restructuring programme should be completed. The cost of restructuring, which would total $2.3 to $2.6 billion, would be financed from internal company sources (40 per cent), bank credits (40 per cent) and attracted capital, such as foreign investment, (20 per cent). Approximately half the total would require foreign currency, while the rest would be spent domestically. Raising the capital is expected to be difficult in the current economic environment as producers are not in a good position to generate investment capital from internal sources, and due to a lack of domestic financing possibilities.

The ownership of state-owned firms is also in the process of changing. In the second half of 1993 a State Ownership Fund and a Private Ownership Fund were created, and control of state firms is being transferred to them. Some 70 per cent of the firms would be held by the state fund, with the balance to be held by the private fund.

Russian Federation

The Russian Federation’s Committee on Metallurgy has developed a programme for the industry which, in concept, has been approved by the government. Under the programme, energy and raw materials efficiency would be increased, as would product quality and overall industry competitiveness. Environmental and social issues would also be addressed. In the case of social issues, measures to maximise and stabilise industry employment are being considered. The programme, which will cost on the order of $12 billion, covers the period from 1993 to 2000. Under the programme, the share of steel produced using continuous casting and basic oxygen steelmaking technology would
rise to 60 and 70 per cent, respectively, as compared to 35 and 18 percent in the former USSR in 1991. Production of rolled products would rise from the current level of 45 million tonnes, to 50-53 million tonnes.

The current financial situation in the industry is reportedly extremely tense due in part to increased costs for raw materials. The prices of coking coal, for example, had, at the time of the seminar, increased more than sixfold when freed from controls in the third quarter of 1993 and averaged $20-25 per tonne (ranging from $8 to $60 per tonne at different mines); prices for natural gas, power, and transport had grown by 2.5, 2.4 and 2.2 times, respectively, while oil and electricity prices had increased 4 to 5 times. While increasing, oil and gas prices were 30 to 50 per cent below world prices; prices similar to those prevailing world-wide were expected to be reached between late 1993 to mid-1994. As to iron ore, prices currently averaged $20-22 per tonne. In the coal industry many mines were lossmaking and would continue to receive subsidies; a special extra-budgetary fund was being established to facilitate the closure of certain mines, which was a costly process, over the next 2 to 3 years.

As a result of increases, production costs at the time of the seminar had doubled, bringing those costs, along with prices, close to world levels. Changes in balance sheets include increases in receivables, which grew from $566 billion roubles ($1.4 billion) on 1 January 1993 to 1 760 billion ($1.5 billion) on 1 September, and liabilities, which have grown from 344 billion roubles ($829 million) to 1 144 billion roubles ($979 million). With a view towards improving solvency, the metallurgical works are trying to increase the level of prepaid sales.

The situation has been further aggravated by the declines in demand for steel in a number of sectors, financial difficulties in steel-using industries, and the imposition of duties on steel delivered to CIS economies -- the duties had raised metal prices by 30 to 35 per cent.

Investment in the metallurgical industry in 1993 was targeted for 641 billion roubles, to be financed as follows:

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra-budgetary investment fund</td>
<td>49.9</td>
</tr>
<tr>
<td>Internal company sources</td>
<td>40.4</td>
</tr>
<tr>
<td>Preferential state credits</td>
<td>5.9</td>
</tr>
<tr>
<td>Preferential credits for military conversion .....</td>
<td>2.4</td>
</tr>
<tr>
<td>Federal budget</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Delays, however, have slowed activity. As a result, only 132.6 billion roubles were commissioned during the first nine months of 1993, while incomplete construction in the metallurgical sector grew by 397.6 billion roubles, to 592.6 billion roubles as of 1 October 1993.

The situation is expected to improve as a result of increased economic co-operation among a number of CIS economies. The conclusion of an agreement forming the Eurasian Association of Coal and Metal, which is patterned after
the ECSC, should, for example, facilitate trade both in the raw materials used in steelmaking (such as chrome and manganese ore and the related ferroalloys) and steel products, as duties between participating countries are to be abolished. The agreement, which has been signed by ten CIS states, also contains provisions under which prices are to be regulated by mutual agreement.

As regards foreign trade, exports of steel products (principally pig iron, slabs and long products) were rising by 20 to 30 per cent in 1993, with a similar increase expected for 1994. Interest in exporting would rise if export tariffs were reduced (as was being proposed). Growth, however, might be constrained by the situation in ports (which have been congested), and the price increases being introduced by steel producers. In general, export volumes valued at $2 to $3 billion are expected to be maintained over the next several years; these exports would be used to help finance industry investment projects.

**Slovak Republic**

The Slovak Republic has adopted a restructuring plan for the steel industry that reflects the results and recommendations of studies that were conducted in 1991. The three principal aspects of the plan are the reduction of surplus steelmaking capacity, increased energy and material efficiency, and improvements in environmental conditions.

Steelmaking activity will be concentrated at one plant and emphasis will be put on increasing the production of galvanised sheets, electrical steel sheets and cold rolled sheets for automotive applications. While flat-rolled carbon steel and pipes will continue to be the principal products manufactured, the capacity to produce a number of steel shapes, which will be consumed domestically, will also be pursued. Foreign trade is important to the industry, as 30 per cent of flat rolled products, and 45 to 50 per cent of pipe production are exported.

Implementation of the restructuring programme has been facilitated through privatisation of the industry, most of which was carried out in 1992 through the sale of facilities to the public via coupons. Some 62 per cent of the country’s largest steelworks is currently privately held; the balance, which is held by the National Property Fund, is to be sold gradually on the stock exchange. Progress in restructuring has, however, been limited due to a lack of financial resources; it appears that foreign loans and joint ventures will be required to help narrow the gap between resources and needs in this regard.

**Sweden**

Restructuring of Sweden’s three large integrated producers was overseen by the government. In 1978, the three companies, two of which were privately owned and one of which was state-owned, were combined into a single company that was owned jointly by the state and private entities (50/50). A plan was then developed under which production would be concentrated in fewer units which, at the same time, were to be modernised. The plan was viewed as having been highly successful, as evidenced by the company’s profitability from 1982,
when the initial restructuring had been completed. Plans currently call for the complete privatisation of the company by 1994.

The success of Sweden suggested that the following principles should be given due consideration by countries developing restructuring plans:

-- if a number of separate companies are involved, they should be combined into one company which is put under one management;

-- management should focus on forming a competitive industry structure. Plant closures and investment should be made in ways that are optimal from the perspective of the company as a whole;

-- markets that the company intends to serve have to be identified, as do the products that will be produced;

-- trade unions need to be involved in the development of restructuring plans. Their understanding will be essential in gaining the necessary support from the workers who will be affected by restructuring measures. Special management should be appointed to address issues associated with redundant personnel.

Data on conditions in the industry during the restructuring period are presented in Table 8.

United States

Restructuring in the US steel industry was reportedly based on the decisions made by individual companies which were not able to co-ordinate and discuss their individual plans with each other. The government’s role was limited, as it did not provide financial assistance for plant closures or modernisation, nor did it assist with the social costs associated with the restructuring.

At US Steel, the country’s largest steel company, restructuring was an ongoing process that resulted in significant cuts in capacity and employment during the 1980s. During that period, crude steelmaking capacity fell by 65 per cent (from 31 to 11 million metric tonnes), while the number of steelworkers employed by the company declined by 81 per cent (from 100 000 to 19 000). Restructuring costs charged against the company’s balance sheet totalled $4 billion. Much of this restructuring occurred in the early 1980s. As economic conditions worsened in those years, each production unit in the company was assessed to determine its viability. Those that did not have a future were shut down. As a result, the number of locations at which the company produced steel fell from 13 in 1980 to 3 currently.

The restructuring of US Steel, and the industry as a whole, was reportedly successful, as companies entered into the latter part of the 1980s in a fully restructured, competitive mode.
Appendix 2

Summary of Statements on Privatisation

Czech Republic

Restructuring in the Czech steel industry has resulted in a reduction of more than 40 per cent in steel output over a 3 to 4 year period, and an associated reduction in steel industry employment of more than 50 per cent. Within the CSFR, steel consumption per capita declined from close to 700 kilograms in 1988 to 400 in 1992; by the year 2000 it is expected to be on the order of 434. From a level of 10 million tonnes in 1989, crude steel production fell to 7.6 million tonnes in 1991, with a further decline, to about 5.8 million tonnes expected by the year 2000. Competitiveness in western markets is judged to be good at the present time largely due to relatively low wages; this advantage, however, is viewed as temporary.

The steel industry is being privatised using a number of approaches. In 28 per cent of the country’s steel organisations, majority ownership is being transferred to the private sector through the sale of stock to selected partners or through a public tender process; this is being characterised as a non-standard approach. The standard approach, which is used in 36 per cent of the cases, involves privatisation through mixed ownership arrangements. This approach is resulting in the following ownership structure:

<table>
<thead>
<tr>
<th>Ownership Structure</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management buyouts and employee ownership</td>
<td>34</td>
</tr>
<tr>
<td>Coupon sales</td>
<td>30</td>
</tr>
<tr>
<td>State ownership</td>
<td>28</td>
</tr>
<tr>
<td>Shares transferred to communities, etc.</td>
<td>8</td>
</tr>
</tbody>
</table>

Another approach, which accounts for 36 per cent of the total, involves a mix of the standard and non-standard methods. Under this approach, companies are reorganised into a series of stand-alone enterprises, after which they are sold part-by-part by the standard and non-standard methods indicated above. In cases where the state is retaining partial ownership, shares are being held in the National Property Fund. These shares are ultimately to be sold through public offerings and/or through options extended to foreign and domestic parties. Prices for the privatised firms, it was noted, are being established on the basis of discounted cash flows (over a three to five year period).

In addition to privatisation, the government is implementing a number of other measures to facilitate restructuring. This includes the creation of a consortium of Czech and foreign banks to provide financing for large modernisation projects. In the case of continuous casters, for example,
financing needs of 2 000 to 2 400 million crowns (about $400-480 million) have been identified. There is also a more general need to stabilise financial markets, which would help to overcome difficulties steel customers have had in paying suppliers.

One of the problems emerging from the restructuring concerns the social issues associated with employment declines. As shown below, job losses in steelmaking are expected to continue to occur for the balance of the 1990s:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>114 000</td>
</tr>
<tr>
<td>1990</td>
<td>110 000</td>
</tr>
<tr>
<td>1993</td>
<td>86 000</td>
</tr>
<tr>
<td>2000</td>
<td>54 000</td>
</tr>
</tbody>
</table>

While many of those affected by the reduction in the workforce are expected to remain employed, some 10 to 13 per cent (i.e., 11 400 to 14 800) may be jobless:

- Reassignment of employees to non-steel production activities ... 15
- New job opportunities in private enterprise .................... 12
- Natural attrition .............................................. 8
- Early retirement ............................................... 7
- Job opportunities in public utilities and services ............. 4
- Surplus workforce (1) ......................................... 10-13

Note:

1. Assuming 7-10 per cent of an initial surplus workforce of 20 per cent find new jobs following retraining.

Germany

Responsibility for the privatisation of the steel industry in the former GDR was delegated to the Treuhandanstalt, a quasi-independent agency to whom ownership of all state-held companies in the former GDR was transferred. At the time the Treuhand was created, the Government of the former GDR estimated the value of the businesses entrusted to the agency to be on the order of 1.3 trillion DM; the actual value has turned out to be on the order of minus 275 million DM.

The agency’s experience indicated that a swift and successful transformation from a command economy to a market economy could not be forced. There were, however, a number of conditions that helped to facilitate the process, including:

- a stable political system;
- a common fundamental acceptance of the economic policy to be followed;
- a proven and coherent legal system;
-- competent and loyal administrations in the states and communities;
-- an efficient transportation and communication network;
-- a system that could absorb and moderate structural unemployment; and
-- a trustworthy financial system and a stable currency.

After reorganising enterprises into strategic business units, companies were sold to investors through an open bid process, with decisions made on the basis of the following criteria:

-- the purchase price offered;
-- the viability of business plans;
-- the entrepreneurial competence of investors;
-- future investment guarantees; and
-- work force guarantees (the Treuhand was mandated to ensure that as many jobs as possible were preserved or created).

Commitments made by investors are reviewed regularly and penalties are assessed in instances where they are not met. Experience has shown that such commitments are being met in about 80 per cent of the 40 000 contracts negotiated.

In the case of steel, the agency found it has been, and still is, very difficult to find western steel companies or other investors to take over the often outdated and marketless steel manufacturers in the former GDR. Upon examination, it found that the industry, most of which was developed in the post World War II period, had a number of problems, as follows:

-- productivity in the industry was much lower than in the west;
-- the machinery and technology employed was outdated;
-- products did not conform to German and EC standards;
-- cost and profit structures had been neglected;
-- efficiency was low;
-- disguised unemployment existed; and that
-- traditional markets had collapsed.

There were, however, a few positive aspects, including:

-- growing sales due to increases in construction activity;
-- favourable location;
-- some equipment that was modern or could be modernised at nominal cost; and
-- opportunities to use new, innovative technologies.

Several steps had to be taken to prepare the steel plants for sale. First, suitable markets had to be identified for firms’ products. The Treuhand found that there were good prospects to achieve considerable market shares using the steel companies’ knowledge of special region conditions and the proficiency of the steelmakers in Russian and other eastern languages.

Second, the industry had to be restructured which included the closure of outdated plant and machinery. As shown below (Table 9), this will entail the closure of substantial portions of the industry by 1996. The impact on the labour force will be even greater; only 7 900 jobs are expected to remain in the industry in 1994, compared to 67 000 in 1990 (i.e., close to 90 per cent of
the jobs are being lost). To ease the impact on employment, companies with no potential have been liquidated and privatised in sections. In addition, certain activities, such as engineering and construction departments in companies, have been separated from enterprises and set up as new enterprises. The possibility of creating new upstream and downstream activities has also been explored and courses for retraining have been offered. Those steel operations that remained have had to be reorganised into viable business units, which, in turn, have to be modernised to enable them to achieve acceptable productivity, quality and environmental standards.

Third, financial restructuring has also been required. In many cases companies had to be relieved of debts. Moreover, loans given to the companies to improve their liquidity have in many cases been transferred to the Treuhandanstalt.

**Mexico**

In Mexico, privatisation of the steel industry was part of a more comprehensive programme implemented by the Mexican Government in 1985 to promote stronger participation of the private sector in the economy and reduce Government spending. The privatisation in steel was achieved in two phases.

In the first phase, the industry was restructured. Sidermex, the state holding group for the sector, was reorganised. Most of the companies in the group that were involved in mining or steel-related services were closed or sold, while most of Sidermex’s functions were transferred to the remaining companies. Conditions in the industry were liberalised through the phasing out of subsidies, both direct and indirect, the lifting of price controls, and the lowering of steel tariffs from an average of 25 per cent to a maximum of 10 per cent. In addition, an integrated plant was closed while modernisation was undertaken at AHMSA, the largest integrated company.

In the second phase, the steel companies were reorganised further to help increase their attractiveness to investors. Long term contracts were negotiated in order to assure electric and gas supplies, and the number of workers, which was high by international standards, was reduced through negotiations with trade unions. In addition, the companies were reorganised into a number of separate businesses or divisions, and a plan was developed to phase in certain environmental measures. Financial restructuring was also carried out.

The process of selling the plants began in 1990. Banks were appointed to the sale as agents of the government and these banks, in turn, contracted the services of foreign technical advisors. Three forms of payment were recognised in the sales: cash, investment commitments and the assumption of long term debt. When the plants were put up for sale, offers totalling $1,512.5 million (on the order of $300 per tonne of crude steelmaking capacity) were received; 20-25 per cent of the offers represented cash, while the balance was fairly evenly divided between investment commitments and debt assumption.
Organisation for Economic Co-operation and Development

The Secretariat provided an overview of the Organisation’s activities on privatisation. The activities included four principal elements:

-- an advisory group on privatisation, which brought together senior government officials responsible for privatisation matters with private sector experts on a twice-yearly basis to discuss issues and needs for technical assistance;

-- the publication of information on privatisation developments twice a year;

-- the organisation of training programmes for privatisation officials; and,

-- the organisation of workshops where senior officials can exchange views and information on privatisation issues.

Work conducted thus far has suggested that countries should undertake a number of restructuring measures prior to privatisation. These include:

-- legal restructuring aimed at transforming state-owned companies to limited liability or joint stock companies; and

-- the reorganisation of companies from combinats into more narrowly defined strategic business units.

In general there appears to be consensus that detailed restructuring should be left to new owners wherever possible.

Poland

Restructuring in the Polish steel industry has been under way for about three years. During this period crude steelmaking capacity has been reduced from a 1990 level of 16.5 million tonnes per year to a current level that is only about 1 million tonnes higher than the final goal (which is a maximum 11.7 million tonnes by the year 2002). In addition to closing obsolete facilities, new technologies will be introduced that will enable production of higher quality steel products on a more flexible basis. The new technologies will contribute to a marked increase in labour productivity -- the number of man-hours required to produce a tonne of steel is expected to fall from 22 in 1990 to a maximum of 5 by the year 2002. This increased efficiency, combined with the closure of obsolete facilities will result in a substantial loss of jobs. In addition to technical improvements, attention is being paid to the capital structure of the restructuring programme and environmental issues.

As a result of efforts to match domestic production more closely to consumption, the proportion of flat products is expected to rise to about 50 per cent of total production while the proportion of long and tubular products will be in the order of 40 and 10 per cent, respectively. In trade, it is being assumed that 1.1 million tonnes of steel will be imported annually, while exports are expected to be about 2 million tonnes. Imports will
generally be comprised of higher quality products that cannot be manufactured in Poland.

Privatisation is considered an important aspect of the restructuring programme, not as a goal in and of itself, but as a means through which steel producers will be able to improve their financial position and overall competitiveness. The transformation is taking place in a difficult environment as the government is addressing a series of interrelated technical, financial and social problems simultaneously.

The first stage of the privatisation involved the commercialisation of plants into Treasury companies and joint stock companies. One plant (Warszawa steelworks) has already been privatised in partnership with the Italian steel producer Lucchini, which has a controlling interest in the firm (i.e., 51 per cent). The firm’s creditors became important owners as well when the company’s debt, which was substantial, was converted into equity. Provision was also made for employees to own up to 10 per cent of the company. In four other cases, the government has decided that plants will be mass-privatised by way of public investment funds. Further privatisation is being delayed until a more comprehensive overview of industry restructuring has been developed.

One of the problems that has to be faced in privatisation is the reorganisation of combinats; over 50 per cent of employment in these combinats are not involved directly in steel operations. In the case of Huta Sendzimira, for example, 40 000 persons used to be employed by the combinat, whose steel facilities produced about 6.5 million tonnes of steel per year. Production has been reduced to about 2.3 million tonnes in recent years, with employment falling to 25 000 one and one-half years ago and then to 17 000 currently (for the same level of production). An additional decline of 8 000 workers is foreseen. The combinat has produced 11 private associations, including a joint venture with an Austrian firm. In addition, a business incubator for 15 small firms has been established; six partnerships are currently operating in this context.

**Russian Federation**

During the past two years, some 70 per cent of Russia’s 258 metallurgical plants have been transformed into joint stock companies. The firms have been privatised through two methods.

Under the first method active employees receive 25 per cent of a company’s total capital in the form of non-voting shares, while management and former employees receive 5 and 10 per cent ownership, respectively. After a public offering, employees are permitted to purchase any offered shares that are left unsold. Under the second method, which accounts for 60 per cent of the industry privatisations, some 51 per cent of each company’s shares are sold to employees; the shares, which are sold at a higher price than under the first method, are voting shares.

Sales to the general public are organised by the State Property Fund, which holds undistributed shares. A portion of the undistributed shares, which can account for up to 20 per cent of the company, can be retained by the Fund for up to 3 years. The Fund also has a "golden share" which empowers it to
exercise certain veto rights and influence major decisions. Sales to the public are made through offerings under which every Russian citizens (including infants) who has been issued a voucher, can buy shares. Each of the the vouchers had an original value of 10 000 roubles; since being issued, their market value has fluctuated from less than 5 000 to close to 30 000 roubles. The price at which companies are sold is based on their residual value, which reportedly tends to be lower than the market value.

As a result of the privatisation, which is to be completed in 1994, ownership in metallurgical is currently structured as follows:

\[
\begin{array}{ll}
\text{-- shares held by the State Property Fund} & 43 \\
\text{-- sold to workers through closed procedures} & 35 \\
\text{-- shares sold in voucher auctions} & 13 \\
\text{-- shares transferred to the work force} & 7 \\
\text{-- shares transferred to plant executives} & 2 \\
\end{array}
\]

Very little, it was noted, has changed in terms of the overall management structure of companies.

The government has found that breaking up combinats into separate activities has, with few exceptions, not been effective. The combinats are therefore generally being transformed into shareholding companies in their entirety. This appears to be working well as the pooling of capital has permitted the combinat flexibility in directing investment towards activities with the highest potential return; considerable success has also been achieved in shifting the combinats’ human resources away from steel into other activities.

As to the role of the state, the government intends to remain involved in the management of steel companies. This is viewed as essential in order to maintain the long standing close co-operation among the enterprises. At the same time, efforts will be made to ensure competition among groups of enterprises.

In the post-privatisation period, problems are foreseen in securing the funding needed for investment, as even large firms will be unable to finance investment and working capital needs. It will therefore be essential to attract foreign investment. Social issues are also going to have to be addressed, but it is difficult at this time to see how matters will evolve. There is also a need for companies to develop business plans; since this is an area in which they have little experience, outside assistance would be welcome. Bankruptcy laws, it was noted, exist but are not generally being used.

Reference was made to an economic agreement entered into by the CIS states, as well as the separate accord reached on coal and metal. The countries have agreed to set up inter-state joint stock companies in which the participation of countries outside the region, notably those in Eastern Europe, would be possible.
Sweden

In 1992, the Swedish Government took action to sell its remaining interest in the steel company SSAB. For a two week period, investors were able to buy a financial package (or unit) which included:

-- a government bond, which could be redeemed in January 1994 for 17,000 Swedish crowns; and

-- a purchase warrant entitling holders to purchase 100 SSAB shares at a predetermined price of 170 Swedish crowns per share.

The price for each of the 127,000 units offered was 14,800 Swedish crowns. Investors were thus guaranteed a return of about 15 per cent over a one and one-half year period. Favourable developments in SSAB’s business, however, greatly increased the value of the purchased units. As of October 1993, investors could have netted 10,200 Swedish crowns per unit on their initial investment, or close to 70 per cent over the one and one-half year period.

Trade Union Advisory Committee

The TUAC representative described how the role of workers in steel companies in the United States was evolving through stock ownership plans and increased participation in management decision-making. Though there were important differences, some aspects of the experience were relevant to the restructuring and privatisation that was taking place in the economies in transition.

Restructuring, which is designed to develop more competitive enterprises, generally has a negative connotation for workers as it often involves capacity reductions and job elimination. These negative connotations tend to take on more prominence at a time when national economies are not in a position to absorb separated workers. Faced with job elimination, workers in the United States were sometimes offered the possibility to enhance a company’s viability through wage and benefit concessions. In return for these concessions, minority employee ownership, which carried many tax advantages for the company, was often acquired. In a sense, the workers were investing to preserve jobs. In more extreme cases, where companies were to be closed or sold, workers had the possibility of becoming majority owners in a company through buyouts.

A prerequisite to steel worker buyouts have been comprehensive feasibility studies, which require the expertise of industry experts, lawyers and investment bankers. While their analysis was being conducted, workers generally debated the desirability of ownership amongst themselves. Final decisions in these types of cases generally shared the following elements:

-- decision by workers on the basis of a secret ballot;
-- equitable distribution of stock between workers and managers;
-- rigorous financial analysis;
-- operational representation of workers on the company’s Board of Directors;
worker rights (including access to stockholders reports and meetings and voting rights);
training programmes to enable workers to become more effective owners; and
participation in management through in-plant committees and consultative mechanisms.

In general, it was noted, maintaining high productivity and international competitiveness requires that workers become actively involved in a wider range of corporate activities. As stated in one of the contracts recently negotiated with a steel company, "managing is too important to leave to managers alone". In the United States the tendency towards more participatory management has been growing, so much so that worker representation on corporate Board of Directors is occurring. This type of involvement was critically important when companies were undergoing major transformation, especially when substantial jobs reductions were involved.

United Kingdom

Privatisation of British Steel Corporation (BSC) was part of a broader national initiative undertaken in 1979 to increase efficiency in businesses owned by the government. Prior to its transformation into a private concern in 1988, BSC was restructured into a smaller, profit-making enterprise; crude steelmaking capacity was reduced by over 25 per cent (from 23.2 million tonnes per year in 1979 to 17.1 million tonnes in 1988), while employment at the company fell by more than 75 per cent (from 255,000 to 55,000 workers). Financial advisors were engaged by the government to estimate the value of the company’s assets in advance of the sale. Their estimation was based on a number of factors, including:

forecast profits for the company for the upcoming year; and
price earnings ratios for a range of heavy engineering companies in the United Kingdom and steel companies in Europe.

Using these criteria, the company was valued at £2.2 to £2.88 billion ($3.91 to $5.12 billion), or $229 to $299 per tonne of annual crude steelmaking capacity.

Two billion shares were then offered at a fixed price of £1.25 per share. The following ownership pattern emerged:

UK institutions ........ 44.2
Foreign investors ...... 33.2
General public ........... 21.8
BSC employees .......... 0.8

Following the sale of stocks, the price of shares rose by 2 per cent, indicating that the assessment of the company’s value was close to the actual market value. Since that time, the stock price fell to 46 pence per share, before recovering to a level which, at the time of the seminar, was once again close to £1.25.
Privatisation of the company has resulted in important changes in the way the company is managed. When state-owned, the government had broad influence in financial matters (both as provider and guarantor of funds), and in investment and disinvestment strategy. Political considerations often influenced important decisions. Under private ownership, political issues were no longer of direct concern. What matters to investors are:

-- the security of investment; and

-- the prospective rate of return on their investment.

For the company’s managers more choices are available for the company, as they are free to explore investment opportunities outside of steel as well as outside the United Kingdom. There is also an important freedom to divest the company from activities through the sale or closure of specific activities.

On an economy-wide basis, however, the government continues to play an important role in three areas:

-- helping to maintain a healthy economy and in assisting regions and workers adversely affected by structural changes in the economy;

-- assuring fair competition: through the control of subsidies; by maintenance of an open and fair trading system; through the control of anti-competitive behaviour; and

-- overseeing issues related to health, safety and the environment.

In privatising, company managers at BSC were required to view their company’s competitive position both in steel and with respect to all other private companies. While their financial performance might be quite good when compared to other steel producers, investors are more interested in performance in a broader sense. If better financial returns are available elsewhere, that is where investment capital will flow.

In the case of the economies in transition, it us understandable that the state will have to play an active role in assisting industries as these economies do not yet have well developed financial mechanisms in place. Mistakes are likely to be made. The consequences of these mistakes, however, will be increased to the extent that political considerations are given higher priority than financial criteria. Prior to making investment commitments, governments were urged to consider a broad range of alternatives with a view towards making choices that will create the greatest increases in wealth for the economy as a whole.
Appendix 3

Summary of the Report of the Discussion Leader

From the perspective of the Delegate of the World Bank, who served as discussion leader, the objectives of the seminar were met. Views and information on the current situation in steel were freely exchanged, as was information on a variety of issues related to structural adjustment in the steel industry. Through the discussions, delegates were provided with an important opportunity to develop a more comprehensive understanding of the nature and scope of problems facing the steel industries world-wide, and the policies that are being used, or have been used, to address these problems.

The discussions suggested that there are three critical elements that need to be present for restructuring programmes to be successful:

-- someone (or some body) has to be in charge of the restructuring process;

-- business plans have to be developed that have as their basic underlying principle the creation of commercially viable, independent companies which serve clearly defined markets; and

-- employees and trade unions have to be actively involved in the planning and implementation of restructuring programmes.

In addition, the discussions indicated that the economic and social problems resulting from restructuring would have to be dealt with effectively if restructuring plans were going to succeed. It was felt that consideration should therefore be given to organising a future seminar on the social and economic problems that restructuring poses for workers and communities, with a view towards identifying policies that companies and governments could pursue. Since traditional approaches are not likely to work in the EITs due to the profound changes that are occurring in most sectors of their economies, it was recommended that efforts be made to explore new and innovative solutions at future meetings.

Restructuring: financial issues

Information provided by the economies in transition on their restructuring plans, indicated that these economies would be trying to balance supply and demand conditions in their domestic markets, which would require considerable reductions in capacity. The economies had developed a well defined idea of this current position and what they would like to achieve; however, the methods that could be used to achieve their goals, were not clear. While the EITs would benefit from the experiences of the OECD countries as they
proceed, the situations in the two areas are quite different. The western economies, for example, were in much better position financially to handle the social and economic problems resulting from restructuring.

Financing restructuring in the EITs would be difficult. Lending from international institutions is likely to be limited and opportunities to raise investment funds through sales of steel to domestic and international markets are not high in light of market conditions and trade restrictions. Innovative approaches would therefore have to be examined.

Privatisation

A number of issues were raised during the discussion on steel industry privatisation, one of which concerned timing. In the case of the OECD countries, steps to privatise the steel industry were implemented prior to privatisation. Many of the economies in transition, on the other hand, are proceeding with privatisation prior to restructuring. This approach was a courageous one which the OECD countries were urged to consider supporting further.

Regardless of the sequence of restructuring and privatisation, it was clear from the seminar discussion that commercial viability should be the goal of privatisation efforts. By this it is meant that enterprises should be capable of financing ongoing operations on a profitable basis, without subsidies.
Table 1. **Apparent steel consumption, by specified region, 1989 and 1992, and the outlook for 1993 and 1994**

<table>
<thead>
<tr>
<th>Area</th>
<th>1989 (Millions of tonnes of finished steel)</th>
<th>1992</th>
<th>1993 (Per cent change from previous year)</th>
<th>1994 (Per cent change from previous year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>327.9</td>
<td>299.7</td>
<td>-0.2</td>
<td>+1.2</td>
</tr>
<tr>
<td>Other market economies</td>
<td>104.7</td>
<td>122.4</td>
<td>+4.8</td>
<td>+5.5</td>
</tr>
<tr>
<td>CEECs and NIS</td>
<td>154.6</td>
<td>96.2</td>
<td>-16.2</td>
<td>-2.0</td>
</tr>
<tr>
<td>Other</td>
<td>66.6</td>
<td>86.5</td>
<td>+10.7</td>
<td>+1.3</td>
</tr>
<tr>
<td>Total</td>
<td>653.9</td>
<td>604.8</td>
<td>-0.2</td>
<td>+1.7</td>
</tr>
</tbody>
</table>

*Source: OECD Steel Secretariat, presentation made at the OECD seminar on *The Steel Industry in Transition: Financial and Privatisation Issues*, held on 25-26 October 1993.*
Table 2. **Trends in steel production, imports and exports during 1993 and the market outlook for 1994**

<table>
<thead>
<tr>
<th>Area</th>
<th>Situation in 1993 vs. 1992</th>
<th>Market outlook for 1994</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Imports</td>
</tr>
<tr>
<td>Western Europe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>European Community</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Finland</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Norway</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Sweden</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Switzerland</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Turkey</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>North America</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Mexico</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>United States</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Asia and Oceania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>New Zealand</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Japan</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Economies in transition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Hungary</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Poland</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Romania</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>-</td>
<td>..</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>-</td>
<td>..</td>
</tr>
<tr>
<td>Ukraine</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

**Notes:**
+ Increase  
- Decrease  
.. Not available

**Source:** Based on information provided to the OECD Secretariat by Delegations during the OECD seminar on *The steel industry in transition: Financial and Privatisation Issues*, held on 25–26 October 1993, and on information contained in the OECD press release of 10 February 1994 on the "Outlook for the OECD Steel Market in 1994" [SG/PRESS(94)8].
Table 3. Steel industry restructuring in the EC, Japan, and the United States, 1980-90: Crude steel capacity, employment and capital expenditures (1)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1980</td>
<td>1990</td>
<td>Per cent</td>
<td>1980</td>
<td>1990</td>
</tr>
<tr>
<td>EC-12</td>
<td>222.5</td>
<td>184.1</td>
<td>-17.3</td>
<td>738</td>
<td>386</td>
</tr>
<tr>
<td>Japan</td>
<td>159.2</td>
<td>136.6</td>
<td>-14.2</td>
<td>271</td>
<td>195</td>
</tr>
<tr>
<td>United States</td>
<td>139.4</td>
<td>105.8</td>
<td>-24.1</td>
<td>512</td>
<td>276</td>
</tr>
<tr>
<td>Total</td>
<td>521.1</td>
<td>426.5</td>
<td>-18.2</td>
<td>1 521</td>
<td>857</td>
</tr>
</tbody>
</table>

1. Employment and investment data for the EC do not include operations that manufacture products outside the scope of the ECSC Treaty, such as tubes and drawn wire.

2. In constant 1992 dollars (adjusted by the implicit deflator for US gross fixed capital formation for machinery and equipment).

3. Calculated on the basis of average annual capacity.

4. Average.

Sources: OECD annual statistical reports on The iron and steel industry in 19__; the Commission of the European Communities' annual reports on Investment in the Community coalmining and iron and steel industries, and EUROSTAT, Iron and steel statistical year-book, various issues.
Table 4. **Steelmaking capacity in the CEECs and the NIS and the cost of restructuring**

<table>
<thead>
<tr>
<th>Area</th>
<th>1992 (Million tonnes)</th>
<th>Future Change</th>
<th>Cost of restructuring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Per cent)</td>
<td>Total (Million $)</td>
<td>Per year (Per tonne)</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>3.5</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>10.2</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Hungary</td>
<td>3.2</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Poland</td>
<td>14.0</td>
<td>11.7 (2)</td>
<td>-16.4 (2)</td>
<td>2 650</td>
</tr>
<tr>
<td>Romania (4)</td>
<td>12.5</td>
<td>11.8 (2)</td>
<td>-5.6 (2)</td>
<td>2 281</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>5.3</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>6.3</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>85.3</td>
<td>..</td>
<td>12 000 (5)</td>
<td>1500</td>
</tr>
<tr>
<td>Ukraine</td>
<td>55.8</td>
<td>..</td>
<td>1500 (5)</td>
<td>18</td>
</tr>
</tbody>
</table>

Notes: .. Not available

1. Calculated on the basis of average annual capacity in 1992 and the future capacity level anticipated.

2. Estimated capacity for the year 2002.

3. Based on a 10-year implementation period.

4. Two estimates have been made.

5. Based on a 8-year implementation period.

Sources: Data on capacity in 1992 based on statistics of the UN-ECE. Other data are based on presentations made at the OECD seminar on *The steel Industry in Transition: Financial and Privatisation Issues*, held on 25-26 October 1993.
Table 5. **Financing steel industry restructuring in the CEECs and the NIS, by source of finance**

<table>
<thead>
<tr>
<th>Area</th>
<th>Total cost</th>
<th>Internal sources</th>
<th>Financial credits</th>
<th>Foreign investment &amp; other attracted capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Million $)</td>
<td>(Per cent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Hungary</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Poland</td>
<td>2 650</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Romania (4)</td>
<td>2 281</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td></td>
<td>2 623</td>
<td>42</td>
<td>38</td>
<td>20</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>12 000</td>
<td>50-70 (5)</td>
<td>..</td>
<td>12</td>
</tr>
<tr>
<td>Ukraine</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
</tbody>
</table>

Notes: .. Not available

1. Including profits and depreciation.
2. Including bank loans and supplier credits.
3. Direct investment by foreign or domestic parties.
4. Two estimates have been made.
5. Based on press reports and discussions with Russian officials.

Sources: Except as noted, data are based on presentations made at the OECD seminar on *The Steel Industry in Transition: Financial and Privatisation Issues*, held on 25-26 October 1993.
## Table 6. Conditions in the Australian steel industry, 1984-88

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td></td>
<td>(%)</td>
<td>($</td>
</tr>
<tr>
<td>Steelmaking capacity</td>
<td>6.7</td>
<td>6.6</td>
<td>-1</td>
<td>--</td>
</tr>
<tr>
<td>(million tonnes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment (thousands)</td>
<td>30.5</td>
<td>27.6</td>
<td>-10</td>
<td>--</td>
</tr>
<tr>
<td>Capital expenditures (2):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (millions)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1 439</td>
</tr>
<tr>
<td>Annual average:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (millions)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>288</td>
</tr>
<tr>
<td>Per tonne of capacity</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>42</td>
</tr>
</tbody>
</table>

**Notes:**

1. Restructuring in the industry had already begun by 1984; capacity and employment in 1982, the year in which it began, were 8.9 million tonnes and 40 400 workers, respectively.

2. In constant 1992 US dollars (adjusted by the implicit deflator for US gross fixed capital formation for machinery and equipment).

**Sources:** OECD, *The Iron and Steel Industry in 19__*, various issues, and company sources.
Table 7. **Conditions in the Japanese steel industry, 1986-90**

<table>
<thead>
<tr>
<th></th>
<th>1986</th>
<th>1990</th>
<th>Change 1986-90 (%)</th>
<th>Change 1986-90 ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steelmaking capacity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(million tonnes)</td>
<td>150.8</td>
<td>136.6</td>
<td>-9</td>
<td>--</td>
</tr>
<tr>
<td><strong>Employment (thousands)</strong></td>
<td>251.3</td>
<td>194.5</td>
<td>-23</td>
<td>--</td>
</tr>
<tr>
<td><strong>Capital expenditures (1):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (millions)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>24 194</td>
</tr>
<tr>
<td>Annual average:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (millions)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>4 839</td>
</tr>
<tr>
<td>Per tonne of capacity</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>33</td>
</tr>
</tbody>
</table>

**Notes:**

-- Not calculated.

1. In constant 1992 US dollars (adjusted by the implicit deflator for US gross fixed capital formation for machinery and equipment).

**Sources:** OECD, *The Iron and Steel Industry in 19__, various issues.
Table 8. Conditions in the Swedish steel industry, 1978-82

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Steelmaking capacity (million tonnes)</td>
<td>7.3</td>
<td>5.4</td>
<td>-26</td>
<td>--</td>
</tr>
<tr>
<td>Employment (thousands)</td>
<td>45.4</td>
<td>37.0</td>
<td>-19</td>
<td>--</td>
</tr>
<tr>
<td>Capital expenditures (1):</td>
<td></td>
<td></td>
<td></td>
<td>1,496</td>
</tr>
<tr>
<td>Total (millions)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>299</td>
</tr>
<tr>
<td>Annual average:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (millions)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>46</td>
</tr>
<tr>
<td>Per tonne of capacity</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

Notes: -- Not calculated.

1. In constant 1992 US dollars (adjusted by the implicit deflator for US gross fixed capital formation for machinery and equipment).

Sources: OECD, *The Iron and Steel Industry in 19___*, various issues, and unpublished OECD data.
Table 9. **Capacity closures in the steel industry in the former GDR, 1989-1996**

<table>
<thead>
<tr>
<th>Operation</th>
<th>1989 (Thousand tonnes)</th>
<th>1996 (Thousand tonnes)</th>
<th>Change (Per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig iron</td>
<td>3 100</td>
<td>0</td>
<td>- 100</td>
</tr>
<tr>
<td>Crude steel</td>
<td>8 885</td>
<td>3 845</td>
<td>- 57</td>
</tr>
<tr>
<td>Hot rolling</td>
<td>5 348</td>
<td>4 476</td>
<td>- 16</td>
</tr>
<tr>
<td>Cold rolling</td>
<td>1 730</td>
<td>1 280</td>
<td>- 26</td>
</tr>
</tbody>
</table>

NOTES

1. The Central and Eastern European countries (CEEC) and the New Independent States of the former USSR (NIS).

2. Albania, Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and the Slovak Republic.

3. The group of states comprising the former USSR, with the exception of Estonia, Latvia and Lithuania.

4. See Appendix 1 for summaries of the statements made or submitted on restructuring.

5. See Appendix 2 for a summary of the statements made or submitted on privatisation.

6. Combinats refer to the administrative units that were created in the Comecon countries to oversee a broad range of economic activities in specific geographic areas.

7. See Appendix 3 for a summary of the discussion leader’s report on the seminar.