Research Department
Federal Reserve
Bank of
San Francisco

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Business & Financial Letter

Can Steel Compete?

U.S. steel consumption has risen only 15 percent over the past decade because of intermittent recessions, the loss of markets to substitute materials, and the recent slack in demand for capital goods. But to add to the domestic industry's problems, foreign imports in the past decade have siphoned off a major portion of this modest market growth.

The Administration acknowledges the seriousness of the import problem, but tends to disapprove of the use of mandatory quotas or formal marketing agreements to restrict the flow of low-cost steel into the U.S. market. Administration spokesmen argue that such restrictions would only raise the price of foreign and domestic steel without attacking the basic causes of the import threat, namely, excess worldwide production and relatively high domestic production costs. Consequently, the Administration is likely to put less emphasis on import barriers than on tax benefits and other measures to encourage plant modernization and cost reduction.

Meanwhile, several producers have petitioned the Treasury for relief under laws which call for the imposition of duties on foreign products found to be in violation of anti-dumping statutes—that is foreign products sold in the U.S. market at less than cost or home-market prices. This raises the question as to whether the domestic steel industry is in fact a relatively high-cost producer and, if so, whether these cost differentials are sufficient to account for the wide disparity between foreign and domestic steel prices in the U.S. market.

Import upsurge

Since the Second World War, the U.S. steel industry has watched its position in the world steel market steadily decline. In 1950, the United States was the largest steel producer in the non-Communist world, accounting for 56 percent of total production. In 1976, it was still the largest single producer, but its share of the total had dwindled to 25 percent, just slightly larger than that of Japan and somewhat less than the share of the European Economic Community. Domestic production moved irregularly upward over the 1950-65 period from 97 to 132 million tons, remained at approximately that level until the 1973 boom—but is presently running at an annual rate of only around 125 million tons, approximately the 1964 level.

Steel imports gained their first real foothold in the U.S. market in 1959, when a prolonged strike turned the United States into a net importer of steel. The foreign share of the market continued to rise as the dollar became increasingly overvalued under the then-prevailing system of fixed exchange rates, with imports reaching 18 million tons by 1971, equivalent to 18 percent of total U.S. apparent consumption. Imports then receded after the 1971-73 dollar devaluations, but another

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import upsurge began in the mid-1970's, with foreign steel reaching 16 percent of total U.S. apparent consumption in January-July 1977—and 20 percent of the total market in August, when the flow reached an annual rate of 22 million tons. As a consequence of the increase in imports over the 1964-76 period, foreign producers captured nearly all of the growth of the U.S. market. In 1976, about 56 percent of U.S. steel imports came from Japan and another 22 percent from the European Economic Community.

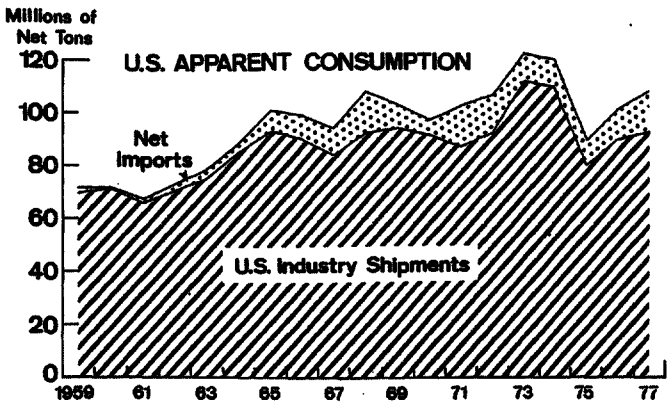
Comparative costs

Comparative steel-production costs, as developed recently by the Council on Wage and Price Stability (COWPS), help to explain how Japanese producers were able to increase their penetration of the U.S. market in recent decades. Historical cost data are scantier for European producers, but the available data suggest that U.S.-European cost differentials alone cannot explain their inroads into the U.S. market. Indeed, the data show that total production costs per ton of raw steel are roughly comparable in Europe and the U.S., and that the costs of transporting steel from Europe to the U.S. raise their delivered costs far above those of domestic producers.

Raw-material cost data show that the U.S. steel industry has gradually lost its earlier comparative advantage over Japanese producers. According to COWPS estimates, the costs of purchased raw materials per ton of raw steel currently are about $5 less in Japan than in the U.S. The Japanese advantage is somewhat less if both purchased and company-produced materials are included, since the largest U.S. firms produce most of their own raw materials.

Unit labor-cost data show that the traditional labor-cost advantage held by Japanese producers has narrowed over time, but remains large nonetheless. Output per manhour more than doubled in the Japanese steel industry over the 1964-76 period, while the productivity gain in the U.S. industry amounted to only about 18 percent due to a much slower growth of output. In contrast, hourly compensation rose nearly six-fold in the Japanese steel industry over that same period, while it increased about 142 percent in the U.S. industry. Yet despite the narrowing differential, unit labor costs are still about $36 less in the Japanese steel industry than in the U.S. industry, per ton of raw steel. This advantage is due mainly to the fact that wage rates in Japan are still only about one-half American rates. Output per manhour is only slightly higher in Japan than in the U.S., despite the more rapid gains made in Japan over the 1964-76 period.

Combining these raw-material and labor-cost differentials—and converting them from a raw-steel to a



finished-product basis—results in about a $73 per ton (25 percent) comparative advantage for Japanese over domestic producers. However, the Japanese advantage is narrowed somewhat when capital costs and other expenses are added.

The overall cost advantage held by Japanese producers is further reduced when their inbound raw-material transportation costs and outbound finished-steel transportation costs are included. The Japanese import most of their raw materials, while U.S. firms obtain most of their raw material inputs from domestic sources. Japanese inbound transportation costs are therefore about $2 per ton higher than for U.S. producers, while freight, loading, insurance and duty charges incurred by Japanese producers in U.S. marketing activities range between $44 and $54 per ton. Indeed, subtracting all these transportation costs from the Japanese production-cost advantage, suggests that Japanese producers can sell steel in the U.S. at only a modest overall discount below U.S. producer costs and still make a profit.

Counterattack

Domestic producers argue, however, that foreign producers have been selling steel in the United States at prices that are much lower than would be warranted on the basis of their comparative advantage—in fact, have been selling steel at a loss in order to raise their operating rates and employment above levels that would otherwise prevail. They claim, furthermore, that foreign steelmakers are able to do this because deficits sustained during periods of weak demand are offset by stiff premiums during periods of strong U.S. demand, and also because Japanese firms are subsidized by their non-steel subsidiaries.

These charges are still being investigated, but the fact that the Treasury recently ruled tentatively in favor of a small Pacific Northwest producer, suggests that domestic steel companies may have a good chance of winning their legal case against foreign producers. Whatever the outcome, it is clear that domestic firms will be operating in an intensely competitive environment for several years to come. Consumption of steel in the non-Communist world is expected to grow at an annual rate of around 4 percent over the 1976-80 period. World capacity is expected to grow at an even slower rate as financially-distressed European and other producers sharply modify their expansion plans. Still, this slowdown in the growth of capacity may not be sufficient to raise overall operating rates substantially above current depressed levels. Thus, given their comparative cost advantage, Japanese producers may well continue to focus on the U.S. market as an important outlet for increased exports.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 10/19/77	Change from 10/12/77	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	101,240	– 442	+ 10,777	+ 11.91
Loans (gross, adjusted)—total	78,989	– 307	+ 10,096	+ 14.65
Security loans	2,132	+ 161	+ 571	+ 36.58
Commercial and industrial	23,924	– 246	+ 1,602	+ 7.18
Real estate	26,087	+ 140	+ 5,139	+ 24.53
Consumer instalment	13,742	+ 48	+ 1,910	+ 16.14
U.S. Treasury securities	7,864	+ 218	– 919	– 10.46
Other securities	14,387	– 353	+ 1,600	+ 12.51
Deposits (less cash items)—total*	98,903	– 1,556	+ 8,551	+ 9.46
Demand deposits (adjusted)	28,516	– 1,039	+ 2,611	+ 10.08
U.S. Government deposits	457	+ 152	+ 10	+ 2.24
Time deposits—total*	68,159	– 285	+ 5,609	+ 8.97
States and political subdivisions	5,316	+ 64	+ 222	+ 4.36
Savings deposits	31,804	– 33	+ 3,489	+ 12.32
Other time deposits‡	28,803	– 251	+ 1,990	+ 7.42
Large negotiable CD's	10,955	– 418	+ 141	+ 1.30

Weekly Averages of Daily Figures	Week ended 10/19/77	Week ended 10/12/77	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (–)	– 39	+ 118	– 37
Borrowings	162	107	1
Net free(+)/Net borrowed (–)	– 201	+ 11	– 38
Federal Funds—Seven Large Banks			
Interbank Federal fund transactions			
Net purchases (+)/Net sales (–)	+ 902	+ 277	+ 12
Transactions with U.S. security dealers			
Net loans (+)/Net borrowings (–)	+ 426	+ 480	+ 114

*Includes items not shown separately. ‡Individuals, partnerships and corporations.

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