Semiconductor dealing

US and Japan near agreement

Washington

THE US semiconductor industry is fishing for an increase of sales to Japan by diplomatic as well as commercial means. This seems to have been the significance of the flurry of activity last week, during Prime Minister Yasuhiro Nakasone's visit to Washington, when President Reagan himself was cast in the role of part-time chip salesman.

Bilateral talks between the United States and Japan have so far produced no formula for expanding US companies' access to Japanese markets, at least on the scale of Japanese exports of semiconductor chips to the United States. But the mere existence of these talks has raised fears in Europe that the two countries are forming a cartel to carve up the world semiconductor market.

US semiconductor sales are in the doldrums. United Technologies Corporation has closed its Mostek subsidiary, and Intel and Motorola have scaled back their operations. The price of chips has been plummeting. Two years ago, erasable programmable read-only memories (EPROMs) were selling for $28, but now they cost about $3 each.

All this has made US companies look more hungrily than ever to a larger piece of the $8,000–10,000 million Japanese market. While the market share for US semiconductors worldwide is about 52 per cent, sales in Japan have been closer to 10 per cent. Last summer, several US companies asked for and were granted a formal investigation by the US Trade Representative Clayton Yeutter of Japanese trading practices.

Since January, representatives from the Japanese Ministry of Trade and Industry and the Office of the United States Trade Representative held a series of meetings to discuss the US complaints. The Japanese offered to encourage Japanese companies to increase purchases of US chips to around 12.5 per cent, and later increased the target to 19.5 per cent by 1990. But US companies reckon they can grab closer to 30 per cent of the Japanese market under "fair" trading conditions, and the last meeting on 28 March ended with the two sides far apart.

Rumours that a cartel was being planned appear to have stemmed from two factors in the negotiations. Some observers saw the Japanese offer of a specific market share to US companies as a preamble to further international arrangements. This fear was fuelled by the fact that the 19.5 per cent offer was made at a meeting between top executives of Japanese and US companies held separately from the official trade negotiations. But officials of the Semiconductor Industry Association — a US trade association — dismiss claims of cartel-talk, arguing that they are merely interested in assuring free trade and competition.

Hovering over the trade negotiations is a preliminary decision by the US Department of Commerce that Japan is guilty of dumping chips on the US market. Importers of 64K dynamic random access memory chips (DRAMs) have been posting bonds or paying deposits to cover dumping duties since last December. Those penalties have been expanded to cover EPROMs and 256K DRAMs since last month. If the preliminary dumping charges are upheld, importers of Japanese chips will have to pay as much as 188 per cent of the cost of the chip in penalties. A permanent decision will be issued on 23 April for 64K DRAMs, and on 27 May for EPROMs and 256K DRAMs.

Dumping duties are a double-edged sword. They provide some measure of relief for semiconductor manufacturers, but may alienate their largest customers, the computer and telecommunications industry. Rising prices for semiconductors spell trouble for the entire electronics industry. Moreover, capturing a market by lowering prices is a time-honoured practice in the United States, one that US companies are not shy of following.

The Reagan administration has so far been giving the semiconductor industry strong support in its fight for entry into Japanese markets. Yeutter has warned Japan to expect "harsh actions" if there is no change in trading practices. President Reagan is likely to take a softer tone with Prime Minister Nakasone, but the US industry is hoping his message will be just as clear.

Joseph Palca

US space station

Europe's centrifugal tendencies

Washington

THE US National Aeronautics and Space Administration (NASA) went to Congress last week to seek $140 million for design and development of the space station, putting a brave face on its continuing argument with the European Space Agency (ESA) on European participation. John Hodge, acting associate administrator for the space station, said he thought agreement with the Europeans in preliminary design work was "very close".

Others are not so optimistic. At issue is whether the pressurized module that ESA will contribute (called Columbus) should be totally dependent on the space station support systems (as NASA wants) or whether it should retain some autonomy that would enable it to be partly free-flying. NASA had wanted the disagreement settled in time for an appearance before the House of Representatives' space station and applications subcommittee, and on 24 March this year Reimar Lüst, director general of ESA, wrote to NASA agreeing that the module would be a permanent part of the space station — although still holding out the hope that it could be detached for research purposes. The details were still being discussed last week by ESA's member nations, which want the module to have the capability to dock with a free-flying European co-orbital platform and insist that the module be attached to the space station at one end only.

There also seems to be potential for disagreement over the sort of experimental apparatus that will be carried on the European module. Hodge told Congress last week that he expects the European module to be used chiefly for life sciences research, while the US experimental module would concentrate on microgravity research and the Japanese on "technological development". But an ESA representative attending the hearing later said pointedly in private that ESA has every intention of carrying out microgravity research of its own and had not agreed to concentrate exclusively on life sciences.

Canada and Japan have already reached agreement with NASA on their contributions to design and development. Canada will supply a mobile manipulator arm, while Japan is to contribute a pressurized module with an unpressurized experimental area known as "the back porch". NASA's conceptual design for the space station is now significantly less ambitious than was being talked about two years ago; the number of US pressurized modules has decreased from four to two, for example (although their volume has increased). Other changes include the power supply, now planned as 25 kW of solar panels and 50 kW of "solar dynamics" — parabolic Sun-tracking reflectors that focus solar radiation on heat-exchanging liquid that drives turbines.

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