JPRS L/9541

11 February 1981

Japan Report

(FOUO 10/81)

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

APPROVED FOR RELEASE: 2007/02/08: CIA-RDP82-00850R000300080024-4

JPRS L/9541

11 February 1981

JAPAN REPORT

(FOUO 10/81)

CONTENTS

POLITICAL AND SOCIOLOGICAL

EDITORIAL LOOKS AT JAPAN'S FOREIGN POLICY AIMS

Tokyo MAINICHI DAILY NEWS in English 5 Jan 81 p 2

[Editorial: "Japan's Foreign Policy"]

[Text]

The New Year has been ushered in with a somber tone. Some 85,000 Soviet troops remain in Afghanistan, 52 American hostages are still in Iran, and no end is in sight in the Iran-Iraq war. The situation in the Middle East, the powder keg of the world, and in Poland may deal a final blow to the detente which has been seriously harmed by the Soviet occupation of Afghanistan.

A new change is taking place in such a ponderous world. On Jan. 20, the new American administration under Ronald Reagan will be inaugurated. American voters chose Reagan with the expectation that the new president will restore a "strong America." Reagan called for the reconstruction of the American economy through the people's vigor and the stabilization of the international situation through the strengthening of the American military capability against the Soviet Union.

In the new American administration, we can anticipate two basic foreign policy lines: economic diplomacy based on the cooperative competition of the Western industrialized nations and diplomacy directed toward the Soviet Union. We do not see any basic difference between the policies followed by outgoing President Jimmy Carter and those of President-elect Reagan.

One difference is in their approach to the Soviet Union. In particular, Reagan's policy will be based on the belief that the Soviet Union is the source of a threat to U.S. security and that U.S. military superiority is therefore indispensable. This is in contrast with Carter's policy line which, as was seen in the Afghanistan problems, tried to treat symptoms as they arose and called for attention.

From the American viewpoint, the most important matter in the relationship with Moscow is the Soviet military power. Some American officials view that the difference between the Soviet-led Warsaw Pact forces and the NATO forces has widened, resulting in heightened tension in Europe, while the invasion of Afghanistan is threatening the stability in the neighboring Middle Eastern and Southwest Asian nations. Everyone knows that the Middle East is the oil supply source for Japan and Western Europe, and its instability may become a matter of life or death to the Western nations.

Well aware of this, the Carter administration tried to strengthen the NATO forces and prepare "Rapid Deployment Forces" to cope with any contingency in the Middle East. Reagan is expected to step up this policy and will place top priority on the improvement of U.S. strategic nuclear capability.

What will be the Soviet reaction to the new American policy? Some people believe that the Soviet Union desires to have talks with the U.S. for the improvement of relations because of its domestic situation.

We do not expect that the Reagan administration would easily accept a Soviet proposal for talks, because American officials know that a prominent cause of the Carter administration's failure in its Soviet policy was attributable to the disarray among the Western allies and the United States can no longer bear heavy military expenditures.

Accordingly, the new U.S. administration will call for unity among its allies. Talks between Reagan and Prime Minister Zenko Suzuki, possibly in May, or the Western summit conference in Ottawa in July will offer good opportunities for that purpose.

How will Japan cope with the expected U.S. demand for the stepping up of its defense capability? We cannot find a clear-cut answer to that question. We must remember, however, that Japan must look at the world through its own eyes and assert its role in contributing to the maintenance of world peace and prosperity by its own code of conduct.

Japan must further improve its relations with China which has stepped up its rapprochement with the Western bloc, extend its aid to stabilize some regions, and play a definite role in checking the possible cold war trend in the Reagan diplomacy. Japan now sits among the nonpermanent members of the United Nations Security Council and will be tested in its role to become a power which will contribute to real world stability.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

CABINET RESHUFFLE CALLED MOST DIFFICULT PROBLEM FOR SUZUKI CABINET

Tokyo MAINICHI DAILY NEWS in English 7 Jan 81 p 4

[Article by Takehiko Takahashi]

[Text]

On New Year's Day, former Prime Minister Kakuei Tanaka received many visitors. This testifies to the political strength that Tanaka still possesses. Why is it that so many visitors, including incumbent cabinet ministers, called at the home of a person who is a defendant in a criminal case involving Lockheed payoffs?

The reason has a connection with the fact that toward the end of last year, Tokusaburo Kosaka and others joined the Tanaka faction (or to be more specific, the Thursday Club which has Susumu Nikaido, chairman of the LDP Executive Council, as its representative) and the Tanaka faction became a huge faction with over 100 members.

Upon joining the Tanaka faction, Kosaka said, "the political situation is stabilized due to the comfortable majority that the Liberal-Democratic Party holds. The LDP administration will remain stable through the existence of a faction that possesses overwhelming numerical superiority."

What was meant by this is that by increasing the number of Tanaka faction members in the future, the leadership of the LDP administration will be grasped and the administration stabilized by that leadership.

The Suzuki administration was born through the cooperation of the Suzuki faction, Fukuda faction and Tanaka faction. The Suzuki faction faces complex inner problems, with MITI Minister Rokusuke Tanaka faction to form his own faction. The attitude of the Fukuda faction is to cooperate while quietly watching the movements of the Suzuki administration.

Under such a situation, the Tanaka faction alone is actively endeavoring to expand its influence. The Suzuki administration does not find this desirable by any means. This is because Prime Minister Suzuki will become unable to carry out any personnel shifts or policies contrary to the wishes of the Tanaka faction. This, in fact, is what the Tanaka faction is aiming at.

Prime Minister Suzuki's schedule this year is filled with many important events. Following his visit to ASEAN countries from Jan. 8, it will be necessary for him to cope successfully with the ordinary Diet session. The budget for fiscal 1981, which will be taken up by the ordinary Diet session, calls for a big increase of taxes. This is a point on which the opposition parties will concentrate vehement attacks.

Another important problem is when Prime Minister Suzuki will visit the United States. Chief Cabinet Secretary Kiichi Miyazawa is taking a cautious attitude, but it has been reported that the United States desires to hold a Japanese-American summit meeting as soon as possible after the inauguration of President-elect Ronald Reagan.

Summit

Then there is the summit meeting of the industrially advanced nations. Upon recollecting the past, the Miki, Fukuda and Ohira cabinets all began to totter after the respective summit meetings. Although this may be a mere coincidence, there is a need for the Suzuki cabinet to be careful.

One reason for the foregoing phenomenon is a matter of timing. It is the customary period for a cabinet reshuffle and a change of party executives.

Toward the end of 1980, Prime Minister Suzuki conducted a press conference intended for publication in the newspapers on New Year's Day. At that time, Suzuki declared that he was not thinking at all about a cabinet reshuffle. This has been the same attitude adopted by prime ministers in the past.

Nevertheless, the reality has been different. As soon as the ordinary Diet session ends and the summit meeting is over, the problems of a cabinet reshuffle and party personnel invariably come to the fore.

If Prime Minister Suzuki attempts to avoid this, criticism is bound to rise that "as in the case of the Miki cabinet, this is an administration in which the prime minister lacks the leadership even to reshuffle the cabinet."

On the other hand, if Suzuki tries to carry out changes of the cabinet and party personnel, the problem that will arise is the movement of the Tanaka faction which has increased its membership. An LDP faction has been described as "a joint-stock corporation that distributes money and position."

The Tanaka faction, which possesses the largest number of stocks (members) in the Liberal-Democratic Party, is bound to demand the number of cabinet members corresponding to its "stock holdings." If this is carried out, nearly one-third of the cabinet posts must be allotted to the Tanaka faction.

The other factions will undoubtedly oppose this vigorously. Prime Minister Suzuki will face great difficulty in making adjustments. But the Tanaka faction will adhere to its demands even if other dissatisfied factions are driven into the antimainstream camp.

One of the problems here is the handling of Executive Council Chairman Nikaido. The Tanaka faction may demand that Nikaido be given the post of deputy prime minister. If so, Yasuhiro Nakasone and Toshio Komoto, who are in the position of deputy prime ministers at the present time, will be forced to put up resistance.

In this way, how to pass over the peak of a cabinet reshuffle, which is forecast for July-August, is likely to become the most difficult problem faced by the Suzuki cabinet.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

LIBERAL DEMOCRATIC PARTY ELATED OVER ELECTION RESULTS

Tokyo MAINICHI DAILY NEWS in English 26 Jan 81 p 2

[Editorial: "Overconfident LDP"]

[Text]

The Liberal-Democratic Party is puffed up with pride, backed by its numerical strength in the national Diet, and its campaign policy charting the future course of the nation announced at the regular party convention on Jan. 23 smacks of self-conceit.

Nobody leveled a serious question at the announcement at the convention which was nothing more than a festive rally, reflecting an air of overconfidence prevailing in the party.

The dual elections for both Houses held last June resulted in the victory for the LDP, reversing the tide in domestic politics. In this regard, a soul-searching analysis of the election results and subsequent changes in the political climate should have been the foremost issue at the convention. The campaign policy pointed out that the healthy political consciousness of the nation, which favored a comeback to tradition-bound conservatism, paved the way for the LDP's smashing victory. Their analysis, however, does not sound right.

The trend toward conservatism is based on the realistic sentiment of the people calling for medium-scale economic growth. This should not be interpreted as indicative of the people's positive support of the LDP or a change in the people's political awareness.

According to a public opinion survey conducted recently by the Mainichi Newspapers, only 8 percent said that the LDP had remained in power for so long because of its excellent politics. On the other hand, more than half of the respondents declared that the lack of strength on the part of the opposition parties resulted in an LDP win.

The LDP victory was due to the passive support of the people resulting from errors by its rivals. The survey also revealed that the people are rather uneasy about the majority strength of the LDP, associating the party with such bad images as "tax increases" and "corruption in the political arena."

The consensus of most people is that under the prevailing circumstances they had no choice but to "pick the Liberal-Democrats." With its numerical strength, the campaign policy of the LDP appears unusually strong on such issues as revision of the Constitution, defense, atomic power plant development and education. They seem to be in a hurry to realize these issues while in power.

We are not against their enthusiastic manner of tackling these problems, but it must be pointed out that they are too confident of their ability.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

POLITICS FACE ROUGH GOING IN 1981

Tokyo MAINICHI DAILY NEWS in English 21 Jan 81 p 5

[Article by Takao Iwami]

[Text]

Many unexpected events occurred in Japanese domestic politics in the 1970s. The trend is likely to continue in the 1980s.

In May 1980, the government of Prime Minister Masayoshi Ohira was toppled by a nonconfidence motion sponsored by opposition parties. The passage of the motion became possible by the absence of several dissident Liberal-Democrats.

As a result, for the first time in Japanese political history, elections of the members of both Houses of the Diet took place on the same day—June 22. During the election campaign, Ohira died.

The election results showed that voters did not support the opposition parties' call for the formation of a coalition government to replace the LDP government. The government party won a landslide victory and the opposition parties, except for the moderate New Liberal Club, suffered a considerable setback. "One strong and six weak parties" emerged on the Japanese political map.

Zenko Suzuki formed a new cabinet. "Zenko who?" was a common question asked by foreign political leaders. But Prime Minister Suzuki skillfully managed the extraordinary Diet session in autumn and compiled a draft budget for fiscal 1981 with little difficulty. Some people said that Suzuki's leadership was inadequate but, in spite of that, he made a smooth start.

At a glance, the LDP government, which survived some difficult situations in the latter half of the 1970s, seems able to continue enjoying one-party control due to its numerical strength in the Diet. Some political observers believe that the LDP has fully regained its strength, coinciding with the worldwide tendency toward on expansion of conservative influence.

Nevertheless, judging from what is taking place inside the party, the LDP government under Prime Minister Suzuki will not necessarily be able to enjoy its stability. It can maintain numerical strength because no election is expected for Diet members in 1981 but there is no guarantee that such a favorable situation would continue in the future.

The conservative tendency is an indication that voters do not want to change the current order rapidly. The tendency cannot be interpreted however, as an indication of the voters' active support of the government party. Staunch supporters of the LDP single party government account for about 30 percent of the total voters. The current stability of the conservative government is a result of the weakness of the opposition parties. In other words, the stability is attained through a structural weakness of the political world.

A recent phenomenon which has attracted political observers is the emergence of cracks in the "stable" party. Until the death of former Prime

Minister Ohira, the Japanese political map was distinguished by two colors—the factional alliance between former Prime Minister Kakuei Tanaka and Ohira, on the one hand, and that between former Prime Ministers Takeo Fukuda and Takeo Miki, on the other.

Since the death of Ohira, the LDP members, weary of factional struggles, have lived under a relative lull during the past six months. A change appeared toward the end of December.

A remarkable phenomenon was the outright expansionist tactics among factions. The faction headed by former Prime Minister Takana, who was prosecuted in the Lockheed scandal case, has exerted considerable influence in the party for about six years since the retirement of Tanaka from the highest position of the Japanese government, although its activities have remained somewhat dormant.

Tanaka is reportedly determined to regain the premiership. He has openly resumed activities, apparently to attain his reported ambition.

In October last year, he reorganized his faction, giving it a new name of "Thursday Club" with Susumu Nikaido, former chief cabinet secretary under the Tanaka cabinet and now the LDP Executive Council chairman, assuming the post of its chairman as a "surrogate" of Tanaka himself.

Tokusaburo Kosaka, businessman-turned-politician and former director general of the Economic Planning Agency, joined the club. The total numerical strength of the club now stands at 101, comprising members of both Houses of the Diet. Japanese political circles, including opposition parties, are carefully watching the activities of the largest and strongest faction in the government party.

Prime Minister Suzuki, in his New Year press conference, said that the formation of the new club was "not welcome," indicating his displeasure with the expansionism of the Tanaka faction.

We must attach significance to the fact that Suzuki, who had enjoyed support from the Tanaka faction, was compelled to make such a critical comment. Tanaka is endeavoring by every means to become the prime minister of Japan.

Meanwhile, the LDP must face such serious problems as the possible revision of the war-renouncing Constitution, expansion of the defense capability, and reconstruction of the deficit-ridden state finances.

The government party members must make a choice on these problems and, together with this, the possibility exists of a polorization among the members—between the pro-Tanaka and anti-Tanaka members.

It is too early to predict anything at present. I have heard some political leaders unanimously express their anxiety that they will experience "rough sailing" in the latter half of this year. They are aware of the start of factional struggles as an undercurrent. The year 1981 is bound to be stormy.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

'YOMIURI' CRITICIZES SUZUKI SPEECH

Tokyo THE DAILY YOMIURI in English 27 Jan 81 p 2

[Editorial: "The Insipid Policy Speech"]

[Text]

Prime Minister Suzuki's speech to the Diet was monotonous, boring and insipid like those of his predecessors except when he stressed Japan's responsibilities for world peace.

Suzuki went into unnecessary details of policy which would have been better left to respective ministers involved with financial and economic affairs. Instead he should have set forth forcefully his political philosophy.

However, we were impressed when he stated that Japan had responsibilities to perform for world peace and asked the people to bear an increased financial burden to fulfill Japan's duties. Nobody can object to Japan taking an assertive political role for world peace nor to the cost of this.

Fails To Clarify Japan's Roles

However, the prime minister failed to make clear just what role or roles Japan should perform, and this left the impression that he and the nation lacked determination. After all Japan for many years has steered clear of a political role, and the idea now seems to plunge us toward the unknown.

But with the Soviet invasion of Afghanistan and the hostage crisis in Iran, Japan abandoned its "omnidirectional foreign policy" with its false sense of security. However, where do we go from here? Of course, Japan must denounce acts which disturb world peace even when this means economic losses.

And Japan must expand its economic cooperation. The prime minister has promised in the next five years to double economic aid. However, this is not enough.

Japan must perform more forcibly as a nonpermanent member of the UN Security Council and must be especially active in working for peace and stability in Asia. Japan must speak out strongly in the cause of peace.

Japan can find a role to play in easing confrontation and preventing armed conflicts, even though it cannot adopt a military role. It should demand disarmament in a louder voice and we wonder why Suzuki made no mention of this in his speech.

Adjust Japan-US Relations

The most important diplomatic task for Japan this year is to adjust Japan-US relations, and we hope Suzuki will be able to visit Washington next April to further this process. Consultation with the US is necessary because we depend on the US for the greater part of our security. But Japan must make it very clear that what it can do in defense is limited.

What the two nations can do quickly to improve relations is follow the advice of the Wise Men's Group and reopen the joint conferences of ministers to reduce trade friction.

(January 27)

CSO: 4120

POLITICAL AND SOCIOLOGICAL

KATO'S SWITCH TO LDP IS BLOW TO JSP CHAIRMAN ASUKATA

Tokyo MAINICHI DAILY NEWS in English 14 Jan 81 p 4

["Nagatacho Doings" column by Takehiko Takahishi: "'Kato Shock' For JSP Chairman Asukata"]

[Text]

A "shocking development" for the Japan Socialist Party has occurred. Former Diet member Kiyomasa Kato, once considered to be a dyed-in-the-wool JSP member, is becoming a candidate under Liberal-Democratic Party colors in the election for the chief of Chiyoda Ward, Tokyo.

Kato is a man in the direct line from the late Inejiro Asanuma, former JSP chairman. After Asanuma's tragic assassination at Hibiya Public Hall, his widow ran once in his place for the House of Representatives but the Diet seat was taken over by Kato after that.

Unfortunately for Kato, at the time when he was defeated in one election, the first electoral district of Tokyo was decided as Chairman Asukata's constituency (Asukata did not have a Diet seat then). Although Kato had been planning a new bid to recover that Diet seat, it became necessary to yield that constituency to the party chairman. A promise was made then that he would be supported as a candidate from the Tokyo local constituency in the House of Councillors election.

In last year's House of Councillors election, however, Kato was defeated. Just then Chief Toyama of Tokyo's Bunkyo Ward was taken by death. Kato decided to become a candidate in the election for the next Bunkyo Ward chief.

Tokyo's Bunkyo Ward is a district with strong conservative influence. Many of the people supporting Kato did so not because he was a JSP member but because of his character. Thus many of those Kato supporters in this election were people of the conservative camp.

The conservatives are also in the overwhelming majority in the Bunkyo Ward assembly. Accordingly, if the ward chief there desires to carry out his administration smoothly, the cooperation of the conservative influence in the ward assembly is essential. In order to become the ward chief, it became necessary for Kato to lean toward the LDP.

At the time, the LDP was looking for a candidate to run in the next election for Tokyo's Chiyoda Ward chief. This is where Kato entered the picture. He was accepted at

once. Talks were held by LDP Secretary General Yoshio Sakurauchi and Kato. Today Kato has become the LDP's official candidate.

The Japan Socialist Party was greatly taken aback. In the last House of Representatives election, Kato campaigned actively for Chairman Asukata.

For Chairman Asukata, the "Kato voters" (votes by people personally friendly with Kato and having no connection with either JSP or Asukata) are very important in an election.

For Kato to have gone over to the LDP means that Asukata suffered a tremendous loss in Bunkyo Ward.

Meeting Avoided

At present Kato is avoiding meetings with Chairman Asukata and JSP executives. At the JSP's first Executive Committee meeting of the year, held on Jan. 8, "Kato" was naturally taken up as a big problem.

According to Asukata, "I first heard about Kato from Shogo Ogi, chairman of the JSP's Tokyo Metropolitan Federation. The Tokyo federation says that it is unable to fathom Kato's true intentions. Ogi is searching for Kato but hasn't been able to meet him as yet."

In regard to this, the criticism has arisen that "Kato has held a press conference and has also met the LDP secretary general. To say that the JSP alone is unable to meet him is not an explanation that the public will accept."

JSP Secretary General Shinnen Tagaya seems to be evading the issue, for he says, "I had returned to Kyushu and since I was away from Tokyo, I don't know exactly what is happening."

At one time the Japan Socialist Party experienced the "Minobe as Tokyo Governor Age" and the reformists' flag flew over the Tokyo metropolitan office. Today, with Shunichi Suzuki as Tokyo's governor, the Liberal-Democratic Party, Komeito and Democratic Socialist Party are the government parties, and the JSP is the opposition.

A Tokyo gubernatorial election will take place this year. This is not locked upon as a local election. It is being watched with close attention as telling the rising or falling fortunes of the different political parties.

But before that, an erstwhile JSP figure is running as an LDP candidate in the election for the Chiyoda Ward chief. This is a big blow to the Japan Socialist Party.

There was a time when the JSP was called "a political party of the cities." This is no longer so. Even in the big cities, the conservative influence is deep-rooted and its strength is mounting, as testified to by Kato's action.

The blow is particularly severe for JSP Chairman Asukata, since he was the one who took over Kato's former constituency.

(The writer is an adviser to the Mainichi Newspapers and former chief editorial writer).

CSO: 4120

POLITICAL AND SOCIOLOGICAL

TANAKA SUPPORTERS INAUGURATE 'THURSDAY CLUB'

Tokyo BUSINESS JAPAN in English Dec 80 pp 14, 15

[Text]

A total of 93 Diet members of the Kakuei Tanaka faction of the ruling Liberal-Democratic Party inaugurated a group named the Thursday Club on October 23. Susumu Nikaido, chairman of the LDP's Executive Board, who has been known as Tanaka's right-hand man, was appointed president of the Club. He leads the faction on behalf of the former prime minister, now an independent, who is a defendent in the Lockheed payoff trial. Nikaido was once alleged to be the "high-ranking 'gray' government official" in the payoff scandal.

Kakuei Tanaka himself is listed among the members of the Club. Although he has avoided open political activities since the payoff scandal emerged, many feel that his membership in the group is a sure sign of his move toward rejoining the LDP.

The Thursday Club's inauguration is significant. First, there is Nikaido's appointment to the Club presidency. Once termed within the LDP as "the Tanaka Corps," the Tanaka faction boasted of ironbound unity among its members; yet their unity was impaired and internal struggles came to the surface on the occasion of recommending a candidate for the party chairmanship and subsequently prime minister, at the sudden death of Prime Minister Masayoshi Ohira. Nikaido and Tanaka's other direct followers unconditionally supported Zenko Suzuki, the present LDP president and Prime Minister, as Tanaka proposed, but at an early stage of the negotiations, Noboru Takeshita, Shin Kanamaru and those who are pro-Eiichi Nishimura, a veteran LDP member who is the intra-factional rival to Tanaka, showed a reluctance to accept Tanaka's proposal. Instead, they showed strong support for Toshio Komoto, now director-general of the Economic Planning Agency.

The Diet elections in June resulted in a victory for the Tanaka group within the faction, with the defectors even losing their leader Nishimura's seat in the Diet. But the victory over the Nishimura group was not enough for Tanaka to forgive and forget the "rebellion" of the pro-Nishimura members at an early stage when they recommended their own candidate for the LDP chairmanship.

Now that Nishimura has failed to be reelected in the Diet, Tanaka apparently considers it an opportune time to solidify the faction by having his right-hand man, Nikaido, take over the leadership. Consequently, the Tanaka faction is getting ready to present Nikaido as a candidate for the LDP presidency should current Suzuki administration begin to falter for some reason. Thus the LDP has another strong contender for the top national position in addition to Toshio Komoto and Yasuhiro Nakasone.

Another point that should be noted at the Thursday Club's inauguration is

the membership of Tanaka himself, a defendant in the Lockheed trial. Although Nikaido explains that "it's not at all unusual for Mr. Tanaka to have joined the Club, a social and friendship organization which accepts anyone wishing to join," it is clear to political observers that the birth of the Club signifies that Tanaka has started to move toward being reinstated in the LDP, perhaps in an attempt to bring a more favorable atmosphere to the Lockheed hearings.

Recently, the Tanaka faction announced its strong wish for the earliest possible conclusion of a court trial for Tanaka. The announcement has led observers to speculate that Tanaka, already prepared for guilty verdict at the first trial now in progress, is setting the stage for a retrial in the higher courts as early as possible. Perhaps he feels that at a trial before the Supreme Court he could possibly be acquitted. There is also the rumor that he expects to be granted amnesty by a special Cabinet order after being judged guilty at the first trial.

What impact these new moves by former Prime Minister Tanaka, who partically launched the Suzuki regime, will have on the over-all LDP which appears to have secured stability since its overwhelming victory in the recent Diet elections? It can be said that Japanese politics in the coming year will develop on the basis of moves by the "Shogun behind-the-scene."

CSO: 4120

POLITICAL AND SOCIOLOGICAL

TANAKA FACTION FURTHER SOLIDIFIED

Tokyo MAINICHI DAILY NEWS in English 11 Jan 81 p 1

[Text]

Former Prime Minister Kakuei Tanaka's stronghold within the Liberal-Democratic Party is becoming more and more solid, as his faction, the largest in the Liberal-Democratic Party (LDP) has enlisted new members from maverick and conservative sectors.

For newcomers to the Tanaka faction the fact that Tanaka is in the dock, involved in the Lockheed payoff scandal, does not seem to be of serious concern. Enrollment in the faction means better access to cabinet posts and more ample election money than in the case of other factions.

Last year-end, seven Diet members, six of them LDP members of the House of Representatives and a New Liberal Club member in the House of Councillors, were admitted to the Thursday Club, a Tanaka faction group.

Susumu Nikaido, chairman of the LDP Executive Council, heads the club. Tanaka left the LDP and his faction, assuming responsibility for his involvement in the scandal. But there are few to believe that Tanaka is not a kingpin of the club.

As a result, the membership of the Tanaka faction now totals 101 — 62 in the House of Representatives and 39 in the House of Councillors. It has become the first faction to have more than 100 members since the Sato faction orchestrated by the late Prime Minister Eisaku Sato, former boss of Tanaka. In addition, Nikaido says he is finding a number of potential Tanaka faction members in other factions.

Explaining their motive for participation in the Tanaka faction, the newcomers say they were attracted by the personality of Kakuei Tanaka.

Tokusaburo Kosaka, an influential LDP member and one of the newcomers to the Tanaka faction, declares that the ever fluctuating world was making it necessary for the Tory party to foster its own firm stabilizing force, and the Tanaka faction will assume a pivotal role in that.

Other factional members fully know the "assets" of the Tanaka faction. The general feeling in the political arena is that among LDP factions, the Tanaka faction possesses the best money backing for

members and the best teamwork to help each other win elections.

Also, the powerful say of the Tanaka faction in cabinet formation is well known. There is a case in which a middle echelon LDP member quickly obtained a cabinet post after he joined the Tanaka faction.

The faction's growing membership will contribute greatly in solidifying its position as a LDP kingmaker.

On the other hand, the enlarged Tanaka faction may encounter internal trouble in the distribution of cabinet posts allotted to it. To the "original" Tanaka faction members, the appearance of the newcomers means a slimmer chance of becoming a cabinet minister.

Kosaka's joining the faction may also add fuel to the leadership debate. Already, the Tanaka faction has Ganri Yamashita and Noboru Takeshita as the likely next-generation leader for the faction. Kosaka's presence is expected to complicate the post-Tanaka race.

Naturally, the emergence of the bigger Tanaka faction is sending a shock wave through other LDP factions, even to the point where a new round of factional contests for enrolling new members is likely to start.

What is emphatically pointed out is the impact of the expanding Tanaka faction army on the 1983 election of the LDP president. In this connection, the factions of Yasuhiro Nakasone and Toshio Komoto are said to be pressured hard to catch up with the expanding Tanaka faction.

Factional reactions to the recent Tanaka faction developments are not limited to these rival factions. Critical views of the Tanaka faction are being heard from even in the Suzuki faction led by Prime Minister Zenko Suzuki, an ally of Tanaka and an advocate of "politics of harmony."

Apart from political considerations, the criticism may heighten. The Suzuki faction members were recently compelled to observe a scene illustrating who is actually the top power holder in the LDP: Tanaka received more New Year callers than Suzuki.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

DSP LEADERS' AMBITIONS FOR NEW, CENTRIST PARTY CALLED DAYDREAM

Tokyo THE DAILY YOMIURI in English 17 Jan 81 p 3

["Political Beat" column by Raisuke Honda: "DSP's Day Dream"]

[Text] The leadership of the Democratic Socialist Party (DSP) is busy preparing for the forthcoming party convention, reportedly with the view of a "big leap forward" toward the goal of creating a new centrist party by rallying moderate forces among opposition parties.

The coming convention scheduled to start on February 18 will most likely reelect party Chairman Ryosaku Sasaki and party Secretary-General Saburo Tsukamoto for their third consecutive term.

High on the agenda will be the party's action policy for 1981, the draft of which calls for all DSP members to make renewed efforts to unite middle-of-the-road forces in the opposition camp.

The DSP leaders' ambition for a new, large-scale centrist party, however, seems almost bound to end in a day dream, as voices of objection have taken root even within the DSP, let alone the cold and indifferent reaction from other parties.

There are two approaches among DSP leaders to realize the envisioned new political party.

One is being advocated by DSP chief Sasaki in favor of "merger" of four opposition parties—the DSP, Komeito, the New Liberal Club (NLC) and the United Social Democratic Party (USD), with the first two playing a leading role.

The other is recently being pushed by DSP's top councilor Ikko Kasuga, who wants to see right-wing elements of the Socialist Party (JSP) allowed to join the four parties mentioned by Sasaki as components of the envisaged new party.

The draft action policy to be adopted in the February convention favors the Kasuga concept as it says the DSP should ask "sound-thinking people" (or right-wingers) in the JSP as well as the four centrist parties to participate in the move for creating a new opposition party.

Former DSP chairman Kasuga at one time used to maneuver actively in an attempt to organize a coalition government comprising the Liberal-Democratic Party (LDP) and middle-of-the-road opposition parties.

The scheme availing of the LDP's razor-thin majority in the Diet, however, came to naught following the conservative party's landslide victory in the "twin" Diet elections last year.

According to his aides, Kasuga's new proposal in favor of JSP right-wingers indicates he now has returned to the position he had taken earlier over the new party issue.

Kasuga has even said: "At least 20 of the incumbent JSP Dietmen would be certain to join us at the right time."

Underscoring his self-confidence, Kasuga's confidants say the Kasuga group has been providing financial assistance on various occasions to JSP right-wingers.

DSP Chairman Sasaki, however, has reportedly remained strongly averse to going hand in hand with any JSP member for a new centrist party scheme.

In addition, several senior members of the DSP, including Secretary-General Tsukamoto and party policy board chairman Keigo Ouchi, are expressing fears of the DSP losing its independent policy line because of the proposed merger of centrist forces.

On top of these circumstances, the DSP must engage in a fierce struggle against Komeito, the NLC and other centrist parties in the Tokyo Metropolitan Assembly election this coming July, a scenario contrary to the DSP's wishes to form closer ties with them for eventually effecting a grand merger of centrist forces.

In the final analysis, both the arguments backed by Sasaki and Kasuga for carrying out a new centrist merger are likely to end in smoke.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

EDITORIAL PRAISES 'WISE MEN'S GROUP'

Tokyo THE DAILY YOMIURI in English 9 Jan 81 p 2

[Editorial: "Wisdom of the Wise Men"]

[Text]

The Japan-US Economic Relations Group, known as the "Wise Men's Group," has submitted a report to Prime Minister Suzuki and President Carter which thoroughly reviews Japan-US frictions, including the security problem, clarifies each other's expectations and makes specific proposals for improving the situation from a long-range standpoint. We are highly pleased with the wisdom shown.

Security matters were not included in the original brief of the group, whose themes were limited to economic affairs when the body was inaugurated following a meeting between the late prime minister Masayoshi Ohira and President Carter in May 1979.

However, in the midst of the group's deliberations, the incident of the American hostages in Iran and the Soviet Union's armed intervention in Afghanistan occurred.

These incidents crystallized recurrent claims by some Americans that Japan was enjoying a "free ride" under the US defense umbrella. Thus, Japan's own defense capability became a new form of diplomatic friction in Japan-US relations, delicately intertwined with economic friction between the two countries.

In this respect, we feel that the Wise Men's Group acted properly in recognizing the security issue

Danger Of Misinterpretation

But if the US misinterprets this report and puts pressure on Japan by linking all other frictions with the security issue, diplomatic relations between the two countries will become strained. It is reasonable that Japan should use its own judgment in deciding by how much it should increase its defense power.

Of the proposals the group made to the Suzuki government, the US places particular hopes on wider access to the Japanese market. The report seems to stress what specific measures the Japanese Government will take in this respect.

As the report points out, dissatisfaction on the part of the US will not accumulate if the Japanese Government sets up a body to deal promptly with each complaint as it arises. The Suzuki cabinet should create an agency with authority to function effectively.

Japanese Proposals

The Japanese members of the group also made clear-cut proposals, including an increase in US productivity. We believe the US will take this advice with good grace since the incoming Reagan administration itself is committed to rehabilitating the US economy.

Frankly speaking, the report is better than we expected. If both governments carry out the recommendations faithfully, the future of Japan-US relations will be bright.

The Reagan administration will be inaugurated in less than two weeks. Immediate problems to be discussed are expected to be the automobile issue and Japan's defense buildup.

No doubt, many other problems will arise. But the two countries must avoid a situation where an issue develops into political confrontation. For that purpose, as the report advises, the US should refrain from placing undue pressure, while Japan should respond quickly to moderate US warnings.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

POLITICAL CORRUPTION CHARGED IN CHIBA PREFECTURE

Tokyo MAINICHI DAILY NEWS in English 20 Jan 81 p 4

[Article by Hideo Matsuoka]

[Text]

Chiba is a standout in political corruption when compared with other prefectures. In almost every election, big vote buying is reported from Chiba Prefecture. There have been so many election irregularities in that prefecture that you have difficulty identifying a particular case with the year of its occurrence. The sheer number makes it impossible.

Koichi Hamada of Las Vegas fame was elected to the Diet from Chiba Prefecture. We wonder how this prefecture can keep electing men of Hamada's ilk year after year. Now it is the governor of the prefecture who has made a splash in the political pool of corruption. The miasma rising from the prefectural political mire has sent some people crazy, it seems.

Buying Votes

The political contamination of Chiba Prefecture has its root in the corrupt prefectural assembly. When one wants to be a candidate in a general election or a gubernatorial election, he has to buy the support of prefectural assemblymen. They have votes that they can deliver. For the candidate, it is important to get these votes. It is also important to show that he is backed by that many assemblymen, and he has to pay to win their approval. Whatever the money is paid for, it is buying votes.

For Governor Kiichi Kawakami of Chiba Prefecture, he needed roughly ¥50 million to nail down his gubernatorial candidacy on the assumption of paying each of some 45 assemblymen ¥1 million. That ¥50 million he received from the president of a Tokyo real estate firm. At the time of election of Diet members and the prefectural governor, it seems it has become a custom for Chiba prefectural assemblymen to collect "be-good-to-me" fees from candidates. It is wholesale corruption. This electoral climate naturally spawns vote buying.

In general elections, it is not uncommon for a candidate to give money to his trusted prefectural assemblymen to obtain votes for him. In Chiba Prefecture's case, the whole assembly was up for sale. It is not known how long this situation has persisted. I can only assume that the Chiba assembly consists of people of the lowest caliber in that prefecture.

And Governor Kawakami matches his assemblymen. Like governor, like assemblymen. The going political practice is that one does not sign a receipt for political money. In the Lockheed payoff, receipts signed by Marubeni executives blew the lid off the hush-hush deal. But Kawakami not only signed a receipt for the ¥50 million in a departure from political common sense but even put his seal (the Japanese equivalent of a Western signature) on a written pledge that, once elected, he would cooperate with the business activities of the donor and consult with him on matters where his business interest was involved. This is ludicrous! It isn't anything that a man aspiring to be a governor would do. It borders on hoodlumism.

Even more absurd is the governor's claim that he returned the ¥50 million to the donor after his election. Returning the money after the election does not undo the fact of taking full advantage of the money during the campaign.

Also, Kawakami received the ¥50 million directly from the

donor, Tetsuo Fukaishi, president of Nittan Co. In returning the money, Kawakami did not go directly to Fukaishi. Instead, he merely delivered it to a certain Kubota, a close friend of Fukaishi, in return for Kubota's name card on which he signed the receipt. The money involved is not just ten or twenty thousand yen. It is ¥50 million. If Kawakami was really anxious to establish the fact that he did return the money, he should have gone directly to Fukaishi and given him the money back in return for the written pledge.

Where is that ¥50 million now? Everybody involved has been telling either a half truth or a complete lie. There is no knowing the truth. One thing that is clear is that Kawakami gave the donor a written pledge promising that he would, if elected, work in the interest of the donor's business. This fact cannot be neutralized by Kawakami's claim that he returned the money or that he had not acted to favor the donor's business.

Immaturity

How could Kawakami have committed such puerile folly? Chiba prefecture citizens must be lamenting over the sad fact of being governed by a man of gross intellectual immaturity. I cannot help sympathizing with the people who live in the politically backward and contaminated area. "Sympathize" is putting it mildly. Actually, I would like to bring the Chiba voters to their political senses.

An acquaintance of mine who held two or three cabinet posts used to say, with a bit of self-humiliation, "I am in that lowly profession called politics." A man of good grace even within the Liberal-Democratic Party, he could only have been half serious about his decription of politics as a profession. Politics, however, should not be a "lowly" profession. On the contrary, it should be a highly refined and intellectual job. But the intelligence and characteristics of the politicians themselves are helping degenerate politics into an unethical and lowly profession.

More than anybody else, no less a man than a former prime minister is showing the way how to do it, and many others are unabashedly following in his footsteps.

President Fukaishi of Nittan hails, like Kakuei Tanaka, from Niigata Prefecture. In trying to buy Kawakami off for ¥50 million, it is said Fukaishi put into practice a lesson he learned from Tanaka. Buying a public official off is not uncommon, and it is rather inappropriate to link just any buying-off to Tanaka. The problem is, however, that people have been so influenced by what Tanaka did that they are wont to associate any political corruption with him. It is said that Fukaishi often mentioned Tanaka's name in conversations with Kawakami before giving him the money. It all lead to Tanaka. The political climate in Japan has been thoroughly corrupted.

Tanaka Faction

There has been a corruptive avalanche toward Tanaka within the LDP, swelling the Tanaka faction to 101 to become the largest intraparty group. No LDP government should ignore Tanaka or his followers. Japanese politics must always mind the Tanaka faction. Some fear even the judiciary may soon become incapable of meting out due justice to Tanaka. I hope not. If the judiciary does not want to fall under suspicion, it should speedily conclude the Tanaka trial. Only the court can end this digusting state of politics where the group led by a man in a criminal court wields the biggest clout. That, of course, is not the job of the court. But, in reality, the court is the only authority that can do the job. The political world itself is totally without a self-purification function.

As though Tanaka had tried God's patience a little too much, he developed heart trouble. The ailment is said to be not chronic. But when one is beyond 60, he should be wary of any affliction that threatens the health. We have an example in Masayoshi Ohira. A conscientious doctor would tell Tanaka to stay away from politics if he wanted to enjoy a long life.

Moreover, Tanaka himself is completely unwanted in Japan's politics. It is because of Tanaka's evil influence that his faction keeps growing and the Chiba governor is bought off. Tanaka is nothing but a minus factor in Japanese politics. A man who should be in political purgatory keeps swashbuckling on the center stage in the spotlight, all his seamy sides notwithstanding. That he is allowed to do so is to shame Japan's democracy.

(The Japanese original appears in the latest issue of the weekly "Sunday Mainichi.")

CSO: 4120

POLITICAL AND SOCIOLOGICAL

COUNTRY BECOMES WORLD'S LEADING AUTO, STEEL PRODUCER

Tokyo BUSINESS JAPAN in English Dec 80 pp 15-17

[Text]

The production of both the steel and auto industries of Japan has finally exceeded that of the U.S., assuming the world's top place in both nominal and real terms.

This remarkable achievement has been largely helped by the recession in the U.S., but this symbolizes the 1980s, a decade of confusion. It also indicates that the responsibilities of Japanese enterprises are great in regard to the world economy.

An estimate compiled by the International Steel Association at its recent annual general assembly in Madrid, Spain, shows that crude steel output in the U.S. this year is expected to decrease by some 25 million tons to 98 million tons, while Japan is expected to maintain the same level of production as in 1979, that is some 112,400,000 tons. As a result, Japan has finally assumed top place in the world in steel output, exceeding the U.S.

In 1953 when the U.S. steel output surpassed the 100 million-ton mark for the first time, Japan's steel output reached only 7,660,000 tons, much less than one-tenth that of the U.S. Even in the period of high-paced growth of the Japanese economy after 1965, the U.S. steel output was roughly twice that of Japan. The marked increase in Japan's steel output can be ascribed to the stagnancy of the U.S. steel industry and the effort of its Japanese counterpart. Eishiro Saito, president of Nippon Steel Corporation, is proud that both management and labor have combined their efforts to reduce costs and promote technological development, thus paving the way toward today's growth.

The major reason for the stagnancy of the U.S. steel industry has been the marked decline in the supply of steel products to the auto industry, which has lagged far behind its Japanese counterpart in small car production. The U.S. auto industry, now replaced in top spot by its Japanese counterpart, is expected to produce some nine million units this year, while Japan's production will exceed 10 million, reaching more than 10,500,000 (including light cars).

In 1965 when the U.S. auto industry produced more than 10 million cars – actually, 11,130,000 – Japan's output was only 1,870,000, less than one-fifth. The pace of Japan's auto industry in taking the place of its U.S. counterpart has been more rapid than that of the steel industry. This, too, has been the result of a united effort between management and labor.

This inverted phenomenon, however, may not last very long. Crude steel output in the U.S. is expected to reach 112,500,000 tons next year and small car production will also reach a full-production stage. Japan's steel and auto industries will not be able to avoid for long a counterattack from their U.S. and European counterparts.

CSO: 4120

POLITICAL AND SOCIOLOGICAL

PRIME MINISTER'S OFFICE POLL TESTS PUBLIC'S ATTITUDE ON DIPLOMACY

Tokyo BUSINESS JAPAN in English Dec 80 pp 20-22

[Text]

The number of Japanese taking an unfavorable view toward the Soviet Union has increased during the past year due to the Soviet intervention in Afghanistan and the buildup of its military facilities in controversial islands off Japan's northernmost main island of Hokkaido. Japan claims the islands which were seized by the Soviet Union in the closing days of World War II.

The latest public opinion poll on diplomacy, conducted by the Prime Minister's Office, showed that 84% of persons questioned do not feel friendly toward the Soviet Union.

Meanwhile, the poll showed that many Japanese want to promote friendly relations with the United States and China. The number of Japanese looking for close ties with China is particularly increasing in recent years, the Prime Minister's Office said.

The poll was conducted May 29 - June 4 among 3,000 Japanese chosen at random throughout the nation. Questions were asked concerning Japan's diplomacy at large, its relations with other nations and future diplomacy as well as economic cooperation and the Indochinese refugee problem.

Asked which area they are concerned about the most, a majority of persons questioned said Asia. Other persons chose the Middle East, North America, East Europe (including the Soviet Union) and West Europe in that order.

Asked with which country they think Japan concentrate on in promoting friendly ties, 32% of those questioned said the United States, 24% replied China and 14% all countries in the world. Compared with a similar survey last year, those favoring close ties with the United States and China increased 3 and 4 percentage points, respectively. Only 1% each said they favor promoting close ties with the Soviet Union or South Korea. The percentage of those favoring close relations with those two nations remained unchanged from 1979.

On U.S.-Japan relations, 77% of those questioned said they feel friendly toward the United States because they said Japan and the United States belong to the free world and that they have a close affinity with each other in economic and security matters. Those who consider the United States as Japan's important partner increased to 22% from 16% last year.

On Sino-Japanese relations, 79% felt friendly toward China, up from 71% last year, while 80%, or eight percentage points more than last year, said they believe Japan already has friendly relations with China. This means a large majority of Japanese now believe firmly that China is a close neighbor in name and reality especially with the recent visit to Japan by Chinese leader Hua Guofeng and the development of cultural and economic cooperation between Japan and China.

On Russo-Japanese relations, only 8%, or 5 percentage points less than last year, said they feel friendly toward the Soviet Union, while those who said they do not feel friendly went up to 84% from 77% last year.

Asked about present Russo-Japanese relations, 74%, or four percentage points more than last year, said relations were generally not good, because they felt the Soviet Union is not trying to settle territorial issues involving the four northern islands off Hokkaido while, at the same time, it is engaging in diplomacy backed up by military power including activities in Afghanistan and the Far East. They also said the Soviet Union is a communist nation and is conducting unfriendly activities in Japan, including espionage activities.

Since the poll was conducted before the Soviet nuclear-powered submarine incident that occurred in August, the present Japanese feeling toward the Soviet Union can be assumed to be much more critical than the results of this poll would indicate. Japan lodged a protest with the Soviet government because the crippled Soviet submarine violated Japanese territorial waters on its way to the naval base at Vladivostok, Siberia, despite the Japanese demand that it stay clear of coastal waters because of a possible radiation hazard.

The Prime Minister's Office said only 10% of those questioned claimed they are satisfied with present Russo-Japanese relations because they said bilateral fishery problems are settled through negotiations, while the two countries are promoting economic cooperation with joint development of Siberian resources. They also noted that the two countries are promoting cultural and sports exchanges.

As to the Indochinese refugee problems, 57% said they will give assistance to refugees whenever necessary. The Prime Minister's Office said 78% of those questioned would welcome refugees wanting to live in their neighborhoods.

CSO: 4120

MILITARY

EXPANDED JOINT U.S.-JAPAN MANEUVERS BEING PLANNED

Tokyo BUSINESS JAPAN in English Dec 80 pp 19, 20

[Text]

According to a Defense Agency source, the Air Staff Office of the Defense Agency is currently studying the feasibility of upgrading joint maneuvers of the Air Self-Defense Force (ASDF) and the U.S. Air Force to a large-scale, sophisticated joint operational training program designed to improve the Japan-U.S. joint defense capability in an emergency.

Detailed training plans conceived by the Air Staff Office include: (1) training aimed at enhancing electronic warfare technology by employing U.S. B52 strategic bombers as target planes; (2) joint operational maneuvers using the Airborne Warning and Control System (AWACS) and (3) large-scale joint defense maneuvers to be participated in by Japanese and U.S. air forces, incorporating the radar network and the network of anti-aircraft missiles in Japan. The Air Staff Office will identify problems concerning coordination with the U.S. and the preparation of a domestic defense setup.

All this is intended to improve the quality of the maneuvers in line with the guidelines on Japan-U.S. defense cooperation. This is attracting attention as indicating that the Defense Agency has taken a step forward toward establishing a structure capable of effectively meeting an emergency under the Japan-U.S. security treaty system.

Beginning in November 1978, the ASDF and U.S. Air Force jointly have conducted maneuvers 19 times, the last one a four-day exercise from October 17 in the area centering on Misawa Air Base in Aomori Prefecture in northern Honshu.

In the 19th joint exercise, ASDF's F4EJ and F104J interceptors engaged in aerial combat with F15 and F4E fighters of the U.S. Air Force and A4 attack planes of the U.S. Marines.

The joint maneuvers always are highly instructive to the ASDF, because its men are able to engage in aerial battles with aircraft of different types from their own, and they can also learn aerial combat tactics from U.S. pilots who have had actual combat experiences.

The joint maneuvers thus far conducted were mainly for improving aerial combat ability. The Defense Agency officials and ASDF personnel are eager to have opportunities to conduct more sophisticated aerial combat training.

Because one of the serious drawbacks of the ASDF is the lack of electronic warfare technology, the proposed maneuvers using B52s is designed to improve this particular interceptor-plane technology. The B52 is a large bomber with sophisticated electronic combat capability. The ASDF hopes that B52s will be used as target planes.

The proposed maneuvers using AWACS are intended to train ASDF personnel taking concerted action with AWACS to counter "enemy" planes coming in at low altitude when the radar network is destroyed.

The Defense Agency hopes that large-scale joint maneuvers using not only AWACS and the radar network and the network of Nike-J and Hawk antiaircraft missiles but also Japanese and U.S. combat units will be realized.

By conducting such comprehensive maneuvers, the Defense Agency hopes to build up and perfect Japan's air defense structure.

Prior to conducting such maneuvers using AWACS, the Defense Agency is studying the possibility of ASDF conducting joint maneuvers using the E2Cs of the U.S. Navy before the E2C early airborne warning planes are introduced into Japan.

The proposed improvement and expansion of the Japan-U.S. joint maneuvers is based on the need to improve Japan's air defense capability.

In order to realize the proposed joint maneuvers, various problems will have to be solved, such as U.S. response to the Japanese proposal, the Japanese political situation and legislative problems, and the difference in strategic procedures and in communication equipment between the ASDF and the U.S. Air Force.

Accordingly, the Air Staff Office of the Defense Agency will study these problems thoroughly so that full-fledged Japan-U.S. joint maneuvers can be realized.

CSO: 4120

MILITARY

WEAPONS EXPORT PROMISING BUT CONTROVERSIAL FIELD

Tokyo BUSINESS JAPAN in English Jan 81 p 41

[Article by Yoshiteru Oka, associate editor, FUJI EVENING]

[Text]

THOUGH there was a great deal of debate on whether the Tansam (a Japanese abbreviation for a particular short-range surface to air missile originally developed in the U.S.) should be domestically manufactured or imported, it has finally been decided to produce them in Japan. Seizing on this opportunity, however, some people have started appealing for the lifting of the current embargo of weapons.

Sadakazu Shindo, Chairman of Mitsubishi Electric Corporation and President of the Electronic Industries Association of Japan, which has many leading weapon manufacturers as its members, emphasizes that with the exception of exports to belligerent nations, the government should lift the embargo on weapons from Japan. Shindo's statement is in contrast to the recent debate at the National Diet: it is less costly to import the Tansam than to produce them domestically. He calims that the cost of domestic production of weapons can be greatly reduced once their markets are expanded and mass-production introduced as markets are enlarged. This can also lead to fortifying the defense weapon industry's international competitive strength and demonstrating the excellence of Japan-made weapons to the world, he insists.

"The reason why Japan-made weapons are comparatively costly is that their export is restricted and their users are confined to the Defense Agency alone, with no mass-production effect being achieved," Shindo continues, "nobody should have to complain that Japanese-made weapons are non-competitive cost-wise. The government should permit us weapon manufacturers to export them and compete with overseas manufacturers on an equal footing." This statement well demonstrates the irritation of the members of the Electronic Industries Association of Japan and the Ordnance Association.

There is something reasonable in his comment. Concerning weapon export, Japan has the most strict regulations in the world. The three principles on the export of weapons have been long observed by the government. On the basis of the Export Trade Control Order, the principles are applied to the following three cases: no export of weapons is allowed to (1) Communist bloc countries, (2) countries to which the export of weapons is prohibited by the resolution of the United Nations, and (3) international belligerents or possible belligerents. Furthermore, in February 1976, then Prime Minister Takeo Miki stated at a National Diet session that virtually no export of weapons was allowed.

Even under such strict restrictions, however, it is undeniable that Japan has exported some weapons for use in war actions. Though the Ministry of International Trade and Industry stipulates the range of "weapons" as "direct lethal weapons," the range or limit of weapons is extremely vague in

itself. Shoes many U.S. soldiers wore in jungles in Vietnam were *jikatabi* or workmen's split-toed heavy-cloth shoes made in Japan. Airborne TV receivers to control SMART bombs were also produced in Japan. They may not be direct lethal weapons, but how about Japanese-made motorcycles adopted by the U.S. Army during the Vietnam war? The U.S. Army used these cycles instead of tanks in approaching enemy lines, making breakthroughs in barren lands and jungles after advancing into battle areas by helicopters. Though tanks are not exported from Japan, motorcycles or jeeps to be used for the same purposes as tanks can be exported freely.

Rifles are representative lethal weapons, but the only domestically produced rifle, the M64, was once exported to the Thailand Police Force and the Border Patrol Police. As the three principles on the export of weapons are applied only to armed forces and not to the police, MITI approved the export. The Thailand Police Force is actually an armed force itself.

The export of weapons from Japan has already been made to this extent, so once the embargo is lifted, exports would be infinitedly expanded. If not fighters, the export of reconnaissance planes or trainers could be made. But transport planes are able to lay mines and the current trainers are usually used for close air support also.

Then once the embargo is lifted, will the prices of Japanese-made weapons go down? Even though the embargo is lifted, this does not directly lead to their export. Only when their reliability and prices are proved internationally competitive they can be first exported. The reliability of Japanese-made weapons is not highly evaluated. In order to enhance their reliability, more efforts and expenditures must be made in research and development, tests, and assessment, and the cost for these efforts must be several times that currently being spent. Even after lifting the embargo, the prices of Japanese-made weapons, therefore, would not become cheaper immediately.

Though the Japanese defense weapons industry expects to export large numbers of weapons to the Middle and Near East in particular, the area is currently unstable from a political standpoint. Even if the industry tries to help the nation import more oil from the area collaterally with the export of weapons, the oil supply could be stopped suddenly due to some political change in the area, jeopardizing the future of the nation. Japan should not hastily resort to increased exports of weapons even though it would seem to be a promising field for the future. □

CSO: 4120

MILITARY

DEBATES TO ESCALATE ON DEFENSE, SECURITY ISSUES

Tokyo MAINICHI DAILY NEWS in English 6 Jan 81 p 2

[Editorial: "Security of Japan"]

[Text]

Debates on our security problems will escalate this year in the face of mounting American pressure for Japan to increase its defense outlay. It is regrettable, however, that the Suzuki cabinet has so far failed to elucidate its fundamental stand on the defense and security issue.

At the same time, we cannot but entertain some anxiety that the rising call in some quarters of the Liberal-Democratic Party for revision of the Constitution may endanger Japan's security. It goes without saying that the basic idea of security calls for efforts to stabilize the environment both at home and abroad to minimize the threat against the people's livelihood.

With regard to the oft-publicized "Soviet threat," the Soviet Union itself has demonstrated by its deeds that the maintenance of stability at home constitutes the biggest deterrent. Moreover, this country aims to remain a peace-loving country by virtue of Article Nine of the Constitution.

The nuclear race between the United States and the Soviet Union has also been checkmated, while the emergence of the Third World has made it impossible for the big powers to engage in reckless military actions.

Under such circumstances, there is every reason to believe that the correctness of Japan's peaceful policy will be proved. This does not mean that the pursuit of economic security under the pretext of being a peaceful country, in other words, efforts for securing supplies of food and energy from abroad, can be justified.

Japan is at once a peace-loving country and an economic power. It is a pity that the nation has not

fully realized the importance of contributing its economic power toward the stability of the international environment.

It must be noted, however, that the 1981 fiscal budget for economic cooperation aimed at easing the north-south conflict is relatively small considering Japan's current economic might. The budgetary scale must be raised to the level of other advanced nations within five years. As a peace-loving country, we are obligated to tackle this issue all the more positively than other nations.

In concrete terms, for instance, we should take the initiative by extending a helping hand to increase food production in Southeast Asia, since food is the basis for the promotion of industrialization and the people's living standards.

Since Japan depends on imports for 90 percent of its energy needs and 60 percent of its food requirements, a settlement of the north-south problem is essential for Japan's security. However, if we are too intent upon securing these resources without stepping up our efforts for economic cooperation, we are doomed to be termed economic imperialists.

An easing of the trade friction between Japan and the United States and Europe is also essential for the maintenance of a stabilized international climate. At this time when justice and welfare are calling for more attention both at home and abroad, present trade principles based on freedom and indiscrimination will soon be replaced with those based on freedom and justice.

The most advanced countries have already adopted preferential tariff systems in importing goods from developing nations as part of their efforts to promote development in these countries. Depending upon the circumstances, some industries in this country will be seriously affected, but then the government must endeavor to settle such possible outcome by encouraging industrial adjustment.

Mutual dependence in the fields of technology and capital, as witnessed in the proposed tie-up between Nissan Motors and Volkswagen, must be further promoted. If mutual dependence is deepened through Japan's positive participation in the development of the Siberian economy, the Soviet threat will diminish.

A sense of unity is particularly strong in our society, which has been called a Japanese village, but we must overcome the exclusionism inherent in a village society and contribute toward the construction of what can be called a "global village." The best way to maintain our security is to make this country an indispensable entity in the world community.

CSO: 4120

ECONOMIC

JAPAN'S ROLE INCREASING IN INTERNATIONAL ECONOMIC SOCIETY

Tokyo BUSINESS JAPAN in English Jan 81 pp 61, 62

[Article by Hiroshi Yoshimoto, director-general, Securities Bureau, Ministry of Finance]

[Text]

ALONG with the enhancement of Japan's role in the international economic society in the 1980s, international capital transfers in the nation's securities market are expected to become more brisk, further promoting the market's internationalization.

Bond and Debenture Market

Japan's bond and debenture distribution market is expanding its scale rapidly with total transactions exceeding ¥200,000 billion a year. As a result, the Tokyo capital market is growing as one that can well compare with its counterparts in the Western hemisphere. Investments by foreign investors in Japanese bonds and debentures are continuing to be active, with their net buying from January to October 1980 totaling nearly ¥800 billion. The amount of foreign debentures issued in yen by foreign organizations is also increasing. Though the amount of foreign bonds issued on a yen basis remained at a lower level in the first half of fiscal 1980, it started to increase again last fall reflecting the improvement in the bond market since last April.

Investments by Japanese investors in foreign bonds and debentures are also active. Floating of foreign loans by Japanese enterprises is also steadily increasing, procuring as much as ¥442,300 million in the first nine months of last year. This is because the procuring of funds overseas is more advantageous than doing so in Japan because of the gaps between foreign interest rates and domestic ones. The international exchange of funds is thus expanding year after year.

Stock Market

The Japanese stock market in 1980 strongly reflected the influence of international transfers of funds centered around oil money. From the last ten days of last July, foreign investors' buying of Japanese stocks, both blue-chip stocks and those of large enterprises, became especially active with the net purchases amounting to some ¥90 billion in July, ¥190 billion in August, ¥220 billion in September, and ¥74 billion in October. The market regained briskness with stocks of large enterprises being transferred, with their quotations renewing their previous records. Total transactions also increased. The increase in foreigners' investments was due to their high evaluation of the Japanese economy, and has a deep significance from the standpoint of international transfers of funds including the reflux of oil money.

International Exchange of Securities Companies

Against the background of the increasing internationalization of securities transactions from the beginning of the 1970s, international

business by Japanese securities companies rapidly expanded from around 1972. Such international business of Japanese securities companies is being developed overseas mainly in the form of local corporations in such cities as New York, London and Hong Kong. In 1980 alone, three local corporations, one branch and six staff offices were opened in the Middle and Near East and Australia among others (as of the end of October). Their international business has thus geographically diversified. As the law concerning foreign securities companies came into effect on September 1, 1971, foreign securities companies were allowed to establish branch offices in Japan, and there are now four companies doing business here with five branches in Japan including two companies which opened their offices in 1980. In addition, cases in which foreign securities companies establish staff offices without doing securities business but for the purposes of collecting and offering information concerning the securities market are on the increase. As of the end of last October, 65 foreign securities companies had staff offices in Japan. Along with the further internationalization of the securities market, such cases are expected to increase.

Outlook for the Securities Market

Despite the severe environment in which the price of imported crude oil has been sharply increased following the two oil crises, the Japanese economy has steadily expanded thanks to the people's successful coping with the environmental changes and the strenuous efforts of enterprises to improve their management over the past several years. During this period, the Tokyo capital market has developed as a relay base for the international transfers of funds. As mentioned earlier, foreign investors' acquisition of Japanese stocks has become very active also as they have highly evaluated the strength of the Japanese economy.

It should be noted that the new Foreign Exchange Law came into effect last December. The liberalization of foreign exchange transactions and international exchange of funds through the nation's securities market now is expected to become more brisk.

At the threshold of the age of full internationalization, the role of the nation's securities market will undergo serious tests in the international economic arena. □

CSO: 4120

ECONOMIC

JAPAN-U.S. ECONOMIC RELATIONS REPORT PRESENTED

Tokyo MAINICHI DAILY NEWS in English 12 Jan 81 p 2

[Editorial]

[Text]

The final report aimed at improving Japan-U.S. economic relations was presented last week by the Japan-U.S. Economic Relations Group, more commonly known as the "Wisemen's Group," to the heads of both governments.

The report, the first to be filed by a group of prominent figures of both nations in their joint effort deserves due credit, we believe, for the significant bearing it will have on attaining the goal.

The report, unlike others, is straightforward in expression. Touching on the sources of trade friction, it bluntly points out the lack of the sense of internationalism among Japanese government officials in dealing with trade problems, and also strongly criticizes the growing protectionism in both the U.S. administration and the Congress.

The constructive recommendations, made from long-range perspectives, cover wide aspects of the causes to be removed to improve the bilateral trade relations.

Among them is the need to set up a White House national council on productivity to improve the low U.S. productivity, one of the major causes of the friction, and to map out realistic policies toward this end.

As for Japan, it also offers many proposals as well, with two of them deserving our close attention.

One is for the Japanese government to set up a "powerful central office" for consultation and resolution of trade and investment issues to improve market openness in Japan.

The other is to provide American firms doing business here, or planning to do so, with preferential treatment. On this score, the report says both nations should give foreign firms operating in each other's countries the equal preferential treatment that the domestic firms enjoy in all aspects of business

operations such as in taxation, subsidies and development projects.

The market here has finally become just as open as that in the United States in the areas of import tariffs and import quotas. Despite this, many American exporters still find a barrier in what amounts to a Japanese government bureaucracy in taking required procedures for obtaining approval and registration of their exported goods and for tests.

This, coupled with Japan's commercial practices and social and cultural structures that differ from those in the United States, has given rise to a stronger impression in the U.S. that the Japanese market is more closed than it actually is.

In this respect, the call for establishing a central government office to deal with American businessmen's complaints in trade and investments here is meaningful and useful. It also falls in line with the Japanese effort to maintain an open global trade mechanism.

Another important proposal made is, as stated earlier, to provide American firms with the same preferential business treatment that the Japanese firms enjoy.

We believe this is the most effective way to remove the basic cause of trade friction with the U.S.—a move which will certainly contribute toward maintaining a global mechanism of economic interdependency.

The biggest question that both the Tokyo and Washington governments face is how to translate the proposals into reality.

We are somewhat concerned about the change of the American administration. We are also concerned about the new U.S. Congress' move toward increased protectionism against Japanese imports, as is evidenced in holding a public hearing on the import of Japanese automobiles.

We strongly hope that President-elect Ronald Reagan and the Congress will take due heed and respect the Wisemen's findings which say in part that success by the U.S. in increasing its industrial productivity and controlling inflationary pressure, rather than restricting Japanese imports, is essential in eliminating the sources of trade friction.

Also, closer consultation and better communication aimed at improving the bilateral trade relations on the private level, not only on the cabinet-minister level, seem essential.

CSO: 4120

ECONOMIC

JAPANESE ECONOMY FORECAST FOR FY 1981

Tokyo MAINICHI DAILY NEWS in English 4 Jan 81 p 5

[Text]

Fiscal 1981 (April 1981-March 1982) will see an economic growth of 4.5 percent in real terms while the current fiscal year (April 1980-March 1981) will end with a growth of 4.7 percent, the Mitsubishi Research Institute has predicted in its semiannual report on the outlook for the nation's economy.

The nation's economy is expected to follow the path to recovery in the coming fiscal year. But the surrounding situation for the Japanese economy will not be as rosy as it used to be during the period of economic expansion, the report reads.

The English version report released by MRI follows. — Editor.

I. Outlook Of External Factors

Oil Situation

The reduction of crude oil supplies resulting from the outbreak of the Iran-Iraq war corresponds roughly to the shrinkage that occurred following the Khomeini Revolution in Iran. However, the general view is that the prevailing shortage will not harm world oil market conditions as seriously as the prior cut-off of Iranian exports.

Given the current decline in oil consumption in the importing countries the high level of their reserves and spare production capacity in OPEC members other than Iran and Iraq, the danger of an acute shortage during this winter is in fact low.

On the other hand, there is a high possibility of tightening demand-supply conditions and renewed upward pressure on crude oil prices throughout the winter months of late 1981.

Moreover, since OPEC is unlikely to be able to agree on a fixed rate of price increase for their crudes, importing countries ought to be prepared for a succession of arbitrary increases by individual OPEC members during those months. It was lucky fortune to find the average per barrel price of OPEC crudes remaining below $40 at the end of calendar year 1981. (See Table 1)

World Economy, Trade

(1) In calendar year 1980, the six major OECD countries (the United States, Canada, United Kingdom, West Germany, France and Italy) were estimated to have posted a negative growth rate of around 0.1 percent. The setback of business activity in the United States turned out to be shorter than had originally been assumed, and this will prevent the average growth rate for the six countries as a whole from posting a larger negative figure.

On the other hand, as the U.S. economy is expected to suffer another decline in early 1981 and conditions will remain basically subdued till mid-year in the other five countries, the growth rate for the six in 1981 is expected to average a mere 0.2 percent.

(2) Meanwhile, the new year is expected to see an easing of inflationary pressures

Table 1

OPEC oil prices

($/bbl)

	Jan.-Mar.	Apr.-Jun.	Jul.-Aug.	Sept.-Dec.	Year average
1980	29.20	31.09	32.61	33.56	31.54
1981	34.97	35.96	37.86	39.62	37.19

Note: Prices are on OPEC government selling price basis.

relative to 1980 in all of the six countries. Nonetheless, the rate of inflation itself will still be high with an average 10.5 percent increase in consumer prices for the six.

(3) Sluggish business conditions in the major countries coupled with a low starting point at the beginning of the year will inhibit a strong expansion of world trade in 1981. Our projection is for a meagre 2.3 percent increase in the volume of world imports for the year. (See Table 2)

Table 2

Overseas Economy Projections

	1979	1980	1981
Average real term growth rate of the six major countries (%)	2.7	-0.1	0.2
of which: U.S.	2.3	-0.7	-0.2
West Germany	4.4	1.8	0.7
U.K.	0.9	-2.5	-0.3
Average increase of consumer prices in the six (%)	10.6	13.2	10.5
of which: U.S.	11.6	13.6	11.0
West Germany	4.1	5.7	4.1
U.K.	13.4	18.4	11.2
Value of world imports (bill. $)	1544.2	1957.8	2277.7
(changes over previous year, %)	(25.6)	(26.8)	(16.3)
changes in unit value (%)	18.2	23.1	13.7
changes in volume (%)	6.3	3.0	2.3
Developed countries	1141.6	1442.1	1675.4
(changes over previous year)	(28.1)	(26.3)	(16.2)
changes in unit value	18.9	23.6	13.9
changes in volume	7.7	2.2	2.0
Developing countries	402.6	515.7	602.3
(changes over previous year)	(18.9)	(28.1)	(16.8)
changes in unit value	14.2	23.4	13.4
changes in volume	4.2	3.8	3.0

II. Outlook Of Japanese Economy

Results Of Forecast

(1) In spite of the pressures for adjustment towards the impact of the second oil crisis, the Japanese economy is expected to post a relatively high growth rate of 4.7 percent in fiscal 1980. Major factors of growth will have been the strength of private investments and an exceptionally large expansion in net exports. Rapid growth of exports and depressed imports are expected to result in an increase of almost 60 percent in net exports.

On the other hand, inflation and the resulting deceleration of growth in real incomes will hold down personal consumption to a meagre 2.0 percent increase in real terms: the slowest growth yet since fiscal 1974. Nor will housing investments be a contributor to growth. Soaring house prices and lack of purchasing power will combine with the fact that the housing market is approaching saturation to result in a negative growth rate of 4.6 percent in the outlays for housing.

Owing to this generally lackluster performance of domestic final demand, inventory adjustment will be carried over into the January-March quarter of 1981. Thus, the burden of excess stocks will bear down heavily on the economy throughout the remaining months of fiscal 1980, so that in spite of the highest GNP growth rate among the developed countries, looking back at the fiscal 1980 economy one would find all the symptoms of a recession year.

Increases in wholesale and consumer prices are expected to stand at 13.5 percent and 7.8 percent, respectively, for the year. These are by no means low rates of inflation. Nevertheless, the rate of price increase is expected to decelerate substantially during the latter half of the year, and we may confidently say that domestic inflation has passed its peak in Japan.

Strong exports and slow growth of imports (notably crude oil imports) are expected to result in a marked improvement in the balance of payments. Our projection is for a current account deficit of $11.5 billion in fiscal 1980. While this falls short of the government's target of $9.1 billion, it is certainly an improvement of considerable scale.

Sustained by these developments, the yen rate has been on an upward trend for some time. By the end of the current fiscal year, the rate is expected to have risen by more than 25 percent against 262 yen per dollar at the beginning of the year.

(2) In fiscal 1981, the Japanese economy is projected to grow by 8.9 percent and 4.5 percent in nominal and real terms, respectively. While the fiscal 1980 real term growth rate of 4.7 percent will have been sustained by a 2.3 percent statistical carryover from fiscal 1979, the carryover into fiscal 1981 will be a mere 0.9 percent. In other words, the economy is expected to attain a strong quarterly average growth rate of 1.2 percent in fiscal 1981.

Owing (a) to relatively slower rates of increase in OPEC crude oil prices and (b) to the upfloating of the yen's exchange rate against the dollar which will work as a buffer against the

infiltration of inflationary pressures from overseas, the rate of inflation is expected to decelerate during the final months of fiscal 1980 and throughout fiscal 1981. Thus, the situation will be one of: a rising exchange rate→slower inflation→recovery of domestic demand→sustained GNP growth. This is the type of virtuous spiral that West Germany was able to enjoy following the first oil crisis.

The fiscal 1981 rates of inflation are projected at 3.2 percent for wholesale prices and 5.5 percent for consumer prices: a marked slowdown in both cases compared to fiscal 1980. However, scheduled increases in the various public utility charges will prevent consumer inflation from decelerating as rapidly as is anticipated for wholesale prices.

Sustained by steadier prices and a relatively favorable employment situation, personal consumption is expected to become the leading factor of expansion in fiscal 1981 with a real term increase of 4.1 percent over fiscal 1980. Private investments will also continue to be a strong contributor to growth with a 6.0 percent rate of increase in real terms. Most of these investments will be aimed at energy conservation, convertion from oil to other energy sources and modernization.

Meanwhile, the need to reduce the currently massive budgetary deficit will restrain public spending to almost zero growth in fiscal 1981. Both government final consumption and government fixed capital formation are expected to see very little change from fiscal 1980 with growth rates of 0.5 percent and 0.2 percent respectively for the two items. Exports which had been a predominant factor of growth in fiscal 1980 are also expected to see a considerable slowdown in fiscal 1981.

Thus, so far as the growth performances of the demand components are concerned, the domestic private sector is expected to lead economic expansion in fiscal 1981. In spite of this, the fiscal 1981 economy will essentially lack the buoyancy which is normally to be expected from such a growth pattern. Corporate profits posted large increases in the first half of fiscal 1980 due to strong exports, gains from the rising value of the yen and rapid price increases. Deprived of these factors, the rate of growth in corporate profits is expected to diminish to virtually zero growth in fiscal 1981.

On the other hand, Japan's external trade balance is expected to post a surplus of $6.7 billion in fiscal 198: a substantial increase against the $1.2 billion surplus of fiscal 1980. This will be the result of sustained strength in exports and continuing decline in the growth of imports. Parallel to the improvement in the trade balance, Japan's current account deficit is also expected to shrink from $11.5 billion in fiscal 1980 to $6.5 billion in fiscal 1981. This improvement in the external balance will combine with the basic strength of the domestic economy to result in further upward pressure on the yen rate.

III. Features Of Economic Outlook

The first year of the 1980s was just out. Last year which began with the entry of Soviet troops into Afghanistan has since then met with the death of Prime Minister Ohira, the outbreak of the Iran-Iraq war and finally with the landslide victory of Governor Reagan and the Republican Party in the U.S. presidential election. Conditions surrounding the Japanese economy are likely to be no less severe in the year 1981.

One major element of concern is the basic instability inherent in the current international political situation. No clear blueprint for ending the Iran-Iraq war has yet been drawn by any of the parties concerned. The presence of Soviet troops in Afghanistan appears to have become an accomplished fact. Now the world is faced with the possibility of Soviet military intervention in Poland.

Amidst this cluster of destabilizing factors, the U.S. has experienced a change in its political regime and the basic inclinations of its new leaders are as yet unkown. Prospects of an overall adjustment in policy management cannot be ruled out either in China or in the Soviet Union. The second year of the 1980s will no doubt be a year of acute instability and many surprises where international politics are concerned.

Another factor of instability is obviously the oil situation. Owing to the Iran-Iraq war, supply of crude oil from OPEC is expected to remain at subdued levels for at least a year from now. Given this underlying shortage, the possibility of renewed confusion in world oil markets and a third explosion in crude oil prices cannot be eliminated.

Falling imports and abundant supplies in the importing countries have thus far resulted in comparative peace in world oil markets. However, should the supply shortfall be prolonged still further, the prevailing balance between supply and demand will unavoidably be destroyed. Meanwhile, as Saudi Arabia's daily production level approaches full capacity, the OPEC price hawks are gradually gaining ground with little that can be done to stop them. The situation calls for further and more resolute efforts on the part of the con-

suming countries to conserve energy, to refrain from rushing to OPEC members for increased supply.

A third factor of concern is the growing instability in the area of international finance. There is no need to dwell here on the massive imbalance in the world balance of payments structure that resulted from the OPEC price hikes.

On the one hand there are the OPEC countries with their abundant assets, and on the other there are the nonoil developing countries with their heavy burden of accumulated external debts, and the situation is one of structural and chronic overlending and overborrowing between nations. Given continuing inflation and repeated increases in crude oil prices, there is little hope of an improvement in these conditions.

In summary, the Japanese economy in fiscal 1981 is expected to follow a relatively strong recovery trend. However, it is likely to be a recovery without any of the normal buoyancy that accompanies a period of expansion. Moreover, many elements of uncertainty cloud over the world today, all of which hold serious implications for developments in Japan. Thus, fiscal 1981 is expected to be a year of low vital pressure and lackluster developments within and high winds blowing for the Japanese economy.

Basic Assumptions

(1) Budgetary outlays:	fy 1980—42.59 trillion yen fy 1981—46.80 trillion yen
(2) Value of public works expenditure:	fy 1980—6.66 trillion yen fy 1981—6.80 trillion yen
(3) Tax reduction for business investments:	fy 1981—150 billion yen
(4) Official discount rate (year end level):	fy 1980—6.75 percent fy 1981—6.75 percent
(5) Import price of crude oil (customs clearance basis):	fy 1980—34.4 $/bbl fy 1981—39.8 $/bbl
(6) Volume of crude oil imports:	fy 1980—257.7 mill. kls. fy 1981—264.1 mill. kls.
(7) Yen/dollar exchange rate (average for the year):	fy 1980—217.75 yen per dollar fy 1981—201.07 yen per dollar

CSO: 4120

ECONOMIC

EDITORIAL NOTES BENEFITS OF STRONG YEN TENDENCY

Tokyo MAINICHI DAILY NEWS in English 9 Jan 81 p 4

[Editorial: "Rising Value of Yen"]

[Text]

The value of the yen against the U.S. dollar has risen rapidly. For the first time in two years, the dollar-yen exchange rate temporarily broke the psychological barrier of 200 yen on the Tokyo foreign exchange market. The Bank of Japan intervened to check a further rise of the yen's value.

Several reasons can be pointed out for the rising value of the yen. Basically, many nations have put confidence in Japan's economic performance which has survived two oil shocks and has controlled inflation while attaining a relatively high economic growth. In addition, the high interest rate in the United States, which supported the strong dollar, has declined somewhat.

A strong yen has both favorable and unfavorable effects on the Japanese economy. We want to emphasize the favorable aspects. A strong yen will help Japan keep prices stable because it will enable Japan to import natural resources and foods at relatively low prices. Accordingly, we believe that Japan must establish economic and industrial structures which can tolerate a relatively higher value of the yen.

The foreign exchange market fluctuates at the spur of the moment. Speculation ignites further speculation. The central bank has intervened to prevent a deterioration of such a trend. Past experience tells us that such intervention has been ineffective.

Some people believe that the value of the yen would rise to 176 yen per one dollar, the figure which was recorded in October 1978. Many consider that the Japanese economy has become resilient to such a

fluctuation. But an excessively rapid dollar-yen exchange rate fluctuation would cause unexpected results in the Japanese economy.

The government authorities may resort to the last measure — stipulation of an "emergency" regulation in the new foreign exchange law which came into existence last December. We do not support the idea of resorting to the "emergency" regulation because it will invite international criticism that the Japanese market is isolated. We hope that the Japanese government would not react too sensitively.

We support the central bank's intervention in the market to prevent a rapid rise of the value of the yen. At the same time, we propose another reduction of the discount rate. The reduction will remove the pressure to buy yen because it will help to curb the inflow of speculative money to Japan. Moreover, it will stimulate the domestic demand, especially individual spending and housing construction, because the higher value of the yen will lead to a decline in exports.

We know that the Bank of Japan cannot easily reduce the official bank rate at this moment. As pointed out by central bank Governor Haruo Maekawa at his latest press conference, the fluctuation has been excessive. Coincidentally, the current interest rate of the national bonds in circulation is higher than the interest rate of the newly issued national bonds which are now open to subscription.

The tendency indicates that the national bond market is in a "glut." The large volume of national bonds has become an obstacle to the smooth and flexible financial policy of the government.

The timing for implementing the financial policy is very important. The government and the Bank of Japan must always be ready to put a flexible policy into practice. For example, they must unify the interest rates of various financial institutions, including post offices which are under the supervision of the Posts and Telecommunications Ministry.

Due to international and domestic reasons, Japan has relatively small room in which to choose its financial policy. For this specific reason, the government and central bank officials must cope with the situation wisely.

We believe that the high value of the yen against the dollar is a favorable phenomenon for Japan because it has a favorable effect on stabilizing prices. We hope that the economic circles will take some measures that will enable the general public to share the benefits of foreign exchange profits, if the present strong yen tendency continues.

CSO: 4120

ECONOMIC

FINANCE MINISTRY'S VIEWS ON ENERGY POLICY, ITS BUDGET GIVEN

Tokyo ENERUGI FORAMU in Japanese Dec 80 pp 95-98

[Original title: "The Ministry of Finance: the Safekeepers Who Gave Special Treatment to Energy"]

[Text] Deepening Sense of Crisis Among Finance Ministry Officials

The Ministry of Finance publishes FINANCE once a month as a public relations magazine. Appearing in the January 1980 issue of FINANCE were the results of an interesting opinion poll. On the theme of "The Convulsive, Obscure 1980's," the magazine questioned 231 persons on the issues of the 1980's, the nature of economic policies, and the world situation, and compiled the results. Three groups were questioned--knowledgeable individuals, retired officials of the Ministry of Finance, and present employees of the Ministry of Finance. Each of these groups made up approximately one-third of the total.

An interesting result of this survey was the answers to the question, "What is the most important issue in economic policy?" "Energy" accounted for an overwhelming 35.7 percent of the responses. Number two was "inflation" at 29.9 percent and number three was "rebuilding of public finances" at 26.8 percent. Some important replies were recorded in the magazine. Under Secretary of Administrative Affairs Takashi Tanaka said that the most important issue for the 1980's was "spiritual transformation and energy measures" and pointed out that in order to develop the necessary measures, "a great deal of time is needed. Everything depends on education." The importance of the energy problem was also indicated by Sagami Takehiro, official in the Regional Finance Bureau, Hiroshi Yoshimoto, director of the Securities Bureau, Eisuke Hamamoto, budget planning official, and Sugio Hatanaka, manager of the Foreign Currency Section of the International Finance Bureau.

The Ministry of Finance has the image of working despereately to rebuild public finances and hold down expenses in order to overcome a severe burden of debt. Actually though, it places more importance on the energy problem than on financial rebuilding. At any rate, the results of this poll show that many Finance Ministry officials have an exceptional amount of interest in the energy problem.

Full Amount Granted for Energy Budget

So then, with this awareness, how is the Ministry of Finance dealing with the energy problem? This is hard to know. MITI is directing energy conservation

policies in industry. The Foreign Ministry participates in international conferences on energy. The Transport Ministry provides guidance for improvement of automobile fuel economy and the Science and Technology Agency promotes the development of nuclear power. The important policies of these other ministries and agencies are clear and evident, but the role of the Ministry of Finance is a more passive one and its position is less clear. Because of this we tend to see the Ministry of Finance as a miser guarding the money box and, even with respect to the energy problem, cutting out a big portion of the budget requests of MITI and the Science and Technology Agency for alternative energy source development and new energy development expenses.

What sort of response is the Ministry of Finance making to the energy problem? Looking at the budget for 1980, we see that "energy related expenses" are given top priority. This budget was formulated right in the middle of the "financial rebuilding" campaign carried on by literally the entire Ministry of Finance, and the size of the budget was held down to an increase of only 10.3 percent over last year. The growth of general expenditures, except such mandatory expenses as national bond expenses (expenses such as interest payments on government bonds) and allocation of regional allocation taxes (32 percent of income taxes, corporate taxes, and liquor taxes), was only 5.1 percent. This is the smallest increase in the budget since 1957. It is an extremely austere budget.

In the budget, energy related expenses are set at 424 billion yen, an amazing 30.2 percent increase. It is a tremendous increase with economic cooperation expenses held to a 17.5 percent increase, social welfare to 7.7 percent, and education and culture to 5.2 percent. The total budget for energy including special accounts is 740.7 billion yen, a huge 30.9 percent increase. The Ministry of Finance, after difficult juggling of meager revenue sources, has given a fat budget only to energy. This budget is certainly a concrete response consistent with the energy consciousness of Finance Ministry officials.

Of course, the Ministry of Finance will take a tough stance toward MITI, the requesting ministry, during the process of budget formulation. MITI initially presented a new tax plan with levies on both petroleum and electricity. The idea was to collect a new tax and use it as a revenue source to promote development of alternative energy sources. However, the industrial sector was fiercely antagonistic to this. The Keidanren and other business organizations stated their opposition to the LDP on this and MITI was left stranded. The Ministry of Finance rejected the MITI proposal because, "Oil is already taxed heavily and there are many problems involved in creating another new tax."

Then MITI set its sights on the petroleum tax which is rising along with increasing oil prices. Among types of taxes, there is the specific tax levied according to volume and the ad valorum tax levied according to price. The petroleum tax is an ad valorum tax. Under this system, if OPEC (Organization of Petroleum Exporting Countries) raises the price of oil and, in response, the domestic oil companies raise their prices, tax revenues will go up.

In 1979, the petroleum tax revenue was initially estimated to be 1.78 billion yen. However, because of the Iranian revolution, the price of crude oil jumped to over

$30 a barrel very quickly and the tax revenue for 1980 is expected to exceed 400 billion yen. MITI has demanded that this be used for development costs of alternative sources of energy.

There are some taxes which are object taxes with specified applications like the gasoline tax which can only be used for the highway budget. However, the petroleum tax is an ordinary tax with unrestricted use. Therefore it can be used for any purpose just like income taxes or corporate taxes, and it is impossible to demand that it be used for energy just because it was levied on petroleum products. When the national finances are under a great burden of debt and financial rebuilding is an urgent problem, MITI itself did not expect to obtain very much.

However, the Ministry of Finance responded with almost the full amount asked for. Furthermore, it is reported that this was pushed forward secretly by the Finance Ministry in unofficial negotiations with MITI. At the time, a Budget Bureau official, Mr Kadoya (presently manager of the Legal Section of the Budget Bureau) said, "It is a fact that we have given special consideration to the energy budget, to the extent that we may be criticized for being too lenient. This is simply because the entire Ministry of Finance was conscious of the importance of the energy problem. Also, no matter how tight the financial situation is, we should allocate money for necessary expenses as long as we have the means. In 1980, the necessary expenses were for energy."

In the 1980 budget, an increase was also made in the electric power source development promotion tax. This is an object tax to be levied according to the volume of electric power used to promote the lagging establishment of power plants. Up to 1979, this tax was 8.5 sen per 1 kWh. MITI requested that this be raised to 30 sen. The Ministry of Finance also approved this right away. As a result, the tax will be quadrupled beginning this June.

Because the Ministry of Finance has provided these sources of revenue, a tremendous advance can be seen in the energy policy for 1980. This Japanese energy policy can be divided into three main parts.

First is the development of synthetic fuels to substitute for oil and new energy sources. Of special mention in this area is the New Energy Comprehensive Development Organization, created under a third sector system. This is an organization for comprehensive promotion of liquification and gasification of coal, nuclear development, etc., which were previously carried out separately. The Ministry of Finance gave strict orders to MITI for administrative reform, but eventually approval was given on the condition of abolishing the Coal Mining Industry Rationalization and merging the Small Business Promotion Corporation and the Small Business Mutual Aid Corporation. The enterprise was started on schedule on 1 October this year and took its first sure steps as a central organization for alleviating dependence on oil in the future. MITI certainly played the main role in creating this organization but without the "understanding the approval" of the Ministry of Finance it would not have succeeded so well. No one would deny that the Ministry of Finance was cooperating behind the scenes.

The second important measure is the petroleum stockpiling plan. A major long-term issue for Japan is promotion of alternative energy sources and reduction of dependence on oil, but this is certain to take time. Therefore, expansion of petroleum stockpiling is an essential policy for national economic security. Although it is not well known, the Ministry of Finance is allowing almost 200 billion yen in grants-in aid to pay interest for petroleum stockpiling in 1980. Under this system, interest is supplemented up to 5.5 percent. This was 5 percent through 1979 and has been raised by 0.5 percent.

What effects will this bring about? It is difficult to prove quantitatively, but it is certain that the Japanese petroleum companies have been motivated to stockpile oil. If the Ministry of Finance had lowered the level of this grant for interest on the basis of financial difficulties, the present stockpile, good for more than 110 days, would not have been created. The cutback in the oil supply due to the Iran-Iraq war would probably have had a greater effect and caused social unrest.

The third energy measure is energy conservation. This can be little influenced by financial measures and greatly depends on individual effort by the industrial sector. However, there is a budget included for small items such as energy conservation PR expenses and operating expenses for guidance. It is reported that the Ministry of Finance has approved most of the requested amounts for these items.

Problems of Formulating Financial Measures

At this point the problem is where to go from here. Until recently each bureau or section of the Ministry of Finance has worked separately unless an especially important policy was involved. However, several years ago, a position was created to coordinate everything related to the energy problem. This post is held by a councilor from the minister's secretariat. His function is to work out policies from a long-range point of view and coordinate the response of the entire ministry. The present holder of this position is Councilor Miyamoto. With a small staff, he is continuing to do slow and steady but wide-ranging research.

Here, the technical aspects of direction of energy development are not considered centrally as they are by MITI or the Science and Technology Agency but a theoretical framework is being built in a thoroughgoing way for advancing energy policy most efficiently. For example, which is the most efficient way to develop alternative energy sources, to spend money on liquification of coal or emphasize nuclear development? Hearings are constantly held with related ministries and agencies and a watch is kept on overseas developments for optimum allocation of resources and energy balance.

Councilor Miyamoto says, "It is clear that revenue sources will continue to tighten. In the 1981 budget, it will probably be impossible to approve an increase of 30 percent for energy alone. Because of that, we must come up with more ideas on how to increase productivity and use public funds well. It may turn out to be unsatisfactory from the viewpoint of other ministries and agencies. However, we must make our decisions inside the framework of the entire national budget. In terms of order of priority, however, we have no intention of changing our previous policy.

9651
CSO: 4105

ECONOMIC

FOREIGN INVESTMENTS IN JAPANESE SECURITIES MARKET INCREASING

Tokyo BUSINESS JAPAN in English Dec 80 pp 17-19

[Text]

According to informed sources, investments at the Tokyo securities market by foreign investors exceeded $10,000 million in the first nine months this year, surpassing for the first time those at the New York market which has been regarded as the largest market in the world for foreign investors. This is largely because those in oil producing countries who are managing investments of oil dollars have become more enthusiastic about investing in Japanese stocks and securities for the following reasons: (1) the current basic trend of higher yen quotations is expected to continue; (2) the technical levels of Japanese enterprises are so high that their business results are drawing an upward curve; and (3) Japan's political situation is stable. Experts foresee that once the war between Iran and Iraq ends, yen quotations will become still higher and investments by foreigners will continue to increase, raising the position of the Tokyo investment market still higher.

According to securities circles, the net increments of stock investments by non-resident foreigners mainly with oil dollars were $1,040 million in August and $1,028 million in September (on the basis of reports from the 12 leading general securities companies for September), surpassing the $1,000 million level for two consecutive months. As a result, foreign investments in Japanese stocks surpassed $3,700 million in the first few months this year alone. The net increments of foreign investments in Japanese bonds and debentures also registered such large amounts as $953 million in June and $958 million in July, reaching amounts close to $1,000 million. Though these investments slightly declined in August and September, the net buying from this January to September exceeded the $4,000 million mark.

Some city banks assume that the total amount of the free yen (the yen that can be freely exchanged with foreign currencies) held by non-resident foreigners reached some $4,700 million or ¥1,100 billion in yen during the first nine months of this year. Together with their investments in Japanese stocks, foreign investments in Japan exceeded the $10 billion level for the first time.

Meantime, the net buying of U.S. stocks by foreign investors at the New York stock market totaled only $2,563 million and that of U.S. bonds and debentures amounted to $2,507 million in the first six months this year. Though the figures were available for these six months only, Japanese securities circles explain that when observing the moves at the stock and debentures markets, foreign investments at these markets have dwindled and deposits in dollars also tend to decrease. As a result, as for the period from this January to September, the Tokyo market became the largest market in the world in buying by foreign investors.

The scale of each transaction in Japanese stocks and debentures at the Tokyo market by foreigners is less than half that at the New York market. But Japan's international pay-

ments balance turned favorable in September after a lapse of 15 months. Securities circles, therefore, are bullish in their outlook by saying, "Except for OPEC countries, Japan is the only country that has the potential to have a surplus in the international payments balance. If the yen quotation continues to go higher despite the secondary reduction in the Bank of Japan's official interest rate, the scale of each purchase of Japanese stocks and debentures by foreigners is expected to become close to that in New York."

The current surplus in the international payments balance among OPEC countries in 1980 has reached some $120,000 million, while the accumulated surplus has surpassed $200,000 million, according to securities circles.

Kuwait is enthusiastic about investments in stocks in particular, and is regarded as having bought some $2,000 million in Japanese stocks and debentures this year alone.

Most of the EDR (European Depositary Receipts) issued by Nippon Miniature Bearing Co. on September 4 this year were purchased by Kuwait investors, and those to be issued by such Japanese companies as Uny and Clarion are expected to be purchased by them.

The ratio of yen assets to the total assets in foreign currencies held by oil producing countries increased from 1% at the end of last year to more than 6% this August. As the ratio of Deutschemark assets in OPEC's total fund management in foreign currencies is assumed to have reached some 12%, Japanese securities circles are still bullish in outlook: they are forecasting that more oil dollars will flow into the Japanese market.

The balance of free yen deposits by non-resident foreigners, which continued to increase from this March, has begun to decrease from this October. The inflow of foreign funds into the Japanese stock market – there was a sharp increase this August and September – also sharply decreased in the middle of October despite the bullish forecast by Japanese securities circles. This is due to the fact that foreign depositors and investors have decelerated their fund management in yen because of the unexpected long, drawn-out war between Iran and Iraq and the intensified outlook that interest rates in Japan will become lower.

The Japanese government and the Bank of Japan, however, regard this seemingly unfavorable phenomenon as temporary, since the fundamentals of the Japanese economy, such as its international payments balance, are generally improving. Both institutions believe that foreign investors have not yet lost their confidence in the Japanese currency.

CSO: 4120

ECONOMIC

JAPAN AIR LINES REPORT SIGNIFICANT INCREASE

Tokyo MAINICHI DAILY NEWS in English 14 Jan 81 p 4

[Article by Hideo Matsuoka]

[Text]

Toward the year-end and through New Year, the New Tokyo International Airport at Narita was awash with Japanese who were leaving for and returning from vacation abroad. /Every day, 16,000 Japanese tourists either left or returned to the airport. A survey by Japan Air Lines showed the Japanese departures and arrivals at Narita over the year-end to be 8 percent above last year.

Flights to Guam and Saipan drew a heavy load of family groups. Not a few on flights to Europe were traveling for a taste of Alpine skiing. Better than anything else, they represented an affluent and peaceful Japan.

This reminds me of my exprience 27 years ago. In the autumn of 1956, Prime Minister Shigeru Yoshida went on a two-month tour of Europe for talks with European leaders. Only seven reporters from as many newspaper companies accompanied the prime minister. Yoshida's tour was an important event for the Japanese press, but newspapers did not have the dollars. To put it more correctly, the country could not afford to spend hard-earned dollars for newspaper coverage of the prime minister's trip. At that time, the yen was valueless outside of Japan. Nobody cared to have the yen in exchange for his national currency.

Now the yen is a star performer on the world's currency markets. A recent report by a major British securities company predicted that the yen would be the most attractive among the world's major currencies in the next six months to a year. In the last quarter century, the yen changed from a mere scrap of paper to a currency coveted by everyone. The yen's rise is impressive to me after seeing its humiliation on the European money markets 27 years ago. The yen has started on a new climb again. As the dollar has become available for less than 200 yen, going abroad is becoming ever cheaper. Making an overseas trip no longer requires a big decision for the Japanese.

Because I am protected by the statute of limitations, I admit that, in accompanying Yoshida on his European tour, I bought dollars on the blackmarket because the dollars supplied by the Mainichi were not enough. The blackmarket price was 400 yen per dollar,

compared to the official rate of 360 yen. Still, I was thankful that 400 yen bought a dollar. Now the dollar is worth only half as much. In other words, the yen has doubled its worth. What particularly delights me is that anybody would now take the yen anywhere in the world. Banks will change the yen into any currencies.

Int'l Respect

Japan tops the world in the number of automobiles manufactured. It has also topped the United States in crude steel production.

That is not all. In a recent survey of national potentials, analyzed into economic and other factors, Japan scored most among the 20 Western major economies. The finding may sound "iffy" to some. But it apparently is a measure of the international respect for Japan's national potentials and, as such, should constitute one of the causes that push up the yen.

Last year, for reasons connected with my work, I did some research on the Katayama Cabinet of 1947-48. That was the time when many dead bodies of starved people littered the filth-covered passageways of Osaka, Nagoya and other major stations of the Japanese National Railways. The whole of Japan was starving then. Nobody then could foresee today's economic prosperity in Japan. Today's state of the nation may well be called a miracle when one remembers how it was in those years. No particular sector or sectors are to be credited for the miracle. It is the concentration of general power by the nation as a whole that deserves credit.

The present state of the nation will not collapse easily because it is supported by the combined power of the whole nation, instead of the power of a limited sector of the nation. If it is to collapse, the cause probably will be political. In a recent public opinion poll by the Mainichi Newspapers, the people were asked what they associate with the word "conservative." An overwhelming majority suggested "connivance, corruption, unreliableness, deceit, and other elements that denote moral depravity." The fact that a conservative party that has lost the trust of the nation has been long in power is a miracle in itself. Unlike the economic miracle, the political miracle forms Japan's biggest drawback.

The poll respondents picked such epithets as "unreliable, thin-skinned" for reformist opposition parties. At least the opposition parties are spared the adjectives that suggest corruption. Like the conservatives in power, these opposition parties have been regarded as "unreliable" by the nation. This shows that all political parties constitute negative elements in Japan's national genetics. We need some genetic engineering to manipulate the genes for our national interest.

Peaceful Nation

Along with the rush of overseas tours, the traditional New Year visit to shrines and temples is another indication of a peaceful Japan. According to a Police Agency survey, 80 million paid a New Year visit to shrines and temples in the first four days of 1981. The figure is an all-time high. Despite the fervent prayers of the nation, gods and buddhas let the nation lose World War II. Some openly complained "What is the good of praying?" From a different viewpoint, however, it may be argued that gods and buddhas let Japan lose because they saw a future prosperity in the losing. So the merciful gods let Japan lose. Why not keep paying homage to them every New Year?

What do New Year visitors to shrines and temples pray for? What benefit do they expect from their visits? Do they go to these places just because many others do? There are not many occasions that can mobilize 20 million Japanese every day for four days. This too is a product of a peaceful Japan.

I emphasized a peaceful Japan by citing the rush of overseas tours and visits to shrines and temples over the year-end and New Year because I wanted to compare this peaceful state of Japan with the European situation.

According to a high government official who returned to Japan in December from an inspection tour of Europe, the situation there was tight as a

drumhead over the developments in Poland. He said his talks with European government officials were dominated by Polish topics, with economic matters shoved to the background. The preponderance of Polish topics could have been due to the fact that the whole of Europe feared an imminent Soviet invasion of Poland at the time of his visit. Every official he talked to, he said, was visibly worried about what would happen in case of a Soviet invasion. Tension was everywhere to be seen, he reported.

"Upon coming home, I deepened my conviction that Japan is Heaven in many ways," he said. By "in many ways," he suggested a variety of elements such as one might choose—an economic Heaven, Heaven of peace, conservatives' Heaven, Heaven for the middle class, Heaven for corruptive elements, or what have you. Undoubtedly, Japan is Heaven compared with European countries.

Land prices are said to be falling in West Germany. I had heard that land prices had ceased to rise there, but it was the first time I was told that they have started to go down. This too is a Polish phenomenon. A Soviet invasion of Poland, when it comes, will necessarily threaten West Germany. A threat and actual invasion are two different things. But people worry ahead of reality. An advance pessimism necessarily cuts the prices of land. The tumble of the West German mark in December was not all an economic phenomenon. It was also a political and Polish phenomenon.

There is nothing wrong about Japan being Heaven—even of some dubious sorts. Japan should remain a Heaven. To keep Japan a Heaven, it is important to do everything to avoid its involvement in war. To stay out of war, we must keep watch on our national politics, which tends to be a defective gene in the national system.

CSO: 4120

ECONOMIC

CONFLICTING VIEWS NOTED ON PROPOSED REVISION OF BANKING LAW

Tokyo MAINICHI DAILY NEWS in English 19 Jan 81 p 2

[Editorial: "Bank Law Revision"]

[Text]

The proposed revision of the Banking Law has given rise to sharply conflicting views between banking circles and the Finance Ministry over the business operations of ordinary commercial banks.

Due to the opposing views, revision of the law, being carried out based on the June 1979 recommendation by the Financial System Research Council, has been hampered. The ministry intends to send a law revision draft to the Diet in mid-March.

The differences of views concern several issues.

In the revised law, the ministry seeks the legality of a finance minister's "right to advise" commercial banks to improve their business operations—a step the minister will take when he sees it necessary to protect the depositors' interests.

The banks, which look upon this as government intervention in their business, vehemently oppose the idea, arguing that such a concept was not contained in the council's recommendation.

The banking side also strongly opposes the ministry's plan to write into a law the need for imposing quantitative restriction on the banks' large loans to private corporations. The restriction, now being enforced under a guideline provided by the director of the ministry's banking bureau, calls for a ceiling on such a loan so that a bank's extended loan to a company will not exceed a certain percentage of the bank's owned capital (for instance, 20 percent in the case of a commercial bank). The banking side contends that the measure itself was originally temporary in nature, having been imposed when the nation's economy was gravely threatened due to the 1973 global oil crunch. It opposes the indiscriminatory imposition of the measure by enacting it into law.

Besides these conflicting views, the most serious problem concerns a bank's dealing in the securities business. Under Article 65 of the Securities and Exchange Law, all financial institutions are prohibited from dealing in this business. The advisability of this particular provision has always been the subject of a heated controversy between the banks and securities companies and the planned revision of the law this time has further heated up the controversy.

In the law revision, the ministry takes a stand allowing a bank to deal in the securities business, although this is strictly limited to the sector of public bonds, by defining the business as "a service" that the bank can also provide to customers. In this case, a bank wishing to engage in this business will be required to obtain a license under the existing Securities and Exchange Law.

Banking institutions, however, are dissatisfied and disagree with the ministry's stand. They argue that dealing in the securities business has inherently been a "concomitant" of the banking business, defined under the Banking Law. They even go so far as to say that the ministry's posture in this regard will reduce the value of the Banking Law itself.

The securities business they mention consists of underwriting, floating and dealing in negotiable securities, and the acceptance of their balance.

Learning a lesson from the financial crisis of the past, a bank in the United States is strictly banned from engaging in the securities business or a securities firm in banking services, although financial institutions in Europe are allowed to carry out both the banking and securities businesses.

It will be logical to assume that banks in Japan will also be allowed to deal in public bonds in view of the fact that Article 65 of the Securities and Exchange Law is a "copied" version of the pertinent article of America's banking law.

Also, we believe the bank's penetration into the field of public bonds is desirable from the viewpoint of national economy. It will open the way for correcting the government's "near compulsory" allocation of national bonds to the banks and the restrictions imposed on their selling.

Second, it will ease the major securities firms' monopoly in securities dealings, leading to a more logical price formation in the public bond market, which will benefit the subscribers.

As the Financial System Research Council has pointed out in its recommendation, the role the bank will play in absorbing new public bonds is bound to become large as the fund raising demand in the public sector will remain strong.

CSO: 4120

ECONOMIC

INDUSTRIES SHOW GREAT DISPARITY IN PROFITS REPORT

Tokyo BUSINESS JAPAN in English Jan 81 pp 24-26

[Text]

The interim account settlements as of last September of major enterprises listed on the first section of the Tokyo Stock Exchange show that while half of these enterprises enjoyed an increase in recurring profits, the remaining half suffered from a decrease in profits. As steel, oil and power companies gained huge exchange profits, these enterprises thoughout all industries enjoyed a 50% increase in recurring profits on the average over the previous six months. Except for the power companies, even recurring profits increased by 7% on the average, a record high. When closely examining the contents of the account settlements, however, business profits with exchange profits deducted are found to have decreased, indicating that their account settlements substantially reflect their stagnant business performance. As for the near future, their account settlements for the next half-year term ending next March are expected to show decreased recurring profits and their full-scale recovery from the current stagnancy is expected to start only from next September.

According to a recent survey by the Wako Economic Institute, the interim account settlements of 348 major enterprises listed on the first section of the Tokyo Stock Exchange indicate that their sales increased by 3.4% and their recurring profits by 7.8% on the average over the previous half-year term.

In addition, if the results of the account settlements, which are not available yet as of this writing, are included, the enterprises in all the industries listed on the exchange's first section are expected to enjoy an average recurring profit with an increase rate of nearly 50% over the previous half-year term, registering an historical high following the previous term, the economic institute says.

Despite such good results in general in recurring profits, their business profits suffered a 5.5% decrease reflecting that their favorable account settlements were due mostly to a marked increase in exchange profits.

It must be pointed out also that while 173 out of the above enterprises surveyed increased their recurring profits, the remaining 175 suffered from a decrease in such profits.

Industry-wise, the manufacturing industries enjoyed an increase of 10.6% in recurring profits on the average, and the non-manufacturing industries decreased their recurring profits by 6.4%.

Among the manufacturing industries, the pulp and paper industries enjoyed a 99% increase, the oil industry doubled its profit, and the steel industry increased its recurring profits by 24%, compensating for the decreased profits in the textile, chemical, glass and nonferrous metal industries, leading to an average 20% increase in the basic materials producing industries.

In the processing industries, where there was no enterprise as in the materials producing industries that sharply increased its profits, the increase in profits was only 2.7%. In the nonmanufacturing sector, all

the enterprises except for those in the warehousing, communication and services registered a decrease in their profits.

The Nikko Research Center says, "The increase rate in their sales went below the expected rate by 2%, and their profit from operations (business profits minus substantial interest rates) decreased. In this sense, their interim account settlements reflect the stagnancy of business activities in general."

The depressive trend of the economy is clearly casting its shadow on the non-manufacturing sector with the exception of the power industry. As the movements of goods slowed down due to the depression, land transport companies decreased their profits by 25%, while warehousing companies increased their profits by 11%, reflecting an increase in inventories.

While pulp and paper companies, steel companies and power enterprises successfully settled their accounts with good results by transferring the rise in prices of raw materials to prices of their products, there are many enterprises which failed to transfer increased costs to the prices of their products due to the stagnant demand.

As for the reason why they failed to do so, Kazuo Matsumoto, managing director of the Wako Economic Institute, points out, "In addition to the off-setting of substantial earning power caused by increased consumer prices, the cool weather during last summer kept consumers from buying. Furthermore, private housing construction was dull due to the high interest rates of housing loans. The restriction placed on public investments also reduced end users' demands for various products."

Both textile and chemical products manufacturers failed to transfer increased costs to the prices of their products, leading to a large decrease in recurring profits. Despite the increase in fares, airlines suffered loss as the number of passengers did not increase. Shipments by steel manufacturers also decreased from the previous half-year term.

The interim account settlements are seemingly favorable in general, but in fact reflect the depressive trend of business activities. Nevertheless, the figures represented in the accounts are, no doubt, an historical high far surpassing early expectations. The following factors can be cited as the major reasons for these good results:

The value of the yen, which stood at ¥249 against US$1 at the end of March 1980, sharply increased to ¥212 at the end of September, leading to high exchange profits for some industries – ¥90 billion for the steel industry, ¥160 billion for the oil industry, and ¥110 billion for the power industry – totaling as much as ¥360 billion. The total corresponds to 27% of the total recurring profit gained in the previous half-year term by all the industries listed on the first section of the Tokyo Stock Exchange.

Exports in the first six months of 1980 increased by 33% over the same term of the previous year and by 12% over the previous term, a major factor that brought good profits to the enterprises. Exports of automobiles completely compensated for a decrease in domestic sales. Exports of machine tools, video tape recorders, integrated circuits and single-lens reflex cameras also sharply increased.

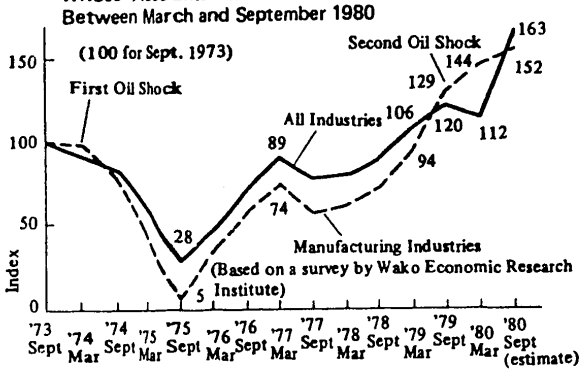
Many enterprises sliced the fat off their managerial burdens in terms of personnel, money and materials after first oil crisis, lowering their break-even point. Even though the rate of their operation was low, they could produce some profits.

All the enterprises exerted efforts to save on energy consumption and succeeded in reducing not only fixed costs but also variable costs as well. Many cement and steel manufacturers shifted from oil to coal for fuel.

Plant and equipment investments that had been long suspended after the first oil shock started to increase from around fiscal 1979, compensating for the stagnancy of personal spending.

Shipments of video tape recorders reached some ¥500 to ¥600 billion a

Trends of Indices of Recurring Profits of Companies Listed on the First Section of Tokyo Stock Exchange Whose Accounts Have Been Settled for the Period Between March and September 1980



year, surpassing the sales of color TV sets and rescuing electrical appliance manufacturers that were suffering from the cool summer. The sales of integrated circuits, numerically-controlled machine tools and copying machines also markedly increased. The application of highly advanced electronic technology is phenomenally strengthening Japanese enterprises in the international market by facilitating the development of new products and reducing their production costs.

Concerning the account settlements for the current half-year term ending coming March, no favorable results can be expected due to the economy's stagnancy. Likely it will be only after the term ending next September that the economy will show any sign of recovery.

CSO: 4120

ECONOMIC

CONFLICTS ACCOMPANY INTERNATIONALIZATION OF SHIPPING

Tokyo BUSINESS JAPAN in English Jan 81 p 65

[Article by Susumu Ono, president, Nippon Yusen K.K.]

[Text]

THE U.S. economy, which had experienced high postwar growth, plunged rapidly into recession in early 1980. Then the economic situation in principal European countries, including Great Britain and West Germany, began to show evident signs of a downtrend. The international economy as a whole thus entered a period of recession and slowdown.

Tension in international politics has also been aggravated. The invasion of Afghanistan by Soviet troops brought about economic sanctions by the U.S. against the Soviet Union including a grain embargo. American Embassy employees were taken prisoner by student militants in Iran bringing relations between the two countries to an all but irreversible low.

Furthermore, war broke out between Iran and Iraq in September, 1980. International politics and the economy surrounding the shipping industry is in turmoil.

In spite of such a gloomy environment, Japan's shipping industry achieved generally normal business results last year. The tanker market stagnated since the start of the year owing to a warm winter throughout the world and the vigorous campaign to economize petroleum consumption.

The tramp market could sustain fairly good activity thanks to increased shipments of coal and cereals. The shipping market further benefited from Japan's brisk export trade throughout the year in spite of yen appreciation and aggravating trade friction.

However, the domestic and international environment surrounding Japan's shipping industry in 1981 is anything but rosy. This year is expected to become another period of ordeal for the shipping business.

The first problem facing the industry is the world economy. Although the U.S. economy is said to have climbed out of the worst trough in the middle of 1980, its full-scale recovery is likely to be delayed through the pressure of inflation and the rising interest rate. It is hoped that the new administration under President Reagan will implement a powerful policy to realize a strong American economy. But immediate effective steps to harness inflation and to bring about economic recovery hardly exist.

OECD predicts that this year's growth rate of world trade volume will fail to attain last year's figure owing to the slowdown of real growth in all industrially advanced countries. In particular, exports to advanced countries and developing countries not producing petroleum are expected to register a very low growth. Exports from Japan, which could maintain a fair level for some time, will inevitably experience a setback.

The second problem is the trend of the shipping market. The Soviet Union and China will continue to import a large volume of grain this year. Shipments of coal as an alternate energy source will stay on a high level.

On the other hand, the demand for the transport of steel raw materials, which contributed to the uptrend in

the shipping market in the past two years, is expected to slow down inevitably because of the production curtailment in the steel industry in Europe and Japan.

A large number of bulk carriers, newly ordered since 1979 after regeneration of the shipping market and the drop in shipbuilding costs, are expected to be launched in succession in 1981 and after. The future of the tramp market is extremely uncertain since the demand for bottoms is tending to deteriorate.

The tanker market, encumbered as it is with a large number of surplus bottoms, cannot hope for a full recovery this year in the midst of general economizing in petroleum consumption and uncertainties in Middle Eastern politics.

The third problem is the deteriorating profit and loss demarcation of shipping business due to soaring oil prices, with strong apprehensions of dwindling corporate profit. The comparative stability of the oil supply last year brought a temporary respite to the rising trend of ship fuel prices.

But the situation changed abruptly after the outbreak of the war between Iran and Iraq in September 1980. Prices of ship fuel skyrocketed immediately. The conflict in the Middle East has been dragging on contrary to initial predictions. Fear of a short supply of petroleum has revived with the approach of the consumption season.

Since both Iran and Iraq have been extremely diligent in destroying each other's petroleum production facilities, exports of oil from both countries will not recover to a normal level for a long period of time even if the present conflict is speedily terminated. Under the circumstances, even the smooth supply of ship fuel will be hampered in some areas in addition to soaring fuel bills.

The Iran-Iraq war has also aggravated the dissension between the doves and the hawks in Arab countries. The possibility of OPEC countries adopting a unified oil price has receded further beyond the horizon.

Both prices and supply of the Middle Eastern oil are in for a period of protracted instability, throwing an ominous shadow on the future management of Japan's shipping industry.

Lastly, competition with the foreign merchant marine fleet is destined to intensify in international shipping. The walkout of Sealand Co. from the Conference in the North American routes and the disturbance of routes by the rampaging of non-Conference ships are expected to create trouble for some time to come. Recovery of freight rates and the stabilization of international routes will require a still longer period of time.

Moreover, non-Conference activities of Soviet and East European Bloc ships in the routes between free countries and the cutthroat discount competition disregarding a sound commercial basis are posing a serious threat to the stabilization of liner routes. If maritime cargo movement is to dwindle through a general slump in world trade, key routes centering on Japan will inevitably be exposed to ugly competition.

In the field of bulk cargo transport, developing countries have begun to demand national flag discrimination at UNCTAD. Discussion by a group of specialists will start this year on this subject.

Japan's shipping industry has survived a protracted recession following the first oil crisis. Although some improvement in business performance has been achieved, consolidation of corporate strength through the improvement of international reserves can by no means be termed adequate.

With the advent of 1981 promising a great number of problems and hardships, it is the urgent task of Japan's shipping industry to positively promote the consolidation of its international competitiveness through redoubled rationalization efforts. ◻

CSO: 4120

ECONOMIC

OKITA STATES FREE TRADE PRINCIPLE MAY REQUIRE LIMITS

Tokyo THE JAPAN TIMES in English 19 Jan 81 pp 1, 3

[Article by Yoshikazu Ishizuka]

[Text]

Saburo Okita, the government's trade representative, has indicated that Japan may have to consider international arrangements that could to some degree limit the free trade principle in its automobile exports to the United States and the European Common Market. This possibly means voluntary moderation on the part of the Japanese, short of an official three-way agreement.

Okita made the suggestion during a recent interview with The Japan Times, saying that whether or not free competition should be limited in such "key industries" as automobiles would have to be studied.

He said he feels that Japan's automobile exports to the U.S. as well as to the Common Market will continue to be a major issue this year and some kind of talks among these three trade partners will become necessary.

Although he stressed that GATT rules must be observed, Okita also said that, if necessary, new arrangements or rules, such as those on safeguards — emergency measures allowed by GATT to limit imports to save the domestic industry from disruption by sharp increases in imports — should be worked out so that trading partners can observe the rules.

He did not say whether he meant an "orderly market agreement (OMA)" by such arrangements, and his office denied he favored an OMA.

Okita's statement, nevertheless shows his perception and understanding of the need for some sort of agreement on the conduct of trade in key industries such as automobiles.

He said he will discuss chiefly "various economic problems" with leading members of the Reagan administration when he visits the U.S. late next month.

Discussing Japan-U.S. relations under President-elect Ronald Reagan's administration and Japan-EC relations in the new year, Okita also said that how Japan and Europe would respond to the U.S. call for "shared responsibility" in economic, political and security fields would be a major issue and that Japan should be prepared to articulate what it can and cannot do as its share of responsibility.

The former foreign minister and prominent economist also said control of inflation is the foremost task facing the new U.S. government. "We want to see a strong, stable dollar at the earliest possible date" for the good of the world economy.

Excerpts from the conversation:

Japan-U.S. trade and economic relations

The higher yen rate in the range of ¥200 to the dollar since the beginning of the year will inhibit Japan's exports and encourage imports. This will help ease trade frictions to some degree this year. Last year's export surge was partly due to the yen's depreciation to as low as ¥260 in the first half of the year.

But the automobile trade will continue to be a major problem this year, as the U.S. automotive industry has various problems of its own, such as those of Chrysler, besides Japan's exports. There is a question of whether or not a completely free trade principle can be applied to the trade in such key American industries as automobiles. I have the feeling that various problems of automobile trade will emerge, both in the U.S. and in Europe, and some kind of talks among us will become necessary.

The new U.S. Congress may pass a resolution that would empower the president to negotiate with Japan on the automobile trade — a similar resolution that was passed last December by the House but killed by the Senate.

A group of U.S. Congress members I met (last week in Tokyo) pointed out that national security would be in jeopardy if the basic industries of the U.S. fail to maintain their domestic production shares at a certain level. Such fields include automobiles and certain areas of electronics.

It is a matter of future study whether the principle of free competition needs modifications when applied to the competition in the field of high-technology industries, such as semiconductors and computers.

'Shared Responsibility'

Another major issue in Japan-U.S. relations will be how Japan and Europe will respond to the U.S. call for "shared responsibility" among major Western nations in the economic, political and security fields.

I do not think the "shared responsibility" means increasing defense spending alone, but also relates to roles to be played in the economic field, such as economic aid to developing countries. Japan should be prepared to state clearly what it can and cannot do under the present world situation.

Reagan administration's attitude toward Japan

There is a possibility that the Reagan administration will evaluate Japan-U.S. relations in overall terms, including economic ties and defense relations as Secretary of State-designate Alexander M. Haig supported "linkage" in his congressional confirmation testimony. The new administration will value consultations more than the outgoing one, but on major issues and not on trifling details.

Japan's defense budget

The two governments should discuss this matter very thoroughly. What is important about the defense budget is its contents and it should not be judged only in terms of the percentage of growth in the fiscal 1981 budget. I suspect the U.S. government will be satisfied considerably if it knows more about its contents — how it is spent.

Tasks of the Reagan administration

The immediate, most important task the Reagan administration should tackle is inflation — reducing two-digit inflation to a one-digit level, while carrying out tax cuts and enhancing vitality of the private sector. It will require a considerable "shock treatment" in order to break the two-digit inflation "institutionalized" in the U.S. economy and change the American people's inflation psychology. But if Americans are convinced the administration this time means it, there may come a real turning point.

I hope the new administration's anti-inflation policy will work. America's two-digit inflation and an unstable dollar have a very undesirable effect on the world economy, including Japan's. We want to see a strong dollar, stable dollar restored as quickly as possible.

Japan-EC relations

It is not very desirable that each of the EC countries take different arbitrary steps (against Japanese exports). GATT rules must be observed, and, if necessary, new arrangements or rules, such as those on safeguards, should be worked out.

For instance, France, which restricts Japan's automobile exports to 3 percent of the domestic market, complains about Japanese auto exports to other EC members, because it says if Japanese cars sales in West Germany and Benelux (Belgium, Netherlands and Luxembourg) increase, French car exports to those countries will decrease. This is a problem for the EC as a whole, and not a problem involving France alone. We want the EC to come out with a single, unified stand on such a problem, so that we can discuss it with the EC commission, not with each government.

In view of political and economic impact, Japan should exercise self-restraint so as not to seriously damage the economy of its trade partners. But at the same time, if competition is limited too much, Europe will further lose its competitiveness. If we rely too much on restrictions, dynamism of the economy in Western countries will be lost. A weakened European economy is not in the interest of the West as a whole.

Japan and the EC should try to find ways to share as much as possible profits and employment opportunities in future through such endeavors as building of Japanese manufacturing plants in Europe, starting of joint ventures in third countries, and further opening up of the Japanese market to imports.

Japan-EC relations are still at a stage in which Japan-U.S. relations were a decade ago, when Japan and the U.S. were disputing the textile trade and trade imbalance problems. More, closer dialogue between the governments of Japan and the EC is needed.

CSO: 4120

ECONOMIC

CHANGING POLICIES AFFECT FINANCIAL INSTITUTIONS

Tokyo BUSINESS JAPAN in English Jan 81 pp 57, 59

[Article by Hiroshi Yonesato, director-general, Banking Bureau, Ministry of Finance]

[Text]

FOLLOWING the outbreak of the oil crisis in 1973, the Japanese economy has been struggling for a smooth transition from the high growth pattern the country had pursued throughout the post-war period to stable economic growth. In this transitional process, the Japanese economy demonstrated, by comparison internationally, excellent resilience and showed a good recovery from the negative growth, registering a 5.9% growth in real terms in 1976, 5.8% in 1977, 5.7% in 1978, and 6.0% in 1979, a very stable performance.

However, this transition from a high growth economy to a slow-but-stable growth economy was accompanied by various structural changes in financial conditions, and the monetary policy is challenged to effectively cope with these changes. Among the changes are the following: first, the volume of monetary transactions will expand at a slower pace. Secondly, the decline in the proportion of the corporate sector in the total need for funds is accompanied by a corresponding increase in the share assigned to the public sector and individuals, and thirdly, the further thrust for internationalization.

With these changes, the ways and means of monetary policy formulation need certain review. During the high-growth period, it was possible to assume the effectiveness of monetary policy as an economic stabilizer by controlling the flow of funds to the corporate sector, which was rather easily done through influencing the lending activities of banks. However, with changes in the money flow, it is necessary to control the total flow of funds including public sector and individual funds, and also to see to it that fund allocation among these three sectors is proper. For example, there are arguments against increased floatation of public bonds on the grounds that increased floatation, under the present system of absorption by financial institutions, is inflationary in nature or that this will limit the fund flow to the private sector and cause "clouding out" in the market. It is too hasty a conclusion to directly connect the increased bond floatation with these conditions, but we cannot deny the possibility if the economic policy is not carried out carefully in order to avoid such consequences. So, in floating public bonds, careful consideration of the financial condition at the time as well as coordination of fiscal policy and monetary policy is becoming more and more vital.

Secondly, in order to secure the effectiveness of monetary policy under the changing flow of funds, effective utilization of the interest mechanism is called for. From this point of view, the report on "The Workings of Ordinary Banks and Reform of the Banking System," published in June 1979 by the Committee on Financial System Research, positively credits the introduction of the competitive tendering method for the issue of medium-term

national government bonds, the introduction of negotiable certificates of deposit bearing an uncontrolled interest rate, and various steps to liberalize and make more flexible the interest rates of the call market and bills market.

These developments in the Japanese economy and the accompanying changes in the money flow have brought about drastic changes in the management of financial institutions. First of all, it is going to be difficult to merely pursue a policy of economy of scale. On the contrary, the focus will be placed on how to compete against the respective expertise and knowhow of each institution. The slowing down of the scale of expansion will deprive the financial institutions of economics of scale and, together with the narrowing profit margins from 1974, will present a very severe profit prospect for them.

Secondly, there will be strong pressures and demands for financial institutions to play public and socially beneficial roles. With the relative decline in the demand for funds within the corporate sector, and especially big business, the lending activities of the financial institutions will be shifted to emphasis on the public sector, to individuals through housing loans and consumer loans, and to medium and small businesses. This will make it necessary for financial institutions to cope with the wide and more diversified needs of various sectors of the economy.

Thirdly, there will be further steps toward internationalization. With the implementation of the new Foreign Exchange Control Law, which greatly liberalizes the foreign exchange transactions of individuals and businesses as well as banking activities, the business activities of Japanese companies will be rapidly internationalized. Banking activities also will have to internationalize to cope with the general internationalization of the Japanese economy.

In order to effectively cope with these changes in the managerial environment, the financial institutions in Japan are expected to endeavor to attain efficient operations through free competition. And for the administration of banking operations, it will be necessary to secure an environment where free competition of financial institutions will lead to socially beneficial results. The establishment of an institutional framework such as fuller disclosures by financial institutions and a limit for largescale loans are necessary steps toward this end. ◘

CSO: 4120

ECONOMIC

MITI, MF CLASH OVER TAX CUT FOR ENERGY INVESTMENT IN 1981

Tokyo NIKKAN KOGYO SHIMBUN in Japanese 8 Dec 80 p 1

[Article: "Concentrating on Energy--All-out Effort by MITI To Get Tax Cut for Investment"]

[Text] Starting this week, MITI will face its greatest test in the offensive and defensive battle over the tax cuts for investment which it is promoting with all its resources--the "Comprehensive Energy Measures Investment Tax Cut" and the "Industrial Diversification Investment Tax Cut." If the Ministry of Finance smells trouble and asks, "How can there be a tax cut when we cannot cover inevitable cost increases without raising taxes?" MITI will not give any ground. "If Japan is to have healthy development under severe restrictions on energy, it is essential to promote investment in energy facilities and secure the energy base of industry. We cannot have great expectations of exports because of trade friction, and public investment is limited because of decreased issue of government bonds. The future of individual consumption is unclear, and what is going to support our economy? Is there any solution but to stimulate private investment in equipment?"

MITI officials say, "The industrial diversification tax cut may be impossible, but we can by no means give in on the energy investment promotion tax system." They are concentrating on the tax cut for energy investment and enlisting the aid of Diet members in their effort to make it a reality. Fundamental principles for LDP revisions of the tax system will be decided on 19 December, and the outcome of the MITI tax system proposal will be watched carefully.

Under the Comprehensive Energy Measures Promotion Tax System there would be a tax deduction of 10 percent of the amount of income from energy conservation facilities, facilities for application of alternative energy sources, and facilities for stabilizing the supply of petroleum. It would be applied for a 5-year period. The amount of tax reduction in 1981 would be 200 billion yen. The effect of the tax cut in stimulating investment would be an acceleration of 15 percent in investment in energy facilities and it is estimated that there would actually be 3 trillion yen in energy equipment investment (one-third by small and medium enterprises) coming under the tax deduction.

Therefore, the following developments can be expected. (1) Vitalization of industry would be brought about by a tax deduction with a time limit, and energy

equipment investment, which is being postponed due to uncertainty about the future, would be carried out. (2) By limiting the period of application to 5 years, investments would probably be made earlier. (3) Profitability would be improved by means of the tax deduction, and energy equipment investments could be accelerated.

Furthermore, expanding this investment will have the following effects on the national economy. (1) The transfer of 4 trillion yen in income to OPEC can be prevented by promoting conservation of energy. (2) Although a great deal of investment expansion cannot be hoped for in these times, an increase in national income of 750 billion yen can be realized through the expansion of private investment. (3) The level of private business activity will rise and a resulting increase in tax revenues can be expected; according to one trial calculation the increase will ultimately cover 80 percent of the amount of the tax cut.

However, the Ministry of Finance is desperately working not only to decrease the amount of national bonds for next year by 2 trillion yen and cut new expenditures, but to cut off aid money and cut into inevitable cost increases and increase corporate taxes. Even if it is admitted that energy is a special category from the viewpoint of Japanese security, there is likely to be strong resistance to a tax cut. MITI makes the point that, "this is a scrap-and-build version of the Industrial Conversion Investment Promotion Tax System which will be terminated in 1980. It is not at all new. We cannot accept simple expansion of the existing financial framework and application of investments and loans from public funds" (MITI official). MITI wants to get this investment promotion tax instituted no matter what.

Although there is no way of telling what will happen in the end, there is a good possibility that the Energy Investment Promotion Tax System will materialize. However, it is possible that the size of the tax cut will be reduced and the equipment subject to the reduced tax may be greatly limited. If this is the case, especially today when all new equipment of small and medium enterprises is related to energy conservation, attention will focus on which items the tax cut will apply to. Recently equipment investment by small and medium enterprises has slumped dramatically. In order to maintain the vitality of our economy, small and medium enterprise organizations like the Japan Chamber of Commerce along with MITI strongly desire the institution of a tax cut for small and medium enterprise equipment investment. So there is much interest in the outcome.

The other measure of concern, the Industrial Diversification Investment Tax Cut, calls for a deduction of 10 percent of the amount of investment from the tax for industries located in industrial parks built by public organizations in industrial guidance regions (a 60 billion yen tax reduction). MITI has promoted this tax cut along with that for energy, but at this point there is a growing feeling of resignation on the diversification tax reduction system. However, there is still some tenacious support for this measure within the LDP.

9651
CSO: 4105

ECONOMIC

CHRYSLER CALLED LIABILITY FOR MITSUBISHI

Tokyo MAINICHI DAILY NEWS in English 20 Jan 81 p 5

[Article by Kentaro Koshiba]

[Text]

The deepening crisis of Chrysler Corp. is having some inevitable impact on its Japanese partner, Mitsubishi Motors Corp. and several Japanese banks who have lent money to the American automaker.

For Mitsubishi, the third largest automaker here, Chrysler is now a liability, something that was inconceivable a decade ago when the two firms formed their present ties.

In April 1971 Chrysler acquired a 15 percent ownership position in Mitsubishi, an affiliate of Mitsubishi Heavy Industries (MHI). And Mitsubishi Motors, which had no sales network of its own in the U.S., obtained the right to sell its cars there through Chrysler's dealers.

But, with its American partner apparently on the brink of bankruptcy, Mitsubishi now stands to lose, rather than gain, from the marketing arrangement with Chrysler. In fact, it was the only Japanese auto firm that suffered a drop in U.S. sales in 1980.

Sales of Mitsubishi passenger cars, marketed under Chrysler nameplates such as Dodge and Plymouth, fell off 6.3 percent from a year ago, to 130,000 units, although truck sales jumped 34 percent to 63,000 units.

The situation has markedly deteriorated of late. Earlier this month Mitsubishi decided to stop producing all types of cars for Chrysler because U.S. inventories had reached twice the normal (three-month) level.

Next month, exports, including engines, will also come to a halt. With 15 percent of output cut off, Mitsubishi has been forced to discontinue overtime work on the assembly lines and transfer some of its 23,000 employees to other plants.

These problems, serious though they are, seem to dwarf compared with the complex problem of preventing a Chrysler collapse, for Mitsubishi's cooperation, whatever form it may take, is considered essential to Chrysler's recovery.

Admittedly, the trouble in which the third largest U.S. auto firm finds itself now stems primarily from failures in management — especially failure to alter its production strategy in line with the shift in auto demand.

But the Chrysler crisis is also perceived to be an integral part of the larger problem facing the U.S. auto industry — the difficulties involved in its transition to small-car production, including competition from imported cars.

Now the U.S. government is committed to help Chrysler tide over the crisis — by guaranteeing an additional $400 million in loans to the ailing automaker (so far $800 million has been guaranteed).

The federal Chrysler Loan Guarantee Board, which has approved of the new guarantee, supports a rescue plan that calls for, among other things, a merger or joint venture between Chrysler and one of its foreign partners.

That puts Mitsubishi in a very difficult position, a position similar to that in which Toyota Motor Co., for instance, was placed last year, when it came under pressure not only from the U.S. but from the Japanese government as well, to "help" the American auto industry.

What Toyota did, besides launching a feasibility study on U.S. production, was to begin negotiations with Ford Motor Co. over plans to build cars in the U.S. through a joint venture (the talks are still under way, and how they will end is not clear at the moment).

The problem with Mitsubishi is that Chrysler as it stands seems to hold out little promise as a possible partner in a merger or joint venture. Last

week, speaking in a news conference Yoshitoshi Sone, Mitsubishi president, indicated he was not much interested in such a possibility.

In fact, Mitsubishi has tried in recent months to break its ties with Chrysler. For example, it has tried, without success, to abolish the capital linkup (by MHI buying up Chrysler's 15 percent stock) and set up its own sales company in the U.S.

Meanwhile, the seven banks involved, including Mitsubishi Bank, also find themselves in a delicate position. For like Mitsubishi, they are likewise expected to cooperate in the Chrysler bail-out

Such cooperation would involve writing off a portion of the $156 million debt Chrysler owes them. Under the conditions set by the loan guarantee board, half that amount would be converted to preferred Chrysler stock. Of the remainder, 30 percent would be paid off in installments, and the rest, equal to about one-third of the debt, would be effectively forgiven.

That would be a "contribution" required not only from the Japanese banks but also from 100-odd other banks to whom Chrysler owes money. As one banker put it, considering the political and economic relations between the two nations, "we would have to respond (positively) to the American plea for cooperation."

Currency Report

The Bank of Japan's note issue Saturday decreased ¥150,400 million to ¥15,151,000 million while its loans outstanding fell by ¥150,400 million to ¥2,489,100 million.

CSO: 4120

ECONOMIC

BRIDGES REFLECT EARLY GOVERNMENT POLICIES

Tokyo BUSINESS JAPAN in English Jan 81 p 42

[Article and illustrations by Minoru Hirota]

[Text]

AFTER passing the Rokugo Shrine and proceeding southwest along the national highway (in this area, the old Tokaido and the national highway are one), we approach a large river called the Tamagawa. Here the river is generally called Rokugogawa instead of Tamagawa, however.

The bridge over the national highway is consequently called Rokugo Bridge. Today several railroad and motor vehicle bridges span the Rokugogawa, but there was none during the Tokugawa period (from the 17th to the mid-19th century).

It was not that bridge building was technically infeasible; but because construction of bridges was banned by the Tokugawa Bakufu, the military government in power at the time. The purpose was to protect Edo (Tokyo). Without bridges spanning the wide rivers, an enemy invasion of the capital on a large scale was not possible. The Bakufu therefore banned, in principle, the building of bridges over large rivers intersecting the Tokaido, the major trunk highway.

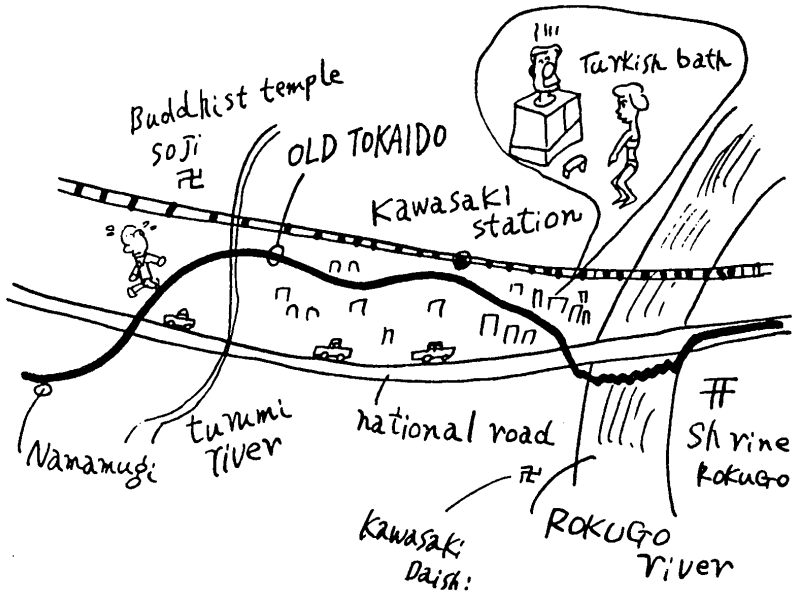
Exceptions were the bridges built across the Toyo and Yahagi rivers flowing through Toyohashi and Okazaki cities, respectively, in Aichi prefecture. Aichi is where Ieyasu Tokugawa, the first shogun, was born. Generations of *daimyo* (manor lords) who were particularly close to the Tokugawa family ruled the area. And since *daimyo* in the vicinity were also related by blood to the Tokugawa Shogun, there was no danger of rebellious elements rising against the Bakufu. The foregoing bridges were thus built as an exception to help make the life of the inhabitants more convenient.

It was extremely inconvenient not having a bridge over a wide river. When the water level was low, it was possible to wade through to the other side, but when it rained, the water level immediately rose and made crossing impossible. It was not unusual to see travelers waiting for days along the river bank until the water level fell.

Fortunately, in the case of the Rokugogawa, there were wooden ferry boats that carried people across the river. The boatmen would not row with oars but propel the vessel forward using a bamboo pole. Such a boat was called *watashibune*.

According to old documents, it seems that in the days before the Tokugawa period, the rivers were spanned by bridges. For instance, in the former province of Kai (Yamanashi prefecture), there once lived a powerful warload named Shigen Takeda whose army tried to cross the Rokugogawa. Legend has it that a general named Danjo Namekata burned the bridge over the river in order to block the invasion which occurred in the mid-16th century.

It is also recorded that another bridge was built there in the year 1600. There is no clear record as to what sort of structure it was, but it seems to have been crudely built.



There was a wooden framework and the section where people walked was filled with earth, so it was in the category of an earthen bridge. Whenever there was a flood, it was quickly swept away.

Even in the early days of the Tokugawa period, simple earthen bridges were built during the winter, perhaps because they could be easily constructed when the volume of water flow was small. However, in the early part of the 18th century, in the mid-Tokugawa period, the building of bridges was strictly banned, and only ferries could be utilized for crossing rivers.

CSO: 4120

ECONOMIC

TASKS, GOALS OF NEW ENERGY COMPREHENSIVE DEVELOPMENT ORGANIZATION

Tokyo ENERUGI FORAMU in Japanese Vol 312 No 26 Dec 80 pp 48-52

[Text] It has been a month since the start of new energy development and promotion as the central subject headed by Sunshine 60 on 1 October. How is this target program going to be developed through organically coupled development and practicalization efforts on the part of government and industry? We asked the fiery Director Watamori for his comments.

From Smooth Touch of a Button to Main Body Development

This Journal: It has now been a month since the birth on 1 October of the "New Energy Comprehensive Development Organization." Needless to say the feature of this organization is the establishment of an operating committee comprised of learned people from the ranks of private industry (Honorary Chairman Toshio Doko of the Federation of Economic Organizations) to serve as the topmost decision making organ in order to activate to the utmost degree activities and creative powers of the private sector. It is said the activities for JFY 1980 were decided at the second meeting of this operating committee on 29 October. Was there any difference at this meeting compared with those of the past and is there any feeling of change in the atmosphere?

Watamori: The first meeting of the operating committee was held on 1 October, and this was the first meeting where there was greater attention at getting to know each other. The second meeting was held on 29 October at which the business plans for JFY 1980 were decided. Among the themes which emerged at this time were the ones which had already been set forth under the Sunshine Program of the Industrial Science and Technology Agency which could be brought out at the touch of a button, and these are programs which are well under way. This just about accounts for the activities for the last part of JFY 1980. We are not creating entirely new themes for introduction at this time.

This is why this operating committee is one which has been pushed into this present situation and which has the role from here on to function to fully activate the true image of this new organization. Mr Doko and Mr Yoshiwara along with the rest of the operating committee may have set out to resolve this energy problem as though they were going to cut the Gordian knot, but this effort has not yet come to the surface at the present time.

While I myself am not devoid of the feeling of wanting to try something else, one of our present problems is that the budget for 1980 has already been set and even the initial draft of the JFY 1981 budget was drawn up in August and is presently being discussed such that our wishes are not reflected.

It will not be until JFY 1982 when our true wishes will be entered into the budget along with the wishes and plans of the other members of the operating committee. When we speak of the JFY 1982 budget, we are talking about next August. This is why we already have to start our wheels moving to present something to the operating committee along about next March and then in June, and I believe this will be a magnificent effort.

In this situation what I am putting my greatest efforts into is how to continue without incurring losses to the button touch capabilities passed on to me by my predecessors. At the same time, the group which has been assembled represents people from the ranks of government and private sectors, and it is very important how their orbits can be synchronized so all can function as a single body, and a considerable part of my energy is directed at this matter.

[Question] How do you propose to provide this operating committee with the capabilities which were lacking in the public organs of the past? At the same time, what the chairman and the rest of the executive board will be doing in this initial attempt along with their basic line of thought will be very important; could you explain this situation?

[Answer] Our future mode of operating will probably be the introduction of some ideas from the private sector to determine the targeted efforts from year to year. We do not intend in an abstract manner to decide to do this or that. For example, we may decide to cut our oil consumption by 1990 to 50 percent and obtain the rest of our needs completely from alternate energy forms as one of our objectives. Then the attainment of this goal will be one of target management.

On the other hand, the government operations of the past were not restricted very much by time limits as far as target management was concerned as a result of which they did not offer much elation. Now, when people from the private sector come in and carry out target management which includes time limits, a situation in which the contents themselves can be altered arises. The makeup of the board of directors has changed at least in shape just because of the entry of people like us from the private sector, at least to my way of thinking.

Then the question arises why do you call this an operating committee? If one looks at the situation it would seem that the operating committee members are pointing and saying do this and that, but it certainly isn't the situation that the organization itself is telling these different people, "just what shall we do?" and wait for an answer. Isn't it the situation that the organization itself shall come forth with its own ideas while the organization proposes that the subjects, which it intends to have carried out next year in 1982, be studied within the organization for which purpose a feasibility study group has already been started?

While we have been working on themes given us by the government, we are now in a position to say that is what we ourselves should do. One of these courses is illustrated by the example in which we conduct a feasibility study deciding what to do in 1990 about a certain objective and what to do in some other area and then go to the operating committee along about next March and say, "this is what we believe, and we ask your consideration." By requesting a review in this manner, we receive a number of suggestions.

We then take this theme for which we obtain the operating committee's approval along about June and take this idea incorporating the originality of this organization to some organ such as the Energy Agency. Then this idea is reflected in the budget drawn up in August, and this is when our ideas first come to reality.

[Question] In other words, the new organization itself will first subject a new project it envisions to scrutiny within its target management concept and evaluate and analyze all facets on just what steps are required to attain this objective and what will be used to achieve this end. At the same time, it will submit its activity plans and strategic projects to the operating committee and grasp the capability which should be reflected in the policy for itself. Is this the way you propose to start?

[Answer] That is so. This is the line of action I would like to follow.

[Question] In such a situation, doesn't it mean that that portion of Japan's energy technology strategy which the new energy development organization will take and assume responsibility over will be self limiting? In the presence of a limited fund situation the problem will arise, what items should be assigned priority and importance while a check and review is conducted and effective development is being promoted?

[Answer] Speaking in a general sense, there is the target date of 1990. While we were thinking about 10 years in the future, it is already only 9 years away, and there are but 9 years left. This is why if we are to lower oil's contribution from 75 to 50 percent, we will have to double our contribution from alternate energy. This is because the base itself will be expanded.

Such being the case, what we can do by ourselves in the 10-year period is already known. Small scale hydroelectric power, geothermal power, or solar energy are very minor when compared to the overall scale. On the other hand, their status will change in the next 10 years from 1990 to 2000 and the next 10 years following that period.

This is why I feel that we must work on coal during the next 10 years because there is nothing else. We make no mistake to say that we will cover the alternate energy situation with nuclear power and coal. This is why it is only natural that the new organization will want to emphasize coal. On the other hand, if we limit ourselves to just coal, when 1990 rolls around, the next 10 years will see the emergence of solar energy and geothermal energy as major actors, and there is a need to make a start in that direction from now. There is need to sprout the seeds and nurture them to the seedling stage. This effort will require a considerable amount of effort.

Of course there is some feeling that maybe some of the money allocated to geothermal or solar energy should be reallocated to coal, but there is need to conduct basic studies in geothermal or solar energy while placing emphasis on coal.

[Question] Then a premise to such an approach will be the need for considerable increase in funds. There is about an order of magnitude difference in funds compared to other leading countries. An increase in funding levels is an important factor, isn't it?

[Answer] Certainly, that is one of the subjects we must not lose sight of. Be that as it may, if we look at the present situation, solar energy is still in the basic study stage so that such a large increase may not be necessary. On the other hand, there is need to make sharp increases in funding where coal is concerned. For example, the coal liquefaction studies we are presently conducting in Japan are with a 1-ton/day facility. The United States, on the other hand, is already planning on 6,000-tons/day scale plants. In this respect, the Japanese Government is keeping in step and is to enter into a one-fourth participation in a joint international research program. This tab is expected to run into 80 billion yen, and this is something this new organization is to take up.

Such being the case, it is not our position simply to shift funds from the right to the left hand. If we are to simply send these 80 billion yen gathered as tax from our people overseas and do not realize equivalent value, we will not be able to face the people. This 80 billion yen is intended to be research funds. This is no trifling sum.

Then we can up our scale of operation from the 1-ton/day level to at least 40 tons/day, and this scale will become much larger in quick order.

[Question] The present Japan-United States-West Germany joint international energy project SRC-II is funded for a total of 80 billion yen and Japan's share will be 22 billion yen for JFY 1981. In contrast to the above, the Japanese domestic program was funded for 1.5 billion yen in 1980 and the request for JFY 1982 is but 13.2 billion yen (of which 3.2 billion yen is for coal gasification). Are we not losing our balance as a result of this limited fund distribution?

[Answer] You are mistaken. I am not in love with Gulf's SRC-II process. I have not engaged in this study myself. This is something the government had already decided, but is something we will take up from here on.

This is why while I am not completely enamored by the Gulf process, if we are to assume a considerable share of the funding and participate, there must be some reasons. There are 3-4 small sprouts which Japan is nurturing such as the solvolysis method, solvent treatment method, or the direct hydrogenation method. These are being cultured in Japanese hothouses. I am thinking of growing these sprouts, and I am not thinking of growing sprouts from some other party.

Now, what do we expect to gain from this 80 billion yen? We hope to gain some insight on mass production technology. Japan is in no position to put up a 6,000-ton plant. The sprout being grown in Japan is one of them. When this one of them

grows in Japan and assumes the stature of a 6,000-ton plant, the areas where we can fall down, and the areas we need to study will not be known until we have actual experience. If we can acquire this information through SRC-II by participation with an outlay of 80 million yen, this mass production technology should become available to us.

By utilizing the information so obtained to grow these young sprouts this becomes Japan's method, and let us put forth all available information in this direction. And we will have to put up roughly four times the 80 billion yen or about 320 billion yen to develop the system, but I feel we must make do with about 200 billion yen. We are making our present outlays with the hope that this program does not meet with failure, and I am certainly not in love with the SRC-II process.

This is a very important point, and this is where the merit lies in participation in the joint international program.

[Question] Coal energy technology development can be classified into liquefaction and gasification. Now, assuming that the respective types of new energy are developed, what would be the most appropriate way of using this new energy in place of oil? Certainly the question here is not one simply of liberating energy, but the selection of the quality of this energy is an important problem. In this respect it is my feeling that both from a technological sense and in line with the actual needs, gasification power generation will be more in line with the range of the individual's needs.

[Answer] There are boundary conditions to such a problem. We will pursue only liquefaction this fiscal year. We will start on gasification next year. That is the order which this organization will follow. When someone asks me why liquefaction first and gasification later, I can only say that is the way it was planned and there are no deep rooted reasons. Gasification is easier.

On the other hand, liquefaction holds some charm for me, and that is because I believe that liquefaction will be more stable in Japan. I have just started in this business and I am not yet an authority who can be a protagonist to a cause, but it seems to me that liquefaction is more advantageous when the transport angle is considered.

For example, gasification is already under way in South Africa. Coal is gasified and then liquefied on a commercial basis. On the other hand, I do not plan to imitate that process. As far as Japan is concerned, it would be easier to directly liquefy the coal rather than gasify then liquefy, and the overall cost will be lower. Furthermore, unless the product is liquid, the transportation becomes a problem.

While Japan has projected production of about 20 million tons of coal, here again there is no other way but to rely on coal imported from abroad to provide the main supply. Now, the question is what would be the most advantageous way of bringing in the coal from the resources rich countries which ring the Pacific Ocean? At the present time, 60 to 70 percent of the cost of coal is transportation. That is why the conversion of the coal at the mine to a high calorie and

small volume product which can be transported most readily and at lower cost will be the most advantageous means: almost anyone will agree.

The liquefaction of the coal dug out of the mountain vastnesses of Australia and piping this product to the waiting tankers will be the most intelligent approach.

In this manner, it is my feeling that the ultimate treatment of coal will be liquefaction, but should gasification be brought about very cheaply, then gasification should be fine. Even now LPG and LNG are shipped into this country in liquefied form. It seems that this is the logical end every time transport is considered.

[Question] On the other hand, when we think of the liquefaction process, doesn't it turn out to be a fairly expensive process? Such being the case, it can only be used in a demand area which can withstand considerable add-on cost, and the soft area for research and development on the mechanism of its introduction into the market should become an important theme.

[Answer] A certain university professor asked why are you liquefying coal; are you not using up half the calories in the coal for the liquefaction? You start off with a large mass of coal and reduce it to a limited amount of the liquefied product, and this seems to be so wasteful. Surely, it is very wasteful. Here we have 8,000 calories of coal and we use 5,000 calories for the liquefaction. Then the 8,000 original calories becomes 5,000 calories of liquid fuel. While you may say it is wasteful, the situation is that the abundant coal has no value resting in the hills of Australia. It is only after the coal is used to fire power company boilers that it acquires any value, and the material nestling in the stamping grounds of the kangaroo in Australia has no value whatsoever to man. That is why even when only half of the calories is recovered in the form of the liquefied product, this material first begins to assume value.

[Question] I suppose where the coal producing country is concerned, it would be more advantageous to export a product to which a high add-on value has been tacked on.

[Question] [Sic] This is where this new organization has this major role of tying together technological development of this alternate energy technology to practicalization. There is no need to mention that we need technological breakthroughs to achieve this end, but the problem arises in just how to make up for the economic disadvantage in competing with other forms of energy. This is why there is need to set up a private business operation and management system to carry out this end.

[Answer] No, I feel that is a simple matter, and I am no longer afraid of such a situation. We have experienced a number of such situations. I am a nuclear power advocate. Let us take the example of the centrifugal separator which is a facility for the enrichment of uranium. That is a technology which none of the other countries would teach us. Since there was no other recourse, it was decided to start its construction by an agreement among the Japanese makers. The first unit which was completed cost several dozens of million yen. We now talk about producing these centrifuges at the cost of about a million yen per unit.

Take the case for example, in which something which could not be produced for 30 million yen is now produced for 3 million yen. The present situation is we are trying to produce them for a million yen per unit. And this is the situation at the present time, and this has come about in the short time of but 5-6 years. This is why I feel that where coal is concerned, it should be possible to bring down the cost of the liquefied product to the level of coal today.

[Question] That is a reassuring thought. The next item of concern is whether private industry and groups will participate wholeheartedly in the research and development program offered by this new organization. This is a problem tied in with management and operation of industrial rights such as patents and utility models, and we must not cause the participation group or industry which itself possesses strength to develop technology and power to amass capital to lose incentive.

[Answer] I am sure that many such problems which require resolution are around. We are now in the process of studying just how to go about this management and operation so that the socalled incentive is not lost.

[Question] What about the local energy approach?

[Answer] We are now at a stage where we have a mountain of projects which we want to pursue, and I feel that local energy is something which should be left up to the private sector or delegated to some smaller organization.

[Question] What I next want to hear about is the relationship with the "New Energy Foundation."

[Answer] This is an area which is still not yet firmly established. We expect to gradually develop this subject from here on, and bits are falling into place in localized manner. The "New Energy Foundation" is again one of our input areas [ukezara] and it is an organ which functions as an intermediary between this organization and the private sector in a role similar to that of the Japan Atomic Industrial Forum (Genshiryoku Sangyo Kaigi) of the nuclear industry which functions in a general sort of way. Coming back to the subject of local energy, even though the organization does not act on it, this "New Energy Foundation" may act on it.

[Question] The final problem is how you consider the terms "new" and "comprehensive." It was said that the principal alternate energy from here on will be oil and nuclear power, yet the all important nuclear power was left out and we are left standing on coal alone leaving us in a very strained situation. How do you feel about this future problem?

[Answer] The "New Energy Comprehensive Development Organization" which does not include nuclear power is something akin to a couple in a three-legged race. Truthfully speaking, we do not intend to be a three-legged couple. We will attain the objective of 50:50 in 1990. It will be nuclear power and coal which will account for the major portion. This is a theme which I have been reiterating over and over. If we take away the major accomplice that is nuclear energy

and I am assigned the job of attaining the desired energy goals, I would consider it a completely unreasonable assignment. While I may think along such lines, the series of events seems to have resulted in such a situation (laughter).

In any event, we must organically tie together the directions of "government" and the ideas of the "private sector" to pursue the common goal. Only after such a union is formed that a new government-private sector organization can be born, and we are pursuing this course despite some headaches and pains.

Budget for New Energy Comprehensive Development Organization
(New Energy Related Fraction) (Unit: 100 Million Yen)

1 項目	2 (56年度) 要求額	3 (55年度) 予算額
4 1. 海外炭開発の促進	82	43
5 (1)海外炭探鉱融資（対象拡大，融資比率70%，金利6.5%）	(51)	(34)
6 (2)海外炭開発債務保証（市中分及び輸銀分の1/2計70%対象，倍率15倍）	(22)	(5)
7 (3)その他（開発可能性調査，地質構造調査）	(9)	(4)
8 2. 石炭エネルギー技術開発	132	15
9 (1)サンシャイン石炭液化	(100)	(15)
10 (2)石炭ガス化（高カロリーガス化，低カロリーガス化）	(32)	(0)
11 3. 地熱エネルギー技術開発	106	86
12 (1)技術開発（熱水利用発電，地熱探査技術，深層熱水供給システム）	(26)	(11)
13 (2)調査（地熱開発促進調査，全国地熱資源総合調査）	(54)	(45)
14 (3)地熱開発債務保証	(0)	(2)
15 (4)大規模深部地熱調査	(26)	(28)
16 4. 太陽エネルギー技術開発	62	13
17 (1)太陽熱発電	(11)	(0)
18 (2)太陽光発電	(45)	(12)
19 (3)その他（産業用ソーラーシステム，太陽エネルギー利用海水淡水化技術）	(6)	(1)
20 5. その他の技術開発（風力発電，水素製造プラント，電力貯蔵システム，燃料電池等）	18	3
21 6. その他（事務費等交付金等）	33	16
22 7. SRC-II分担金	220	0
23 計	653	176
24 計（SRC—II分担分を除く。）	433	—

25 (注) 55年度は6カ月予算

Key:

1. Item
2. Requests for JFY 1981
3. JFY 1980 budget
4. Promotion of overseas coal development
5. (1) Overseas coal prospecting fund (objective expansion, funding ratio 70 percent, interest 6.5 percent)
6. (2) Overseas coal development obligation guarantee (70 percent of one-half total of cities and Export Bank, 15 times multiplication)
7. (3) Others (survey on possible developments, geologic structural survey)
8. Coal energy technological development

[Key continued on following page]

9. (1) Sunshine coal liquefaction
10. (2) Coal gasification (high calorie gas, low calorie gas)
11. Geothermal energy technological development
12. (1) Technology development (hot water power generation, geothermal search technology, deep layer hot water supply system)
13. (2) Surveys (geothermal development promotion survey, all country geothermal resources comprehensive survey)
14. (3) Geothermal development obligations guarantee
15. (4) Large scale deep layer geothermal survey
16. Solar energy technology development
17. (1) Solar energy power generation
18. (2) Solar photopower generation
19. (3) Others (industrial solar systems, technology for utilization of solar energy for desalination of sea water)
20. Other technological developments (wind power generation, hydrogen production plant, electric power storage systems, fuel cells, etc.)
21. Others (office expenses, subsidies, etc.)
22. SRA-II share
23. Total
24. Total (excluding SRC-II share)
25. (Note) JFY 1980 was budget during June

2267
CSO: 8111/0408

SCIENCE AND TECHNOLOGY

WIDE ENERGY-SOURCE SPREAD ESSENTIAL FOR FUTURE

Tokyo BUSINESS JAPAN in English Jan 81 pp 32-35

[Article by Shozo Hochi, editor-in-chief, BUSINESS JAPAN]

[Text]

A report recently compiled by the Shell Oil Co. of Japan and Shell Kosan Co., titled "A Report on Oil Majors in 1979," states that during the second oil crisis in 1979, when supplies of Iranian crude were halted and prices hiked twofold, consumption of energy throughout the world increased by 3% over the preceding year. But it notes that consumption of oil grew by a mere 1% while that of energy other than oil, such as coal and gas, marked a higher growth.

In the autumn of 1979, the Secretariat of the International Energy Agency (IEA) and the Commission of the European Communities compiled a forecast on the volume of oil consumption in 1980 by the 21 member countries of IEA plus France, a non-member. According to the forecast, the volume of consumption would decline by 7% as compared with the preceding year while imports would also fall by 11%. The economic slowdown in various countries had its effect, but the rise in oil prices spurred economy measures in the consumption of oil and a switch to the use of coal. Another major reason for the lower consumption of oil was the high operating rate of nuclear power plants.

The IEA believes that both consumption and imports will continue to decline in 1981 as the U.S. economy recovers, and it is increasingly thought that the era of large oil consumption is drawing to a close. Japan's petroleum imports (daily volume) amounted to 5,160,000 bbl. in 1980, and IEA thinks that 5,060,000 bbl. – far less than the restricted import target of 5,400,000 bbl. agreed on in 1980–will be sufficient in 1981.

The forecasts of the IEA and EC are based in principle on the outlook for annual economic growth of the various governments in both 1980 and 1981 (4.8% in the case of Japan in FY1980 and an average of 5.5% thereafter). According to their estimates, petroleum consumption of the 22 countries in 1980 will total 1,855 million tons, or a daily volume of just under 38 million bbl. (1 ton = approx. 7.4 bbl.). It will fall short of the daily volume of 40 million bbl., a level which has continued for the past several years.

This is partly due to the fact that demand has not grown because of the economic slowdown in the U.S. and other industrially advanced nations. But an even greater factor is that as a result of OPEC's hiking of oil prices since 1979, there has been a conspicuous acceleration in oil saving measures and moves away from oil.

The promotion of safety measures at nuclear power plants and their operation at nearly full capacity have resulted in France's oil consumption declining by 14% from the preceding year. The figure for West Germany, which is striving to expand use of domestic coal, has also fallen by 9%. Japan's oil consumption, too, is expected to drop by 7% since the operating rate of nuclear power plants reached the level of 61.6% (monthly average between April and September) in 1980, as compared to 46.7% in the same period a year ago.

Reflecting this decline in consumption, the volume of petroleum imports of the 22 countries in 1980 is expected to total 1,163 million tons, or just under 2,370,000 bbl. per day, which will be approximately 3 million (11%) less than that of the preceding year. Compared with the restricted import targets for 1980 set at the summit meeting of the leaders of the industrially advanced nations in Tokyo in 1979, the daily volume will reportedly fall by 12% to the low level of 3.2 million bbl.

The IEA and other quarters expect that oil consumption and imports will continue to decline in 1981. They predict that the annual volume of consumption of the 22 countries will total 1,844 million tons (just under 37.6 million bbl. per day) and imports, 1,139 million tons (23 million bbl.), down by 1% and 2%, respectively. Restraints on oil imports, they stress, will prove effective.

It is estimated that Japan will import 253 million tons (daily volume, 5,160,000 bbl.) of oil in 1980 and no more than 248 million tons (5,060,000 bbl.) in 1981. And there is very little likelihood that the operating rate of nuclear power plants will register a sudden fall hereafter. The movement of the power and cement industries to switch to the use of coal is expected to pick up momentum, and even

Table 1. Expected Supply and Demand Results of Industrially Advanced Nations in FY1980 and Outlook for FY1981

	1980	1980	1980	1981	1981	1981
	Consumption Volume	Import Volume	Import Target	Consumption Volume	Import Volume	1980 Target Comparison
Japan	511 (▲7)	516 (▲8)	540 (▲1)	507 (▲1)	506 (▲2)	▲6
United States	1,664 (▲8)	692 (▲6)	890	1,660 (0)	703 (2)	▲21
W. Germany	271 (▲9)	271 (▲10)	291	267 (▲2)	259 (▲4)	▲11
Italy	204 (▲1)	204 (0)	212	200 (▲2)	196 (▲4)	▲8
United Kingdom	173 (▲3)	6 (▲84)	24	167 (▲4)	△10 (−)	−
IEA Totals	3 588 (▲6)	2,153 (▲11)	2,450	3,540 (▲1)	2,108 (▲2)	▲14
France	220 (▲14)	216 (▲15)	238	216 (▲2)	212 (▲2)	▲11
Total of 22 Countries	3,778 (▲7)	2,369 (▲11)	2,688	3,756 (▲1)	2,320 (▲2)	▲14

Notes: 1) Figures within parentheses indicate percent of rise/fall compared with preceding year (expected results).
▲ indicates decline.
2) 1980 target comparison also indicated by percent.
▲ indicates decline.
3) In case of United Kingdom △ indicates net export volume.

with the foregoing import level, it is believed that the economy can be managed without difficulty.

On the basis of the above forecast, the IEA and the EC commission will decide the 1981 oil import target by country. It looks as if Japan's target will be lowered by 6% below that of 1980. For the moment, the Japanese government is taking a cautious wait-and-see attitude toward the considered target reduction, but there are officials even within the government who believe that Japan can manage with a daily import volume of from 5 million to 5.2 million bbl. It is possible, therefore, that Japan will accept the target cut.

It should be mentioned that at the cabinet meeting on November 28, the Japanese government officially decided on the alternate energy supply targets which would lower Japan's dependence on oil from the present 72% to 50% in FY1990 (See Table 2). The targets were formulated by the Ministry of International Trade and Industry (MITI) on the basis of the Petroleum Alternate Energy Law promulgated in May 1980. It provides for a higher ratio in the use of various alternate energies such as nuclear power, coal, etc.

A MITI minister's notice, together with an "Import Guidelines" for industry, was issued on December 3 explaining the kinds of alternate energy that industries can introduce in accordance with their business category, the work process and the method of introduction. Following this guideline, the government will develop alternate sources of energy, facilitate their import and seek to establish a society that does not rely on oil.

Of the foregoing supply targets, that of nuclear power generation is set at a wide range of from 51 million kw to 53 million kW with an annual power generation of 292,000 million kWh. At present, location of nuclear power plants is conspicuously lagging due to the opposition of local residents and the difficulty of putting the full potentials of the facilities to work. However, MITI's Agency of Natural Resources and Energy belives that even if 51 million kW cannot be attained, the supply volume target can be achieved by raising the operating rate to 65%.

In the past, Japan's nuclear power plants had been operating at a rate of 50%, somewhat lower than the 60% levels of the U.S. and Europe. Since 1980, however, they have experienced little trouble and have been operating at a high 60% rate. Since regular inspections (requiring a month each) three times a year are stipulated by law in Japan, a 73% operating rate is the ceiling. MITI is increasingly confident of achieving a 65% operating rate in the next decade as a result of the diffusion of relatively trouble-free, domestically redesigned plants and anticipated technological improvements in existing plants.

MITI estimates the supply of coal, the major alternate energy, at 163.5 million tons, of which imports will account for 143.5 million tons and domestic production 20 million tons. It expects that the demand, mainly from

Table 2. Alternate Energy Supply Targets (FY1990)

Energy	Actual Figure	In Terms of Oil (1,000 kl)	Ratio (%)
Water power	123 billion kWh	31,900	4.6
Geothermal	7.3 million kl	7,300	1.0
Domestic oil/ natural gas	9.5 million kl	9,500	1.4
Domestic coal	20 million tons	14,900	2.0
Nuclear power	292 billion kWh	75,900	10.9
Imported coal	143.5 million tons	108,700	15.6
(Ordinary coal)	(56 million tons)		
LNG	45 million tons	63,500	9.0
Liquefied coal, Others	38.5 million tons	38,500	5.5
Sub-total	350 million kl	350 million kl	50.0
Imported oil	366 million kl (350 million kl)	366 million kl (350 million kl)	50.0
Supply Total	716 million kl (700 million kl)	716 million kl (700 million kl)	100.0

Note: Figures within parentheses in imported oil category indicate volume of demand, the ratio having been calculated on the basis of these figures.

power plants, for ordinary imported coal will double to 56 million tons, while that for coking coal will double to 87.5 million tons.

Following the November 28 cabinet decision on alternate energy supply targets, the Atomic Energy Council, headed by Ichiro Nakagawa, director general of the Defense Agency, published the following statement appealing for the promotion of the development of nuclear power generation:

"Nuclear power generation is the most promising and realistic of all the alternate energies, but the problem of location is proving to be a bottleneck. For this reasons as a means of promoting progress, 1) assistance will be given to public relations activity from the initial state of site location, 2) if necessary, the government, on behalf of the power companies, will commission a third party organ to conduct a study on site location, and 3) assistance of a kind that local governments can accept on their own initiative will be provided.

Share of Petroleum Thermal Power Generation

Let us survey the power supply targets up to fiscal 1990 as incorporated in the foregoing alternate energy supply targets. These targets were published by MITI and are based on the power supply targets compiled by the supply and demand subcommittee of the Electric Projects Council at the end of 1979. 1) The volume of nuclear power generation in fiscal 1990 is set at 291,000 million kWh, and coal, 104,000 million kWh, the power generation volume of the non-petroleum sector being raised to the 1979 target ceiling, 2) Oil power generation is pegged at the lowest level of 181 000 million kWh. Petroleum thermal power generation is targeted at 53 million kW as compared to the upper level figure of 59.5 million kW in 1979. The targets are characterized by hikes in the ratios of the non-petroleum sector. As a result, the share of petroleum thermal power generation will account for less than one-fourth of the overall power generation structure at the end of 1990 and rank with nuclear power in size of share.

The power supply targets compiled in December 1979 by the supply and demand subcommittee of the Electric Projects Council are based on the provisional outlook of the Comprehensive Energy Study Council Supply and Demand Committee. The target for nuclear power generation volume is put at 268,000 million kWh to 291,000 million kWh in fiscal 1990. In all sectors, with the exception of pumping up and LPG power generation, both the upper and lower limit figures are listed.

In contrast, the latest power supply targets, although being based on the targets of 1979, have been raised to the highest level in the entire non-oil sector with respect to volume of power generation, thus encouraging the power companies increasingly to move away from the use of oil.

As a result, the nuclear power supply target has been raised from the 1979 low of 28.6% to 31.1%; coal, from 10.1% to 11.1%; LNG, from 18.2% to 20.1%; water power from 11.5% to 12.3%; and geothermal energy, from 1.4% to 2.1%.

On the other hand, the oil supply target has been lowered from the 1979 ceiling of 244,000 million kWh to the lower limit of 18,000 million kWh. Thus the share for oil in the volume of power generation will decline from the 1979 ceiling of 26.0% to 19.3%.

In the composition of power sources at the end of fiscal 1990, only nuclear power in the non-oil sector has lower and upper limit targets similar to those in 1979, the figure ranging from 51 million kW to 53 million kW. Other power source targets are the same as the 1979 ceiling figures.

Specifically, the target for coal has been raised from the lower level of 22 million kW to 23 million kW; LNG from 40.5 million kW to 43.5 million kW; water power from 50 million to 51.5 million kW; and geothermal energy from 20 million kW to 30 million kW. Of the foregoing, general water power has been increased from 23 million kW to 24.5 million kW.

In contrast, the targets for oil, which were set at a high of 59.5 million kW and a low of 51 million kW in 1979, have been lowered to 53 million kW and 51 million kW, respectively, the same level as nuclear power. The ceiling share has also been reduced from 1979's 25.8% to 22.9%. Even at the top figure, the target for oil is expected to be less than one-fourth the overall composition of power sources.

Advances in Industrial Reform

Japan is thus entering a new era of industrial reform. It is a movement to switch its principal energy sources from oil to coal, nuclear power and natural gas. In the past, when the changeover was made from charcoal to coal, and then to oil, the economy, the people's life and regional societies of the country were greatly affected. Now, influences just as strong are being felt. When will this alternate energy revolution be achieved? It will most likely take 20 or 30 years, but when it is completed, Japan's industrial map will have been completely revamped and immense changes will have taken place in all areas.

Today, however, Japan's oil tanks are full, and still more are being built in the vicinity of harbors where giant tankers discharge their cargoes. In addition, enormous petroleum reserve bases are under construciton in coastal industrial areas such as Tomakomai Higashi, in Hokkaido, and Mutsu Ogawara, in Aomori prefecture. Each is large enough to hold one or two baseball stadiums. The Japanese economy is thus showing a strong preference for petroleum, the most convenient source of energy, and finding it difficult to switch easily to any other fuel.

But with the price of oil having risen to over $30 a bbl. as a result of the Iranian revolution, and with coal and nuclear power generation now showing a clear price advantage, it can be said that Japanese industry has firmly decided to switch to alternate sources of energy.

Huge tanks to hold LNG are being built one after the other in coastal areas, but they are not of the usual kind. They are like thermos bottles, with heat insulating material packed between double steel plates.

Coal unloading platforms are being built on piers where coal carriers dock and coal carrying freight trains are increasingly being seen. In the Chichibu cement area, for instance, coal hauling trains have made a strong comeback.

The power plants continue to generate electricity but they are now moving from burning only oil to a mixture of oil, coal and natural gas.

There is violent opposition to the construction of nuclear power plants. However, the power companies are pinning even greater hopes on nuclear energy because at the time of the rate hikes in April 1980, those which possessed the most nuclear power plants carried out the lowest rate increases and also because nuclear power generation is progressing smoothly since the latter half of last year, with many of the plants operating at almost full capacity.

On the other hand, the conversion to other forms of energy have necessitated new technology, such as coal liquefaction, which, together with the LSI (Large Scale Integrator) revolution in the electronics industry, is proving to be a new stimulus for technological innovations.

In any case, an energy changeover sufficient to rock the country to its foundation is under way. It would not be an exaggeration to call it an "industrial revolution" in terms of significance and scale.

According to estimates of the Council on Promotion of Comprehensive Energy, the cost of energy conversion, including the stockpiling of petroleum and energy-saving measures, from 1980 to 1995, will amount to as much as ¥230,000,000 million (¥155,000,000 million in terms of 1979 costs). For the lower growth Japanese economy, it should prove to be a big sustaining factor.

Oil Consumption Down

Power consumption in the first half of fiscal 1980 was down by 1% from the same period of 1979. In particular, the volume of generation of thermal power stations fell by 13.8% as a result of which an economy of 6.7 million kl in oil, etc. was achieved – one of the reasons for the present surplus of oil in Japan.

The fact that there was no growth at all in the consumption of power last year was due to: 1) the efforts of both industry and households to economize because of the over 50% hike in power rates in April; 2) the industry's cutback in production from April; and 3) the drop in demand for air conditioners owing to the cool summer.

If the drop in power consumption was largely due to the cool summer – a temporary factor – it would be unwise to take a shortsighted view and ease off on the construction of power plants. Also, the favorable utilization ratio (61.5%) of nuclear power plants in the first half of the year helped to lower oil consumption, and the effects of the conversion to alternate sources of energy began to show up.

Consequently, there has been a surplus of oil, prices have turned sluggish, and despite the Iran-Iraq war, the situation remains calm in Japan. Efforts to switch to other forms of energy have tended to wane because oil, after all, is extremely convenient.

Japan, however, must convert to other sources of energy because by depending on oil only, it would run the risk of placing its fate in the hands of the countries of the Middle East, a limited region.

Non-bulky, enriched uranium can be preserved within the country for a long period, while coal is available from various countries, such as Canada, America, Australia, China and the Soviet Union.

Therefore, it would not be a judicious policy for Japan to get away from oil altogether. Japan should operate nuclear power, coal and natural gas plants together with oil powered plants. It should establish oil tanks and maintain good relations with the Arab countries.

The indispensable condition for Japan in terms of the security of the nation and economy is to use all types of energy, spreading the sources as widely as possible. It is the foremost reason for the need to steadily promote the revolution in alternate energy. □

CSO: 4120

SCIENCE AND TECHNOLOGY

GIANT STEEL INDUSTRY CLAIMS TOP WORLD POSITION

Tokyo BUSINESS JAPAN in English Jan 81 pp 79, 83, 87

[Article by Isao Izawa]

[Text]

IRON is the State. ..... This statement directly represents the influence the steel industry has in industrial circles in Japan.

Though such representative industries as the auto and household electrical appliance have grown, their voices are not strong enough yet to be equal to that of the steel industry in Japan. Concerning the auto industry that is now gaining a larger and larger share in the U.S. market with small cars, leaders of the steel industry say, "The auto industry has come into bloom only because the steel industry continued to supply it with high-grade steel products on a stabilized basis." The pride of the people in the steel industry is well represented by this statement.

Both Yoshihiro Inayama, president of the Federation of Economic Organizations (Keidanren), and Shigeo Nagano, president of the Japan Chamber of Commerce and Industry, are concurrently chairman and honorary chairman, respectively, of Nippon Steel Corp., Japan's top steel maker.

We often hear such expressions as, "Steel controls the nation's industries."

Then how strong is the steel industry now? As Japan heavily depends on overseas countries for most of its raw materials for industrial production, the steel industry in this way is perhaps the most typical Japanese industry.

Production

Demand for steel in the world in 1979 was estimated to have been some 756,080,000 tons in terms of crude steel production. As for 1980, demand is expected to be on the same level.

Of this total demand, Japan meets more than 15% by producing some 110 million tons.

As the U.S.'s steel output dwindled in 1979 due to the depression of its economy, it is becoming apparent that Japan has become the largest steel producing country in the free world, and now exceeds the U.S.

There is no doubt the brisk economic activities of the nation have helped the steel industry to produce such a large amount of steel.

Though demand for automobiles has been leveling off recently, the auto industry is still contributing greatly to the increasing steel output. Other factors that are helping the steel industry are the nation's shipbuilding industry (also strong in the world market), the household electrical appliance industry, and public investments made by the government in the domestic market.

Exports to the U.S. and other countries in the world are also contributing considerably to the increased output of the steel industry.

The industry produced some 110 million tons of crude steel in 1979, up 9.4% over the previous year and more or less on the same level as in 1973 when a peak-time output was achieved.

Though not compiled yet, the steel industry's crude steel output in 1980 is expected to reach some 107 million tons.

Despite being the top steel producing country in the world, Japan is completely different from other steel producing countries such as the U.S. because it has to import most of iron ore and coal from overseas to produce its steel.

It is a wonder, then, that Japan has established itself as the world's top steel producing country despite being a country without natural resources.

Japan's steel industry processes some 130 million tons of iron ore and some 52 million tons of coal into steel every year, all imported.

Of the total iron ore imported every year, Japan buys 42.4% from Australia, 20.1% from Brazil, 13.1% from India and the remaining from other regions of the world, thus assuring a stabilized basis for production.

As for coal, Japan imports 45.7% from Australia, 24.8% from the U.S., 18.9% from Canada and the remaining from elsewhere.

Japan thus produces steel by processing these imported raw materials and adding value to them.

This being the case, therefore, should there be problems with the sources of these raw materials, steel production would be considerably affected. Those in the steel industry felt extremely uneasy about the security of coal from Australia when strikes continued at coal mines in that country for a long period of time from last July to September.

One of the largest problems for the nation's steel industry is how the government develops the nation's diplomacy with Australia, Brazil, the U.S., Canada and other countries in order to assure stable supply of raw materials on a long-term basis.

Japan's steel industry's Achilles' heel is that it is heavily dependent upon the moves of the countries from which it receives supplies of raw materials.

Exports

Predominant in Japan is the concept, "Steel is a strategic commodity for export." It is true that steel is one of the most important export commodities for Japan along with automobiles and industrial plants.

In 1979, Japan exported some 31 million tons of steel products. Their destinations include not only such free nations as the U.S. but also some communist bloc countries including the U.S.S.R.

The nation's steel exports amount to some $15,000 million a year. The country assumes the top position in steel export in the world, far surpassing the 25 million tons by West Germany. Japan exports more than one-third of its steel output.

The remarkable nature of Japan's steel industry is its extremely high international competitive strength even though it has to import most of its raw materials from abroad.

Among advanced industrial countries, a predominant idea is that the steel industry is now declining.

This concept is especially strong in the U.S. and no active investments are being made in the industry there. This is based on the judgment that it is difficult to invest much money in non-profitable industrial fields such as the steel industry. This may be the logic of capitalists, but in Japan this concept is far less prevailing. A high level of investments, therefore, continues to be made in Japan.

Such active investments in the steel industry lead to the construction of highly advanced steel mills on one hand and pave the way toward the development of pioneering iron and steel making technologies on the other.

These advanced technologies have been the prime mover to produce cheaper and internationally competitive steel products.

In recent years, some representative Japanese steel manufacturers have started to export even software related to steel making to such U.S. makers as Armco, Republic Steel and U.S. Steel from which they once induced technologies. The export of technologies to advanced steel making countries is expected to become more brisk from now.

In 1945 when World War II ended, Japan's steel industry started to rebuild itself from nothing, and the remarkable growth of the nation's economy has brought this basic industry to a top level in the world.

According to those in the steel industry, there are now some 30 projects to construct steel plants throughout the world, and in each one of these cases, Japanese steel makers have

been requested to extend cooperation in one form or another.

Plant and Equipment Investments

Japan's steel industry is now equipped with 65 blast furnaces, of which 43 are in operation, producing some 110 million tons of crude steel every year. Though all the blast furnaces are not in operation, plant and equipment investments are still active in the industry.

Such investments in the steel industry have registered the following figures in the past decade:

In 1970, ¥852 billion or 17.9% of total plant and equipment investments in all industries; in 1971, some ¥770 billion or 17.6%; in 1972 some ¥650 billion or 15.2%; in 1973, ¥590 billion or 11%; in 1974, some ¥890 billion or 13.9%; in 1975, some ¥1,100 billion or 19.1%; in 1976, about ¥1,300 billion or 20.3%; in 1977, some ¥690 billion or 11.2%; in 1978, some ¥590 billion or 8%; and in 1979, some ¥650 billion or 7.6%.

The steel industry's ratio against the nation's total plant and equipment investments have ranged from a minimum of 7% or so to a maximum of more than 20% over the past decade. The industry has assumed a yearly average of more than 10%.

In the first half of the 1970s, the industry's emphasis on such investments was placed on increased output, but in the second half of the decade, investments were made on rationalization or modernization of facilities. Labor saving was also an important target of such investments.

As a result, extensive rationalization of production processes has been achieved on one hand, and diversification and enhancing the grades of its products have been materialized.

Development has been seen also in the improvement of blast furnaces and converters and much progress has been witnessed in new technologies such as continuous casting. Combined with computers, iron and steel making processes have made phenomenal progress as total systems.

Consequently, the yields of its products have improved, its production costs have been reduced, and its international competitive strength has increased.

This fact is related not only to the industry's products but also to its export of steel plants. Especially among advanced steel making countries such as the U.S. there are many people concerned with the steel industry who place great expectations on the induction of knowhow to manage steel production established by Japan's steel industry.

The conventional concept long held by foreigners that the Japanese steel industry developed thanks to the low wages of its workers has been totally eliminated.

Prospects

Though Japan's steel industry has finally assumed a top position in the world, it is doubtful that it can maintain its position for long.

Domestically, its market represented by the auto industry has reached a saturation point, while internationally developing countries are rapidly catching up. Steel itself is losing its characteristic as a strategic export commodity. Though Japan's steel industry is now holding the top position in the world, its export of steel plants to developing countries is likely to lead to the danger that it could be surpassed by developing countries in the future.

Once Japan's steel industry starts to recede in the export market, this would lead to the retreat of Japan, an industrial nation, itself. The environment of Japan's steel industry, especially the industry's cooperative relations with its counterpart in other countries, has become more and more complicated. It will be necessary for the nation's steel industry to re-examine its relationships with its counterparts in other countries so that it can more firmly establish itself while still contributing to the further development of the world economy. □

CSOP 4120

SCIENCE AND TECHNOLOGY

ACOUSTIC MICROSCOPE OPENS NEW FIELDS TO ANALYSIS

Tokyo BUSINESS JAPAN in English Jan 81 p 130

[Text]

IT was about 30 years ago that the idea of observing things by sound emerged. The idea, however, could not find practical application in those days because no technique was then available to generate ultrasonic waves of high frequencies.

Ultrasonic technology has made giant strides in subsequent years. The most important step was made in 1973 at Stanford University in the United States where the world's first ultrasonic microscope based on mechanical scanning was made. This intensified research efforts throughout the world.

Hughes Aircraft of the U.S. subsequently successfully developed an acoustic microscope. In Japan, Olympus Optical Co. perfected the first trial model (using 200 MHz ultrasonic waves and achieving an azimuth resolution of 5 microns) at the end of March 1980, and delivered it to Tohoku University. All of these early models failed to attain full-scale commercialization because of yet-to-be-solved engineering problems.

In the meantime, Hitachi had perfected the world's first acoustic microscope with interference mode and using 1 GHz (1 billion Hz) ultrasonic waves. Unlike previous acoustic microscopes, Hitachi's new model can "see" in the depth of over 0.3 microns at high resolution thanks to its interference mode.

This enables a detailed observation of minute variations of the internal structure of semiconductor devices, living organisms and metals. The new acoustic microscope is expected to be placed on the market in a few years.

Applications of ultrasonic waves have made amazing progress in the past several years. Such waves have the property of penetrating some objects which are impervious to light and electron beams. The higher the frequency, the better the achieved resolving power.

Furthermore, ultrasonic waves give information on the internal structure of objects not available from optical devices, because some physical properties of the objects, such as elasticity, density and viscosity, are imparted on ultrasonic waves. The acoustic microscope makes use of these ultrasonic wave characteristics.

The working principle of an acoustic microscope is as follows: A piezoelectric film is excited by pulses from high frequency carrier waves, causing it to generate ultrasonic waves. They are sharply focused by a spherical lens and directed onto the test sample which is moving two-dimensionally so as to be scanned by the ultrasonic waves. The waves reflected from the sample are picked up by the sensor section and converted into electrical signals.

Previous acoustic microscopes could work with ultrasonic frequencies of 200 MHz at most, since the manufacture of acoustic lenses was cumbersome. Azimuth resolving power and depth resolving power stayed at about 10 microns and 5 microns, respectively. These resolving powers have been raised to 1 micron and 0.3 micron, respectively, in Hitachi's new product by applying ultrasonic waves of higher frequency.

This microscope is expected to play a vital part in the inspection of semiconductors. Recent semiconductors have become extremely minute and complex in structure through the progress of technology. Many of them have a multilayer structure. Extremely fine inspection is needed for rejecting defective products and collecting design data.

Development of an acoustic microscope enabling the observation of the fine multilayer structure of semiconductors was the target of Hitachi's research. Higher resolving power and direct observation of multilayer structure involving aluminum wiring and insulating layers have become possible through the application of 1-GHz waves and the interference mode.

Oscillating frequency of the piezoelectric film is the decisive factor in achieving high resolving power. Hitachi has solved this problem by developing a high-performance piezoelectric film generating a frequency of 1 GHz.

However, higher frequency is attended with the difficulty that ultrasonic waves are more easily attenuated in the intervening medium between the sample and the sound-collecting lens. This obstacle has been successfully overcome through the development of a lens of extra small aperture for focusing ultrasonic beams below 1 micron wavelength.

The newly developed sample table features extremely small vertical shift (below 0.05 micron) during scanning, so that images of very high quality are obtained.

The new acoustic microscope can be applied with advantage to (1) medicine and biology, and (2) physics and engineering.

In the field of medicine and biology, the sample need not be dried as for electron microscopes or dyed as for optical microscopes. Cells and tissues can be directly observed.

The acoustic microscope will open the way for quantitative analysis of the image characteristics of medical ultrasonic diagnostic equipment now widely in use.

They will also prove useful in physics and engineering where they offer a means for noninvasively examining minute samples, including the structure of metals and the subsurface structure of semiconductor devices. □

CSO: 4120

SCIENCE AND TECHNOLOGY

FUJI FILM MAKES USE OF AMORPHOUS SILICON POWDER

Tokyo BUSINESS JAPAN in English Jan 81 pp 128, 129

[Excerpts] Amorphous Silicon Powder With Outstanding Photoelectric Characteristics (Fuji Photo Film Co., Ltd.)

Fuji Photo Film Co. has established a manufacturing process for amorphous silicon powder with outstanding photoelectric characteristics. It can be applied to the photo-cells of high-performance copying machines and other photo-sensors.

Although amorphous silicon powder has been known for some time, its physical properties or practical applications were never studied in earnest.

Now Fuji Photo has discovered through its research that powder-form amorphous silicon with specific resistance lying between 10^4 and 10^{14} Ohm/cm can be readily produced. The company has succeeded in developing photo-receptors used for various applications by mixing the new amorphous silicon with organic high-polymer materials.

The powder itself is made through the decomposition of silane gas by means of glow discharge. Specific resistance can be varied in the range of 10^4 - 10^{14} Ohm/cm by adjusting manufacturing conditions such as gas pressure, flow, temperature and the power of high-frequency current applied to the discharge.

Powder of hydrogen dope type with particle size of about 0.1 microns is obtained. Flexible and large-area photo-receptors for a variety of uses can be made by mixing this powder with organic high-polymer substances.

Its main application is expected to be the photosensitive plates of electronic copying machines. Photosensitive plates are made at present by evaporating selenium on a cylinder of aluminum or stainless steel, but the development of more efficient photosensitive materials has been awaited with the great increase in demand for copying work.

The new photo-receptor, developed in response to these needs, can reproduce intermediate tones, which cannot be accomplished by conventional selenium photosensitive plates. Copying that is almost indistinguishable from photography becomes possible by combining with a suitable toner, the company claims.

Furthermore, this silicon powder has light sensitivity resembling that of the human eye, so that its use as photo-cells for cameras, for illumination photometers and for actinometers is possible. The maker intends to work toward eventual commercialization by developing various uses for the product.

New Technique To Isolate Ethanol Through Special Diaphragm

A new technique to isolate ethanol (ethyl alcohol) dissolved in water has been perfected by Assistant Professor M. Tamura of the Institute for Solid State Physics, Tokyo University. The process is accompanied by far less consumption of energy than conventional distillation processes.

The separation takes place with a special diaphragm. The process is so effective that alcohol can be separated even from beer and 92% ethanol is obtained in this way. It offers the possibility of obviating completely the previous distillation process regarded as indispensable for the manufacture of ethanol.

Research is progressing throughout the world on transforming biomass into ethanol. The central theme has been the development of a new alcohol condensing process which does not consume as much energy as distillation. The new process will thus be greatly welcomed.

The heart of the new process is a hydrophobic porous diaphragm combining vinylidene fluoride, radicalized teflon and teflon. If water is dropped on a hydrophobic surface, it becomes a tiny sphere through the repellent force of the surface. Thus water molecules are stopped on the diaphragm surface while ethanol molecules with smaller viscosity freely pass through its pores. The condensation ratio is as high as 92.7%.

In the new process, the separation is expedited by imparting microwave vibrations to the diaphragm. Vibration is generated through a high-frequency current of 100 - 1,000 kHz applied to the diaphragm through an electrode.

Powder Paint Lengthens Service Life of Heat-Collecting Plates

Kuboko Paint Co. has developed "Nisshin Solar Coat" (trade name), a powder paint which imparts high performance and durability to the heat-collecting plates used with solar houses.

This powder paint also contributes to the saving of natural resources and the prevention of environmental pollution since it can be applied electrostatically, and any paint lost in the painting booth can be recovered.

Solar Coat for heat-collectors is mainly composed of thermosetting polyester resin with a few additives including carbon. Its composition is an industrial secret.

Whereas it was regarded as impossible to reduce the coat thickness of powder paints below 50 microns, Kuboko Paint has succeeded in reducing the thickness to 30 microns by adopting a smaller particle size. This not only reduces heat absorption loss but also enhances considerably the absorption speed and durability.

Conventional heat collecting plates for solar systems are made by sintering matte paint on base plates of stainless steel, aluminum or copper. They are encumbered by low weather resistance and short service life (2 - 3 years). Their heat absorption ratio is 92% at most.

On the other hand, Solar Coat has a service life of about 15 years. The heat absorption ratio has been raised to 95% or more. Even if the hot water supply system becomes empty and the plates are overheated to 150 - 200°C, the paint does not come off the plates. The paint costs about ¥72 per m^2, which is cheaper than conventional products.

Gas Absorbing Heat Pump System Saves Energy

The first gas absorbing heat pump system has been perfected by Osaka Gas Co. with the cooperation of Tokyo Sanyo Electric Co.

This system produces hot water of 90°C (maximum) from effluent water of about 30°C through heat exchange. It achieves a 50% energy saving compared with the conventional method based on steam heating with a boiler, Osaka Gas claims.

In developing the new heat pump system, Osaka Gas had to consider the following engineering problems: (1) how to measure the flow and temperature variation of low-temperature effluent water, (2) study of corrosion by low-temperature effluent water and the material of the heat exchanger, and (3) the heat balance of recovered heat and the operating method suitable to that balance. The manufacture of the equipment was undertaken by Tokyo Sanyo Electric Co.

The newly developed system works in the same manner as an absorption-type refrigerator. High-temperature water is produced from low-temperature water by heat transfer using water as the coolant and the aqueous solution of lithium bromide as the absorbing fluid. The first system developed so far recoveres heat of about 332,000 kcal per hour, and obtains water of 80°C from effluent water of a dyeing plant at about 40°C. The equipment cost of about ¥20 million is claimed to be recovered in about 2.5 years.

Osaka Gas intends to produce 40 units of this system in the initial year. It will undertake sales compaigns aimed at prospective customers such as factories, bathhouses and hotels regularly discharging lukewarm effluent water. □

CSO: 4120

SCIENCE AND TECHNOLOGY

NICKEL-ZINC BATTERY DEVELOPED FOR ELECTRIC CARS

Tokyo NIHON KOGYO SHIMBUN in Japanese 15 Dec 80 p 1

[Text] According to the disclosure on the 14th by the authorities concerned, the Japan Storage Battery Company (president, Motoshige Sakata), which has been involved in research for an electric vehicle (EV) new storage battery, has succeeded for the first time in the world in developing an epochal "nickel-zinc battery" which is lighter and can be used to increase driving distance two times or more over the conventional lead battery. The hardest problem relating to electric vehicles which are expected to be the real answer to "oil-independency" is the development of a new battery which can replace the low energy density lead battery. Manufacturers in every country in the world, and of course manufacturers in Japan, and GE and Gulf and Western in America, have been engaged in fierce competition in order to develop a new battery for practical use. With this backdrop, the JSBC has demonstrated that a vehicle loaded with this new battery achieved fantastic performance results in 40 km/h highway driving tests, a one-charge driving distance of 86km (lead battery 38.6km). The new battery promises to serve the propagation and promotion of electric vehicles to a great extent in the days to come.

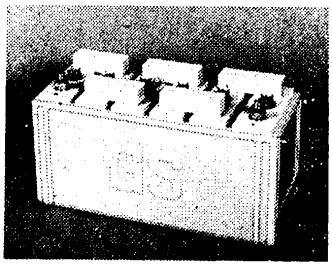
The "nickel-zinc battery" is an alkali secondary battery which uses nickel for the anode and zinc for the cathode. Other theoretically feasible new batteries which can replace the lead battery are "nickel-iron" and "zinc-chlorine" batteries. Compared to those, this battery is characterized with: (1) high discharge voltage, (2) high energy density, (3) high discharge capability, and considered to be the top contender among the batteries to be used for electric vehicles. However, on the other hand, there are plenty of problems to be resolved before practicalization due to the use of zinc electrodes, for instance, reduction of capacity caused by the elution of some reaction products into the electrolyte during discharge and by the production of dendroid zinc during charging.

The new battery developed by the JSBC this time has solved all the problems associated with this phenomenon by improving the electrolyte, developing a zinc electrode hard to elute and adopting a special separator with a low zinc mineral ion permeability. This battery which uses a six cell monoblock electrolytic bath encompasses an energy density of 62 kw/h per kilogram, approximately two times more than the lead storage battery and trimmed in gross weight by 30-50 percent to 28kg per one unit.

The JSBC conducted driving tests using a vehicle loaded with five of these new batteries (gross weight 140kg) and demonstrated that by one charge the vehicle could be driven 86km in highway driving at 40km/h and 75km in city driving, a performance 2.3 times better than a vehicle loaded with lead batteries.

Speaking of new EV batteries, GM invested $33 million last year to develop a "zinc-nickel battery." Gulf and Western, the American conglomerate, announced a "chlorine-zinc battery" this year. Neither company disclosed their demonstration test data, and the batteries weigh close to five times more than that of the JSBC.

The battery may well be practicalized as it is, but the JSBC intends to improve it in respect to its further weight reduction and extension of charge and discharge life cycle before mass production which is scheduled within a few years. The related industries will eventually give attention to this development since it is very likely that electric vehicles will come into wide use much faster than expected with this invention.



New Battery (for EV) with high performance twice that of a Lead Battery

8940
CSO: 8129/0444

SCIENCE AND TECHNOLOGY

HOUSING STARTS DETERMINE DEMAND FOR GALVANIZED SHEETS

Tokyo BUSINESS JAPAN in English Jan 81 pp 89, 91, 93

[Article by Shigeo Yabe, executive director, Japan Galvanized Iron Sheet Export Cooperative]

[Text]

THOUGH Japan's output of galvanized steel sheets has increased year after year as shown in Table 1 due to the stagnancy of housing related industries in 1980, the output of both galvanized steel sheets and colored galvanized sheets is expected to go down.

Table 1. Output of Galvanized Steel Sheets in Japan

1975	4.3 million tons
1976	5.8 "
1977	5.9 "
1978	5.9 "
1979	6.9 "
1980 (Jan.–Sept.)	5.27 "

Of the above total output for each year, some 30% or 2 million tons or so are for export to various parts of the world including North America. Trends in those overseas markets, therefore, largely affect the nation's output.

As is well known, though previous demands for galvanized steel sheets were mainly from the construction industry for use as roofing materials and exterior finishing materials, along with technical progress and qualitative improvement in the galvanized steel sheet industry, these sheets have started to be extensively used for automobiles, household electrical appliances, and other items. This has markedly increased their output. It is expected that because of their economical nature, durability and from a standpoint of saving resources, demand for galvanized steel sheets will further expand.

Our industrial circles are exerting more and more efforts in order to meet the increasing demand, improve the quality of products and heighten their grades. Research and development are in progress in the industry in order to ship to the markets products that are not only highly economical, anti-corrosive and easy to process, but also long lasting, and easy to paint and weld as high-grade materials. As more and more higher grade products continue to be required, galvanized steel sheets and especially surface treated steel sheets can be said to be promising.

There are many types of galvanized steel sheets, which can be roughly divided into types by manufacturing method. They include fused galvanized steel sheets, among them galvanized iron sheets (JIS G3302), fused galvanized steel sheets and alloyed galvanized steel sheets; and electroplated steel sheets (JIS G3313).

Furthermore, on the basis of these products, there have been developed many varied products such as colored galvanized iron sheets painted by baking with synthetic resin paints, printed steel sheets printed with various patterns, polyvinyl chloride steel sheets coated with PVC and insulating galva-

nized steel sheets surfaced with insulating materials such as urethane foams. These products developed for varied uses have undergone secondary and tertiary processings. One product that is attracting wide attention is galvanized steel sheet which has undergone cold pressing. One side of this sheet can be easily painted and the other side is highly anti-corrosive.

In 1979, some revisions were made on the standardization of both galvanized steel sheets (JIS G3302 – 79) and colored galvanized steel sheets (JIS G3312 – 79) to meet the varied needs of customers. Major points in these revisions are as follows: more subdivisions of classifications of products by use; prescriptions on the quality of products according to uses and increased quality of products; prescriptions on the minimum volume of zinc to be used; and induction of standards for roofing industries.

For details, please refer to JIS G3302 and JIS G3312, 1979.

Major Uses of Galvanized Steel Sheets

Uses include:

For construction: exterior finish work (roofs, exterior walls, curtain walls, rain doors, arcades, etc.); interior finish work (walls, room dividers, decorated plates, interior decorations, etc.); and structures (deck plates, lightweight shaped steel, etc.)

For furniture: office fixtures (desks, shelves, lockers, cabinets, filing cases, etc.); containers (for safe-keeping goods, apparel containers, cupboards, display cases, etc.); and miscellaneous goods (buckets, dustpans, washbowls, etc.)

For automobiles: exterior finish work (bodies for buses and trucks, etc.); portions surrounding wheels (floors); interior finish work (interior finish, dashboards, etc.); electric furnishings (air cleaners, oil cleaners, various covers, etc.); and tanks (gasoline tanks, oil tanks, etc.)

For transport machines: railway rolling stock (panels, ceilings, etc.); and ships (interior finish, ducts, panels, containers, etc.);

For electric machines: kitchens (ovens, refrigerators, coolers, kitchen sets, etc.); air conditioning (heaters, etc.); and communication and power (switchboards, panels, switchboxes, meter boxes, lighting equipment, rice boilers, washing machines, dryers, automatic vending machines, etc.)

For civil engineering: (guard rails, corrugated pipes, deck plates, etc.)

For machine parts: (various forms of frames, arms, covers for machines and equipment, etc.)

For agriculture: (silos, drying furnaces, panels, cattle sheds, containers, etc.)

As for demands for galvanized steel sheets in 1979, the construction industry assumes the largest ratio of 55% (including 11.5% for roofing and 14.4% for sidings), which is followed by airconditioning ducts with a ratio of 16.9%, electric machinery, 13%, civil engineering works, 16.6%, and others, 15.4%. As for demands for colored galvanized steel sheets, the construction industry occupies the largest share of 92.6% (mainly for roofing and sidings). Regionwise, the Tohoku District and Hokkaido assume a majority of demands.

The major uses of electroplated galvanized iron sheets are for interior finish, furniture, office machines, automobiles, electric machinery and panels.

We have already mentioned that Japan's exports of galvanized iron sheets assume about one-third of its total output or about 2 million tons. Japanese-made galvanized steel sheets have won wide acceptance throughout the world because they are good in quality, high in grade, rapid in delivery and proper in price. Consequently they are very popular among overseas users. As a result, Japan's exports of galvanized steel sheets assume about half of the total trade of such products among major countries in the world, making the country the world's top supplier.

In 1979 when Japan exported some 2 million tons of galvanized steel sheets, the total export of such products by major countries in the world was only 4,120,000 tons, indicating that Japan assumed 48% of the world's total exports. (See Table 2)

As indicated in Table 2, though Italy's and the U.S.'s exports decreased by 36.5% and 23.3% respectively in 1979 from the previous year, those by other countries showed a slight increase, increasing the total by 1.4%.

Though the U.S., Belgium and Britain showed a decrease in imports by 6.6%, 17.9% and 14.1% respectively in 1979, those of France, Italy and W. Germany increased by 10.9%, 52.7% and 8% respectively. Thus overall imports showed a slight increase of 1.5%.

Japan's imports of galvanized steel sheets became negligible, and Japan became more and more an exporting country.

The destinations of Japanese-made galvanized steel sheets in 1979 were North America with a share of some 50%, and Southeast Asia and the Middle and Near East with shares of 1.6% respectively. These are followed by Africa, Europe, Central and South America, and Oceania.

In ratios against the previous year, Japan's exports to the Middle and Near East increased by 2.5% in 1979, and those to Africa, Oceania and Europe showed a slight increase. But those to North America decreased by 2.9% in 1979, and those to Southeast Asia and Central and South America showed a slight decrease.

Item-wise, exports of coils assumed the largest share of 48.7% (50% in 1978), which were followed by flat sheets, 28.3% (26.5%), corrugated sheets, 9.7% (9.7%), electroplated galvanized steel sheets, 7.5% (5.1%), colored galvanized steel sheets, 4.3% (5.1%), and belts, 1.5% (2.0%). ◘

Table 2. Trade in Galvanized Steel Sheets by Major Countries

(in 1,000 tons)

Country	Exports				Imports			
	1978	Ratio against previous yr.	1979	Ratio against previous yr.	1978	Ratio against previous yr.	1979	Ratio against previous yr.
Japan	1,986.6	89.3%	2,001.8	100.8%	0.1	–	–	–
U.S.	48.6	169.3	37.3	76.7	1,393.0	102.7%	1,301.0	93.4%
W. Germany	655.5	111.7	698.2	106.5	268.0	104.8	289.5	108.0
France	413.4	136.6	434.7	105.2	195.3	100.6	216.5	110.9
Belgium	640.3	111.5	668.8	104.5	45.9	95.4	37.7	82.1
Britain	177.6	145.8	189.4	106.6	189.2	134.8	162.6	85.9
Italy	144.8	186.6	91.9	63.5	99.1	72.8	150.8	152.2
Total	4,066.8	103.8	4,122.1	101.4	2,190.6	102.8	2,158.1	98.5

Table 3. Japan's Galvanized Steel Sheet Exports by Country

Destination	1979 (A)	1978 (B)	(A) – (B)
Southeast Asia	16.6%	17.8%	-1.2%
Middle & Near East	16.2	13.7	2.5
Africa	7.6	6.8	0.8
North America	51.1	54.0	-2.9
Central & South America	2.7	3.0	-0.3
Oceania	2.3	1.8	0.5
Europe	3.5	2.9	0.6
Total	100.0	100.0	

CSO: 4120

SCIENCE AND TECHNOLOGY

JAPAN'S SMALL TOOLS PLAY BIG ROLE IN INDUSTRIAL EXPANSION

Tokyo BUSINESS JAPAN in English Jan 81 p 113

[Article by Kunio Owada, director, Japan Small Tool Makers Association]

[Text]

WITH the advent of the New Year 1981, the machine tool industry in Japan is looking forward to the sixth year of consecutive expansion following a 20% growth last year in spite of general business stagnation at home and abroad.

The first growth factor is the expansion of equipment investments, which may be classified as follows:

1. Industries which have finished the first-round development of energy-saving technology have now started full-scale equipment investments.
2. Diversification of needs and the progress of series production are stimulating the development of NC machines which make these changes possible.
3. The need for labor saving and rationalization for increased productivity has impressed itself forcibly on the consciousness of industrialists in management streamlining for the past several years.

The boom is not expected to end in a short time, since investments of this type are far-reaching.

The second growth factor is the brisk export centering on machine tools. Japan's machine tools are enjoying a boom. Their export ratio has surpassed 40% consecutively in the past several years.

The favorable export trend also covers automobiles, household electric appliances and electronic products. Exports of these products are now causing trade friction abroad, and industries are seeking possibile ways for peaceful coexistence in the milieu of free competition. Under the circumstances, economic activities are expected to stay on a relatively high level for some time to come.

On the other hand, there are a number of negative factors including the sluggish international economy, the slowdown in general consumption and the stagnation of public enterprises. The machine tool industry with its multiple and close dependence on other industries must be aware of these negative and disturbing trends.

Let us turn our attention from the quantitative side to the qualitative side of the growth possibilities.

The following fields in Japan require an extremely high level of technology:

1. Technological aspects of the small-car competition,
2. Development of aircraft and space industries,
3. Expansion and realization of higher performance in the electronics industry, and
4. Research and development of

energy to replace petroleum and energy saving efforts in all industries.

All have contributed to bringing about a transformation in materials for machine tools and induced efforts for enhancing machining precision and performance. The quality of machine tools must be raised incessantly.

The Japan Small Tool Makers Association is fully aware of these needs. Japanese machine tools belong to the highest level in the world as to quality and performance. But we must not relax our efforts for further improvement in response to higher demands.

Against this background, the New Year finds the Japan Small Tool Makers Association in an environment which can by no means be considered as completely optimistic.

The industry has set as its target the quick response to the continuing stream of technological innovations and to variegated new needs, establishment of enhanced reliability of machine tools, and fostering of the progress of interrelated industries.

I wish to conclude my greeting by wishing all of you a happy New Year, as our industry hopes, with your support, for the continued growth of the Japan Small Tool Makers Association. ◘

CSO: 4120

SCIENCE AND TECHNOLOGY

MACHINE TOOLS SUPPORT INDUSTRIAL ACHIEVEMENTS

Tokyo BUSINESS JAPAN in English Jan 81 pp 105, 107, 109, 111

[Article by Naoyuki Sato, Machinery and Information Industries Bureau, Ministry of International Trade and Industry]

[Text]

THE world economy, hard hit by successive increases in oil prices, is suffering from inflation and business recession. In the field of trade, there is great concern over trends toward protectionism among the developed nations, despite the agreement on the framework of the world economy reached as a result of the Tokyo Round of trade negotiations. Now it has become more important than ever for Japan to make international contributions through the maintenance of a world economic order and to pursue economic cooperation with other countries. It is no exaggeration to say that the machine tool industry, which is indispensable to the growth of the Japanese machinery industry, has contributed to the Japanese economy which has come to play such an important role throughout the world.

Machine tools, as indispensable basic products for modern industries, constitute the basis of all branches of the machinery industry, such as automobiles, precision machines and industrial equipment, all of which have supported the postwar Japanese economy. Goods processed by cutting, grinding and polishing determine the quality and performance of many products. By use, they are divided broadly into steel tools which are made of high speed steel, cemented carbide tools made of cemented carbide alloys and diamond tools which use diamonds. These machine tools each have their own technical fields of use. Both Japanese steel tools and cemented carbide tools stand at a high international technical level, with diamond tools having the greatest growth potential.

The value of machine tools produced in 1979 was ¥180 billion, a record 24% increase over the preceding year due to the growth of electronics and other industries that require them. Exports in 1979 totaled ¥16.1 billion, a gain of 32% over the preceding year. The percentage of exports has steadily increased year after year with those to Southeast Asia and North America leading the way.

In the 1980s, the Japanese machinery industry will be required to make itself an even more creative and knowledge-intensive industry, on the basis of the development of unique technology and of the results of similar efforts made in the 1970s, to supply various sophisticated, value-added products. The scale of production of machine tools is expected to increase to ¥400 billion (at an annual rate of about 8.2%), while the value of exports will increase to about ¥50 billion (at an annual rate of about 12.3%). However, due to the shift of the Japanese economy to a period of slow growth, it is difficult for the industry to expect domestic demand to grow as fast as it did in the past. Therefore, further efforts are needed in the industry to develop technology and promote interchanges, including export expansion. In terms of technological develop-

ment, it is necessary to develop technologies to produce high-performance machine tools with new materials, such as CBN, ceramics and cermet and to positively promote efforts to economize such key raw materials as tangusten and cobalt, as well as to cope with such problems as increased demand from electronics and other industries for materials difficult to cut and grind and uncertain supplies of raw materials. The development of new technology is another requirement.

Tool Steel Tools

Production of tool steel tools in 1979 reached a record ¥66.7 billion, a gain of 15% over the preceding year. However, it represents an increase of 15% over the previous record set in 1974 and shows that the industry barely emerged from the impact of the oil shock. As a result of diversified demands and labor-saving efforts in various industries during that period, tool steel tools yielded the position of the biggest market share holder to cemented carbide tools. It is necessary to orient them toward overseas markets hereafter by taking advantage of Japanese products which are on a world level in terms of quality and technology.

Exports in 1979 totaled ¥8.1 billion, an increase of 30% over the preceding year. Probably as a result of efforts to develop new markets in anticipation of stagnant domestic demand, the proportion of exports grew at an annual rate of more than 10% for the three consecutive years from 1977. The percentage of exports is expected to increase further in the 1980s through overseas publicity activities exchanges of information.

Imports in 1979 grew 25% over the preceding year to ¥3 billion, and a tendency to import standard products from semi-developed countries in recent years. The average import ratio remains relatively stable at 3-4%.

Cemented Carbide Tools

Production of cemented carbide tools in 1979 grew 26% to a record ¥63 billion, setting an all-time high for the second year in a row due to vigorous activity in such industries as automobiles, steel and electrical appliances that prospered in spite of the economic slowdown. Their production is expected to continue smoothly in spite of such problems as supplies of tungsten, cobalt and other resources, technical renovations, the advance of foreign enterprises from developed countries and the industrialization of developing countries.

Table 1. Machine Tool Production

(Unit: ¥1 million)

Item \ Annual Production		1970	1974	1975	1976	1977	1978	1979
Machine tools	Production	94,162	132,149	91,441	109,295	133,739	146,583	182,357
	Compared to year before	131.9	122.4	69.2	119.5	122.4	109.6	124.4
Special steel tools	Production	44,778	58,212	38,679	42,201	52,320	58,120	66,656
	Compared to year before	130.2	125.2	66.4	109.1	124.0	111.1	114.7
Cemented carbide tools	Production	37,796	54,760	36,297	44,718	56,632	62,971	79,067
	Compared to year before	138.8	122.4	66.3	123.2	126.6	111.2	125.6
Diamond tools	Production	11,588	19,177	16,465	22,376	24,787	25,492	36,634
	Compared to year before	118.6	114.6	85.9	135.9	110.8	102.8	143.7

Source: MITI statistics for special steel tools and diamond tools.
Japan Cemented Carbide Tool Manufacturer's Association statistics for cemented carbide tools

Table 2. Machine Tool Exports

Exports (Unit: ¥1 million)

Annual Production		1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Machine tools	Exports	1,878	2,426	2,630	3,836	3,251	3,246	3,696	5,192	5,516	7,332	10,266	12,221	16,066
	Compared to year before	136.0	129.2	108.4	145.9	84.7	99.8	113.9	140.5	106.2	132.9	140.0	119.0	131.5
	Export ratio	4.2	4.1	3.7	4.1	4.0	4.1	3.4	3.9	6.0	6.7	7.7	8.3	8.8
Special steel tools	Exports	1,270	1,766	1,594	2,278	1,719	1,803	1,189	2,612	2,959	3,807	5,500	6,295	8,163
	Compared to year before	131.5	139.1	90.3	142.9	75.5	104.9	104.8	138.3	113.3	128.7	144.5	114.5	129.7
	Export ratio	6.0	6.3	4.6	5.1	4.7	5.3	4.1	4.5	7.7	9.0	10.5	10.8	12.2
Cemented carbide tools	Exports	421	518	812	1,221	1,266	1,057	1,235	1,928	1,826	2,576	3,834	5,015	6,270
	Compared to year before	147.6	123.0	156.8	150.4	103.7	83.5	116.8	156.1	94.7	141.0	148.8	130.8	125.0
	Export ratio	2.5	2.3	3.0	3.2	3.8	3.2	2.8	3.5	5.0	5.8	6.8	8.0	7.9
Diamond tools	Exports	187	142	224	337	266	386	572	652	731	949	932	911	1,633
	Compared to year before	143.8	75.9	157.7	150.4	78.9	145.1	148.2	114.0	112.1	129.8	98.2	97.7	179.3
	Export ratio	2.8	1.7	2.3	2.9	2.3	3.0	3.4	3.4	4.4	4.2	3.8	3.6	4.5

Sources: Japan Small Tool Makers Association for special steel tools; MITI statistics for cemented carbide tools and diamond tools

Table 3. Exports by Destination

(Unit: ¥1 million)

		1975	1976	1977	1978	1979	Jan.–May 1979
N. America	Special steel tools	840	803	1,052	1,270	1,946	1,309
	Cemented steel carbide tools	382	475	521	1,226	815	487
	Diamond tools	71	65	45	37	59	19
	Machine tools	1,293	1,343	1,618	2,533	2,820	1,815
E C	Special steel tools	716	1,017	1,384	1,427	1,836	911
	Cemented steel carbide tools	233	210	278	336	402	365
	Diamond tools	32	14	18	33	37	27
	Machine tools	981	1,241	1,680	1,796	2,275	1,303
Southeast Asia	Special steel tools	2,311	2,515	3,422	5,910	7,245	2,017
	Cemented steel carbide tools	534	1,161	1,799	2,035	3,296	1,049
	Diamond tools	275	405	444	409	539	314
	Machine tools	3,120	4,081	5,665	8,354	11,080	3,380
Middle & Near East	Special steel tools	57	127	200	220	211	150
	Cemented steel carbide tools	39	95	100	147	63	122
	Diamond tools	37	222	47	42	75	27
	Machine tools	133	444	347	409	349	299
Oceania	Special steel tools	106	79	230	348	301	102
	Cemented steel carbide tools	244	186	201	309	428	487
	Diamond tools	10	15	15	18	33	42
	Machine tools	360	280	446	675	762	631
Africa	Special steel tools	186	586	3,087	974	734	1,587
	Cemented steel carbide tools	248	297	167	111	118	77
	Diamond tools	31	32	25	46	40	13
	Machine tools	465	915	3,279	1,131	892	1,677

Source: MITI statistics

Table 4. Machine Saws, Edged Tools

(Unit: ¥1 million) %

Annual Production	1975	1976	1977	1978	1979
	18,495	22,438	23,615	24,170	28,892
	–	121.3	109.1	102.4	119.5
Exports	1,570	1,908	2,261	2,170	2,484
	–	121.5	125.9	96.0	114.5

Exports in 1979 increased 25% to ¥6.3 billion, thereby continuing the tendency of growing at an annual rate of around 30% since 1976. The export ratio came to exceed the import ratio in 1978 and 1979, indicating that Japanese producers had become able to compete with world enterprises of developed countries.

Imports in 1979 grew 24% to ¥5.4 billion due in part to those which were intended to compensate for the 1978 decreases. The average import ratio has been high compared with other machine tools, at 6-8%. Since the markets of the developed countries in Europe and America have reached maturity, foreign producers are expected to try to supply Japanese demand with foreign-capital firms operating in Japan leading the way.

Diamond Tools

Production of diamond tools grew smoothly in 1979, totaling ¥36.6 billion for a gain of 44% over the preceding year, or twice the 1975 figure. The growth of diamond tools was particularly remarkable, although the production of both tool steel tools and cemented carbide tools also registered all-time highs.

Diamond tools can meet the more sophisticated demands in the field of machining, such as high-precision and high-speed machining. At the same time, steady demand is expected to come from the frontier technology field, such as the spread of CBN tools whose hardness ranks next to diamond and demand for automated factories.

Production of diamond machine tools is a domestic demand-oriented industry; exports in 1979 totaled ¥1.6 billion and accounted for 4.5% of total production.

Edged Tools

Edged tools are divided into various categories according to use, such as those for woodworking, bookbinding, paper making and steel making. Demand comes from a wide range of general industries, such as steel, automobiles and shipbuilding. They are basic products which play an important role in meeting the requirements of these industries. Such industries need high-precision and high-performance edged tools in order to make effective use of sophisticated facilities and technologies.

Edged tools have made rapid progress in terms of quality and manufacturing technology, but the industry's productivity remains low. Since edged tools are produced to order, there are several thousand products of different standards and sizes, and it is difficult to save labor and rationalize operations because of the need to produce a large number of items on a small scale. ◻

CSO: 4120

SCIENCE AND TECHNOLOGY

INDUSTRIAL DIAMONDS ESSENTIAL FOR HIGH PRECISION TOOLS

Tokyo BUSINESS JAPAN in English Jan 81 p 118

[Article by Haruo Suzuki, chairman, Industrial Diamond Association of Japan]

[Text]

THE quality and performance of a product improves accordingly as the precision of their parts and materials increases. And to assure parts and materials of higher precision, it is necessary to use tools with high precision machining capabilities. In this respect, diamond tools can be regarded as the most suitable for the following reasons.

Tools made of diamond, the hardest of all materials, achieve extra high precision processing to a micron level which is not possible with other types of machining tools. With the use of diamond tools, the total machining cost can be reduced remarkably because their outstanding abrasion resistance cuts down machining processes and the need for frequent tool replacement.

Much progress has been made in such technically vanguard industries as computers, electronics, space, aircraft and nuclear power, all of which call for extreme precision. And more and more metals and nonmetals, which are difficult to cut, have been developed. Diamond tools, together with tools made of cubic boron nitride (CBN) grains and their sintered products, are widely used to process hard-to-cut ferrous material. Diamond tools and CBN tools are indispensable in many industries whose products are used by people throughout the world.

Despite the recent worldwide recession caused by high-priced crude oil, Japan has fortunately braked inflation, with the yen remaining stable at a relatively high level in foreign exchange markets, and the country's international balance of payments turning into the black.

Japan's diamond tool industry has grown steadily, and its output in the calendar year of 1980 is expected to increase by more than 10% over the previous year, nearing the $200 million level.

The industry hopes to expand trade, both exports and imports, in line with governmental policy. To help promote trade, the Industrial Diamond Association of Japan has compiled an English-language pamphlet titled "Tools of Japan" in cooperation with the Japan External Trade Organization (JETRO) for distribution to interested people via our branch offices overseas.

In other efforts to promote trade, we organized a trade conference on machine tools in Chicago during the '80 Chicago International Machine Tool Show. We are also making efforts to establish a Japanese Industrial Standard (JIS) for diamond tools which now conform to the ISO standard, keeping in step with progress of the Tokyo Round of GATT.

Through these efforts we are trying to contribute to the open economy system and to publicize our industry. □

CSO: 4120

SCIENCE AND TECHNOLOGY

MECHANIZED CUTTER INDUSTRY GIRDS ITSELF FOR HARD TIMES AHEAD

Tokyo BUSINESS JAPAN in English Jan 81 pp 120, 121

[Article by Suzuo Watanabe, chief director, Japan Mechanical Saw and Cutting Tool Industry Association]

[Text]

AT the beginning of 1981, I would like to wish all of you a happy new year. The business activities of our industry, along with the moves of the Japanese economy as a whole, turned gradually upward from the former stagnant condition from around spring of 1979 and rapidly improved, although with a slightly overheating trend, from the spring of 1980. Since last summer, however, business activities turned downward rapidly and have become more and more stagnant each month.

This stagnancy within the industry can be ascribed to the facts that plant and equipment investments in industries in which our products are used have been generally completed and consumers in general are holding back from buying durable consumer goods, a trend that has become more noticeable since the oil crisis.

Mechanical cutting tools for woodworking are among the items in our industry whose sales have become sluggish recently partly because housing construction starts have become stagnant. This condition has been caused by continued increases in land prices due to the delay in the development of lands for housing and by sharp increases in construction costs. Rises in interest rates for housing loans and the extremely slow increase in wage levels must have also kept consumers from investing in housing. As a result, construction materials and furniture making related companies, our leading customers, are also suffering from a general business slowdown.

Due to the second sharp rise in oil prices in the fall of 1979, the prices of major raw materials including power rates, steel materials and special steel products, were also raised in the spring of 1980. Though some price increases have successfully been transferred to the prices of finished products in our industry, they have not been able to fully absorb the cost increases due partly to the sluggishness of our customer industries.

As we will describe later, in the first half of fiscal 1980, temporary demand for our products in anticipation of the coming rises in prices in general increased our output considerably and kept the industry's profitability on a fairly high level. In the present half, however, the fact is that the industry's profitability is rapidly worsening because of lack of demand and curtailed production.

The use of high-quality mechanical cutting tools enhances operating performance and the added value of products. Being reluctant to invest in such improvements, which assume only a small portion of the total cost of products, leads to larger losses, we believe.

We are exerting our best efforts to supply better products to meet the needs of our customers. As for products that are less profitable, makers are

reluctant to undertake research for their improvement.

Though we are continuing efforts to reduce costs through the simplification and rationalization of production processes and the adoption of more economical materials, we also ask that our customers endeavor to understand our situation so that we may obtain fair profits for products which demand high production costs.

According to production statistics released by our association, the output of band saws increased by 17.2% in the first half of fiscal 1980 compared with the first half of the previous fiscal year, circular saws by 15.6% (of which chip saws increased by 6.6%), and mechanical cutting tools by 5%.

Of mechanical cutlery, the output of metal cutting tools increased by 17.9%, plywood cutting tools by 24.6% and chipper knives by 11.9%. On the other hand, the output of planer saws decreased by 5.3%, woodworking circular cutters by 6.8%, and bookbinding cutters by 8.4%.

As for production figures for the latter half of the current fiscal year, we are not in a position yet to provide exact figures, but the output of mechanical cutters as a whole is expected to decline considerably because of the sluggishness in the demand for construction materials and furniture; the expected decrease in demand from the field of iron and steel production; and the stagnancy of plywood related industries, as well as the expected decrease in the output of those items that showed an abnormal production increase in the first half of the fiscal year.

In 1981, bearing in mind the rapidly changing conditions effecting politics and economies throughout the world, Japanese politicians and entrepreneurs are all urged to cope well with such difficult problems as the reconstruction of the national finance which could even face bankruptcy if present trends continue, the security of natural resources, the adjustment of East-West trade, cooperation with developing countries, and other challenging international problems.

I believe that the Japanese people, who are generally dilligent and highly educated and able to effectively adjust quickly to any change, will be able to overcome these problems.

We look forward to your continued support for our industry again this year. □

CSO: 4120

SCIENCE AND TECHNOLOGY

MITI PREPARES PROJECTION OF PLANT, EQUIPMENT INVESTMENT

Tokyo BUSINESS JAPAN in English Jan 81 pp 23, 24

[Text]

At a recent meeting of the subcommittee on industrial funds of the Industrial Structure Deliberation Council, the Ministry of International Trade and Industry reported on private industries' plans for plant and equipment investments for fiscal 1980 (April 1980 - March 1981). According to the plans, the total amount of such investments is expected to reach ¥10,269,200 million on a construction basis throughout all industries, up 28% over the previous fiscal year. Industry-wise, in addition to processing and assembly-type industries which have been heavily investing so far, industries producing basic industrial materials are also planning to invest in plants and equipment during this fiscal year after a lapse of several years. Investments in the power industry have been markedly transferred from the first half to the latter half of the current fiscal year. The planned amount of such investments in the next fiscal year throughout all industries is expected to increase by only 9.2%, indicating that such investments will level off.

The growth rates of such investments in the private industries shown in this report are higher than in any survey announced by various financial institutions, but the rate for fiscal 1981 is expected to slow down considerably. MITI judges that it is necessary to implement some measures to promote such investments in the coming fiscal year.

The ministry conducted last February a survey on such plans and has prepared the recent report after a follow-up survey it conducted last fall. Private enterprises that were surveyed accounted for 1,686 with a capital of more than ¥100 million. The industries include 13 fields under the jurisdiction of the ministry and some others. Their total plant and equipment investments assume some 60% of those by major enterprises in Japan, an important barometer of the trend of private plant and equipment investments.

As the growth rate of such investments for the current fiscal year, namely 28.0%, is a nominal one, it is reduced to 22.0% in real terms when the increase rate of prices in general is accounted. As compared with the survey conducted last February, the growth rate has been modified upward by 5.1%. Industry-wise, investments in such processing and assembly-type industries as the automobile, electronics and electric machinery continue to be brisk, while those in materials producing industries such as cement, aluminum smelting and rolling, petrochemical – except for paper and pulp and steel – have recovered, surpassing those in the previous fiscal year.

Investments in the non-manufacturing industries are expected to increase by 28.3% over the previous fiscal year. A steady increase is witnessed in the power industry as well as in wholesale, retail and leasing businesses. While in the manufacturing industries, investments increased by 13.5% in the first half of the fiscal year over the previous half-year term and are expected to increase by 12.6% in the latter half in

Plant and Equipment Investments in Major Industries in Fiscal 1980 and 1981

(On a construction basis; unit: ¥1,000 millions; percentage)

Industry	No. of companies	Results in fiscal 1979	Results in fiscal 1980 (estimate)	Plans for fiscal 1981 (On a basis of replies from companies)		Ratio against previous fiscal year	
				Fiscal 1980	Fiscal 1981	1980/79	1981/80
Power	35 (33)	2,728.1	3,660.8	3,660.8	4,193.6	134.2	114.7
City gas	19 (19)	251.2	278.8	278.8	332.6	111.0	119.3
Nonferrous metals	24 (17)	21.0	39.4	34.6	19.5	187.8	56.4
Iron and steel	96 (66)	623.5	624.0	599.1	753.0	100.1	125.7
Oil refining	46 (43)	361.3	387.1	382.2	405.1	107.1	105.7
Petrochemicals	77 (65)	131.4	174.5	157.9	186.9	132.8	118.4
Synthetic fibers	24 (22)	48.1	50.1	49.8	45.3	104.0	91.0
Automobiles	84 (61)	698.7	1,019.1	920.0	1,023.2	145.9	111.2
Electronics & electric machines	83 (57)	428.2	655.9	298.6	336.4	153.2	112.7
Paper & pulp	56 (45)	192.9	172.8	167.6	122.2	89.6	72.9
Cement	23 (20)	129.9	180.3	147.1	80.7	138.8	54.9
Aluminum smelting & rolling	27 (21)	48.8	75.3	71.1	55.1	154.5	77.5
Retail sales	60 (45)	379.8	451.2	365.4	345.8	118.8	94.6
Total of the above	654 (514)	6,042.9	7,769.3	7,134.2	7,904.6	128.6	110.8
Other industries	1,032 (800)	1,978.1	2,499.9	1,950.9	2,019.0	126.4	103.5
Grand total	1,686 (1,314)	8,021.0	10,269.2	9,085.0	9,923.6	128.0	109.2
Manufacturing	1,471	3,616.9	4,619.0	3,658.0	3,795.4	127.7	103.0
Non-manufacturing	215	4,404.1	5,650.2	5,400.0	6,128.2	128.3	113.5

Note: The figures in parentheses are the numbers of enterprises which replied to the survey for fiscal 1981.

the non-manufacturing industries, investments by the power industry increased by only 8.1% in the first half and are expected to increase by 28.7% in the latter half.

Throughout all industries also, investments in plants and equipment increased by only 10.5% in the first half and are expected to increase by 21.1% in the latter half. Investments have thus been sharply transferred to the second half of the fiscal year, as in the power industry.

The recent survey has also collected information on the industries' plans for such investments in the next fiscal year for reference purposes and has found that their rate of growth is expected to slow down to only 9.2% in all industries over the current fiscal year. This would reflect the declining trend of business activities, MITI judges.

Most of their investments are concentrated on facilities to promote savings on energy consumption and labor as well as replacing and renewing obsolete facilities. Throughout all industries, investments in facilities to save on energy consumption amount to such a high level as 7.1% of the total investments for plants and equipment. MITI, however, anticipates that investments for this purpose are likely to show considerable increase in the near future.

CSO: 4120

SCIENCE AND TECHNOLOGY

STAINLESS STEEL PRODUCER SETS GOALS FOR '80s

Tokyo BUSINESS JAPAN in English Jan 81 pp 28-31

[Interview with Fujio Tsukamoto, president, Nippon Metal Industry Co., Ltd., by Shozo Hochi]

[Text]

THE reception room for visitors calling on executives of Nippon Metal Industry Co., Ltd. (NIKKINKO and its trademark NTK) is on the 52nd floor of Shinjuku Mitsui Building located in Japan's first skyscraper development, and now a familiar landmark on Tokyo's skyline.

Mr. Fujio Tsukamoto, President of NTK, a quiet and scholarly type, was born in the year 1918. He graduated from the Metallurgical Department, Engineering Division, Tokyo Imperial University, in December 1941.

In March 1942, Mr. Tsukamoto was commissioned as a technical officer in the Japanese Imperial Navy and became a member of the Naval Technical Research Laboratory. During the Pacific War, Mr. Tsukamoto devoted himself to elevating the technical level of special steel and its related products for the Imperial Navy.

After the end of the war in 1945, he returned to civilian life and entered NTK in 1946. It was in February, 1962, that he became a Doctor of Engineering as a result of his thesis entitled "Strength and Various Deficiencies of Heat Resistant Stainless Steel." He was appointed as director in May 1963, and thereafter rose step by step – assuming the post of managing director in 1969, senior managing director in 1973, and in December 1975, the post of president.

It was also in that month that he was appointed to several important posts; director of the Federation of Economic Organizations which functions as a nucleus of the Japanese business world, permanent director of the Japan Federation of Employers' Associations, and director of the Japan Iron and Steel Federation. He continues to hold these positions.

At about the same time, he was appointed Chairman of the Japan Stainless Steel Association and became its advisor in June 1976. At present, he holds the post of Vice-Chairman for a two-year term so as to be actively engaged in betterment of the Japanese stainless steel industry. He is also director and advisor of the Japan Institute of Metals and councillor of the Iron and Steel Institute of Japan.

NTK is capitalized at ¥6,500 million (authorized capital ¥17,000 million), boasting a yearly turnover of ¥90,000 million and a yearly production of 190,000 tons. The company has 1,700 employees.

The Yokohama Works was constructed in 1932, the year in which the company was founded. The Sagamihara Works in Kanagawa Prefecture which went into operation in 1960 constitutes the main force of its production facilities. This facility is the first in Japan to adopt the AOD refining furnace and it is fully equipped with hot rolling mills and Sendzimir cold rolling mills for the production of stainless steel sheets, coils, strips and plates.

Construction of the Kinuura Works located in the city of Hekinan, Aichi Prefecture, was completed in 1972. This is a stainless steel producing facility based on the AOD process. NTK completed a 100% continuous casting method for the first time in the world. It has cold rolling mills complete with process control. This facility is capable of producing high grade products with the most advanced equipment.

In November, when this interview took place, Mr. Tsukamoto was awarded the Blue Ribbon Medal, an award presented by the Japanese government to persons who have rendered distinguished services in industrial development to the country. We began the interview by asking Mr. Tsukamoto his feelings as a recipient of this medal.

(Interviewed by Shozo Hochi, Editor-in-Chief, Business JAPAN)

Q: I wish to express to you my heartiest congratulations on your being awarded the Blue Ribbon Medal. We all know that the award is extremely difficult to earn and that only a handful in the steel industry are so honored each year. With this in mind, I would like to ask how you feel about this award.

A: Being an engineer, I have been constantly engaged in research on and production of special steel – from my school days through the navy and up to the present. I have continued to work on stainless steel since entering NTK in 1946.

Japanese stainless steel manufacturing techniques in those days were so primitive as to be almost beyond imagination. However, the 1960s through the 1970s was an era of technological innovations during which great strides were made. Since I have actually experienced this transition, it is like saying that my own history is the history of stainless steel.

I have earnestly worked hard as an executive as well as an engineer so I feel that I might have been recognized for this. I consider that this award is not for me as an individual, but as a recognition of valuable contributions made by the Japanese stainless steel industry to our nation and society. And in this sense, I feel that the award was bestowed on me as an encouragement to brace myself and work harder.

Q: What are the future domestic and overseas market trends?

A: Stainless steel in the past was used somewhat extensively in the chemical and paper and pulp industries, but, since then, technological innovations have brought about reduction in costs and broadened the range of usage. I feel I can say with confidence that the demand for stainless steel will increase markedly because this metal is rust free and presents a beautiful appearance.

During the high growth period, we have seen a yearly growth rate of double digit numbers. It was actually ranging between 10% and 20%. However, the growth rate from about 10 years ago has ranged between 4% and 5%.

Since 1970, Japanese stainless steel production has surpassed that of the United States to become the world's highest. Japan now accounts for one-third of the world production. The total volume of production in Japan is about 1.8 million tons per year in terms of hot rolled products.

Japanese manufacturers differ from those of the United States and Europe in that not only do we pursue volume, but also expend great efforts in aggressively developing the market as well. It can be said that the Japanese stainless steel industry has followed a path of growth similar to that of other industries in Japan in the sense that the industry further developed the technologies invented overseas.

Japan is a nation without natural resources and on top of that there is a pronounced worldwide maldistribution of raw materials for stainless steel. The United States and European manufacturers are also burdened by the same handicap. I think this is the reason why we were able to compete with them on an equal footing.

Q: Japan being a nation without resources, raw materials must be transported a long way from overseas countries. In this respect, what hardships are in store for our stainless steel industry?

A: The fact that the industry must depend on overseas supply sources for raw materials is the weak point. There are over 100 kinds of stainless steel products manufactured to meet various applications. It is our desire to develop various kinds of stainless steel to meet particular requirements without using vital metal resources, always in critical supply. This thinking holds much weight, because, for example, we have developed a grade of stainless steel without using nickel, a raw material of limited supply. We were the first to put this product on the market, thus establishing ourselves as the world's leading manufacturer of this grade of metal.

In other words, we are constantly striving to develop the right product best suited for any specific application.

Q: We feel that every industry in Japan should be resources saving conscious. What is your outlook as to future availability of resources?

A: We always endeavor to have our sources dispersed and diversified instead of depending on one overseas source. We try to work towards internationalization by maintaining friendly relations with many countries not only in exports, but also in importation of raw materials with the aim of complete diversification.

Q: I think this cannot be accomplished by the efforts of the private sector alone. The government should appeal to the developing countries with natural resources through economic and technical assistance.

A: From the standpoint of security, the United States is directing its efforts towards storage of resources. In the case of Japan, a consensus on this point is yet to emerge. We do have a group called the Rare Metals Stockpile Association, but after all, with only private sector funding, its scope of operations tends to be restricted. Without government support, the aims of this association will not be achieved.

Q: During the high growth period, there seemed to be no problem in securing raw materials.

A: Yes. Times change.

Q: You have performed the role of a pioneer in importing foreign technologies. I would like to hear of some of your experiences regarding the adoption of Sendzimir equipment in 1960 and the AOD refining furnace in 1971.

A: I took my first overseas trip in 1953. The more plants I visited, the more I realized the necessity of importing the latest of the technological innovations I was seeing.

Accordingly, with the aim of responding to the increasing demand for stainless steel sheets, a four-foot wide cold rolling mill was installed in our Sagamihara Works in 1960, followed by a series of advanced equipment installations such as a 50-ton capacity electric furnace, a continuous casting machine, a Steckel hot rolling mill and an AOD converter.

Again in 1972, a 70-ton capacity electric furnace, a 75-ton capacity AOD converter, a continuous casting machine and a 20-Hi Sendzimir five-foot wide cold rolling mill were installed at our Kinuura Works. With the installation of this most up-to-date production equipment, the Kinuura Works has gained fame as a model plant engaged in the manufacture of stainless steel.

In our case, each piece of equipment relating to the production of stainless steel products was developed through the latest technologies developed in various countries such as the United States, West Germany and Switzerland. Therefore, it can be said that each of the production processes is an accumulation of the world's newest high-level technologies.

The AOD (Argon-Oxygen Decarburization) converter was considered to be an advantageous refining process due to its having the following features:

(1) It permits the use of low cost raw materials;
(2) Shortens production time;
(3) Reduces unit consumption; and
(4) Permits the extraction of contaminating gaseous ingredients and non-metallic inclusions.

Thus, AOD excells in productivity, operating efficiency, low running costs and high quality end products. We installed a 55-ton capacity AOD converter in 1971 which at that time was classed as the world's largest furnace of its type. A 75-ton capacity AOD converter was installed in the Kinuura Works later.

These installations make up the main stream of our stainless steel production at present.

I would like to add that in parallel to these installations, a continuous slab casting process was adopted to replace the conventional ingot casting process. The continuous casting machine installed in our Kinuura Works is called the curved type. With this equipment, we were able to lead the world by establishing the NTK process with a continuous operation flow consisting of electric furnace, AOD converter and curved type casting equipment. We have succeeded in complete continuous casting of all grades.

Furtheremore, all types of stainless steel to be developed in the future will be premised on continuous casting aiming at a significant improvement in production efficiency.

The NTK Process since then has been accepted by stainless steel manufacturers not only in Europe but throughout the world, an impressive demonstration of its surpassing technology.

These technical innovations and efforts expended on development were risky, but I may say that the success of our company was brought about by the ability to look far ahead in the technological field.

Q: In 1962, you received your doctorate in engineering, and you have many other achievements to your credit. I would think that these achievements have served as the foundation of your company's technology.

A: My thesis was concerned with characteristics of heat resistant stainless steel, not about production technology. However, the results of technical research and experiments fed back to us from the floor were most effectively connected with the next technological advance. Our technological advances happened to coincide with the era of high growth, permitting investments mounting to several scores of billion yen, but we always strove to create plants and production facilities that could not be criticized by oncoming generations.

Q: Your company has attained high rates of profit and the dividends to shareholders are high. At a time when it is

expected that economic conditions will become even more severe, what kind of management concept do you have in mind? Also, we would like to ask your opinion regarding equipment investment and management strategy.
A: Long as well as short-term strategies are being mapped out by our general staff. Alterations will be made according to changes in the times, but the most important matter to keep in mind is the desire to make products that will meet the requirements of customers.

In this area, mass production and mass sales are impractical. Therefore, we are thinking of an equipment layout plan that would be compatible with the diversifying market demands.

To attain sound process control, we must bear in mind the need to improve and perfect equipment with full utilization of computers as well as making equipment pollution-free. This does not mean adding on another line of equipment similar to an existing installation simply to shoot for increased volume, but I would like very much to increase our capabilities with equipment that would respond to the diversification which I mentioned earlier.

Q: Your Kinuura Works is situated on a large tract of land, providing much room for expansion.
A: In those days, the area of the site was considered to be excessive, but we secured it after taking into consideration the future growth of stainless steel demand.

Q: As to the needs of the coming generations, work related to development of new energies and marine resources is likely to appear from many sources. In this respect, what kind of concept do you have with regard to technological innovations that would meet these needs?
A: Stainless steel is certainly useful in this work. To give you some indication of its uses, stainless steel is used in LNG carriers, storage tanks and membranes.

I may add that we are constructing a fabrication plant so as to be fully prepared to make deliveries to the Tokyo Gas Company on the basis of our successful induction of technology from overseas to produce stainless steel that will not be effected by temperature changes from normal to 162 degrees below zero.

As a stainless steel specialist, we are interested in carrying out the necessary equipment investment in this area. We have great confidence in the future of this product.

Q: We understand that you are extending technical assistance to overseas manufacturers to a considerable degree.
A: We are well acquainted with many stainless steel manufacturers abroad with whom we maintain close relations. We have been on several occasions requested to extend technical assistance. Our technical assistance includes improvement in surface defects caused by continuous casting to Stora Kopparbergs of Sweden, guidance on how to operate continuous casting system to British Steel Corporation, and technical guidance regarding hot rolling of stainless on the Steckel hot rolling mill to Ilssa-Viola, one of the big three Italian stainless steel manufacturers. In addition, we have also extended tecynical assistance to developing countries.

In this regard, it is our sincere desire to raise our level of technology by helping each other, thereby contributing to the growth of the world's stainless steel industry.

Q: Your ratio of sales is 85% domestic and 15% overseas. This does not appear to be a company dependent on exports. May we have your views on exports?
A: In the past, we were exporting in the range between 35 and 40%. Like some other industries, we too have experienced trade friction. To overcome this situation, we have worked hard at expanding our domestic market through a vigorous program of demand cultivation.

As for myself, I would like to reduce as much as possible our degree of dependence on exports. Our present 15% is the result of our efforts. However, if we were to export, we should export only products that are not available in that particular country. This kind of thinking is based on our dedication to contribute to coexistence and coprosperity in cooperation with manufacturers in other countries.

Q: A few words on future market development, please.
A: Some 40% of the bathtubs in Japan are made of stainless steel. Various applications are numerous. To name a few, there are swimming pools, roofing, and other building materials, and water storage tanks. These markets did not exist ten years ago. Stainless steel products are widely used for varied sanitary purposes also. We feel that these areas will not only increase in importance domestically, but overseas as well. Therefore, it is our desire to develop a grade of metal that will meet the demands in this market.

Q: Since you are actively engaged in a variety of business activities, we would appreciate your views on the overall Japanese industrial economy.
A: I would like to contribute to society through the medium of stainless steel. Japan as a whole is burdened with many critical problems – energy and pollution among others. I am determined to do our best in eliminating various pollutions, and improving energy and other important problems by means of stainless steel products.

****

The interview was carried out in a very relaxed and agreeable atmosphere. Mr. Tsukamoto has the reputation of being a well-rounded man of many interests. In his overseas trips, he visits art galleries and attends concerts. He even carries along his own painting supplies should he be inspired to reproduce the local scenery on canvas, though he rarely finds time now for this relaxing hobby. Mr. Tsukamoto is also a good golfer with a handicap of 17. □

CSO: 4120

SCIENCE AND TECHNOLOGY

JAPAN'S CEMENTED CARBIDE TOOLS CONTRIBUTE TO WORLDWIDE INDUSTRIAL DEVELOPMENT

Tokyo BUSINESS JAPAN in English Jan 81 pp 115, 116

[Article by Shiro Ueda, president, Japan Cemented Carbide Tool Manufacturers' Association]

[Text]

THE modern scientific control method for machinery factories started with the measurement of the standard work volume performed by tools. Tools are vital factor in determining whether a specific manufacturing method is possible or not, as well as determining the manufacturing time and the cost of manufacture.

At the start of the current century, demand for good quality, hard-strength tools began to increase. Starting with steel, a variety of hard-tool materials were developed by many countries. For instance, high-speed tool steel was developed in 1900, Stelite in 1907, tungsten carbide (WC) in 1914, and subsequently molybdenum carbide (MoC) and cast hard-metal. From among these hard-tool materials, WC emerged to play the principal role.

The development of these hard metals subsequently resulted in the use of cemented carbide produced by the powder matallurgy method. It was in 1926 that cemented carbide made primarily of WC and metallic cobalt used as binder was marketed for the first time by Krupp of Germany under the trade name of "Widia." In the U.S., General Electric began manufacturing cemented carbide in 1928, marketing it under the trade name of "Carboloy." In Japan, research on cemented carbide started at about the same time as in the U.S., and trial manufacture of cemented carbide was successfully achieved in 1927-28. The cemented carbide developed in Japan was used in single-point tools for turning and in wire drawing dies. Like its Western and U.S. counterparts, the Japanese cemented carbide tool manufacturing industry has a history and tradition of over half a century.

The quality of tool materials, including WC-based cemented carbide, has made astonishing progress in Japan. Thanks to positive investment in research and development by cemented carbide tool manufacturers, coupled with the general progress of the industry, a great variety of new tool materials, have been developed and are now being put to practical use. Among them are coated tips; titanium carbide (TiC), and/or titanium nitride (TiN) based cermet; aluminum oxide (Al_2O_3) based ceramics; and ultra-high pressure composite materials (CBN compact and diamond compact).

The progress made by cemented carbide, together with the improvement of tooling technology, has expanded greatly the scope of its application. Spurred by the sophistication of software technology, the diversification of cemented carbide tools progressed rapidly. In Japan today, numerous cemented carbide tools are employed in almost all industries. For instance, the small cemented carbide tools used today include dental burrs and micron drills while the giant tools

Table 1. Production in Value by Year

(Unit: ¥1 million)

Item	Year	1970	1974	1975	1976	1977	1978	1979
Cemented carbide tips & tools	Production	37,796	54,760	36,297	44,718	56,632	62,971	79,067
	Compared with preceding year	138.8	122.4	66.3	123.2	126.6	111.2	125.6

include crank pin cutters which are three meters in diameter. Cemented carbide tools produced and marketed in Japan are at the world's top level. Standardization of cemented carbide tools is now in progress, and the Japanese Industrial Standard (JIS) has been set for 13 items, and the Cemented Carbide Tool Manufacturers' Association Standard (CIS) for 19 items.

The latest events in the field of technical development are as follows:

(1) The structure of tools has been improved to make quick change of tools possible in order to reduce inactive time;

(2) Manufacture of various high-efficiency end mills for engraving, including ball-end mills, by devising unique cutting edge geometry and structure;

(3) Manufacture of high-efficiency twist drills for steel and throw-away drills for large holes, by means of unique cutting-edge shape designs;

(4) Use of cemented carbide in deep grooving cutters and hobbing cutters.

There are many others on the long list of innovations.

As Table 1 shows, Japan's cemented carbide tool production in 1979 exceeded ¥79,000 million, while the output of cemented carbide reached the all-time high of 1,455 tons. The production of cemented carbide tools further expanded after the start of 1980, renewing records. Japan's cemented carbide tool production is believed to rank second among mechanized Western industrial nations, next to the U.S. and on a par with Sweden. We can say that Japan is

CSO: 4120

END