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Questionnaire Survey of Small and Medium-sized Enterprises
on Foreign Exchange Intervention Effects

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Overview

For this study, small and medium-sized enterprises (SMEs) in Japan were administered a questionnaire survey of the effects of foreign exchange intervention. The survey was administered in November 2012. Key conclusions drawn from this study include the following: 1. Most SMEs surveyed regard the foreign exchange interventions of the Japanese government in 2010 and 2011 as either “not so effective” or “not effective at all.” 2. Many SMEs surveyed consider that the level of the yen against the US dollar around the end of 2012 was either “very strong” or “somewhat strong.” 3. The companies are not receiving benefits of the foreign exchange interventions. They want more frequent government intervention. 4. Although only to a slight degree, more companies prefer “loans for financing” to “foreign exchange intervention” as measures against the strong yen. Although this study has limitations in some respects as survey research, it might be useful to other researchers.

1 Introduction

The Japanese yen was very strong during 2010–2012. Its value against the US dollar hit a new post-World War II record high. Japanese authorities intervened actively in the foreign exchange market during and after 2010 in response to the rising yen. Japan’s manufacturing industry sustained a decline in sales caused by the rapid yen appreciation. The policy of reducing the yen’s appreciation through foreign exchange intervention was therefore undertaken in part to mitigate the effects of a strong yen on domestic manufacturing industries. The question, then, is how domestic manufacturers perceive such foreign exchange intervention. To answer this question, a questionnaire survey on foreign exchange policies was administered to small and medium-sized enterprises (SMEs) located near the city of Higashi Osaka. Significant findings of this study were the following: 1. Most SMEs surveyed regard the foreign exchange interventions of the Japanese government in 2010 and 2011 as either “not so effective” or “not effective at all.” 2. Many SMEs surveyed consider that the level of the yen against the US dollar around the end of 2012 was either “very strong” or “somewhat strong.” 3. The companies are not receiving benefits of the foreign exchange interventions. They want more frequent government intervention. 4. Although only to a slight degree, more companies prefer “loans for financing” to “foreign exchange intervention” as measures against the strong yen. As these results suggest, the study evaluated the effects of foreign exchange interventions by means that were different from conventional methods. The effect of foreign exchange intervention is examined commonly by measuring its effects on exchange rates based on time-series data.¹ By contrast, this study investigated the effects of foreign exchange intervention through a questionnaire survey of SMEs’ perceptions of the effects of foreign exchange intervention.

One interesting study of foreign exchange risk management conducted using questionnaires is that reported by Ito et al. (2010). Researchers in this study administered questionnaires to the managers of foreign exchange risk and the selection of invoice currencies at all 920 manufacturers with shares were listed on a stock exchange that engaged in international trade. The results suggest, for instance, that 73.1% of the manufacturers responding to the questionnaires were using some hedging technique in the foreign exchange market. The percentage of those using a foreign exchange forward contract as a specific method of hedging, was very high. Nakazawa (2000) analyzed the effects of yen appreciation on the Kinki region. Rather than analyzing the actual exchange rates, Nakazawa (2000) simulated how the appreciation of 10 yen would affect the Osaka Prefecture economy. Results indicated that a 10-yen appreciation would reduce private-sector capital expenditures in Osaka Prefecture and that local companies would start moving their

¹ Examples of survey-based studies of foreign exchange intervention include Sarno and Taylor (2001) and Takagi (2014). Ito and Yabu (2007) provide details of Japan’s interventions.

production factories to overseas locations.

Exchange rate trends raise important issues for Japan. The yen's appreciation is likely to affect the Japanese economy and businesses to a considerable degree. Given this background, the study used a questionnaire survey to investigate how the SMEs in Higashi Osaka assessed Japan's foreign exchange policy, how the yen appreciation affected the SMEs, and what measures they were taking in response to a strong yen.

This report is structured as follows: The second section presents a description of the strong yen around 2012 and foreign exchange policy and SMEs in the city of Higashi Osaka. The third section summarizes the questionnaire questions and the responses they elicited. The fourth section presents related conclusions.

2 Yen Appreciation, Foreign Exchange Policy, and SMEs

The following first outlines the progress of foreign exchange interventions around 2012. On September 15, 2010, the Ministry of Finance intervened in the foreign exchange market for the first time in six and a half years. This intervention was implemented when the exchange rate was around 82 yen to the US dollar, reflecting the highest yen-dollar value in 15 years. The amount was 2,124,900 million yen, the largest US dollar-buying, yen-selling intervention in history at the time. This dollar-buying, yen-selling intervention pushed back the exchange rate to slightly lower than 86 yen to the US dollar. Beginning with this intervention, the government implemented approximately eight interventions (eight days) between September 2010 and November 2011. The value of the US dollar-buying and yen-selling operations totaled 16,422,000 million yen.

In 2011, the yen's value frequently hit a post-war record high. On March 11, 2011, a strong earthquake, later called the Great East Japan Earthquake, struck the Tohoku region, leading eventually to severe damage to a nuclear power plant. The yen rapidly appreciated in the foreign exchange market. On March 17, the yen's value was the highest in history, at 76.25 yen to the US dollar.² In response, a joint intervention was implemented on March 18, 2011. Subsequently on August 4, 2011, the government conducted another intervention. On October 31, 2011, the yen's value in the Oceania market reached its highest level after WWII: the rate was 75.32 yen per dollar. On the same day, the government conducted foreign exchange interventions in response to such a trend of the yen. The interventions continued for five consecutive days from October 31, 2011, and caused a total of 9,092,600 million yen in US dollar-buying and yen-selling. The exchange rate at the end of October 2012 immediately preceding this study was 79.73 yen per US dollar. The questionnaire survey in this study was conducted in early November 2012. Subsequently on December 16, 2012, a general election was held in Japan, which caused a change of ruling party

² Because Japan is a net creditor country, it is likely that the yen appreciated further as foreign assets accumulated.

from the Democratic Party of Japan to the Liberal Democratic Party of Japan and the establishment of the second Abe administration. On the expectations for economic recovery through the economic policy called Abenomics, the yen began depreciating to around 90 yen to the US dollar in January 2013 and to around 100 yen in May 2013. Under the Abe administration, the yen continued to depreciate to the level of 120 yen per US dollar by December 2014. The time when the questionnaire survey reported herein was conducted therefore reflects interesting timing: it immediately preceded the change of ruling party.

The city of Higashi Osaka in Japan is known as a town of manufacturers that is home to 6,016 such businesses, the fourth largest number in Japan, with the highest factory density in the country.³ According to information provided by the Higashiosaka Chamber of Commerce and Industry, manufacturers of metal products such as nuts and bolts comprise 29.1%, those of production machinery and equipment 15.5%, and plastic product manufacturers 10.3%. The city is characterized by the combined percentage of these businesses, which alone exceed 50% of its manufacturing industry. Among all factories, the percentage of factories having no more than 20 employees is approximately 90%. Particularly, numerous small factories are located in the area known as Takaida in Higashi Osaka.

Studies that have investigated the yen's value and businesses in Higashi Osaka include a questionnaire survey of the effects of yen appreciation conducted by the Higashiosaka Chamber of Commerce and Industry. This survey was completed by 67 companies that presented their products at the Higashi-Osaka Industrial Exhibition held on November 9 and 10, 2011. The following summarizes the findings in this survey. Regarding the effect of the yen's appreciation, 14.9% of the respondents answered that a strong yen had certain negative effects, 34.3% answered that it had some negative effects, 37.3% replied that there was no effect, 9% responded that it had positive effects, and 4.5% were not sure. These results suggest that the yen's appreciation affected many of the companies. The exchange rate reported as profitable around 2011 was 89.8 yen to the US dollar.

⁴ To a question about measures taken in response to a stronger yen (multiple answers allowed), 37.3% of the respondents selected expansion of business in the domestic market, 32.8% selected cost reduction through rationalization, 28.4% opted for development of competitive new products, 14.9% preferred overseas expansion of production bases, and another 14.9% cited increased procurement of overseas products and parts. Such answers reveal the companies' responses to the yen's appreciation. When asked about deindustrialization of the Higashi Osaka area, 53.7% thought that it would be exacerbated, 38.8% were not sure, and 7.5% did not expect it to worsen to any remarkable degree. Regarding overseas expansion, 29.9% of the companies had already entered foreign markets, 7.5% were planning to go overseas, and 62.7% had not developed overseas

³ From the website of the city of Higashi Osaka. <http://www.city.higashiosaka.lg.jp/>

⁴ The average value of 28 companies that provided responses.

business and were not planning to do so. These survey results are closely relevant to the investigations in this study and are expected to be profoundly useful as a reference. A strong yen might provide benefits in certain cases. A monthly report of the Higashiosaka Chamber of Commerce and Industry (2011) published a story of a company operating a wire-drawing business that benefited from the yen's appreciation: the strong yen had allowed the company to purchase materials at the asked prices. More companies than indicated earlier, however, claimed to have been adversely affected by the rising value of the yen.

3 Questionnaire survey on foreign exchange policies

3.1 Survey overview

For this study, questionnaires were distributed directly to 195 companies located mostly in Takaida, Higashi Osaka city, to conduct the survey. The actual questionnaire is attached as Appendix A to supplement this report. The number and percentage of valid responses were, respectively, 44 and 22.56%. Twenty of the companies responding to the survey had 20 or fewer employees, 11 companies had 21–50 employees, three companies had 51–100 employees, and six companies had 101 or more employees. Regarding the paid-in capital of these companies, 16 of them held 10 million yen or less, 17 companies held 10.01 million yen to 50 million yen, four companies had 50.01 million yen to 100 million yen, and two had 100.01 million yen or more.⁵ As for their business types, 86% of the respondent companies were manufacturers (screws, plastic components, pharmaceuticals, metal products, etc.). The number of responses and other information are summarized in Appendix B.

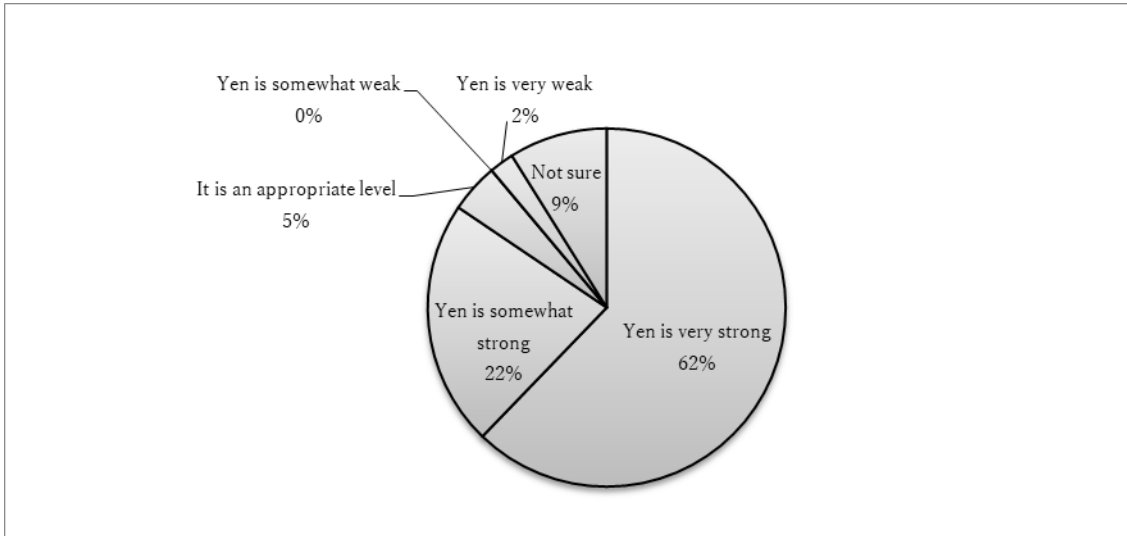
3.2 Questions asked and results

3.2.1 Opinions on the exchange rate level

This section summarizes the questions asked in the survey and the results. The first question (Q1.) was “what do you think about the level of the exchange rate (1 US dollar = 79.73 yen) as of the end of October 2012?” The answers are presented in Figure 1.

⁵ A small or medium-sized enterprise is defined as a manufacturer with 300 or fewer employees or paid-in capital of 300 million yen or less. In the sample of this study, one company corresponds to a large company, which was, however, directly included in the sample.

Figure 1. The level of the exchange rate (Q1)



Of the companies, 61% answered that the “yen is very strong,” with 23% selecting the “yen is somewhat strong.” Regarding the combined total, 84% of the companies considered that the exchange rate represented a strong yen. The average exchange rate of the answers to the next question (Q2) “what is the level of the current exchange rate that your company considers appropriate?” was 95.595 yen per US dollar.⁶

These results suggest that the companies perceived 79.73 yen to the US dollar as a very high value of the yen. The respondents raised opinions such as “because we are doing business overseas and unable to make profit in the current situation, we are moving our liaison to an overseas joint company,” that the yen was strong in comparison to the Korean won, that the rate should have been about 100 yen to the US dollar, considering Japan’s national strength at the time, and that there might be no such thing as appropriate exchange rates, but a system to prevent rapid fluctuations is necessary. The survey asked question Q2 in this manner because, although a question asking about specific exchange rates assumed by the respondents would have been more desirable, one characteristic of SMEs is that they operate businesses with domestic companies doing business overseas, rather than directly engaging in transactions with foreign companies.

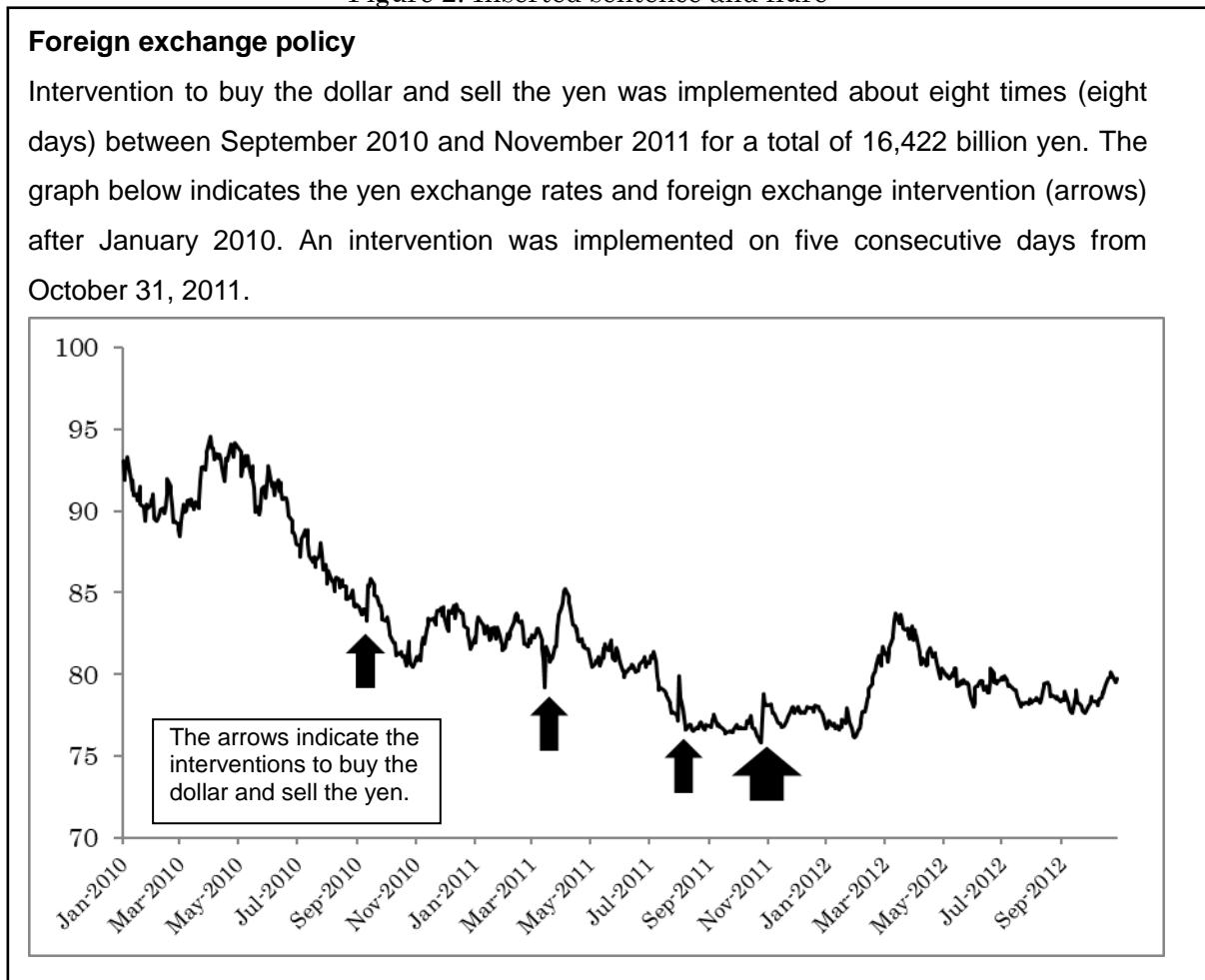
3.2.2 Effects of foreign exchange policy

This section presents a description of the questions related to foreign exchange intervention in the survey. The following sentence and figure were inserted before the questions to facilitate the

⁶ The number of companies responding to the survey is 37. For answers having a range of rates such as 90 to 100 yen to a dollar, the average of the range such as 95 yen was used for calculations.

respondents' accurate understanding of the types of policies that had been implemented (Figure 2).⁷

Figure 2. Inserted sentence and fiure



Because the companies perceived the exchange rate as a strong yen, they were likely to hope for yen-selling/dollar-buying intervention. To question Q.3, “do you think the foreign exchange interventions implemented in and after 2010 were appropriate?,” however, 2% of the respondents answered “very appropriate” and 41% selected “appropriate,” whereas 25% “not so appropriate,” and 16% “not appropriate.” In other words, 43% of them answered either “very appropriate” or “appropriate” and 41% considered the interventions either “not so appropriate” or “not appropriate at all,” demonstrating similar percentages of the opposite opinions.

⁷ For details, see the questionnaire attached as a supplement.

Figure 3. Implementation of foreign exchange intervention (Q3).

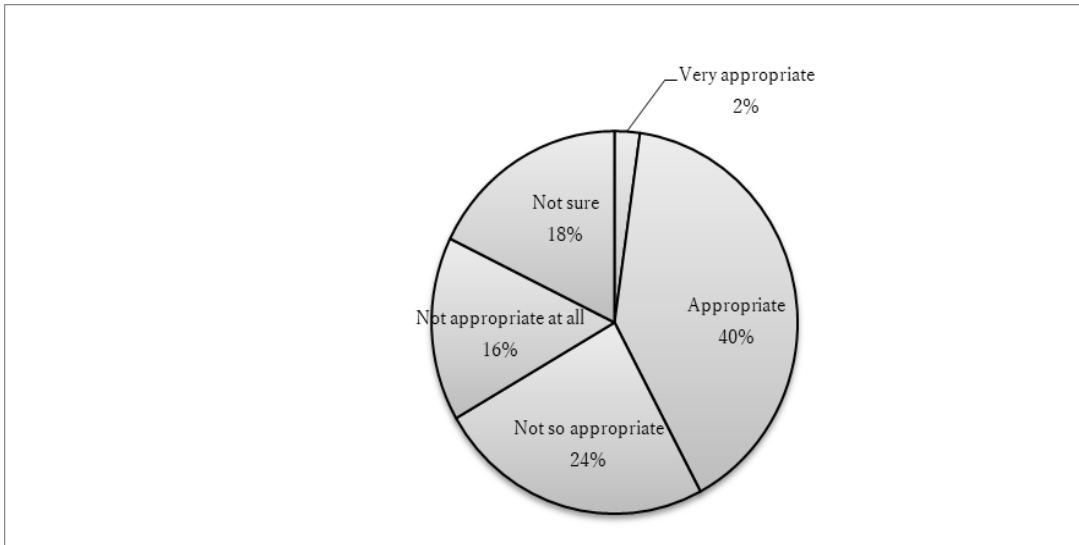
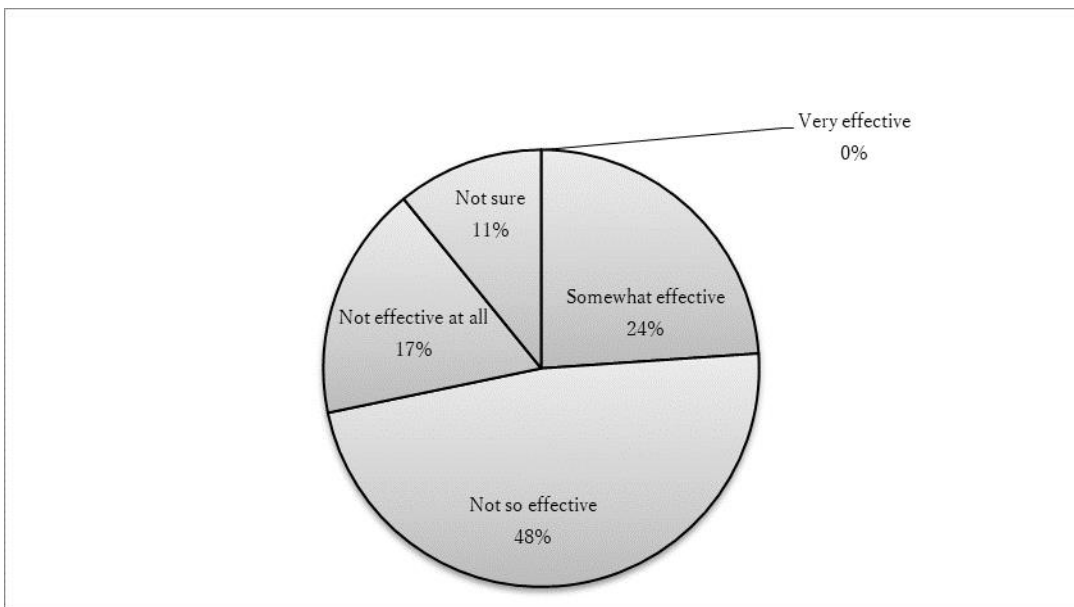


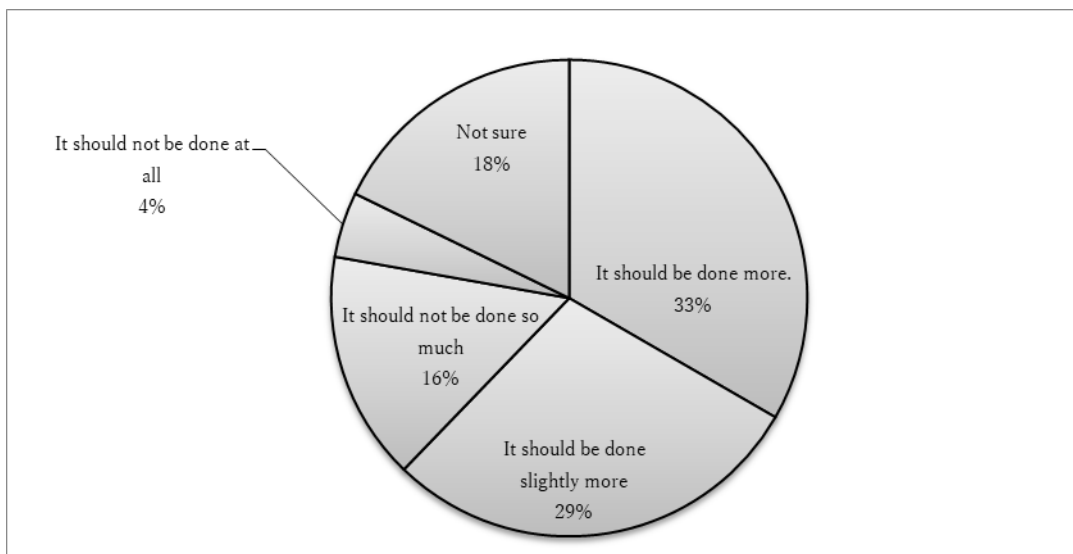
Figure 4. Effects of foreign exchange policies (Q4).



Did the companies think the foreign exchange interventions were effective? The responses to Q4. “do you think that the foreign exchange interventions implemented in and after 2010 were effective?” are presented in Figure 4. As Figure 4 depicts, none of the respondents considered the interventions “very effective,” 21% thought “somewhat effective,” 47% “not so effective,” and 18% “not effective at all.” In contrast to the combined answers of 24% of the respondents expressing the effectiveness of the interventions, approximately 65% negatively perceived the effect and selected “not so effective” or “not effective at all.”

When asked whether foreign exchange interventions should be done more frequently, ⁸ 34% of the respondents selected the answer “it should be done more,” 27% thought “it should be done slightly more,” 16% preferred “it should not be done so much,” and 5% said “it should not be done at all” (Figure 5). The common opinion supporting active interventions despite the large number of respondents not enjoying the benefit of the interventions might imply that they think interventions should be repeated until the benefit is evident. One respondent, however, commented that the government should not have intervened so much because the effect was not very clear.

Figure 5. Government foreign exchange intervention (Q5).

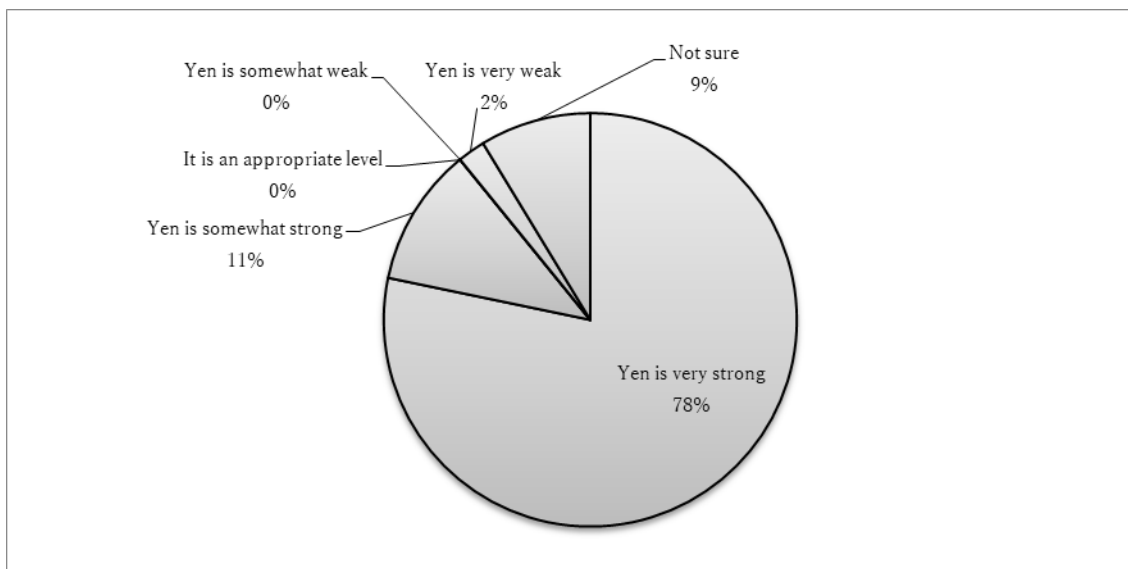


As shown also by the answers to Q1, 78% of the companies responding to the question Q6 “What do you think about the exchange rate, 75.84 yen to a dollar on October 30, 2011, immediately before the exchange intervention on five consecutive days totaling approximately nine trillion yen?” answered the “yen is very strong.” Also, 11% of them answered the “yen is somewhat strong.” The combined total of the companies considering the rate as a strong yen therefore amounted to 89% (Figure 6). A large number of companies answered that the yen around this time was very strong in comparison to the rates prevailing at the end of October 2012 in Q1.

The following summarizes the questionnaire results. The companies considered the yen stronger than usual against other currencies. The responses to the implementation of foreign exchange interventions, however, were closely divided between whether they were appropriate or otherwise. Many respondents also expressed that, overall, the foreign exchange interventions had not had much effect.

⁸ Studies of intervention frequency include those of Hoshikawa (2008) and Utsunomiya (2013).

Figure 6. Level of exchange rate on October 30, 2011(Q6).



From this result, it can be inferred that the respondents are stating that the interventions had little effect because the yen did not depreciate at all following the interventions when the yen was very strong. This question, however, does not necessarily identify the specific reasons why the respondents considered the interventions as not very appropriate: perhaps the timing was late and the scale was small. Respondents at the companies might think that the government should not intervene in the foreign exchange market in the first place. Based on these points, there is room for the questions to be improved. Because Q1 “what do you think about the level of the exchange rate (1 US dollar = 79.73 yen) as of the end of October 2012?” is vague, directly asking for an exchange rate expected by the respondents might be a better approach. The reasons for the answers to Q3 “do you think the foreign exchange interventions implemented in and after 2010 were appropriate?” might vary greatly: the respondents might think that the interventions were inappropriate because the timing was too early or too late, because the government should not intervene in the market to begin with even if the timing is appropriate, because the scale of the interventions was too small or too large, or because the interventions had little effect on their own business. The questions must therefore be improved in this respect. Question Q4, “do you think that the foreign exchange interventions implemented in and after 2010 were effective?”, fails to specify whether the effectiveness referred to in the question is long-term or short-term effectiveness. Therefore, the question should be made more specific. In this respect, improvements must be made in future studies.

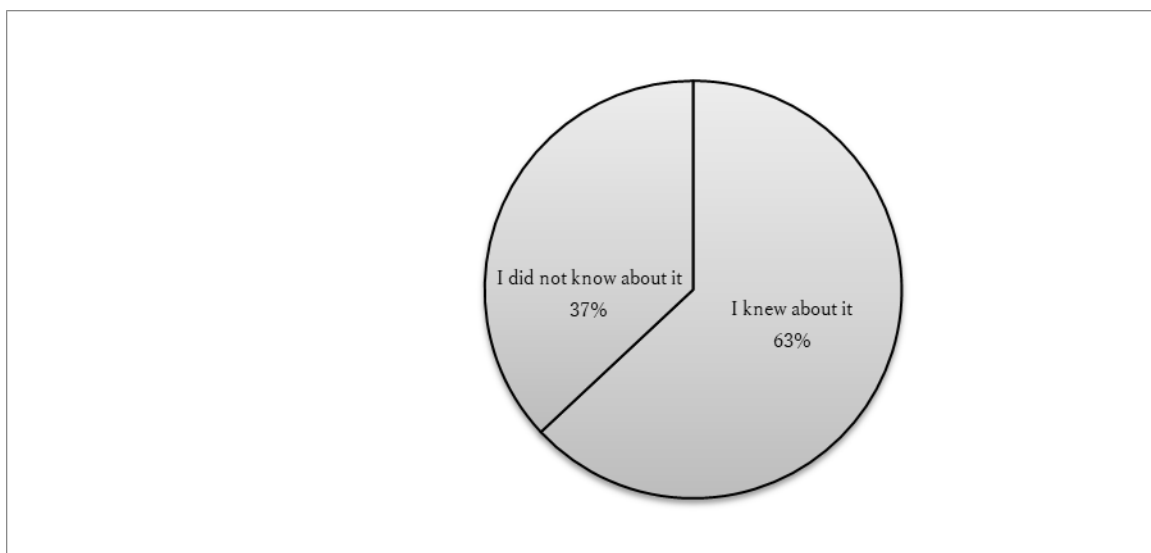
3.2.3 Countermeasures against yen appreciation other than foreign exchange policy

Measures to control the yen’s appreciation other than foreign exchange intervention might be used.

For instance, the Safety-net Guarantee System was established to support the financing of SMEs facing difficulties caused by the Great East Japan Earthquake and the yen's appreciation, for which Guarantee No. 5 (type of industry with worsening business conditions (national level)) particularly includes companies sustaining damage caused by the yen appreciation in its terms of eligibility. Eligibility has been added with the condition that the company must be an SME with latest monthly sales, in principle, that have decreased 10% or more year on year because of the yen appreciation and for which average monthly sales in the prior three months, including the following two months, are expected to fall 10% or more year-on-year. The guarantee requires a document (a statement of reasons) specifically explaining how the decline in sales and profit has been caused by a stronger yen.

To find out whether such a program is widely known, Q7 “did you know about the Safety Net Guarantee System (No. 5: type of industry with worsening business conditions (national level)) that was established as a measure to support the financing of SMEs in response to the Great East Japan Earthquake and the rising yen?” was added to the survey. To this question, 62% of the respondents answered “knew about it,” but 38% indicated “did not know about it” (Figure 7). This result suggests a rather high level of recognition of the system.

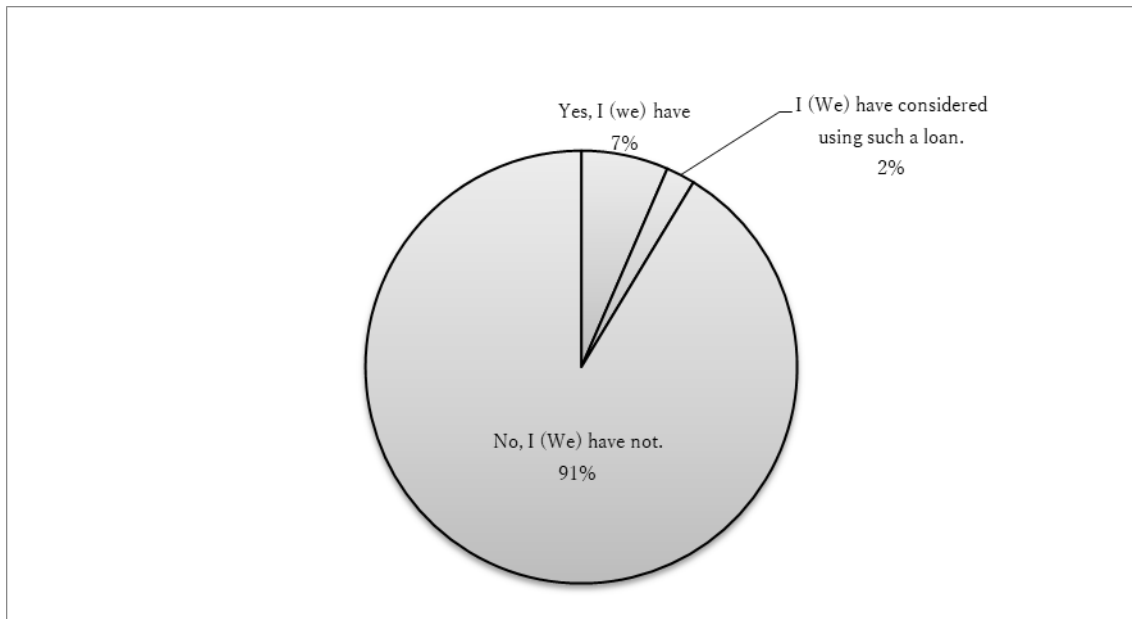
Figure 7. Safety Net Guarantee System (Q7).



Related to the actual use of the system, Q8 asked “have you used the loans for measures against the strong yen (e.g., Safety Net Guarantee No. 5)? Why did you use or not use such a loan?” As presented in Figure 8, 7% of the respondents answered “Yes, I (we) have,” 2% said “I (we) have considered using such a loan,” and 91% responded “No, I (we) have not.” Not many companies in the sample of this study have actually used the system. Many of them expressed that they had not

needed any loan to cope with the yen appreciation. Some stated that the recent rise in the yen's value should be addressed through corporate downsizing rather than borrowing because it might not be a short-term trend. Other reasons for not using the system included that the system required "too many documents to process." The use of the Safety Net has not spread despite the high level of recognition.

Figure 8. Use of loans as measures against yen appreciation(Q8).

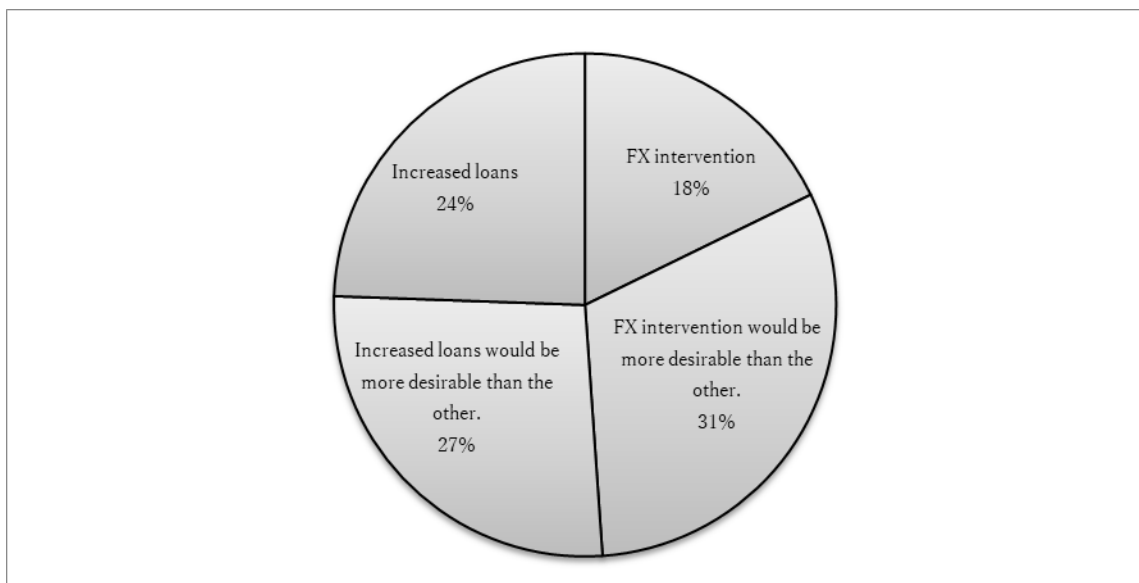


One important question asked in this survey was included to compare two policies, i.e., foreign exchange intervention as measures against the strong yen and increased loans for financing, in terms of preference of the companies. For this purpose, Q9 asked "if only one of 'foreign exchange intervention' and 'increased loans for financing' were to be implemented as measures against strong yen, which one do you think would be more desirable for your company?" Eighteen percent of the respondents preferred "foreign exchange intervention" and 30% expressed "foreign exchange intervention would be more desirable than the other," totaling 48% of the respondents who preferred foreign exchange intervention (Figure 9). By contrast, 25% opted for "increased loans." Also, 27% reported that "increased loans would be more desirable than other measures," resulting in a total of 52% of respondents who regarded increased loans as desirable. Although the difference is very narrow and although it does not help determine better countermeasures against a strong yen, the support for increased loans is slightly higher than the other. Those companies that had actually used the Safety Net answered that increased loans should have been implemented.

Even if the government promoted the yen's depreciation through foreign exchange intervention and benefited exporters successfully, such a weaker yen would adversely affect importers.

Therefore, handling the issue directly through other policies such as subsidies and loans might be more desirable than manipulating exchange rates through intervention. The adverse effects of manipulating the exchange rates, i.e., the yen’s value, through intervention must also be considered.

Figure 9. Policies as measures against yen appreciation (Q9).



3.2.4 Effects of exchange rate fluctuations on companies

The remaining questions are related to the condition of the companies. The responses to Q10 "how great an effect do exchange rate fluctuations have on the performance of your company?" included "strong effect" comprising 13%, "some effect" comprising 58%, "minimal effect" making up 20%, and "no effect at all" and "not sure," making up 2% each, which reflects a tendency similar to that shown in results of the questionnaire survey conducted by the Higashiosaka Chamber of Commerce and Industry, which revealed that companies affected to some degree constituted the largest percentage.

The answers to Q11 "do you directly export products or raw materials to an overseas company?" included responses of 14% of "yes" and 86% of "no." One characteristic of SMEs is that they often deliver parts and other products to large domestic companies doing business overseas, rather than directly exporting goods to foreign companies.

Similarly, the answers to Q12 "do you directly import products or raw materials from an overseas company?" included 33% of "yes" and 68% of "no" responses. In the sample examined in this study, the number of companies importing raw materials from overseas companies is greater than the number of companies exporting goods, which might have affected the results.

In response to Q14 "do you hedge the risk of exchange rate fluctuations through financial transactions such as forward exchange contracts?," 7% answered "yes" and 93% answered "no."

When asked Q15 “what measures does your company take against the strong yen? (Multiple answers allowed)?,” the companies selected “nothing in particular” the most (61%), followed by “reduce costs” (19%). This result might reflect the fact that, unlike large companies, SMEs in many cases do not engage in direct business with overseas companies. Furthermore, SMEs often do not hedge their risks while operating import and export operations. A respondent from one company answered that it would purchase foreign bonds as measures against the yen’s appreciation. In the most severe condition, however, one company reported closing its business in response to the yen’s appreciation. Very few effective responses were obtained for Q16 “how much are you affected by the appreciation of one yen against US dollar?” This lack of responses suggests that the respondents were not necessarily aware of the extent of the effects of exchange rates on their companies’ sales and recurring income.

One question related to competition with other countries was Q17 “do you feel competition from companies in other countries in the price and quality of your products?,” to which 12% of the respondents answered “feel strongly,” 49% said “feel to some extent,” 28% selected “do not feel so much,” and 12% expressed “do not feel at all.” In response to Q18 “companies in which particular country do you feel competition from?,” 24 companies indicated “China,” 10 companies pointed to “South Korea,” 7 companies said “Taiwan,” 2 companies cited “eastern Asian countries,” 2 companies wrote “Thailand,” and other respondents indicated “the United States,” “European countries,” and “only domestic companies.” In addition, when asked Q19 “is your company technologically more competitive than the competitors in other countries?,” 8% answered “much more competitive,” 53% answered “Somewhat more competitive,” 24% answered “not so competitive,” and 16% answered “not competitive at all.” Assuming that they were indeed more competitive technologically than foreign companies, competition is likely to arise in terms of cost. The results presented above suggest that although the companies are not inferior to their competitors in terms of technology, competition originates particularly from China, South Korea, and Taiwan.

To Q20 “are you considering overseas relocation of a store or factory?,” 79% replied “not considering overseas relocation,” 12% replied “considering overseas relocation,” and 9% replied “already implementing overseas relocation.” Subsequently, Q21 asked “do you agree to the immigration policy of accepting foreign workers?,” and 26% of the respondents would “agree,” 12% “would not agree,” and 62% would “neither agree nor disagree” to such a policy.

The final section of this report presents some comments provided in the free-answer section of the questionnaire. The comments included “we are powerless at the level of small factories. To increase our price competitiveness, we purchased new machines, reduced employees to the greatest extent possible, and ran the machines 24 hours a day without the workers’ attendance, but since the Lehman Brothers’ bankruptcy, many companies have gone bankrupt or have demanded discounts

and the yen kept appreciating for two years. As a result, most of our products have gradually been shifted to imports,” “in the old days, when a nation's economy was strong, the currency of the country appreciated. Recently in Japan, however, the yen's value rises even when the economy is weak,” “foreign exchange intervention gives only a temporary relief,” “I trust the Bank of Japan,” and “we suffered large losses in derivatives recommended by a large bank because of a rapid rise in the yen’s value.”

3.3 Coefficient of correlation

Table 1 presents the coefficients of correlation of answers to key questions. The colored numbers reflect that the null hypothesis that the coefficient of correlation is zero at the 5% significance level is rejected. Coefficients of correlation have been calculated based on data that exclude “not sure” from the answer choices. The following describes results of key coefficients of correlation that were significant.

Table 1. Correlation

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q14	Q17	Q19	Q20	Q21	Capital	Employees	Sales	Ordinary income	
Q1	1.00																					
Q2	-0.36	1.00																				
Q3	-0.30	0.12	1.00																			
Q4	-0.42	0.13	0.75	1.00																		
Q5	-0.15	0.12	-0.02	0.11	1.00																	
Q6	0.80	-0.06	-0.19	-0.22	-0.09	1.00																
Q7	0.14	0.01	-0.31	-0.23	-0.04	0.13	1.00															
Q8	0.07	-0.01	-0.19	-0.11	-0.29	0.10	0.24	1.00														
Q9	-0.28	-0.05	0.35	0.26	0.43	-0.12	-0.11	-0.29	1.00													
Q10	0.17	-0.40	-0.18	-0.18	0.42	0.20	0.04	-0.05	0.21	1.00												
Q11	-0.03	-0.07	0.26	0.27	-0.07	-0.06	-0.11	-0.12	-0.22	0.19	1.00											
Q12	-0.04	0.08	0.22	0.23	-0.05	0.02	0.10	-0.03	-0.13	0.21	0.48	1.00										
Q14	0.13	-0.36	0.11	0.24	-0.09	0.10	0.03	-0.08	-0.01	0.07	0.41	0.41	1.00									
Q17	-0.10	-0.04	-0.20	-0.20	0.11	-0.18	0.33	0.04	0.13	0.25	0.02	-0.09	-0.19	1.00								
Q19	0.04	-0.35	0.20	0.38	-0.28	-0.08	-0.08	0.30	-0.10	0.07	0.40	0.31	0.40	0.33	1.00							
Q20	0.14	-0.04	0.00	0.12	-0.30	0.17	0.14	0.41	-0.21	-0.09	0.28	0.01	0.16	0.05	0.32	1.00						
Q21	-0.04	-0.31	0.35	0.14	-0.04	-0.12	0.13	-0.09	0.49	-0.08	0.00	-0.29	0.19	-0.17	0.22	0.10	1.00					
Capital	-0.12	0.11	-0.37	-0.23	0.01	-0.08	-0.14	0.04	0.04	-0.04	-0.38	-0.31	-0.05	-0.05	-0.10	-0.42	-0.18	1.00				
Employees	-0.14	0.10	-0.38	-0.32	-0.01	-0.11	-0.15	-0.01	0.04	-0.08	-0.38	-0.31	-0.35	0.05	-0.23	-0.39	-0.14	0.90	1.00			
Sales	-0.14	0.11	-0.36	-0.22	0.02	-0.11	-0.13	0.06	0.10	-0.09	-0.41	-0.05	-0.03	-0.05	-0.09	-0.51	-0.18	0.99	0.97	1.00		
Ordinary income	-0.19	0.20	-0.34	-0.26	0.04	-0.10	-0.12	0.09	0.10	-0.10	-0.42	-0.12	-0.06	0.01	-0.16	-0.52	-0.22	0.97	0.96	0.95	1.00	

The correlation between Q4 and Q1 at the fourth row from the top of the left-end column is -0.42, which suggests that the more the companies considered the exchange rate as showing a strong yen, the more they tended to feel that the intervention was ineffective. In other words, those companies not considering the exchange rate as reflecting a very strong yen felt that the intervention had some effect. The correlation between Q9 and Q3 at the ninth row from the top and the third column from the left is 0.35, which indicates that the companies considering the foreign exchange intervention appropriate would prefer intervention to loans as measures against the yen's

appreciation and those companies perceiving that the intervention was inappropriate would prefer loans to intervention. The coefficient of correlation of Q19 and Q4 is 0.38, which implies that the higher a company's technological competitiveness in comparison to other companies, the more the respondents of a company consider the intervention to be effective. Conversely, respondents of companies with low technological competitiveness tend to think that intervention was ineffective.

4 Conclusion

This study conducted a questionnaire survey of companies in Higashi Osaka to elicit opinions related to foreign exchange policies. No other researchers have reported SMEs' perceptions of foreign exchange policies. This study is therefore regarded as presenting data for academic importance and as a contribution to the literature. The key findings in this study include that the management of many companies evaluate the effect of foreign exchange intervention negatively. They considered the level of exchange rates at the time (around November 2012) as reflecting a strong yen. Moreover, managers of those companies think that the government should intervene more frequently. The study also raised the issue of necessity to consider measures against the yen's appreciation other than foreign exchange intervention such as loans and subsidies. The interpretation of results and analyses presented herein require some caution in some respects. It is noteworthy that the questionnaire survey in this study was administered to a very small sample of companies in a specific geographical area. Additionally, some of the questions must be improved. Based on these study results, more extensive surveys should be conducted in the future.

Acknowledgments

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Appendix A

Questionnaire

Fill your answers in directly in this questionnaire form.

Circle the number attached to the answer you select for questions that are given options to choose from.

Write your specific answer when you select "Other."

Please write your comments and opinions in the margin if you have any.

Opinions on the exchange rate level

Q1. What do you think about the level of the exchange rate (1 US dollar = 79.73 yen) as of the end of October 2012?

A smaller value of yen to the dollar means a stronger yen and vice versa.

- 1) Yen is very strong. 2) Yen is somewhat strong. 3) It is an appropriate level.
- 4) Yen is somewhat weak. 5) Yen is very weak. 6) Not sure

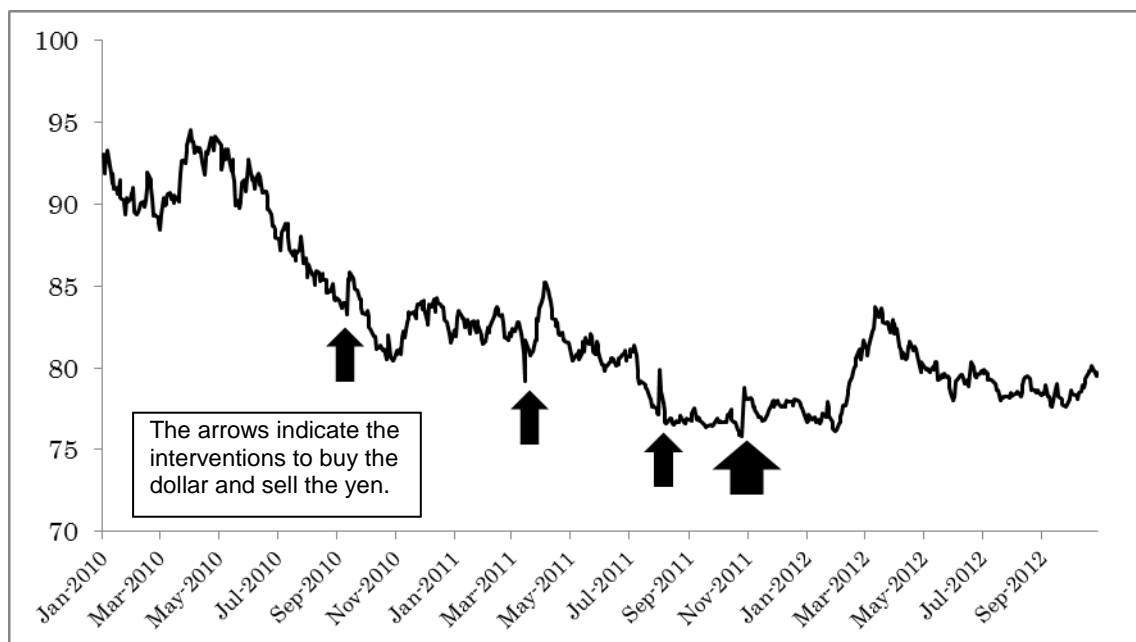
Q2. What is the level of the current exchange rate that your company considers appropriate?

(1 US dollar = _____ yen)

(Why? _____)

Foreign exchange policy

Intervention to buy the dollar and sell the yen was implemented about eight times (eight days) between September 2010 and November 2011 for a total of 16,422 billion yen. The graph below indicates the yen exchange rates and foreign exchange intervention (arrows) after January 2010. An intervention was implemented on five consecutive days from October 31, 2011.



Q3. Do you think the foreign exchange interventions implemented in and after 2010 were appropriate?

- 1) Very appropriate 2) Appropriate 3) Not so appropriate 4) Not appropriate at all
- 5) Not sure

Q4. Do you think that the foreign exchange interventions implemented in and after 2010 were effective?

- 1) Very effective 2) Somewhat effective 3) Not so effective 4) Not effective at all 5) Not sure

Q5. What do you think about the government's foreign exchange intervention?

- 1) It should be done more. 2) It should be done slightly more.
- 3) It should not be done so much. 4) It should not be done at all. 5) Not sure

Q6. What do you think about the level of the exchange rate, 75.84 yen ^(note) to a dollar, on October 30, 2011, immediately before the exchange intervention on five consecutive days totaling approximately nine trillion yen? Note: The US dollar–yen spot rate at 17:00 of the Tokyo Interbank Offered Rate

- 1) Yen is very strong. 2) Yen is somewhat strong. 3) It is an appropriate level.
- 4) Yen is somewhat weak. 5) Yen is very weak. 6) Not sure

Q7. Did you know about the "Safety Net Guarantee System (No. 5: type of industry turning worse of business conditions (national level))"^(note) that had been established as a measure to support the financing of SMEs in response to the Great East Japan Earthquake and the rising yen?

- 1) I knew about it. 2) I did not know about it.

Note: A system to support SMEs belonging to the types of industry for which business conditions were deteriorating on the national level. Eligibility has been added with the condition that the company must be an SME of which the latest monthly sales, in general, have decreased 10% or more year-on-year because of the appreciation of the yen; also, the company must have average monthly sales in the three months including the following two months expected to fall 10% or more year-on-year.

Q8. Have you used the loans for measures against the strong yen (e.g., Safety Net Guarantee No. 5)? Why did you use or not use such a loan?

- 1) Yes, I (we) have. 2) I (We) have considered using such a loan. 3) No, I (We) have not.
- Why? (_____)

Q9. If only one of "foreign exchange intervention" and "increased loans for financing" were to be implemented as measures against strong yen, which one do you think would be more desirable for your

company?

1) Foreign exchange intervention 2) Foreign exchange intervention would be more desirable than the other. 3) Increased loans would be more desirable than the other. 4) Increased loans

Effect of exchange rate fluctuations on your company

Q10. How great an effect do exchange rate fluctuations have on the performance of your company?

1) Strong effect 2) Some effect 3) Minimal effect 4) No effect at all 5) Not sure

Q11. Do you directly export products or raw materials to an overseas company?

1) Yes => Go to Q11a 2) No

Q11a. If you directly export goods, what is the currency used in the transactions?

1) Yen 2) U.S. dollar 3) Euro 4) Other (_____)

[Continue on the reverse side]

Q12. Do you directly import products or raw materials from an overseas company?

1) Yes => Go to Q12a 2) No

Q12a. If you directly import goods, what is the currency used in the transactions?

1) Yen 2) U.S. dollar 3) Euro 4) Other (_____)

Q13. Select one of the following that best describes your company.

1) An export company 2) An import company

3) A company engaging in both import and export

4) A company doing yen-based business mostly with Japanese export companies

5) A company doing yen-based business mostly with Japanese import companies

6) A company doing yen-based business mostly with Japanese import and export companies

7) A company doing yen-based business mostly with companies in domestic industries other than international trade.

8) Other (_____)

Q14. Do you hedge the risk of exchange rate fluctuations through financial transactions such as forward exchange contracts?

1) Yes => Go to Q14a 2) No

Q14a. If yes, what are the specific measures you are taking?

(_____)

Q15. What measures does your company take against the strong yen? (Multiple answers allowed)

Describe the measures in detail.

- 1) Increase forward exchange contracts, etc. 2) Expand overseas business 3) Increase domestic business
- 4) Reduce cost 5) Increase technical development 6) Other 7) Nothing in particular

What are the specific measures your company is taking against the strong yen?

()

Q16. How much are you affected by the appreciation of one yen against US dollar?

Sales [(1) increase (2) decrease] by approximately (___)% (3) Sales do not change (4) Not sure

Ordinary income [(1) increases (2) decreases] by approximately (___)% (3) Ordinary income do not change (4) Not sure

Q17. Do you feel competition from companies in other countries in the price and quality of your products?

- 1) Feel strongly 2) Feel to some extent 3) Do not feel so much 4) Do not feel at all

Q18. Companies in which particular country do you feel the competition from? (multiple answers allowed)

(Country:)

Q19. Is your company technologically more competitive than the competitors in other countries?

- 1) Much more competitive 2) Somewhat more competitive 3) Not so competitive 4) Not competitive at all

Q20. Are you considering overseas relocation of a store or factory?

- 1) Already implementing overseas relocation 2) Considering overseas relocation 3) Not considering overseas relocation

Q21. Do you agree to the immigration policy of accepting foreign workers?

- 1) Agree 2) Do not agree 3) Neither agree nor disagree

Overview of your company

Company name	
Type of business	
Location	
Capital	

Number of employees	
FY 2011 sales	
FY 2011 ordinary income	

Comment

(Write in the space below if you have any request to the government related to its foreign exchange policy or comment on this questionnaire.)

This is the end of the questionnaire. Thank you very much for your cooperation.

After you have finished answering the questions, please return the questionnaire in the enclosed envelope by **November 30, 2012.**

Appendix B

Table 1. List of questionnaire results

Choices	1	2	3	4	5	6	7	8	Total
Q1	27	10	2	0	1	4			44
Q2	Average response is 1 US dollar = 95.595 yen								37
Q3	1	18	11	7	7				44
Q4	0	11	21	8	5				45
Q5	15	12	7	2	8				44
Q6	35	5	0	0	1	4			45
Q7	28	17							45
Q8	3	1	41						45
Q9	8	13	12	11					44
Q10	6	26	9	2	2				45
Q11	6	37							43
Q11a	1	2	0	1					4
Q12	13	27							40
Q12a	3	8	0	2					13
Q13	0	2	4	3	1	1	25	5	41
Q14	3	39							42
Q15	1	2	2	7	1	1	22		36
Q16 (net sales (%))									2
Q16 (choices)	0	3	13	24					40
Q16 (ordinary income (%))									2
Q16 (choices)	0	4	12	24					40
Q17	5	21	12	5					43
Q18	China (24), S. Korea (10), Taiwan (7), E. Asia (2), Thailand (2), other								30
Q19	3	20	9	6					38
Q20	4	5	34						43
Q21	11	5	26						42

Note: Values in the "Total" columns represent the number of responses.