

ONE TEAM

SUSTAINABLE FORESTRY THROUGH CORPORATIZATION

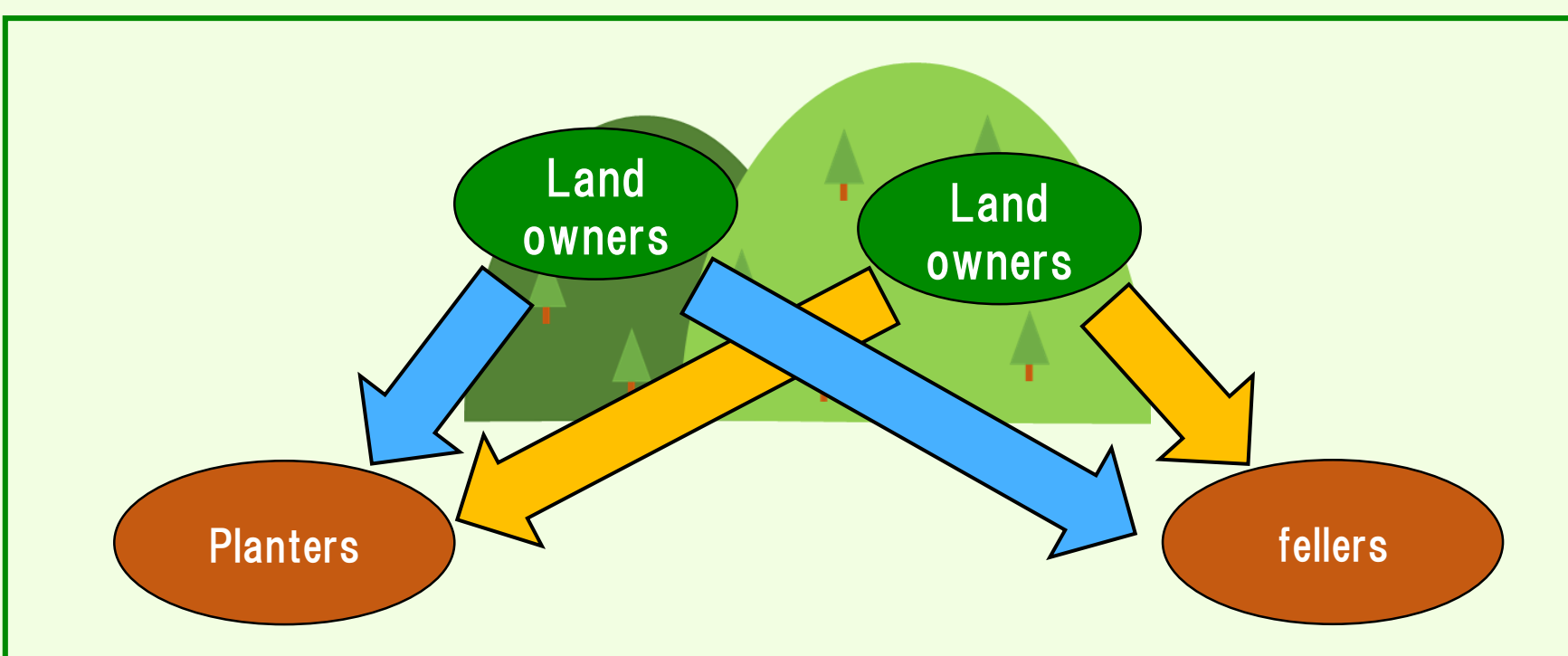
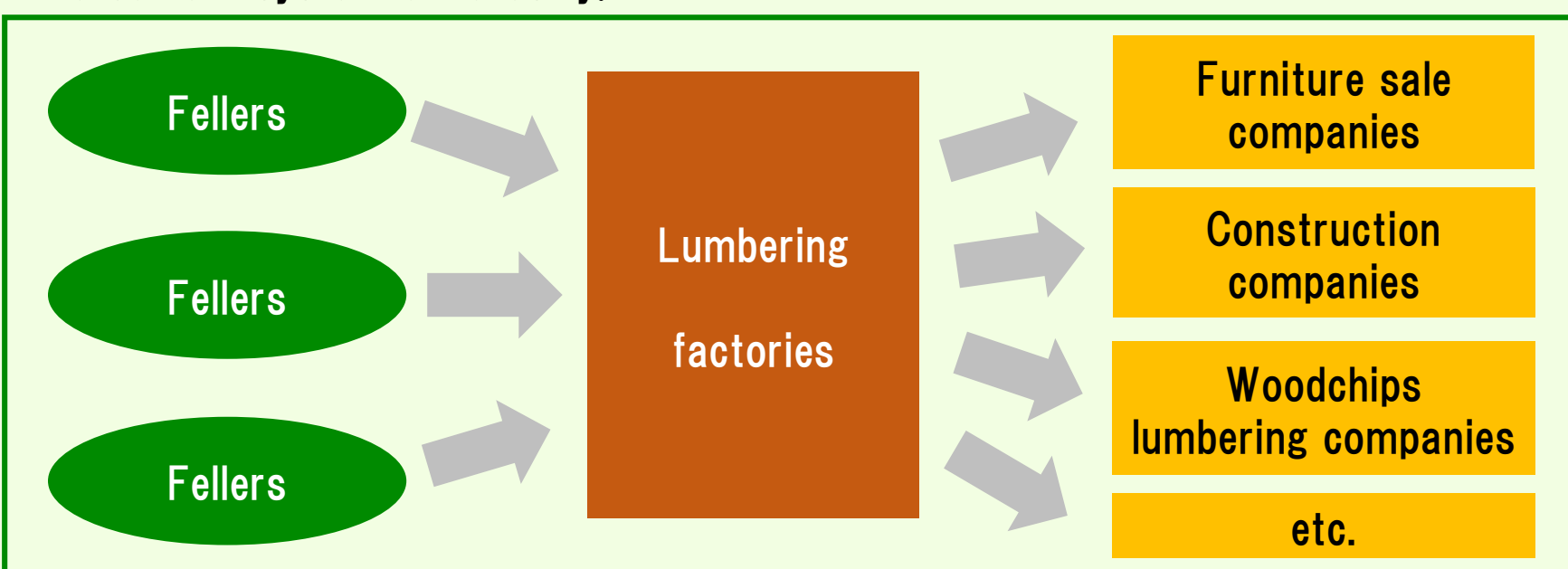
Miyazaki Ohmiya High Senior School

Abstract Miyazaki has been the first place in production of Japanese cedars in 28 years. However, lately, the forestry in Miyazaki is in poor condition. One of the big problems people in the forestry industry have is that a lot of trees are stolen or are cut down wrongly. This is caused by uncertainty of landowners and prevents forestry in Miyazaki from developing further. To solve trouble like these, our group has come up with an idea to implement administration of forestry, in other words, to corporatize forestry, which nobody has tried yet. If we put this idea into practice, owners of mountains and forests can save their time by commissioning companies to plant, administer, and cut trees to maintain their land. This proposal will be able to create a system that generates profit so that companies can head for a surplus. Moreover, this system will make it possible to distinguish the borders between the personal forests, which will reduce the number of stolen trees. Although a huge initial expense is necessary to carry out this plan, we suggest an investment to solve it. Instead of a large expense, being able to invest with even a little money will make forestry more familiar to people. Then more people will try to invest in forestry and forestry in Miyazaki will become more active. As one of methods to make this idea more real and useful, we surveyed 120 people in Taiwan, 15 people in Singapore, and about 80 people here in Japan. Through this survey and through our interview of a couple of people involved in forestry, we concluded that it was possible to create an investment plan which would be suited to the Japanese, the Taiwanese and the Singaporeans and that this proposal would be a key to success in generating sustainable forestry in Miyazaki.

Background and purposes

Miyazaki has been the first place in Japanese cedar production for 28 years!

The current system of forestry.



Current situations

- ① Planting is not ongoing and sustainable forestry is impossible.
- ② Felling is not possible because landowners are unclear.
- ③ The number of workers has been decreasing.



Solutions

- ① Sustainable forestry will be possible because the corporation do both planting and felling.
- ② The problems about landowners will not spread out since the corporation manages altogether.
- ③ More workers will be found by corporative forestry and investment.

A facing challenge

Much money is needed as initial cost.



Purpose of our project

Problems about corporatization and forestry will be solved at the same time.

Ways of carrying out the project

Interviews

- To Miyazaki prefectural office
 - To Miyazaki Chuo Shinrin Kumiai
 - To Matsuoka Rinsan
- Statistics on forestry in Miyazaki
 - Documents on actual transactions
 - Basic knowledge on forestry dealings

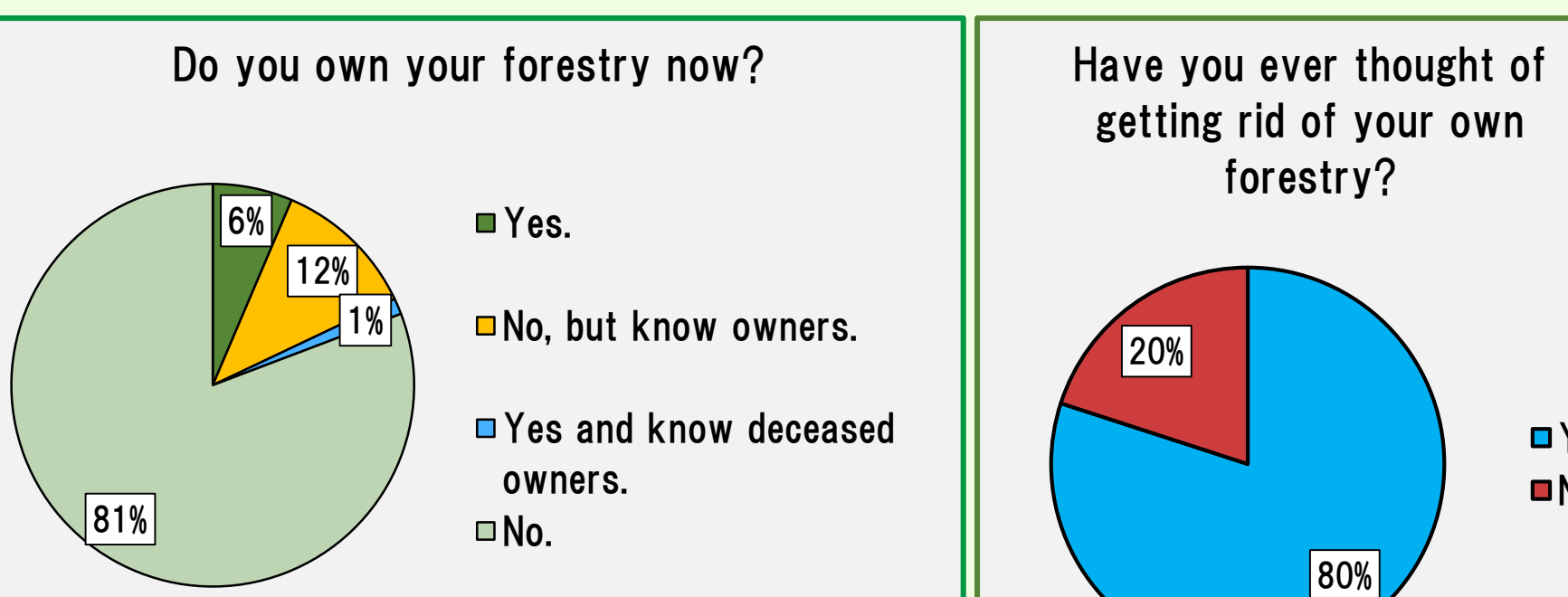
Surveys

- To 15 Singaporean people
 - To 120 Taiwanese people
 - To 78 Japanese people
- Experience of investment
 - Willingness for investment
 - Amount of money to invest
 - Rate of interest
 - Terms of dividend
 - Risks of investment
 - Property in mountains

Profit and loss account calculation

Estimate interest rate and profits of the corporation every year using Excel.

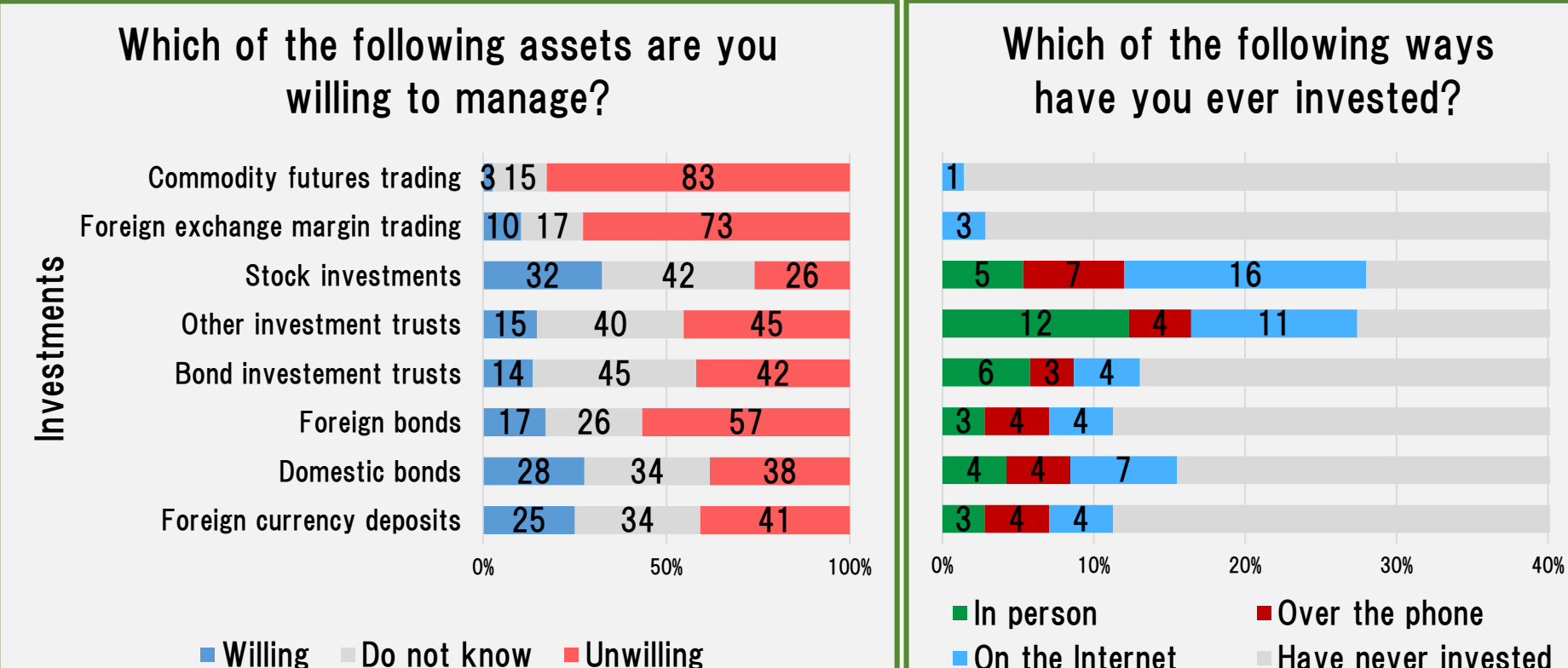
Surveys in Japan



Result Those who either own or know about their forest are almost unwilling to keep it in their hands anymore.

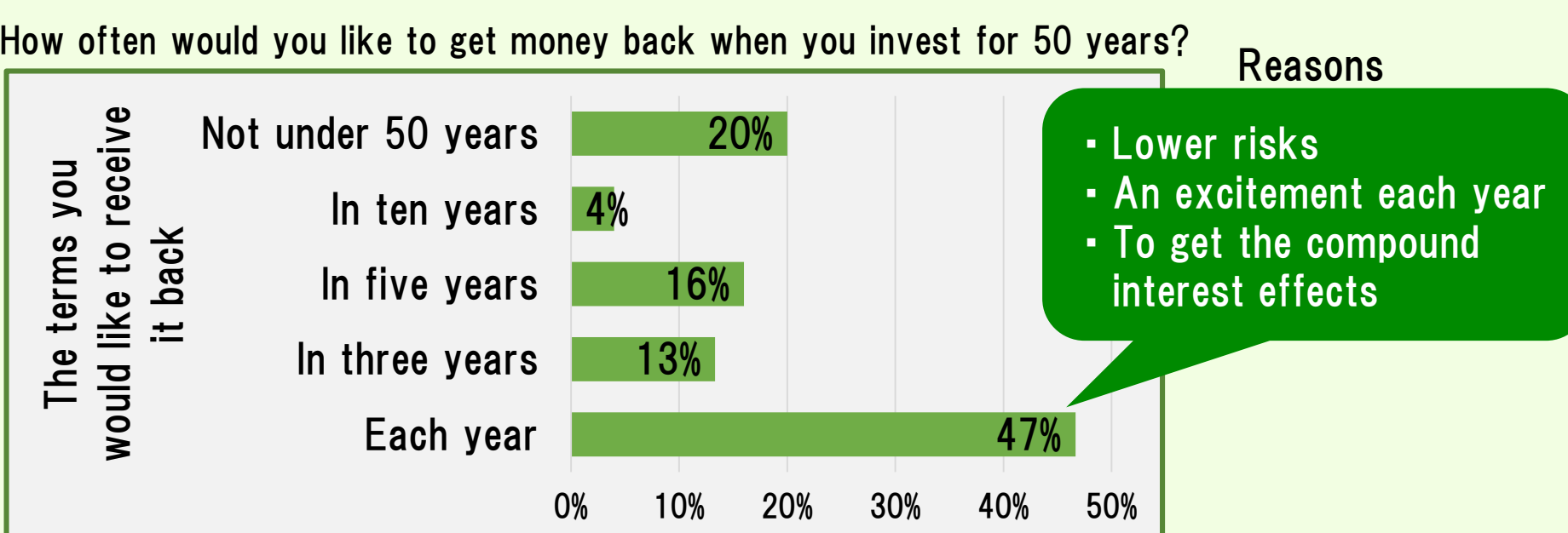
Conclusion A new way of investment dealing with "land" will seem to be possible.

Surveys in Japan



Result Stock investment is the largest number in both questions.

Conclusion We seem to be able to gather initial cost by stock investments.



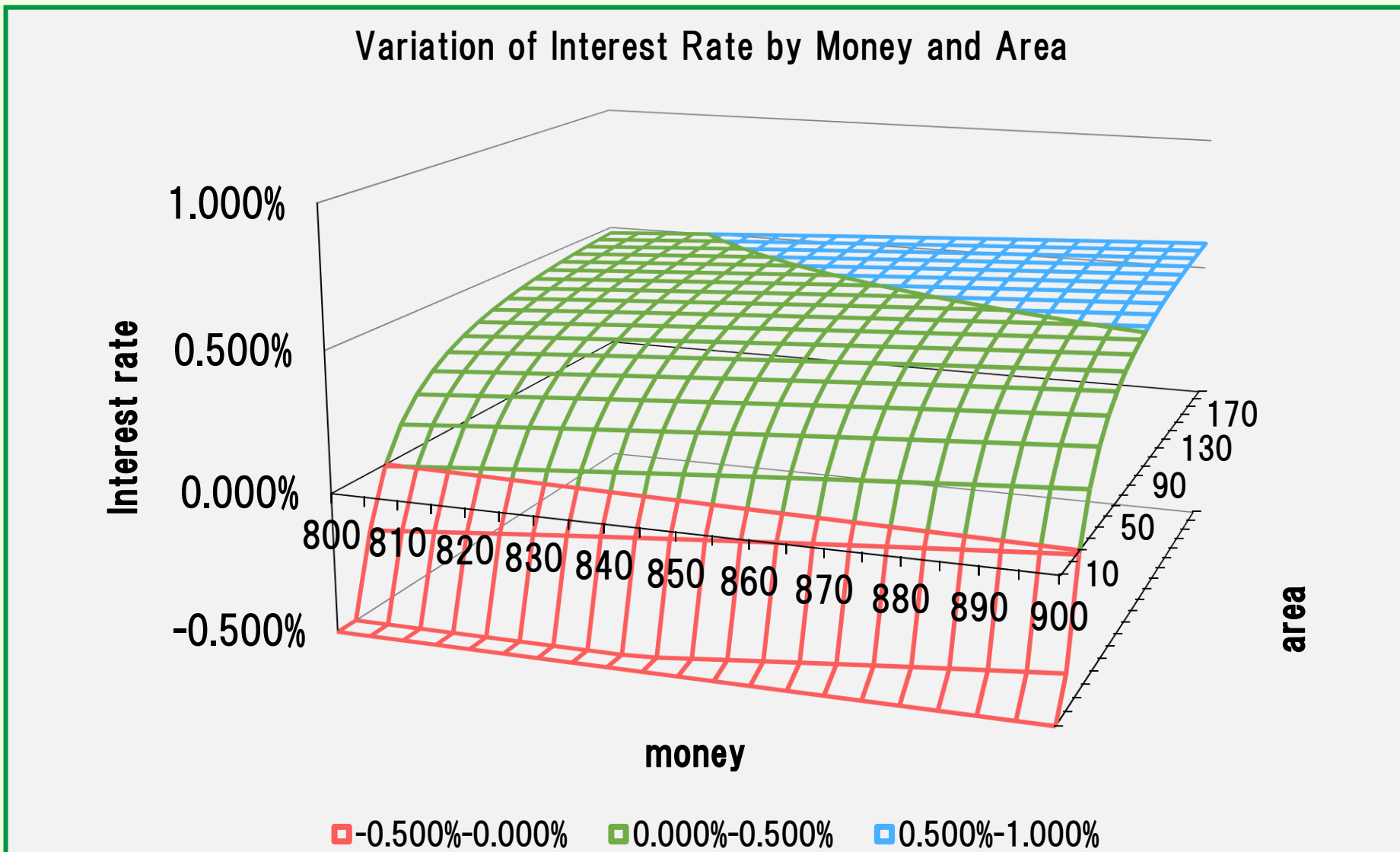
Result Many people seem to prefer each year.

Conclusion More people are willing to get their money back each year.

Income statement

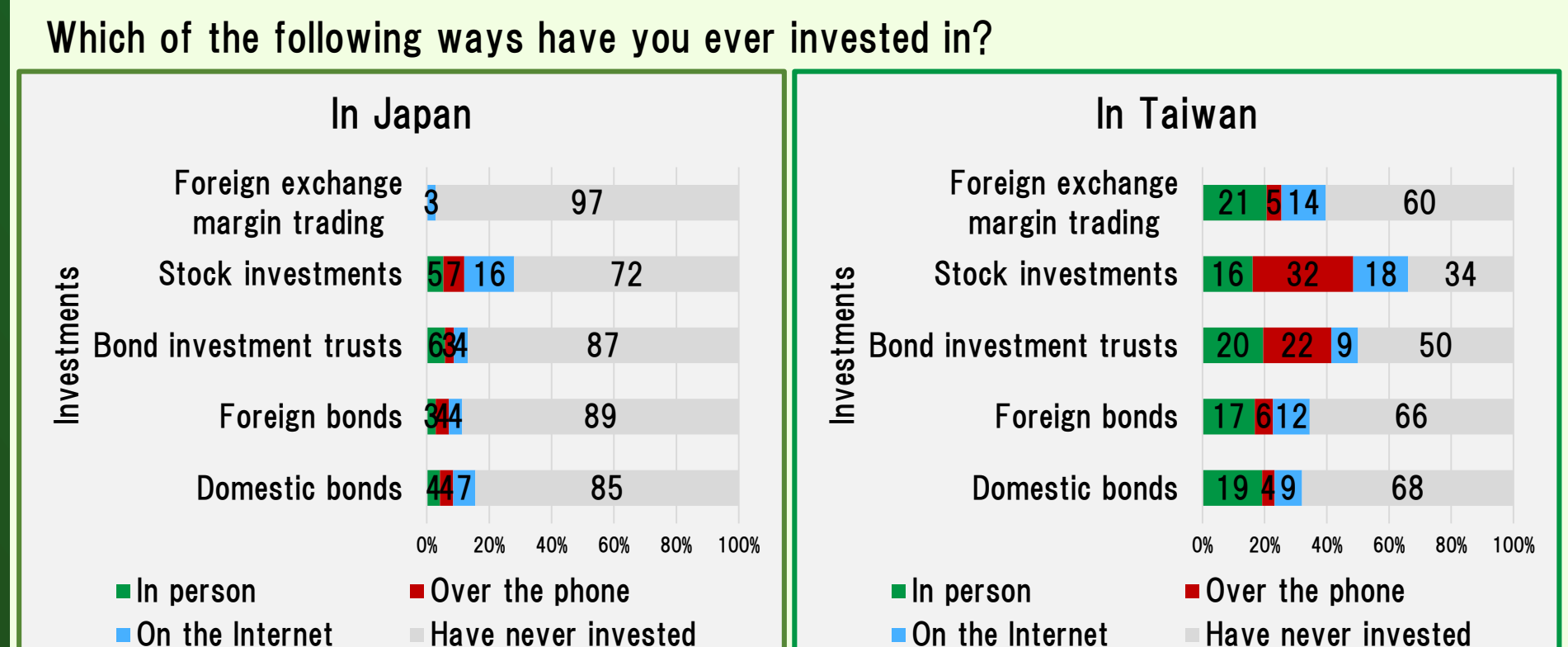
We calculate our benefit per 1 ha (When we manage forestry for 40 ha that is the least extent to make a profit. [money : × 10³ yen])

year	The company					
	Income and outgo	The budget in forestry (operation cost and revenue)	Balance	Accumulated Balance	Accumulated Balance Including there for administration	Land cost
0	810	2277	2272.5	2272.5	2272.4	814.5
1	-789.5	-504.8	-1298.8	973.7	973.5	4.5
2	-3.5	-79.8	-87.8	885.9	885.6	4.5
3	-3.5	-79.8	-87.8	798.1	797.7	4.5
4	-3.5	-79.8	-87.8	705.3	704.8	4.5
5	-3.5	-79.8	-87.8	617.5	616.8	4.5
6	-3.5	0	-8.0	609.5	608.7	4.5
7	-3.5	0	-8.0	601.5	600.6	4.5
8	-3.5	0	-13.0	588.5	587.5	4.5
9	-3.5	0	-8.0	580.5	579.4	4.5
10	-3.5	0	-8.0	572.5	571.3	4.5
11	-3.5	0	-8.0	564.5	563.2	4.5
12	-3.5	0	-13.0	551.5	550.1	4.5
13	-3.5	0	-8.0	543.5	542.0	4.5
14	-3.5	0	-8.0	535.5	533.9	4.5
15	-3.5	-103.6	-111.6	423.9	422.2	4.5
16	-8.5	0	-13.0	410.9	409.0	4.5
17	-3.5	0	-8.0	402.9	400.9	4.5
18	-3.5	0	-8.0	394.9	392.8	4.5
19	-3.5	0	-8.0	386.9	384.7	4.5
20	-8.5	0	-13.0	373.9	371.6	4.5
21	-3.5	0	-8.0	365.9	363.5	4.5
22	-3.5	0	-8.0	357.9	355.4	4.5
23	-3.5	0	-8.0	349.9	347.3	4.5
24	-8.5	0	-13.0	336.9	334.2	4.5
25	-3.5	-147	-155.0	181.9	179.1	4.5
26	-3.5	0	-8.0	173.9	171.0	4.5
∴	∴	∴	∴	∴	∴	∴
43	-3.5	0	-8.0	17.9	13.1	4.5
44	-8.5	0	-13.0	4.9	0.0	4.5
45	0.00	2277	2272.5	2277.4	2272.4	4.5

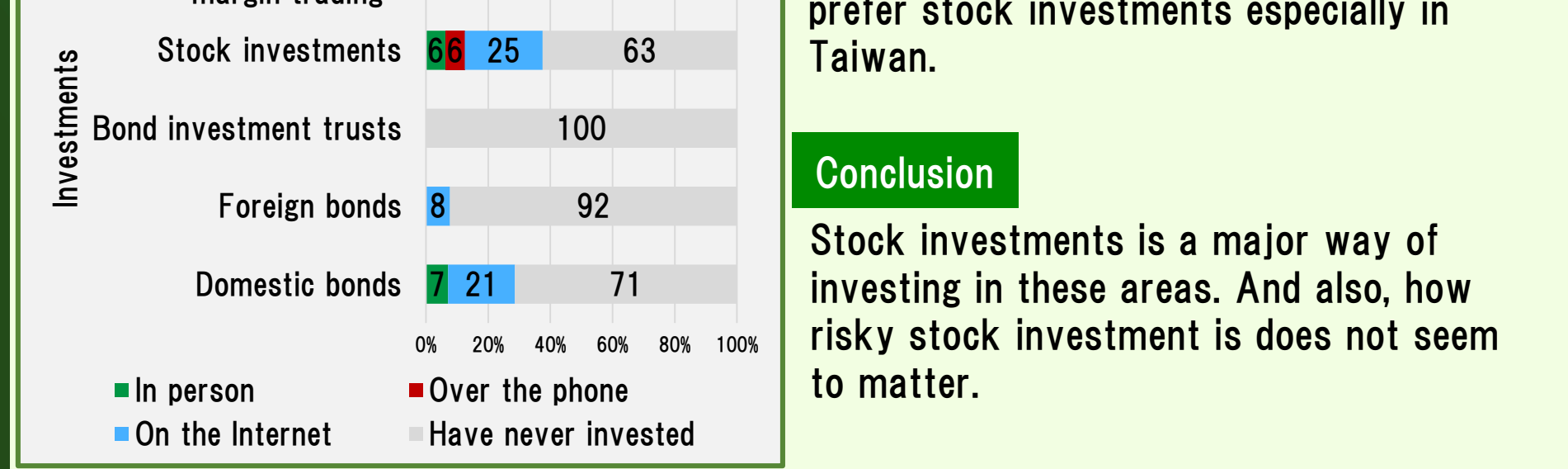


Conclusion As we borrow more money and as we manage more area, the interest rate goes up higher.

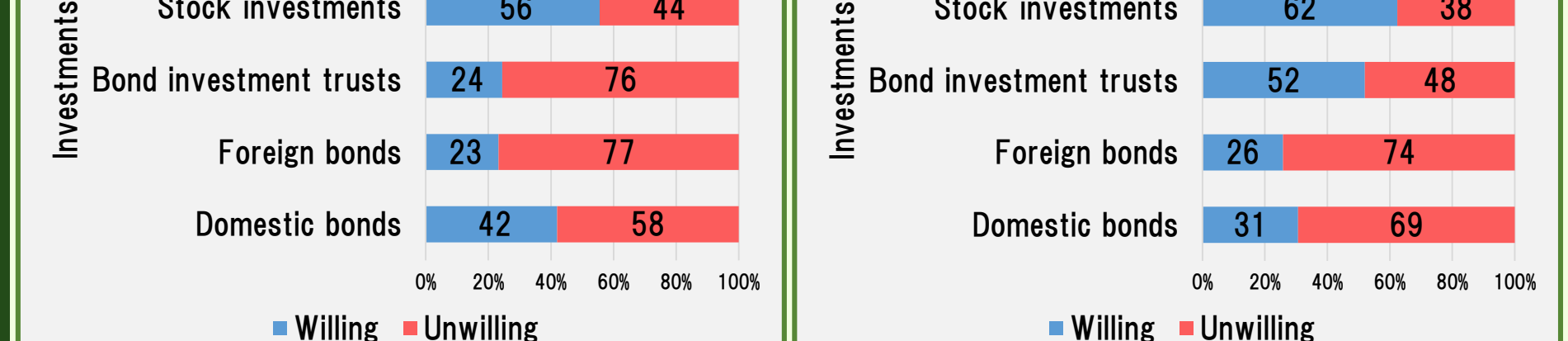
Surveys in the foreign countries



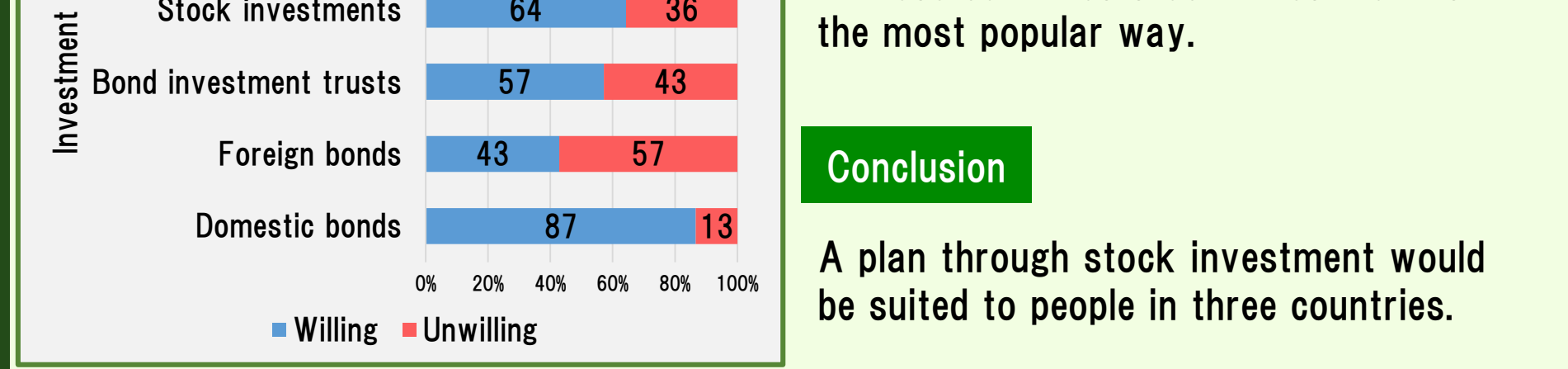
Result People in these three countries tend to prefer stock investments especially in Taiwan.



Conclusion Stock investments is a major way of investing in these areas. Does not seem risky stock investment is and also, seem to matter.



Result In these countries stock investment is the most popular way.



Conclusion A plan through stock investment would be suited to people in three countries.

Conclusion

- One-year investment is the most recommended plan.
- This plan is expected to be suited for the Japanese, the Taiwanese, and the Singaporean.
- This plan will enable us to sustain our forestry industry in Miyazaki.

What is necessary to do more

- search the problem about uncertainty of land ownership.
- survey more in Singapore to make sure whether the result clearly reflects opinions of people there.

References and acknowledgements

◀Acknowledgements▶
We extremely appreciate Mr. Fujikake in Miyazaki University, Mrs. Kawano in Miyazaki Ohmiya high school, Mr. Fujimoto in the environmental forestry division of the environmental forestry department of the Miyazaki prefectural office, Mr. Nasu, Mr. Hashimoto in Miyazaki Chuo Shinrin Kumiai, Mr. Matsuoka, the president of Matsuoka Rinsan Inc. and the teachers and parents in Miyazaki Ohmiya High school, who understood and cooperated with us.

◀References▶
井上公基・梅田三樹男,「立木価格の簡易評価法」,1987-06-26,最終閲覧日 2019-10-30 https://www.jstage.jst.go.jp/article/jifs1953/70/10/70_10_447/pdf/en
宮崎県環境森林部 山村・材木振興課,「宮崎県の林業・木材産業の動向」,2018-06
「再生産可能な木材価格についての検討(40年生スギ)」
「森林維持にかかる費用」
宮崎中央森林組合,「森林経営計画制度のしおり」,2014
林野庁森林整備部整備課,「森林整備事業のあらまし」,2018