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CROSS TABULATION ANALYSIS OF INVESTMENT BEHAVIOUR FOR SMALL INVESTORS IN THE HONG KONG DERIVATIVES MARKETS

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ABSTRACT

This paper, using a survey, makes an attempt to find out the attitude of small investors towards financial derivatives in Hong Kong and their investing pattern on different financial derivatives. The observation period for the current survey cover the most turbulent period of Euro Zone Sovereign Debt crisis of January 2013-January 2014 which happened in Hong Kong. The survey was conducted from 21 January 2014 to 21 March 2014. A non-probability sampling (snowball method) was applied to select individuals aged 18 or above from the population of Hong Kong. The results indicate that small investors mostly tend to trade warrants (24% of total) and stock options (23% of total). The results further indicate that 22.7% and 21.3% of the respondents respectively considered overall past performance seen from a historical perspective and recommendations, advice, and forecast from professional investors were the decisive factors which would affect their decision-making while investing in the financial derivatives. At the same time, about 83.3% of the respondents can be found in less than 10% portfolio weight in derivatives products, they were influenced by Euro Zone Sovereign Debt crisis. This result unveils that the small investors put less investment in derivatives markets.

Keywords: Cross Tabulation, Investment Behavior, Small Investors, Derivatives Markets, Hong Kong.

Introduction

In 2011, major Asia markets were confronted by a number of uncertainties. The Japanese market was hit due to a sequence of natural calamities like massive earthquake in March which was followed by a tsunami and radiation leakage at one of its nuclear plants. The Hong Kong market generally underperformed, dragged down by financial stocks (HKEx, 2011 and 2012). In the present

study, I attempt to analyse and study as to what sorts of events will initiate a psychological instead of rational response from the small investors in the Hong Kong derivatives markets. Humans simply aren't capable of carrying out the dynamic optimization problems required by the tenets of classical finance theory. Instead they use rules of thumb (heuristics) to deal with a deluge of information (Montier, 2010, p.1).

Hon (2014) identified five factors that capture the investment decision of small investors in Hong Kong derivatives markets. Their investment decision has uniform views as to the ascending order of importance of cognitive style (the least importance factor), risk tolerance, return performance, reference group, and personal background (the most important factor). I extend Hon's paper to find out the attitude of small investors towards financial derivatives in Hong Kong and their investing pattern on different financial derivatives. By using the information collected, I make an attempt to examine if there is a phenomenon in the pattern of investment and analyse the reasons behind it.

This paper is organized as follows: Section 2 explains the data and method, and is followed by Section 3, which discusses the analytical results, and the last section concludes the present study.

Data and Method

The data for the present study was collected from the small investors in Hong Kong through a survey questionnaire. Its main purpose was to find out the attitude of small investors towards financial derivatives in Hong Kong and their investing pattern on different financial derivatives. The questionnaire was designed to elicit information about demographics, investment experience and behaviour, and factors affecting financial decision-making of the respondents. The first part of the questionnaire focused on the investment experience, perceptions about the investment

conditions, and factors that affect financial decision-making. The second part collected the respondents' demographic data such as personal information which include gender, age, education level, employment status, and average monthly income.

The survey was conducted from 21 January 2014 to 21 March 2014. I had a limit resource to conduct this survey. A group of undergraduate students helped in the distribution of questionnaires to the respondents. A non-probability sampling¹ (snowball method) process was adopted to select individuals aged 18 or above from the population of Hong Kong. The target population is the small investors in the Hong Kong derivatives markets. Finally, I distributed 1,200 questionnaires to my students. There were 1,130 selected respondents who completed and returned the questionnaires and this represents a response rate of 94 per cent. I employ cross tabulation as my empirical framework.

Results

In this section, I analysed the data obtained from my survey. First, I present information about the sample and then I report their opinions on investing using financial derivatives. Second, I report the cross tabulation analysis.

Sample Demographics and Summary Statistics

[Table 1 here]

The profile of the respondents is reported in Table 1. Among the respondents, 64% of the respondents were male and 36% were female. The majority of them were under the

¹ See Cochran, Mosteller, and Tukey (1954).

age of 55 (94%), and only 6% were aged 55 or above. Regarding the level of education, majority of them have tertiary education (57.8%), while 42.2% graduated from secondary schools or below. Regarding their employment status, 73% of the respondents were employed, 15.8% were self-employed, 5.3% were retired and 5.9% were classified as “others” which included housewives and students. Finally, the respondents’ median income was \$16,363.84². 39% of the respondents answered the percentage of their average monthly income for derivatives investments. About 46.1% of them used 10% or less for it. 94.1% of the respondents used the Internet or e-mail either at home or at work in the past six months. 29.9% of the respondents are working for a large for-profit company with over 1,000 employees. 72.6% of the respondents had 3-4 members in their family. In view of the above demographic profile of the respondents, I believe that the respondents are representative of small investors in the Hong Kong derivatives markets.

[Table 2 here]

Responses to various items are reported in Table 2. The results from item 1 indicate

that 23.6% of the respondents had invested for a period ranging from three to five years, 22.9% had invested for one to three years, 18.8% had invested less for one year, 16.4% had invested for five to ten years, 13.5% had invested for a period above ten years and 4.9% had no experience of investing in financial markets. The results from item 2 indicate that 91.4% of the respondents invested in financial derivatives from January 2013 to January 2014.

Warrants were the most favorite product for investment; the results from item 3 indicate that 24.0% of the respondents traded it frequently. The second frequently traded derivatives product was stock options, with 23.0% of the respondents; the third frequently traded was Hang Seng Index (HSI) futures, with 19.3% of the respondents; the fourth frequently traded was Callable Bull/Bear Contracts (CBBC), with 17.6% of the respondents; the fifth frequently traded was Hang Seng Index (HSI) options, with 12.3% of the respondents; the least frequently traded was Renminbi non-deliverable forwards (NDF), only with 3.7% of the respondents. This may possibly be due to the fact that small investors have rich experience

² The result is calculated by:

$$M_d = B_L + \left[\frac{\frac{(N+1)}{2} - cf_B}{f_{M_d}} \right] \times i$$

Where:

M_d : The median income.

B_L : The lower boundary of the median class.

N : Total number of frequencies.

cf_B : The sum of the frequencies of all classes up

to the median class.

f_{M_d} : The number of frequencies in the median class.

i : The width of median class interval.

$$M_d = \$14,999.5 + \left[\frac{\frac{1,111+1}{2} - 380}{645} \right] \times \$5,000 = \$16,363.84$$

in warrant markets. These warrants are attractive investment vehicles for two reasons: their leveraging effect and limited loss feature make them attractive to aggressive investors; they can serve as hedging instruments to reduce the risk exposures arising from other related investments.

The most important determinants for the respondents to make investment decisions on financial derivatives are reported as follows. The results from item 4 indicate that 22.7% of the respondents think that the overall past performance of the market seen from a historical perspective; 21.7% of the respondents think those taking recommendations, advise and forecast from professional investors; and 18.4% of the respondents would take information from company as a basis for fundamental analysis. Discussion with personal friends and information from colleagues at work were less important in influencing investors' decisions, with only 5.4% and 2.1% respectively. The results show that the small investors pay more attention to past performance of the market when deciding their investments. As derivative investments are generally conceived to be high risk or very high risk (39.3% and 12.3% respectively, shown in item 15), it means that they expected the high return in shorter holding period.

Cross Tabulation Analysis

[Table 3 here]

The cross tabulation results of item 4 and item 10 show me that the respondents, who had taken the information from the company as a basis for fundamental analysis or the overall past performance of the market seen

from a historical perspective when they were making investments in financial derivatives, would have a relatively lower proportion to suffer loss. Table 3 shows that only 8.4% of the respondents who based on fundamental analysis as their major determinant had suffered loss on their derivatives investments, while 22.7% and 17.9% of the respondents had suffered loss when they had obtained information from colleagues and personal friends.

[Table 4 here]

The cross tabulation results of item 1 and item 10 show that the respondents who have more experience would have a relatively higher average return. It can be observed that there is a decreasing trend of the proportion of the respondents suffered loss on their derivatives investments with the longer investment experiences. Table 4 shows me that 21.4% of the respondents who have less than 1 year investment experience had suffered losses. It implies that the well-experienced respondents had a greater proportion to earn profit on their financial derivatives investments. Therefore, the investment experiences of small investors are directly related to the average return on their financial derivative investments.

[Table 5 here]

Table 5 shows the combined cross tabulation results of item 9 and item 10 which states that 17.9% and 20.2% of the respondents who usually sell or close out their positions within one day and one week had a larger proportion to suffer loss in their financial derivatives investments. While only 3.6% of the respondents who sell or close out their positions within one year had suffered

losses. It implies that there is a decreasing trend of the proportion of the respondents to suffer loss with longer holding periods. But, we are also concerned that derivatives prices have time value. Time value decays more rapidly as expiration approaches. 4.3% of investor who sells or closes out his positions more than one year has suffered loss.

To determine how the investment incentive and derivatives portfolio were affected during the Euro Zone Sovereign Debt Crisis, the respondents were asked to answer item 6. Table 2, reveals that a significant percentage of 74.3 of the respondents were affected by the Euro Zone Sovereign Debt crisis in their derivatives investment incentive. Only 25.7% of the respondents were not affected in their derivatives investments.

[Table 6 here]

At the same time, the proportion of derivatives in the portfolio was analysed among those who were impacted by Euro Zone Sovereign Debt crisis but they were not impacted. Table 6 combined cross tabulation results of item 6 and item 8 shows that about 83.3% of the respondents can be found in less than 10% portfolio weight in derivatives products, they were influenced by Euro Zone Sovereign Debt crisis. This result unveils that the small investors put less investment in derivatives markets.

[Table 7 here]

Table 7 combined cross tabulation results of item 7 and gender in table 1 shows that the majority of the male and female respondents, 45.0% and 46.0% considered their risk tolerance as medium. Yet, 30.2% and 3.8% of the male respondents believed

that their risk tolerance as high and very high respectively, compared with only 17.6% and 1.4% of the female respondents who believed that their risk tolerance as high and very high. Besides, 30.1% of the females conceived their risk tolerance as low, compared with only 17.6% of the males.

[Table 8 here]

Table 8 combined cross tabulation results of item 3 and gender in table 1 shows that the respondents who invest the type of financial derivatives most frequency. Table 8 shows that 26.2% of male preferred to invest warrant. This percentage is higher than female (20.8%). However, 25.9% of female preferred to invest stock options. This percentage is higher than male (20.9%). These two types of financial derivatives are invested most frequency.

[Table 9 here]

Table 9 shows the combined cross tabulation results of item 1 and item 3 which state that 25.0% and 23.7% of the respondents who usually have 3-5 years and 1-3 years' experience in their financial derivatives investments. The respondents who have 3-5 years' experience preferred to invest Hang Seng Index options (29.7%), while the respondents who have 1-3 years' experience also preferred to invest Hang Seng Index options (26.6%).

[Table 10 here]

Table 10 shows the combined cross tabulation results of item 3 and item 6. It reveals that 78.1% of the respondents were affected by the Euro Zone Sovereign Debt crisis in their Hang Seng Index futures investment incentive, which was a significantly large portion. Only 21.9% of the

respondents were not affected in their Hang Seng Index futures investments.

[Table 11 here]

Table 11 shows the combined cross tabulation results of item 3 and item 7. 53.9% of the respondents invested in stock options most frequency and 46.2% of the respondents invested in Hang Seng Index futures most frequency respectively, they believed that their risk tolerance as medium.

[Table 12 here]

Table 12 shows the combined cross tabulation results of item 3 and item 10. 38.3% of respondents have average return less than 10% in Callable Bull/Bear Contracts, while 35.9% of respondents have average return 10% and fewer than 30% in Hang Seng Index options. A larger proportion of respondents (19.3%) suffered loss in warrants.

[Table 13 here]

Table 13 shows the combined cross tabulation results of item 3 and item 15. 48.2% of respondents think that warrants investment were involved high risk level, while 41.5% of respondents think that stock options investment were involved medium risk level.

[Table 14 here]

Table 14 combined cross tabulation results of item 3 and age groups in table 1 shows that the majority of respondents who invest in their derivative investments during January 2013 to January 2014 are relatively younger. 31.6% of 18-24 years old group of respondents invested in Renminbi Non-Deliverable Forwards Contracts; 34.4% of 25-34 years old group of respondents invested in Hang Seng Index options; 30.5%

of 25-34 years old group of respondents invested in stock options; 28.5% of 25-34 years old group of respondents invested in Hang Seng Index futures; 27.9% of 25-34 years old group of respondents invested in Callable Bull/Bear Contracts; 26.5% of 45-54 years old group of respondents invested in warrants; while only 5.8% of the respondents who are over 55 years old invested in their derivatives investments.

[Table 15 here]

The cross tabulation results of item 3 and education level in table 1 indicate that the respondents who have higher education are prone to invest in financial derivatives. Table 15 shows that more than 58.1% of the respondents who have tertiary education for their derivatives investments during January 2013 to January 2014. On the contrary, the respondents (5%) who have relatively lower education (i.e. primary school and no school) are not prone to investing their derivative investments.

Conclusion

The main purpose of my research was to to analyse the attitude of small investors towards financial derivatives in Hong Kong and their investment patterns of different financial derivatives. The majority of them were under the age of 55 (94%), and only 6% were aged 55 or above. 23.6% of the respondents had invested for a period ranging from three to five years. As derivative investments are generally conceived to be high risk (39.3%), this means that they expected the high return in shorter holding period.

Firstly, 83.3% of the respondents can be found in less than 10% portfolio weight in derivatives products, they were influenced by Euro Zone Sovereign Debt crisis. This result unveils that the small investors put less investment in derivatives markets during January 2013 to January 2014.

Secondly, I studied the trading pattern and performance of the small derivatives investors. I found that the small derivatives investor that I studied mostly traded warrants (24.0%) and stock options (23.0%). This may possibly be due to the fact that these warrants are attractive investment vehicle (i.e., their leveraging effect and limited loss feature make them attractive to aggressive investors; and they can serve as hedging instruments to reduce the risk exposures arising from other related investments). Small investors also have long experience in warrant markets.

Thirdly, I tried to find out the factors which contribute to a better performance of the small investors. There is a decreasing trend of the proportion of the respondents to suffer loss with longer holding periods.

Fourthly, I studied the investment attitude and behaviour of the small investors in the Hong Kong derivatives markets. The most important determinants for the respondents to make investment decisions on financial derivatives are the overall past performance of the market seen from a historical perspective and recommendations, advice, and forecast from professional investors.

Finally, the majority of respondents who invest in their derivative investments during January 2013 to January 2014 are relatively younger. More than 58.1% of the respondents who have tertiary education for their derivatives investments. Male preferred to invest in warrant than female, while female preferred to invest stock options than male.

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List of tables**Table 1: Demographic characteristics of the respondents**

Personal characteristics	No.	% of total
Gender:		
Male	709	64
Female	398	36
Age group:		
18 - 24 years old	213	18.9
25 – 34 years old	329	29.1
35 – 44 years old	281	24.9
45 – 54 years old	238	21.1
55 – 64 years old	55	4.9
65 years old or above	13	1.2
Education level:		
No school	14	1.2
Primary school	46	4.1
Secondary school	417	36.9
Tertiary education	652	57.8
Employment status:		
Employee	816	73.0
Self-employed	177	15.8
Retired	59	5.3
Others	66	5.9
Average monthly income:		
Below HK\$5,000	79	7.1
HK\$5,000 -HK\$9,999	80	7.2
HK\$10,000 - HK\$14,999	221	19.9
HK\$15,000 - HK\$19,999	265	23.9
HK\$20,000 - HK\$24,999	169	15.2
HK\$25,000 - HK\$29,999	141	12.7
HK\$30,000 - HK\$49,999	113	10.2
HK\$50,000 or above	43	3.9
How many percentage of your average monthly income for derivatives investments?		
%	426	39.0
I don't know	665	61.0

Have you personally used the Internet or e-mail either at home or at work in the past six months?		
Yes	1045	94.1
No	65	5.9
Do you or does someone in your household currently work for a large for-profit company with over 1,000 employees?		
Respondent does	332	29.9
Other household member does.	274	24.7
No	505	45.5
How many members in your family (includes yourself)?		
1	18	1.6
2	127	11.4
3	395	34.6
4	411	37.0
5 or above	160	14.4

Table 2: Responses to various items

Items and responses	No.	% of total
1. How long have you invested in the financial markets?		
Never invested	55	4.9
Less than 1 year	212	18.8
1 year to under 3 years	258	22.9
3 years to under 5 years	266	23.6
5 years to under 10 years	185	16.4
10 years or above	152	13.5
2. During January 2013 to January 2014, have you ever invested in financial derivatives?		
Yes	1025	91.4
No	96	8.6
3. Which type of financial derivative do you invest most frequency?		
Warrants	249	24.0
Hang Seng Index Futures	200	19.3
Stock Options	239	23.0
Hang Seng Index Options	128	12.3
Callable Bull/ Bear Contracts	183	17.6
Renminbi Non-Deliverable Forwards Contracts	38	3.7
Others (Please specify) _____	0	0

4. When making financial derivatives investment decisions today, which of the following factors do you consider most important?		
Information from the company as a basis for a fundamental analysis.	191	18.4
Recommendations, advice, and forecasts from professional investors.	221	21.3
The overall past performance of the market seen from a historical perspective.	235	22.7
Information from newspapers/ TV/magazines.	140	13.5
Information from the Internet.	103	9.9
Discussion with personal friends.	56	5.4
Information from colleagues at work.	22	2.1
Own intuition of future performance.	68	6.6
5. What do you think was the most important contributing factor to the decline of trading volume in the financial derivatives markets?		
The new stories in the media.	133	12.8
The forecasts of analysts.	176	16.9
Loss of confidence among investors in the financial derivatives markets.	219	21.1
Decline earnings and profitability of the financial derivatives.	272	26.2
Herd behaviour (i.e., small investors following the majority).	239	23.0
6. Did Euro Zone Sovereign Debt crisis in recent years affect your desire on investing financial derivatives?		
Yes	758	74.3
No	262	25.7
7. What is your personal level of tolerance for investment risk?		
Very Low	41	4.0
Low	224	21.9
Medium	465	45.4
High	265	25.9
Very High	30	2.9
8. As a percentage of the total amount in your investment portfolio, how much do you invest in derivatives products?		
Less than 10%	267	25.7
10% to under 30%	416	40.1
30% to under 50%	261	25.1
50% to under 100%	78	7.5
100%	16	1.5

9. When did you mostly sell or close out your position when you invested in Financial derivatives between January 2013 and January 2014		
Within one day	39	3.8
Within one week	282	27.1
Within one month	386	37.2
Within three months	226	21.8
Within one year	83	8.0
After more than one year	23	2.2
10. What is your average return on investment in derivative products?		
Loss	149	14.3
Average return less than 10%	340	32.7
Average return 10% to under 30%	322	31.0
Average return 30% to under 50%	165	15.9
Average return 50% to under 100%	51	4.9
Average return 100% or above	12	1.2
11. If there was a significant downturn (i.e. the Hang Seng index had lost one-third of its market value as compared to its peak in the previous year) in the financial derivatives markets today, do you agree that the financial derivatives markets will surely return to its former level in a couple of years or so?		
Strong agree	64	6.2
Somewhat agree	328	31.6
Neutral	546	52.7
Somewhat disagree	84	8.1
Strongly disagree	15	1.4
12. If you look at the trading volume of financial derivatives markets today, in your opinion, is it:		
Over-traded by _____%	115	11.1
Under-traded by _____%	87	8.4
Traded at a fundamentally correct level	399	38.6
Cannot say	432	41.8
13. Assume the following situation: during the last week, a financial derivative price has risen 70% and the future for the financial derivative looks bright. How do you value this piece of information?		
The financial derivative is worth investing.	234	22.7
The information is not sufficient for investing the financial derivative.	611	59.1
The financial derivative is not worth investing.	188	18.2
14. If the Hang Seng Index has <i>increased</i> consecutively over the past three days, what is probability that it will <i>increase</i> in value during tomorrow?		

Less than 10%	86	8.3
10% to under 20%	114	11.0
20% to under 30%	192	18.5
30% to under 40%	172	16.6
40% to under 50%	145	14.0
50% to under 60%	160	15.4
60% to under 70%	84	8.1
70% to under 80%	61	5.9
80% to under 90%	16	1.5
90% to under 100%	8	0.8
100%	0	0
15. What do you think is the risk level in investing in financial derivatives?		
Very Low Risk	29	2.6
Low Risk	119	10.6
Medium Risk	397	35.3
High Risk	443	39.3
Very High Risk	138	12.3

Note: percentages do not always add up to 100 due to rounding up.

Table 3: Average Return versus Determinants Cross Tabulation

	Average return	Loss (%)	<10 (%)	10-30 (%)	30-50 (%)	50-100 (%)	>100 (%)	Total (%)
Determinants	fundamental analysis	8.4	28.8	38.7	17.8	4.7	1.6	100
	professional investors	16.3	33.0	29.0	17.2	4.5	0	100
	past performance	9.8	32.3	33.2	17.4	5.5	1.7	100
	newspapers/ TV/magazines	20.7	41.4	23.6	12.9	1.4	0	100
	Internet	16.5	28.2	33.0	15.5	5.8	1	100
	personal friends	17.9	32.1	28.6	12.5	8.9	0	100
	colleagues	22.7	31.8	22.7	4.5	18.2	0	100
	Own intuition	19.1	35.3	23.5	13.2	2.9	5.9	100
Total	14.4	32.8	30.9	15.8	4.9	1.2	100	

Table 4: Average Return versus Investment Experience Cross Tabulation

	Average return	Loss (%)	<10 (%)	10-30 (%)	30-50 (%)	50-100 (%)	>100 (%)	Total (%)
Investment Experience	Never invested	17.9	32.1	21.4	25.0	3.6	0	100
	< 1 year	21.4	43.9	21.9	8.6	3.7	0.5	100
	1-3 years	15.4	38.6	29.7	14.2	2.0	0	100
	3-5 years	13.1	23.9	37.5	20.1	4.2	1.2	100
	5-10 years	7.4	30.7	33.5	19.3	8.5	0.6	100
	10 year above	13.3	26.6	32.2	14.7	8.4	4.9	100
Total		14.3	32.7	31.0	15.9	4.9	1.2	100

Table 5: Average Return versus Sold or Closing Out Position Cross Tabulation

	Average return	Loss (%)	<10 (%)	10-30 (%)	30-50 (%)	50-100 (%)	>100 (%)	Total (%)
Sold or Closing Out Position	Within 1 day	17.9	33.3	20.5	12.8	15.4	0	100
	Within 1 week	20.2	35.1	22.7	16.0	4.6	1.4	100
	Within 1 month	13.5	30.6	36.8	14.8	3.9	0.5	100
	Within 3-month	12.8	30.1	31.9	18.1	5.3	1.8	100
	Within 1 year	3.6	43.4	34.9	14.5	3.6	0	100
	After more than 1 year	4.3	26.1	30.4	21.7	8.7	8.7	100
Total		14.3	32.7	31.0	15.9	4.9	1.2	100

Table 6: Euro Zone Sovereign Debt Crisis Impact versus Investment Portfolio in Derivatives Products Cross Tabulation

	Euro Zone Sovereign Debt Crisis	Impact (%)	No Impact (%)	Total (%)
Investment Portfolio in Derivatives Products	Less than 10%	83.3	16.7	100
	10% to under 30%	78.6	21.4	100
	30% to under 50%	65.7	34.3	100
	50% to under 100%	51.3	48.7	100
	100%	56.3	43.8	100
Total		74.3	25.7	100

Table 7: Personal Level of Tolerance for Investment Risk versus Gender Cross Tabulation

	Tolerance	Very low (%)	Low (%)	Medium (%)	High (%)	Very high (%)	Total (%)
Gender	Male	3.5	17.6	45.0	30.2	3.8	100
	Female	4.8	30.1	46.0	17.6	1.4	100
Total		3.9	21.9	45.4	25.8	2.9	100

Table 8: Types of Financial Derivatives versus Gender Cross Tabulation

	Types	Warrants (%)	HSI futures (%)	Stock option (%)	HSI options (%)	CBBC (%)	NDF (%)	Total (%)
Gender	Male	26.2	17.9	20.9	11.9	19.2	3.9	100
	Female	20.8	21.7	25.9	13.1	15.1	3.4	100
Total		24.3	19.2	22.6	12.3	17.8	3.7	100

Table 9: Investment Experience versus Types of Financial Derivatives Cross Tabulation

	Investment Experience	Never invested (%)	Less than 1 year (%)	1-3 years (%)	3-5 years (%)	5-10 years (%)	10 years above (%)	Total (%)
Types	Warrants	1.2	13.7	22.5	26.1	20.1	16.5	100
	HSI futures	1.5	20.0	23.5	24.0	17.5	13.5	100
	Stock options	4.2	20.1	24.3	23.4	15.1	13.0	100
	HSI options	2.3	14.8	26.6	29.7	16.4	10.2	100
	CBBC	3.3	16.9	23.0	25.1	17.5	14.2	100
	NDF	7.9	36.8	23.7	15.8	5.3	10.5	100
Total		2.7	17.9	23.7	25.0	17.0	13.7	100

Table 10: Euro Zone Sovereign Debt Crisis Impact versus Types of Financial Derivatives Cross Tabulation

	Euro Zone Sovereign Debt Crisis	Impact (%)	No Impact (%)	Total (%)
Types	Warrants	76.5	23.5	100
	HSI futures	78.1	21.9	100
	Stock options	70.1	29.9	100
	HSI options	71.1	28.9	100
	CBBC	74.7	25.3	100
	NDF	73.7	26.3	100
Total		74.3	25.7	100

Table 11: Level of Tolerance for Investment Risk versus Types of Financial Derivatives Cross Tabulation

	Tolerance	Very low(%)	Low (%)	Medium (%)	High (%)	Very high(%)	Total (%)
Types	Warrants	4.0	14.1	41.5	35.5	4.8	100
	HSI futures	4.1	27.4	46.2	20.3	2.0	100
	Stock options	2.2	17.7	53.9	25.0	1.3	100
	HSI options	7.1	30.7	35.4	23.6	3.1	100
	CBBC	4.4	26.0	45.3	20.4	3.9	100
	NDF	2.6	21.1	44.7	31.6	0	100
Total		4.0	21.9	45.3	25.9	2.9	100

Table 12: Average Return versus Types of Financial Derivatives Cross Tabulation

	Average return	Loss (%)	<10 (%)	10-30 (%)	30-50 (%)	50-100 (%)	>100 (%)	Total (%)
Types	Warrants	19.3	28.9	27.3	15.7	6.8	2.0	100
	HSI futures	13.0	37.0	32.0	13.5	3.5	1.0	100
	Stock options	7.9	31.0	30.5	22.6	7.1	0.8	100
	HSI options	15.6	27.3	35.9	14.1	4.7	2.3	100
	CBBC	16.4	38.3	33.9	9.3	2.2	0	100
	NDF	13.2	39.5	21.1	26.3	0	0	100
Total		14.3	32.8	31.0	15.9	4.9	1.2	100

Table 13: Risk Level versus Types of Financial Derivatives Cross Tabulation

	Risk level	Very low (%)	Low (%)	Medium (%)	High (%)	Very High(%)	Total (%)
Types	Warrants	2.0	7.2	32.1	48.2	10.4	100
	HSI futures	1.5	13.0	37.5	38.5	9.5	100
	Stock options	5.0	14.2	41.5	32.2	7.1	100
	HSI options	1.6	14.2	37.8	36.2	10.2	100
	CBBC	1.1	8.7	36.6	39.9	13.7	100
	NDF	7.9	18.4	39.5	31.6	2.6	100
Total		2.6	11.5	37.1	39.1	9.7	100

Table 14: Age Level versus Types of Financial Derivatives Cross Tabulation

	Age level	18-24 year old (%)	25-34 year old (%)	35-44 year old (%)	45-54 year old (%)	55-65 year old (%)	65 or above (%)	Total (%)
Types	Warrants	12.9	32.1	24.5	26.5	3.6	0.4	100
	HSI futures	19.0	28.5	29.5	19.5	3.5	0	100
	Stock options	21.8	30.5	21.8	18.8	6.3	0.8	100
	HSI options	10.9	34.4	32.8	20.3	1.6	0	100
	CBBC	17.5	27.9	24.0	19.1	7.7	3.8	100
	NDF	31.6	13.2	23.7	23.7	7.9	0	100
Total		17.4	29.9	25.7	21.2	4.8	1	100

Table 15: Education Level versus Types of Financial Derivatives Cross Tabulation

	Education level	No school (%)	Primary school(%)	Secondary school(%)	Tertiary education (%)	Total (%)
Types	Warrants	1.2	1.6	35.3	61.8	100
	HSI futures	0.5	6.0	37.5	56.0	100
	Stock options	1.3	3.3	38.1	57.3	100
	HSI options	0.8	1.6	36.7	60.9	100
	CBBC	1.6	6.6	35.5	56.3	100
	NDF	0	5.3	44.7	50.0	100
Total		1.1	3.9	36.9	58.1	100