



香 港 樹 仁 大 學

**The Profile of Credit Union Member Savings
and Borrowing Behaviour in Hong Kong:
A Statistical Analysis**

Che-Cheong POON

April 2008

經 濟 學 系

Working Paper Series

**Economics Department
Hong Kong Shue Yan University**

Working Paper Series
April 2008

All Rights Reserved
ISBN: 978-962-8719-70-9
Copyright © 2008 by Hong Kong Shue Yan University

Information on the Working Paper Series can be found on the last page. Please address any comments and further inquiries to:

Dr. Shu-kam Lee
Working Paper Coordinator
Department of Economics
Hong Kong Shue Yan University
10 Wai Tsui Crescent
Braemar Hill Road
North Point
Hong Kong
Fax: 28068044
Tel: 25707110
Email: sklee@hksyu.edu

The Profile of Credit Union Member Savings and Borrowing Behaviour in Hong Kong: A Statistical Analysis¹

Che-cheong Poon

In his *Statistical Requirements for Greek Economic Planning*, Professor Arrow complained that “too much energy has gone into squeezing the last bit of juice out of old data collected for different purposes relative to the design of new types of data” (Arrow 1984:51).

1 Background Information of the Surveys

In general, the purpose of credit union surveys is to collect information about member behaviour profile related to savings and borrowing, and the information drawn from the survey data will provide credit union leaders with valuable guidance for developing plans to expand credit union services². However, there has been no such comprehensive survey of credit union member behaviour profile undertaken in Hong Kong so far. And thus, in addition to the credit union statistics available at the Co-operative and Credit Union Section of the AFCD and the Credit Union League of Hong Kong (CULHK), a scientific investigation (see Spector, 1981 and Kumar, 2005) in the form of a sample survey has to be undertaken to answer some specific questions or hypotheses on the behaviour profile of individual credit union members in Hong Kong.

¹ I am grateful for the enormous help provided by William Ma, one of the key credit union leaders in Hong Kong, in the coordination of the credit union surveys.

² Excellent examples can be found in publications such as Boucher, Barham and Branch, 1993; Eisenhauer, 1995; Mesbah, 1998; Petrie, 2002; Stewart and Clay, 2004; Nyirabega, 2005; Nyirabega and Ford, 2005; and Sundaram-Stukel, 2006.

We followed Dina Mesbah's three-data-set survey methodology (Mesbah 1998, p.6) by combining his "baseline survey" and "market survey" in a single member survey and retaining the credit union institution records survey. The Member Savings and Borrowing Behaviour Survey (the questionnaire is in **Appendix 1**) from January–June 2007 was designed to elicit information about demographic and economic characteristics, member perceptions of credit union services, and opinions on savings and borrowing services provided by credit unions and commercial banks. In order to facilitate a better understanding of the members' savings and borrowing pattern in Hong Kong, a Credit Union Performance Survey (the questionnaire is in **Appendix 2**) has been undertaken from June to July 2007 to collect supplementary information about the current savings and outstanding loan balances in the individual credit unions. The subsequent sections will describe the general feature of the two surveys.

1.1 The Member Savings and Borrowing Behaviour Survey

The Member Savings and Borrowing Behaviour Survey was conducted to identify the pattern of savings and borrowing behaviour of Hong Kong credit union members. The first part of the questionnaire included questions about the demographic characteristics, and the data collected would provide background information on the respondent credit union members; the second part of the questionnaire sought information about the member-credit union relationship such as the perceptions and opinions about the credit union. The data collected would provide hints to identify the members' savings and borrowing behaviour; finally, the questionnaire focused on how the respondents would allocate their savings and borrowing between credit unions and commercial banks. The data collected would enable us to carry out an analysis of credit union members' perceptions regarding credit union and banking services.

Following the traditional classification of credit unions used by Croteau (1963, p.8), the classification criterion adopted by the AFCD and CULHK, and taking into account the distribution of savings and outstanding loan balances across credit unions in Hong Kong, we grouped the total credit union members into employment credit union members and non-employment credit union members. The employment cluster includes civil servants, company employees, industrial employees, association employees, and university employees; there were 61778 members as at end of March 2006³. The non-employment cluster consists of members in churches, social centres/services, benevolent associations, credit union⁴, and housing estates; there were 3246 members as at end of March 2006. Considering the average size of employment credit unions and non-employment credit unions (2808 and 162 respectively), the number of respondents from the non-employment credit unions, and the cost constraints of this survey, we decided to observe a sample of two employment credit unions in the employment cluster and three non-employment credit unions in the non-employment cluster.

Following pilot testing on one credit union from each of these two clusters and subsequent amendments⁵, the questionnaires were sent to two randomly chosen employment credit unions and three non-employment credit unions. The executives of these sample credit unions had agreed in advance to distribute and help their members to fill-in the questionnaires. At the end of the survey period, a total of 364 questionnaires were returned: 274 from the two employment credit unions and 90 from the three non-employment credit unions, which

³ See 2006 AFCD Annual Report, Appendix 21

⁴ Although the 61 members in the Hong Kong League Central Credit Union include institutional members, because the number of such membership is negligible and for the sake of simplicity, we did not exclude it from the sample frame.

⁵ Such as rewording of some questions to eliminate ambiguities, and adding or expanding the income classes so as to capture more information.

represents a response rate of 24.2 per cent⁶.

Since some respondent members did not reply to all the questions in the questionnaire, we used only the number of replies (i.e. the question which the respondent did not answer was not counted) to calculate the total number of counts and the percentage to the total for the individual entries of the questionnaire. The results of the sampling survey questionnaire with 21 questions and 101 entries collected from 364 credit union members in Hong Kong during the survey period January-June 2007 are depicted in Table 1 below.

⁶ The response rate is calculated by the formula:

$$\text{Response Rate} = \left(\frac{274 + 90}{(223 + 533) + (168 + 299 + 580)} \right) \times 100\% = 24.2\%$$

Table 1 Results of the Member Savings and Borrowing Behaviour Survey

Items	Employment Credit Unions	Non-Employment Credit Unions	Estimated ⁽¹⁾ Population Value	% to Total
(A) Demographic Characteristics				
1. Gender:				
Male	213	27	48,998	76.23
Female	58	61	15,277	23.77
2. Age:				
Below18	0	2	72	0.11
18-24	2	1	487	0.75
25-44	85	11	19,561	30.19
45-54	139	42	32,855	50.70
55-64	46	13	10,840	16.73
65 or above	1	21	983	1.52
3. Education Levels:				
No schooling	1	4	370	0.57
Primary	52	28	12,734	19.65
Secondary	188	47	44,083	68.03
Post-secondary or above	32	11	7,612	11.75
4. Household size (including yourself):				
1	10	7	2,507	3.87
2	44	10	10,281	15.87
3	63	20	14,926	23.03
4 or more	156	53	37,084	57.23
5. Employment status:				
Employee	250	43	57,918	94.76
Self-employed	0	6	216	0.35
Retired	2	25	1,353	2.21
Others	5	14	1,632	2.67
6. Your average monthly income (including salaries, interest, rent and other earnings):				
Below HK\$4,000	2	20	1,172	1.91
HK\$4,000 – HK\$9,999	8	22	2,597	4.23
HK\$10,000 – HK\$15,499	134	13	30,681	50.00
HK\$15,500 – HK\$19,999	54	6	12,392	20.19
HK\$20,000 – HK\$27,499	30	7	7,016	11.43
HK\$27,500 – HK\$39,999	6	3	1,461	2.38
HK\$40,000 – HK\$59,999	14	2	3,229	5.26
HK\$60,000 or above	12	3	2,814	4.59

Items	Employment Credit Unions	Non-employment Credit Unions	Estimated Population Value	% to Total
7. Your average monthly household income (including salaries, interest, rent and other earnings):				
Below HK\$4,000	2	7	703	1.16
HK\$4,000 – HK\$9,999	3	9	1,001	1.65
HK\$10,000 – HK\$15,499	68	12	15,765	26.00
HK\$15,500 – HK\$19,999	49	10	11,409	18.81
HK\$20,000 – HK\$27,499	58	19	13,762	22.69
HK\$27,500 – HK\$39,999	24	12	5,844	9.64
HK\$40,000 – HK\$59,999	34	4	7,810	12.88
HK\$60,000 or above	18	8	4,347	7.17
(B) Member perceptions and opinions of credit union services				
8. How long have you been a credit union member?				
Less than 5 years	48	9	11,147	17.84
5-9 years	80	18	18,687	29.91
10-19 years	95	25	22,321	35.73
20-29 years	37	30	9,424	15.09
30 years or more	3	6	893	1.43
9. Amount of your share balances at credit union:				
Less than HK\$1,000	58	6	13,293	22.12
HK\$1,000 – HK\$9,999	88	29	20,887	34.75
HK\$10,000 – HK\$49,999	92	44	22,330	37.15
HK\$50,000 – HK\$99,999	10	4	2,399	3.99
HK\$100,000 or above	5	2	1,199	2.00
10. Amount of your outstanding loan balance at credit union:				
Less than HK\$1,000	73	31	17,577	49.27
HK\$1,000 – HK\$9,999	29	7	6,791	19.03
HK\$10,000 – HK\$49,999	41	25	10,146	28.44
HK\$50,000 – HK\$99,999	2	0	451	1.26
HK\$100,000 or above	3	1	712	2.00
11. What kind(s) of credit union services do you use most frequently? (You can choose more than one item)				
Savings	217	82	51,884	55.92
Borrowing or repaying	58	34	14,303	15.42
Social/community/institutional activities	98	34	23,322	25.14
Counselling services	12	2	2,778	2.99
Others	2	1	487	0.52

Items	Employment Credit Unions	Non-employment Credit Unions	Estimated Population Value	% to Total
12. Frequency of using credit union services each month:				
1	191	69	45,553	83.45
2-5	9	7	2,282	4.18
More than 5	29	0	6,539	11.98
Others	0	6	216	0.40
13. Reasons for becoming a credit union member: (You can choose more than one item)				
To earn higher interest rate on savings	128	20	29,581	27.32
To obtain loan with lower lending interest rate	61	20	14,475	13.37
To keep closer relationship with other members	90	26	21,230	19.61
To obtain special financial services from the credit union	60	21	14,285	13.19
To support the credit union movement	118	58	28,697	26.51
14. How would you rate the quality of credit union services? (The weighted average score: 5 = Very good; 1 = Very poor) ⁽²⁾				
Democracy	4.22	4.32	4.23	
Management	4.26	4.28	4.26	
Service	4.36	4.36	4.36	
Innovation and development	3.90	3.66	3.89	
Community recognition	4.00	3.92	4.00	
Overall impression	4.25	4.24	4.25	
15. Will you recommend credit union to others ?				
Yes	236	77	55,987	94.13
No	15	3	3,490	5.87
(C) Credit union services versus banking services				
16. How would you rate the importance of the following factors which will influence your decision in choosing a financial institution to deposit your savings ? (Quote at most two items with the same score: 5 = Most important; 1 = Least important)				
Safety	4.75	4.75	4.75	
Interest rate	4.28	4.03	4.26	
Variety of deposits	3.81	3.16	3.78	
Service charge	4.33	4.08	4.32	
Fast and easy to deposit or withdraw savings	4.41	4.36	4.41	

Items	Employment Credit Unions	Non-employment Credit Unions	Estimated Population Value	% to Total
Good payment system	4.28	3.94	4.26	
Convenient location	4.27	4.29	4.28	
17. How would you rate the importance of the following factors which will influence your decision in choosing a financial institution to borrow money ? (Quote at most two items with the same score: 5 = Most important; 1 = Least important)				
Interest rate	4.58	4.67	4.59	
Maximum loan amount	4.18	4.06	4.17	
Repayment period	4.13	4.22	4.13	
Service charge	4.32	4.28	4.32	
Fast and easy to get a loan	4.13	4.07	4.13	
Privacy	4.41	4.51	4.42	
Friendly service	4.31	4.00	4.29	
18. Do you have deposit accounts or have received loans with the banking sector ?				
No	104	24	24,314	43.40
Yes	132	54	31,709	56.60
19. What is the proportion of your share balance with credit union to total deposits with the banking sector?				
Less than 10%	82	18	19,138	56.48
10% and under 50%	23	30	6,268	18.50
50% and under 100%	10	2	2,327	6.87
100%	13	3	3,039	8.97
More than 100%	13	5	3,111	9.18
20. Except residential mortgage loans, have you received loans from the banking sector?				
No	154	53	36,633	85.55
Yes	26	9	6,187	14.45
21. Except residential mortgage loans, what is the proportion of your outstanding loans with credit union to those with the banking sector?				
Less than 10%	32	4	7,359	58.58
10% and under 50%	13	3	3,039	24.19
50% and under 100%	5	5	1,308	10.41
100%	1	4	370	2.94
More than 100%	2	1	487	3.88

Notes:

(1) The population value is estimated by using the following formula:

$$V_p = V_{Emp} \times \left(\frac{61778}{274} \right) + V_{Com} \times \left(\frac{3246}{90} \right)$$

Where:

V_p is the estimated population value; V_{Emp} is the sample value obtained from Employment credit unions;

V_{Com} is the sample value obtained from Community credit unions;

274 and 90 is the sample size of Employment and Community credit unions respectively; and 61778 and 3246 is the population size of Employment and Community credit unions respectively

Notice that the total estimated number of credit union members for the questions are not equal to the total number of credit union members of 65024 because some respondents did not reply to one or more questions.

(2) The weighted average score is calculated by the following formula: $S_w = \frac{\sum W_i S_i}{\sum S_i}$

Where S_w and S_i is the weighted average score; W_i is the weight of 1,2,3,4, and 5 assigned the score 1,2,3,4, and 5 respectively.

1.2 *The Credit Union Performance Survey*

According to the Hong Kong Credit Union Ordinance (section 77 of Chapter 119), a credit union is prohibited to disclose any information regarding a transaction of a member of that credit union. We were therefore not permitted to gain access to the credit union records to extract information on individual members. To collect the needed information, we resorted to a Credit Union Performance Survey that was designed mainly to ask the treasurer of respondent institutions for summary statistics about the current savings and outstanding loan balances of their members. The data obtained from this survey was used to provide supplementary information to the analysis of the members' savings and borrowing behaviour.

Following pilot testing on one credit union and subsequent amendments, the questionnaires were mailed to all the 42 credit unions in Hong Kong on 20 June 2007. Follow-up phone calls were made to non-responding institutions. At the end of the survey period on 15 July 2007, a total of 17 questionnaires (from 9 employment credit unions and 8 non-employment credit

unions⁷) were returned, which represents a response rate of 40.48 per cent.

This survey is in essence a non-probability sample⁸ of seventeen respondent credit unions with 13,940 members drawn from the population of forty-two credit unions with a total membership of 65,024⁹ in Hong Kong. Since there is a significant difference between the size of employment credit unions and that of non-employment credit unions, we use the weighted average technique to estimate the population values based on the sample observation.

The preliminary findings of the sampling survey questionnaire regarding the member savings and member outstanding loan balances distribution and the estimated population distribution are depicted in the table below.

⁷ The nine respondent employment credit unions are: Government Supplies staff, Hong Kong Observatory, Marine Department Staff, New Territories Treatment Works Staff, Hong Kong International Terminals, Hong Kong Caritas Staff, Kowloon-Canton Railway, PCCW, and San Miguel; and the eight respondent non-employment credit unions are: Mother of Good Counsel, Sheung Shui, St. Anthony's, St. Bonaventure's Church, St. Francis, St. Lawrence, and St. Vincent.

⁸ See Cochran, Mosteller, and Tukey (1954).

⁹ According to the AFCD 2006 Annual Report.

Table 2 Results of the Credit Unions Performance Survey

Class Limits	Employment credit unions		Non-employment credit unions	
	No. of Members	Percentage	No. of Members	Percentage
Savings (Share Balance)				
Less than HK\$1,000	727	5.92	209	12.63
HK\$1,000 – HK\$9,999	4512	36.73	660	39.88
HK\$10,000 – HK\$49,999	3994	32.51	695	41.99
HK\$50,000 – HK\$99,999	1301	10.59	67	4.05
HK\$100,000 or above	1751	14.25	24	1.45
Total	12285	100.00	1655	100.00
Outstanding Loan Balance				
Less than HK\$1,000	9	0.61	2	0.85
HK\$1,000 – HK\$9,999	270	18.16	51	21.70
HK\$10,000 – HK\$49,999	936	62.95	167	71.06
HK\$50,000 – HK\$99,999	208	13.99	14	5.96
HK\$100,000 or above	64	4.30	1	0.43
Total	1487	100.00	235	100.00
Total (Employment and non-employment credit unions):				
Class Limits	Observed Value		Estimated Population Value	
	No. of Members	Percentage	No. of Members	Percentage
Savings (Share Balance)				
Less than HK\$1,000	936	6.71	4225	6.50
HK\$1,000 – HK\$9,999	5172	37.10	21535	33.12
HK\$10,000 – HK\$49,999	4689	33.64	20618	31.71
HK\$50,000 – HK\$99,999	1368	9.81	7336	11.28
HK\$100,000 or above	1775	12.73	11311	17.39
Total	13940	100.00	* 65024	100.00
Outstanding Loan Balance				
Less than HK\$1,000	27	0.25	32	0.25
HK\$1,000 – HK\$9,999	1524	14.13	1781	14.13
HK\$10,000 – HK\$49,999	6863	63.64	8017	63.64
HK\$50,000 – HK\$99,999	1764	16.36	2060	16.36
HK\$100,000 or above	606	5.62	708	5.62
Total	10784	100.00	* 12597	100.00

* The number of savers (members) as at 31 March 2006 was 65024 (AFCD 2006 Annual report), and the number of loan cases as at 31 December 2006 was 12597 (CULHK 2006 Annual Report).

2 Observations and Findings

The sampling method of these two surveys is the unequal size single-stage cluster sampling (Cochran 1977, pp. 249-273). 364 credit union members and 17 credit unions were featured in the Member Savings and Borrowing Behaviour Survey and the Credit Union Performance Survey. In this section, based on the information contained in Table 1, Table 2 and the original survey data sets, and by using the cross-tabulation statistical technique, we attempt to present summary statistics on the demographic and economic characteristics of the respondent members, and to highlight some of the interesting characteristics of credit union members in Hong Kong regarding their savings and borrowing behaviour.

2.1 Membership Profile

A) Gender and age

The sex ratio¹⁰ for the employment and non-employment clusters were 3672 and 443 respectively and the weighted average sex ratio for the whole population was 3207. Table 3 indicates that there were about three male to one female in the whole population: with more male members in the employment cluster but more female members in the non-employment cluster.

In the employment cluster, it is interesting to note that the sex ratio increased with the age of the members. This reveals the fact that the work place (especially in the Civil Services) was largely a male preserve in the earlier stage of economic development in Hong Kong in the 1960s. Since gender equality has been achieved in Hong Kong, we can expect the overall sex ratio of this cluster to decrease gradually to about 1000 in 2044 (in 37 years) when the present “18 – 24 “age group becomes the “65 and above” age group.

¹⁰ The sex ratio is the number of males per 1000 females.

In the non-employment cluster, the sex ratio decreased with the age of the members before retirement. This may be due mainly to the fact that the participation in associational and community organizations has a gender bias to female. However, the increase in the sex ratio in the age group of 65 and above was because some of the retired members (most of them are male) from employment credit unions¹¹ chose to continue their involvement in the credit union movement by becoming members of a non-employment credit union. Additionally, it is worth noting that, on average, the members of employment credit unions were younger than those in non-employment, their median age was 46.71 and 50.13 respectively¹².

Table 3 Sex Ratios by Age Group and by Cluster

Age Group	Employment Cluster	Non-employment Cluster	Estimated Population Value
18 - 24	1000	n.a.	500
25 - 44	1833	833	1667
45 - 54	4957	367	2358
55 - 64	14000	300	3462
65 and above	n.a.	429	400
Total	3672	443	3207

B) Household size and age

Following the trend towards smaller households in Hong Kong indicated by the 2006 Hong Kong Population By-Census, the household size of credit union members as reflected by

¹¹ Since they do not have the common bond of their employment credit union and have to determinate the membership.

¹² The Medians are calculated by:

$$M_{d(EMP)} = 44.5 + \left(\frac{137 - 87}{226} \right) \times 10 = 46.71$$

$$M_{d(NONEMP)} = 44.5 + \left(\frac{45.5 - 14}{56} \right) \times 10 = 50.13$$

Table 4 demonstrates the fact that when the members become older, their household size become smaller. For example, the proportion of the respondent credit union members who live alone (their household size is one) to the total number of members in the “25 – 44” and “65 or above” age groups was 4.2 per cent and 16 per cent respectively. This type of aged member living alone who has supported the credit union movement for a long time is most likely to benefit from credit union services in terms of life-insurance, special financial services or even benevolent care. In addition, 23 per cent of the “65 or above” age group in the non-employment clusters suggests that non-employment credit unions have to put more emphasis on co-operative values of self-help and mutual-help than the employment credit unions in which all their members are aged below 65.

Table 4 Household Size by Age Group and by Cluster

Age Group	Employment Cluster				Total	Non-employment Cluster				Total
	1	2	3	4 or more		1	2	3	4 or more	
Below 18	0	0	0	0	0	0	0	0	2	2
18 - 24	0	0	0	2	2	0	0	0	1	1
25 - 44	4	24	28	29	85	0	3	4	4	11
45 - 54	3	17	30	89	139	4	2	7	29	42
55 - 64	2	3	5	36	46	0	0	4	9	13
65 or above	1	0	0	0	1	3	5	5	8	21
Total	10	44	63	156	273	7	10	20	53	90

C) Income Distribution

In order to extract more meaningful information from questions 6 and 7 in the questionnaire, we combined the number of respondent members registered for different categories of individual income and household income together to form an “individual versus household income distribution matrix” as presented in Table 5. Note in particular that it was erroneous for a respondent to report his individual income that was more than his household income, and therefore this observation should not be counted. Based on the information contained in this income distribution matrix, we can determine the general economic status of the credit

union members in their family, the estimated median income for the credit union members in Hong Kong, and compare the individual and household median income for these two credit union clusters.

Table 5 Members’ Monthly Individual and Household Income Distribution Matrix

Cluster	Member Individual Income		Member Household Income [#]								Total*
			1	2	3	4	5	6	7	8	
Employment	1	Below HK\$4,000	1	0	0	0	0	1	0	0	2
	2	HK\$4,000 – HK\$9,999	0	2	1	2	1	1	0	0	7
	3	HK\$10,000 – HK\$15,499	1	1	63	19	28	10	7	1	128
	4	HK\$15,500 – HK\$19,999	0	0	2	26	13	7	4	1	51
	5	HK\$20,000 – HK\$27,499	0	0	0	1	17	4	5	3	29
	6	HK\$27,500 – HK\$39,999	0	0	0	0	0	1	5	0	6
	7	HK\$40,000 – HK\$59,999	0	0	0	0	0	0	13	1	14
	8	HK\$60,000 or above	0	0	0	0	0	0	0	12	12
		Total*	1	2	64	47	59	24	34	18	249
Non-employment	1	Below HK\$4,000	6	2	3	3	4	1	0	0	19
	2	HK\$4,000 – HK\$9,999	1	3	3	2	7	6	0	0	21
	3	HK\$10,000 – HK\$15,499	0	1	3	2	4	2	1	0	12
	4	HK\$15,500 – HK\$19,999	0	0	0	3	1	1	0	1	6
	5	HK\$20,000 – HK\$27,499	0	0	1	0	2	2	2	0	6
	6	HK\$27,500 – HK\$39,999	0	0	0	0	0	0	0	3	3
	7	HK\$40,000 – HK\$59,999	0	0	0	0	0	0	1	1	2
	8	HK\$60,000 or above	0	0	0	0	0	0	0	3	3
		Total*	6	5	9	10	18	12	4	8	72

The numbers 1-8 in the row beneath the heading of “Member Household Income” each represent an income group corresponding to that listed below the heading of “Member individual income”.

* Since the amount of household income must be greater than or equal to individual income, the total number of members is the sum of numbers on or to the right/ above of the diagonal line.

Calculated from the income distribution matrices of the employment and non-employment clusters (the upper and lower areas with shaded-in background), we found that 135 and 21 members (the sum of numbers on the diagonal line) were the only breadwinner of their families in the respective cluster (or 54.2 per cent and 29.2 per cent of the total respondent members), and that while the members’ median individual income of the employment and

non-employment clusters was HK\$14,554 and HK\$9,000 respectively, the member median household income of the employment and non-employment clusters was HK\$21,398 and HK\$22,708¹³. These observations demonstrate that although the median individual income of the non-employment cluster was significantly less than that of the employment cluster, the median household income of the non-employment cluster was a little more than that of the employment cluster because most of the members of non-employment credit unions (about 70%) are not the only breadwinners of their family. Furthermore, based on the results of the Member Savings and Borrowing Behaviour Survey presented in Table 1, the estimated median values of individual and household income for all of the Hong Kong credit union members was HK\$14,824 and HK\$20,786¹⁴ respectively. The fact that the estimated HK\$20,786 median monthly household income of the total credit union members in Hong Kong was about one-fifth more than the HK\$17,469¹⁵ median monthly household income of Hong Kong people in the same year reveals the fact that, on average, credit union members in Hong Kong were the better-off households in Hong Kong.

2.2 *Savings behaviour of respondent credit union members*

This section presents some interesting results derived from the survey information about the relation between members' savings and the length of membership and the members' savings

¹³ The medians are calculated by:

$$9999.5 + \left(\frac{125-9}{128} \right) \times 5500 = 14984; \quad 3999.5 + \left(\frac{36.5-19}{21} \right) \times 6000 = 9000$$

$$19999.5 + \left(\frac{125-114}{59} \right) \times 7500 = 21398; \quad 19999.5 + \left(\frac{36.5-30}{18} \right) \times 7500 = 22708$$

¹⁴ The medians are calculated by:

$$9999.5 + \left(\frac{30681.5 - 3769}{30681} \right) \times 5500 = 14824 ; \quad 9999.5 + \left(\frac{30321 - 28878}{13762} \right) \times 7500 = 20986$$

¹⁵ The monthly household income in 2006 was HK\$17,250 (See 2006 Hong Kong Population By-census, page 11), adjusted by the Composite CPI inflation rate of 1.27% in the period between May 2006 (CPI=102.1) and May 2007 (CPI=103.4), the estimated monthly household income of HK people in 2007 was HK\$17,469.

patterns with respect to their individual and household income. Since it is advisable to contrast the credit union members' savings behaviour with their borrowing behaviour, further analysis in this regard will be presented in the next section.

A) Savings by the length of membership and by employment/non-employment cluster

In Table 6, the 10.4 years and 17.8 years¹⁶ median length of membership respectively for the employment and the non-employment cluster demonstrates the fact that non-employment credit unions have more senior members than employment credit unions. By looking at the number of respondent members in each of the "length of membership" classes, we discover that the number of credit union members in the "20 year to 29 years" class has increased by 644% of the "more than 30 years" class form 1964 to 1982¹⁷, and the "10 years to 19 years" class increased by 75% of the "20 year to 29 years" from 1982 to 1992; although the cumulative frequency curve of the length of membership has kept increasing after 1992, it is increasing but at a decreasing rate (the rate of change decreased by 20.2% from 1992 to 2000, and by 37% from 2000 to 2005). If we examine this trend in the employment and the non-employment credit unions separately, we will note that the inflection point¹⁸ has been reached earlier in the former than in the latter type of Credit Union. This can be attributed to the successful result of a series of credit union promotion campaigns conducted in 1980s that targeted large business organizations to produce a buoyancy of credit union movement.

¹⁶ The results are calculated by: $10 + \left(\frac{127 - 123}{91}\right) \times 10 = 10.4$; $10 + \left(\frac{43 - 25}{23}\right) \times 10 = 17.8$

¹⁷ $2007 - \frac{20 + 29}{2} \cong 1982$

¹⁸ It is the point at which a curve starts to change from increasing at an increasing rate to a curve of increasing at a decreasing rate when the value of the independent variation increased.

Table 6 Savings Behaviour by the Length of Membership and by Clusters

Cluster	Savings (Share Balances at CUs)	Length of Membership (Year)					Total
		< 5	5-9	10-19	20-29	>30	
Employment	< HK\$1,000	12	15	25	5	1	58
	HK\$1,000 – HK\$9,999	12	27	28	19	2	88
	HK\$10,000 – HK\$49,999	21	28	32	11	0	92
	HK\$50,000 – HK\$99,999	3	3	3	1	0	10
	>HK\$100,000	0	2	3	0	0	5
	Sub-Total	48	75	91	36	3	253
Non- employment	< HK\$1,000	1	1	2	2	0	6
	HK\$1,000 – HK\$9,999	5	6	10	6	2	29
	HK\$10,000 – HK\$49,999	2	9	9	21	3	44
	HK\$50,000 – HK\$99,999	1	0	1	1	1	4
	>HK\$100,000	0	0	1	1	0	2
	Sub-Total	9	16	23	31	6	85
Total	< HK\$1,000	13	16	27	7	1	64
	HK\$1,000 – HK\$9,999	17	33	38	25	4	117
	HK\$10,000 – HK\$49,999	23	37	41	32	3	136
	HK\$50,000 – HK\$99,999	4	3	4	2	1	14
	>HK\$100,000	0	2	4	1	0	7
	Sub-Total	57	91	114	67	9	338

By observing the joint frequencies in the employment and those in the non-employment cluster, we can discover that the centroid of the savings-by-length contingency table of the employment cluster is located at the area enveloped by length of membership ranges from 5 to 19 years and savings from HK\$1,000 to HK\$49,999 (i.e. the joint frequencies are 27, 28, 28, and 32, they are the four cells at the upper part of Table 6 with shaded background) which represent 45% ($\frac{27 + 28 + 28 + 32}{253} = 45\%$) of the respondent CU members in this cluster. On the other hand, in the savings-by-length contingency table for the non-employment cluster, the centroid is located at the area enveloped by length of membership ranges from 10 to 29 years and savings from HK\$1,000 to HK\$49,999 (i.e. the joint frequencies are 10, 6, 9, and 21, they

are the four cells at the lower part of Table 6 with shaded background) which represent 54% ($\frac{10+6+9+21}{85} = 54\%$) of the respondent CU members in this cluster. By comparing these two findings, we may say that members in the employment credit unions tend to accumulate a given amount of share balance at their credit unions earlier than those in the non-employment credit unions.

In order to test if there are some relationship between the size of credit union savings and the length of membership for all credit union members scientifically, a test of association using the contingency table of the total CU members¹⁹ shows that there is no significant relationship between the length of membership and the savings (Pearson Chi-Square value is 12.5 with degree of freedom of 12, the P-value is 70.89%). Thus, there is not enough evidence for us to conclude that the longer the length of membership of an individual member does not necessarily imply the more share balances he or she has accumulated at the credit unions.

Furthermore, the median savings for members in the employment and non-employment clusters was HK\$8,056 and HK\$17,272 respectively²⁰ showing the fact that members in non-employment credit unions tend to use much more credit union savings services than those in employment credit unions. In addition, the HK\$8,516 estimated median member savings of the credit union industry as a whole representing only 56.4 per cent of the HK\$14,276 estimated median individual monthly income of their members, so we have reason to suggest that credit union member save money in credit unions to satisfy their precautionary motive (Keynes, 1951, pp.170-172) rather than to accumulate wealth.

¹⁹ See Newbold (1995), pp. 415-418.

²⁰ The results are calculated by:

$$999.5 + \left(\frac{127-58}{88}\right) \times 9000 = 8056; \quad 9999.5 + \left(\frac{43-35}{44}\right) \times 40000 = 17272; \quad \frac{61778 \times 8056 + 3246 \times 17272}{65024} = 8516$$

B) Savings by individual income, and by household income

According to the saving function in a simple Keynesian national income determination model which relates saving to disposable income²¹, individual savings should be positively correlated with income. However, Table 7 reveals some interesting findings. Firstly, a test of association was run for each of the contingency tables regarding individual and household income, we found that the Pearson Chi-Square value is 31.884 with degree of freedom of 28 for the savings in the individual income contingency table, and that the Pearson Chi-Square value is 56.621 with degree of freedom of 28 for the savings in the household income contingency table. The P-value of 27.9% and 0.1% for the savings in the individual income contingency table and the savings in the household income contingency table respectively enable us to conclude that credit union members' individual income and their savings at credit unions are independent²², but there is a certain degree of association between their household income and savings at credit unions²³.

Furthermore, from the upper part of Table 7 regarding individual income, we can see the area enveloped by income lower than HK\$27,500 and savings less than HK\$50,000 (i.e. the 15 joint frequencies with shaded background) which represent 82.8%

$$\left(\frac{3 + 6 + 31 + 8 + 10 + 8 + 8 + 50 + 25 + 8 + 8 + 14 + 49 + 21 + 15}{319} = 82.8\% \right) \text{ of the respondent CU}$$

members earned less than HK\$27,500 and saved less than HK\$50,000 at credit unions; or

²¹ See Samuelson and Nordhaus (2005), pp.450-453.

²² The null hypothesis of the independence is accepted at a significance level less than or equal to 27.9%. For a standard significance level of 5%, we cannot reject the claim that the two variable of the contingency table is independent.

²³ The null hypothesis of the independence is accepted at a significance level less than or equal to 0.1%. For a standard significance level of 5%, we can reject the claim that the two variable of the contingency table is independent. That is, these two variables are dependent.

from the calculated median individual income and median savings of HK\$14,416 and HK\$8,875 respectively²⁴, we can infer that, on average, members tend to accumulate their savings at credit unions by 1.6 times of their monthly income, and that most of the members cease to accumulate their savings at credit unions up to a specific amount.

This observation provides additional evidence to support the argument put forward in the previous sections that the members' motive for credit union savings is mainly precautionary. Bringing together the information provided by the response to question 19 in Table 1 that 56% respondent members keep less than 10% of their total savings (bank deposits plus credit union share balance) with credit unions, we can come to conclude that, when a credit union member thinks that his savings with the credit union are sufficient to cover contingency expenditure, he tends to put his savings in other financial institutions for the purpose of wealth accumulation.

²⁴ The results are calculated by:

$$999.5 + \left(\frac{160 - 50}{137} \right) \times 5500 = 14416 ; \quad 999.5 + \left(\frac{160 - 62}{319} \right) \times 9000 = 8875$$

Table 7 Savings behaviour by Members' Individual, and by Household Monthly Income

Income (HK\$)	Savings or Share Balances (HK\$)					Total
	<1,000	1,000-9,999	10,000-49,999	50,000-99,000	>100,000	
Individual Income						
< 4,000	3	8	8	0	2	21
4,000 – 9,999	6	8	14	1	0	29
10,000 – 15,499	31	50	49	4	3	137
15,500 – 19,999	8	25	21	2	1	57
20,000 – 27,499	10	8	15	2	1	36
27,500 –39,999	0	4	4	1	0	9
40,000 – 59,999	2	6	4	3	0	15
>60,000	2	3	9	1	0	15
Total	62	112	124	14	7	319
Household Income						
< 4,000	3	3	1	0	2	9
4,000 – 9,999	2	5	2	0	0	9
10,000 – 15,499	23	17	28	2	3	73
15,500 – 19,999	10	24	19	2	1	56
20,000 – 27,499	13	34	25	1	1	74
27,500 –39,999	3	9	20	3	0	35
40,000 – 59,999	3	14	16	4	0	37
>60,000	5	6	13	2	0	26
Total	62	112	124	14	7	319

2.3 Borrowing behaviour of respondent credit union members

Credit union loans have some very special features: they are mostly unsecured credit to members; they are insured at no direct cost to the eligible members; there are no hidden fees or transaction charges; repayments are calculated on the reducing balance of the loan; and repayment terms are arranged to suit members' particular circumstances. Some researchers suggest that the increased availability of unsecured loans to credit union members allows them to smooth consumption across spells of economic difficulties (Sullivan, 2002). To justify the benefits of the credit union loans, we used the information contained in the Member Savings and Borrowing Behaviour Survey and the Credit Union Performance Survey to facilitate an in-depth investigation of the borrowing behaviour of credit union members and to

evaluate the achievement of the loan services provided by credit unions in Hong Kong.

Based on the results of the Member Savings and Borrowing Behaviour Survey presented in Table 1, 18,100 out of 65,024 credit union members in Hong Kong had outstanding loan balances with their credit unions, and the estimated median value of their outstanding loan balance was HK\$18,907²⁵.

Question 10 of Table 1 shows that 49 per cent of the respondent members fell in the lowest class of outstanding loan balances (i.e. less than HK\$1,000). However, the results of the Credit Union Performance Survey in Table 2 show that 0.25 per cent of credit union members reported their outstanding loan balances was less than HK\$1,000. Taking into account the possibility that the respondent members who had not borrowed from the credit union have included themselves in the “less than HK\$1,000” class, we deleted this class from observation. After deduction of the number of non-responses in the variables used for cross-tabulation, the total number of observations was 101 survey members in the following cross-tabulation analysis.

A) Loan by types of credit unions, and by gender

Table 8 details the borrowing pattern in terms of types of credit unions and gender. Out of the 274 and 90 total number of respondents in the employment and non-employment categories, there were 71 (or 25.9%) and 30 (or 33.3%) of the members respectively in the employment and non-employment clusters receiving loans from their credit unions. Moreover, the median value of outstanding loan balance for the employment cluster was HK\$17,567 and that for the

²⁵ The median value is calculated by:

$$9999.5 + \left(\frac{9050.5 - 6791}{10146} \right) \times 40000 = 18907$$

non-employment cluster was HK\$26,521²⁶. These observations indicate that more members in non-employment credit unions want to use the loan services and borrow larger amounts than those in employment credit unions.

Table 8 Borrowing Behaviour by Gender

Cluster	Outstanding Loan Balance with Credit Union	Gender		Total
		Male	Female	
Employment	HK\$1,000 – HK\$9,999	23	6	29
	HK\$10,000 – HK\$49,999	33	4	37
	HK\$50,000 – HK\$99,999	1	1	2
	>HK\$100,000	3	0	3
	Cluster Total	60 (84.5)	11 (15.5)	71 (100)
Non-employment	HK\$1,000 – HK\$9,999	2	4	6
	HK\$10,000 – HK\$49,999	8	15	23
	HK\$50,000 – HK\$99,999	0	0	0
	>HK\$100,000	1	0	1
	Cluster Total	11 (36.7)	19 (63.3)	30 (100)
Total	HK\$1,000 – HK\$9,999	25	10	35
	HK\$10,000 – HK\$49,999	41	19	60
	HK\$50,000 – HK\$99,999	1	1	2
	>HK\$100,000	4	0	4
	Grand Total	71 (70.3)	30 (29.7)	101 (100)

Note: Figures in parenthesis represent percentage to the row total.

In the lower part of the table, it is also interesting to note that 71 male and 30 female members surveyed have used credit union loan services, and the median value of outstanding loan balance for male and female members was HK\$17,567 while that for the non-employment cluster was HK\$26,521²⁷. These observations reveal the fact that more male members want to use the loan services than female members, but on average the outstanding loan balances for female members was a little more than that for male members.

²⁶ The median values are calculated by:

$$9999.5 + \left(\frac{36 - 29}{37} \right) \times 40000 = 17567 \quad ; \quad 9999.5 + \left(\frac{15.5 - 6}{23} \right) \times 40000 = 26521$$

²⁷ The median values are calculated by:

$$9999.5 + \left(\frac{36 - 25}{41} \right) \times 40000 = 20731 \quad ; \quad 9999.5 + \left(\frac{15.5 - 10}{19} \right) \times 40000 = 21578$$

B) Outstanding loan balances by individual income, and by household income

A test of association was run for each of the contingency tables in Table 9 regarding individual and household income. We found that the Pearson Chi-Square value is 26.65 with degree of freedom of 21 for the outstanding loan balances in the individual income contingency table and the Pearson Chi-Square value is 33.24 with degree of freedom of 21 for the outstanding loan balances in the household income contingency table. The P-value of 18.3% and 4.4% for the outstanding loan balances in the individual income contingency table and the outstanding loan balances in the household income contingency table respectively enable us to conclude that, like that for savings mentioned in section 2.2B, credit union members' individual income and their outstanding loan balances at credit unions are independent²⁸, but there is a certain degree of association between their household income and savings at credit unions²⁹.

²⁸ The null hypothesis of the independence is accepted at a significance level less than or equal to 18.3%. For a standard significance level of 5%, we cannot reject the claim that the two variable of the contingency table is independent.

²⁹ The null hypothesis of the independence is accepted at a significance level less than or equal to 4.4%. For a standard significance level of 5%, we can reject the claim that the two variable of the contingency table is independent. That is, these two variables are dependent.

Table 9 Borrowing behaviour by Members' Individual, and by Household Monthly Income

Income (HK\$)	Outstanding Loan Balances (HK\$)				Total
	1,000-9,999	10,000-49,999	50,000-99,000	>100,000	
Individual Income					
< 4,000	1	3	0	1	5
4,000 – 9,999	2	7	1	0	10
10,000 – 15,499	14	30	1	2	47
15,500 – 19,999	10	14	0	0	24
20,000 – 27,499	6	0	0	1	7
27,500 –39,999	0	3	0	0	3
40,000 – 59,999	2	1	0	0	3
>60,000	0	2	0	0	2
Total	35	60	2	4	101
Household Income					
< 4,000	0	1	0	1	2
4,000 – 9,999	3	0	0	0	3
10,000 – 15,499	5	16	1	1	23
15,500 – 19,999	10	12	0	2	24
20,000 – 27,499	8	12	0	0	20
27,500 –39,999	2	11	1	0	14
40,000 – 59,999	5	2	0	0	7
>60,000	2	6	0	0	8
Total	35	60	2	4	101

Furthermore, from the upper part of Table 9 regarding individual income, we can see the area enveloped by income lower than HK\$27,500 and loan less than HK\$50,000 (i.e. the 10 joint frequencies with shaded background) which represents 86.1%

$$\left(\frac{1 + 2 + 14 + 10 + 6 + 3 + 7 + 30 + 14 + 0}{101} = 86.1\% \right) \text{ of the respondent members earning less than}$$

HK\$27,500 and borrowed less than HK\$50,000 from credit unions; or from the calculated median individual income and median loan balances of HK\$14,212 and HK\$20,666 respectively³⁰, we can infer that, on average, members tend to borrow from credit unions by 1.5 times of their monthly income which is much less than the maximum amount they are

³⁰ The results are calculated by:

$$9999.5 + \left(\frac{51-15}{47} \right) \times 5500 = 14212 ; \quad 9999.5 + \left(\frac{51-35}{60} \right) \times 40000 = 20666$$

allowed to borrow³¹.

Bringing together the information provided by the response to question 21 in Table 1 that 59% respondent members reported that less than 10% of their total outstanding loans (bank non-mortgage loan plus credit union loans) are borrowed from credit unions, we can come to conclude that the members' primary motive for credit union credit, like that of the precautionary balance saved, is to smooth consumption across spells of economic difficulties. That is to say, a credit union member borrows money from the credit union mainly for the purpose of meeting contingency expenditure and not for investment or speculation.

C) The relationship between credit union savings and outstanding loan balances

Since the member coverage in the Credit Union Performance Survey is much more than the Member Savings and Borrowing Behaviour Survey, we used the survey results of the Credit Union Performance Survey to interpret the pattern of aggregate savings and borrowing behaviour of credit union members in Hong Kong. As shown in Table 2, we noted that about 20 per cent³² of the members borrowed from the credit union. The median values for savings and outstanding loan balances were HK\$23,102 and HK\$32,387³³ and about 71 per cent and 78 per cent of the members had savings and outstanding loan balances of less than HK\$50,000 with credit unions, indicating that most credit union members do not want to keep their savings with the credit union at more than their median monthly household income³⁴ or to borrow from the credit union by more than 1.5 times of their median monthly household

³¹ The maximum amount of ordinary loan to individual members is up to 10 times of his share balance but cannot exceed HK\$40,000.

³² $\frac{12597}{65024} \times 100\% = 19.37\%$

³³ The median values are calculated by:

$$9999.5 + \left(\frac{32512.5 - 25759}{20618} \right) \times 40000 = 23102 \quad ; \quad 9999.5 + \left(\frac{6299 - 1812}{8017} \right) \times 40000 = 32387$$

³⁴ The estimated monthly household income for the members was HK\$20,786.

income. This behaviour can be explained partly by the fact that they make use of the credit union savings and lending services mainly for the purpose of smoothing their life long consumption expenditure by establishing a specific amount of precautionary balance through savings and/or borrowing.

In addition to the information derived from the Credit Union Performance Survey, a cross-tabulation analysis of the individual members' savings and outstanding loan balances figures contained in the original data set of the Member Savings and Borrowing Behaviour Survey, will provide an interesting pattern of member savings and borrowing behaviour. Table 10 reports the respondent members' individual choice decision regarding savings and borrowing with the credit union. It is worth noting that the centroid is located in the area enveloped by outstanding loan balances that range from HK\$10,000 to HK\$50,000 and savings of less than HK\$50,000; that is, credit union members seldom saved and borrowed more than HK\$50,000. This characteristic provides additional evidence to support the argument put forward in the previous section that a credit union member saves and borrows money from credit union mainly for the purpose of meeting contingency consumption expenditure rather than for the purpose of investment or speculation.

Table 10 The Credit Union Member Savings and Loan Matrix

Share Balances Savings (HK\$)	Outstanding Loan Balances (HK\$)				Total
	1,000–9,999	10,000-49,999	50,000-99,000	>100,000	
<1,000	10	11	0	0	21
1,000–9,999	21	22	0	0	43
10,000-49,999	4	24	0	2	30
50,000-99,000	0	1	2	0	3
>100,000	0	2	0	2	4
Total	35	60	2	4	101

2.4 *Member perceptions of credit union services*

A) Reasons for joining credit unions, frequency of using credit union services, and the member loyalty and satisfaction

Nearly 54 per cent respondents to Question 13 of the Member Savings and Borrowing Behaviour Survey reported that they joined to earn higher interest on savings and to support the credit union movement. However, it is interesting to note that the percentage of members in the non-employment credit union choosing “to support credit union movement” was significantly higher than that of the employment credit unions (40% versus 25.8%); and thus we may say that the non-employment credit union members are more social-orientated, while the employment credit union members are more business-orientated.

In view of the fact that 83 per cent of the surveyed members reported that they visit the credit union once every month for savings and paying of loan installments, and that the most frequently used credit union service was savings (revealed by question 11), we may conclude that credit union members in Hong Kong have fulfilled the principle of regular saving advocated by credit unionists.

We may expect that only loyal and satisfied members will recommend credit union services to others. Out of the 331 replies received to Question 15, 313 (or 94%) were willing to refer credit union services to others. The percentage is quite high. By studying the questionnaires of the 18 members who would not recommend credit unions to others, we discovered that they had never used the counseling services (revealed by Question 11) and seldom visited the credit union (revealed by Question 12).

B) The quality and member expectation of credit union services

According to the rating scheme, “3” is the score of average performance. In question 14 of the survey regarding democracy, management, services, innovation and development, community recognition, and overall impression, all aspects were rated above the average with “overall impression” at 4.25. It is found that credit unions in Hong Kong were strong in “services”, “management”, and “democracy”, but weak in “innovation and development” and “community recognition”.

Question 16 of the survey was on savings services provided by financial institutions, “safety” was the most prominent factor influencing members’ decision when choosing credit union or commercial banks. Apart from that, “fast and easy to deposit or withdraw savings”, “service charge”, “convenient location”, “good payment system” and “interest rate” were also their main concerns. On the other hand, “variety of deposits” would not have too much influence on members’ decision on where to deposit their savings.

Question 17 explored the factors that would influence members’ decision in choosing a financial institution to borrow money from. We found that “interest rate”, “privacy” and “service charge” were the most prominent factors. On the other hand, loan arrangement such as “maximum loan amount”, “repayment period” and “fast and easy to get a loan” would not have too much influence on members’ decision.

3 Summary

The Member Savings and Borrowing Behaviour Survey and the Credit Union Performance Survey conducted in early 2007 in Hong Kong gathered data about individual members' demographic and economic characteristics, financial services needs, perceptions, and attitudes towards credit union services. The following observations and findings have already appeared in the relevant section of this chapter. They have been listed here under different headings for the purpose of providing a general description of the membership profile of credit unions in Hong Kong.

Demographically, the sex ratio of 3207 indicating that males have dominated the Hong Kong credit union industry. Although there were more male members in the employment credit unions, the number of female members in the non-employment credit unions was higher than that of males. We have noted that most of the members did not have post-secondary education, about 95 per cent of the members were employees, and the credit unions have been facing an aging problem.

Economically, credit union members in Hong Kong come from better-off households because their estimated median monthly household income is a little higher than that of the whole Hong Kong population in the same year. Although the median monthly individual income of the non-employment credit union members was significantly less than that of the employment credit union members, the median household income of the former was a little higher than that of the latter. This observation may be explained by the fact that the median age of non-employment credit union members was older than their counterparts. This reflects classic life cycle pattern³⁵ of credit union members. Moreover, we have noted that credit union

³⁵ Members who are young and new entering the credit union are expected to come from households with low level of assets and income. (Boucher, Stephen; Barham, Bradford; and Branch, Brian, 1993)

members' individual income is independent of their savings and loan at credit unions, but their household income has a certain degree of association with savings and loan in credit unions. Also we noted that they make use of the credit union savings and lending services mainly for the purpose of smoothing their life long consumption expenditure by establishing a specific amount of precautionary balance through savings and/or borrowing. In addition, judging from the frequency of visits to their credit unions and the type of services they most use, credit union members in Hong Kong have fulfilled the principle of regular saving advocated by credit unionists.

Regarding the quality of credit union services, it was found that credit unions in Hong Kong were strong in "services", "management", and "democracy", but weak in "innovation and development" and "community recognition". Besides, "safety" was the most prominent factor to influence members' decision when choosing credit union or commercial banks. Apart from that, "fast and easy to deposit or withdraw savings", "service charge", "convenient location", "good payment system" and "interest rate" were also their main concern. On the other hand, "variety of deposits" would not have too much influence on members' decision. Also, it was found that "interest rate", "privacy" and "service charge" were the most prominent factors affecting members' decision in choosing which financial institutions to borrow from.

Appendix 1

No. _____

**A Survey on the Savings and Borrowing Behaviour
of Credit Union Members in Hong Kong**

Target Population: Hong Kong Credit union members

The Purpose: To analyze the savings and borrowing behaviour of Hong Kong credit union members in the hope of helping credit union leaders to reinforce the Hong Kong credit union system and to improve credit union services to their members.

Duration of the Survey: January – June 2007

(A) Demographic Characteristics

1 Gender:

- Male
- Female

2. Age:

- Below18
- 18-24
- 25-44
- 45-54
- 55-64
- 65 or above

3. Education Levels:

- No schooling
- Primary
- Secondary
- Post-secondary or above

4. Household size (including yourself):

- 1
- 2
- 3
- 4 or more

5. Employment status:

- Employee
- Self-employed
- Retired
- Others (Please specify) _____

6. Your average monthly income (including salaries, interest, rent and other earnings):

- Below HK\$4,000
- HK\$4,000–HK\$9,999
- HK\$10,000–HK\$15,499
- HK\$15,500–HK\$19,999
- HK\$20,000 –HK\$27,499
- HK\$27,500 –HK\$39,999
- HK\$40,000 –HK\$59,999
- HK\$60,000 or above

7 Your average monthly household income (including salaries, interest, rent and other earnings):

- Below HK\$4,000
- HK\$4,000–HK\$9,999
- HK\$10,000–HK\$15,499
- HK\$15,500–HK\$19,999
- HK\$20,000 –HK\$27,499
- HK\$27,500 –HK\$39,999
- HK\$40,000 –HK\$59,999
- HK\$60,000 or above

(B) Member perceptions and opinions of credit union services

8. How long have you been a credit union member?

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Less than 5 years | <input type="checkbox"/> 5-9 years |
| <input type="checkbox"/> 10-19 years | <input type="checkbox"/> 20-29 years |
| <input type="checkbox"/> 30 years or more | |

9. Amount of your share balances at credit union:

- | | |
|--|--|
| <input type="checkbox"/> Less than HK\$1,000 | <input type="checkbox"/> HK\$1,000 – HK\$9,999 |
| <input type="checkbox"/> HK\$10,000 – HK\$49,999 | <input type="checkbox"/> HK\$50,000 – HK\$99,999 |
| <input type="checkbox"/> HK\$100,000 or above | |

10. Amount of your outstanding loan balance at credit union:

- | | |
|--|--|
| <input type="checkbox"/> Less than HK\$1,000 | <input type="checkbox"/> HK\$1,000 – HK\$9,999 |
| <input type="checkbox"/> HK\$10,000 – HK\$49,999 | <input type="checkbox"/> HK\$50,000 – HK\$99,999 |
| <input type="checkbox"/> HK\$100,000 or above | |

11. What kind(s) of credit union services do you use most frequently? (You can choose more than one item)

- Savings
- Borrowing or repaying
- Social /community/institutional activities
- Counselling services
- Others (Please specify) _____

12. Frequency of using credit union services each month:

- 1
- 2-5
- More than 5
- Others (Please specify) _____

13. Reasons for becoming a credit union member: (You can choose more than one item)

- To earn higher interest rate on savings
- To obtain loan with lower lending interest rate
- To keep closer relationship with other members
- To obtain special financial services from the credit union
- To support the credit union movement

14. How would you rate the quality of credit union services?

	<i>Very good</i>	←—————→			<i>very poor</i>
	5	4	3	2	1
a. Democracy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Innovation and development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Community recognition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Overall impression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Will you recommend credit union to others ?

- Yes
- No

(C) Credit union services versus banking services

16. How would you rate the importance of the following factors which will influence your decision in choosing a financial institution to deposit your savings ? (Quote at most two items with the same score)

	<i>Most Important</i>	←—————→			<i>Least Important</i>
	5	4	3	2	1
a. Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Interest rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Variety of deposits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Service charge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Fast and easy to deposit or withdraw savings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Good payment system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Convenient location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. How would you rate the importance of the following factors which will influence your

decision in choosing a financial institution to borrow money ? (Quote at most two items with the same score)

	<i>Most Important</i>	←—————→			<i>Least Important</i>
	5	4	3	2	1
a. Interest rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Maximum loan amount	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Repayment period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Service charge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Fast and easy to get a loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Privacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Friendly service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Do you have deposit accounts or have received loans with the banking sector ?
- No (You have finished the questionnaire. Thank you!)
- Yes (Please answer the following question.)
19. What is the proportion of your share balance with credit union to total deposits with the banking sector?
- Less than 10%
- 10% and under 50%
- 50% and under 100%
- 100%
- More than 100%
20. Except residential mortgage loans have you received loans from the banking sector ?
- No (You have finished the questionnaire. Thank you!)
- Yes (Please answer the following question.)
21. Except residential mortgage loans, what is the proportion of your outstanding loans with credit union to those with the banking sector?
- Less than 10%
- 10% and under 50%
- 50% and under 100%
- 100%
- More than 100%

Thank you very much for taking your valuable time to complete this questionnaire!

編號：_____

香港儲蓄互助社社員意見調查問卷

調查對象：香港各儲蓄互助社社員

調查日期：2007年2-6月

調查目的：收集社員有關儲蓄和借貸的資料，希望能藉此深入探討本港儲蓄互助社社員存貸金錢的行為及態度，並就改善儲蓄互助社的運作和服務提供建議。

甲、 個人背景資料

1. 性別：

- 男
- 女

2. 您的年齡是：

- 18 歲以下
- 18 -24 歲
- 25 -44 歲
- 45 -54 歲
- 55 -64 歲
- 65 歲或以上

3. 您的教育水平是：

- 未曾上學
- 小學
- 中學
- 大專或以上

4. 您家庭的成員人數（包括你在內）：

- 一人獨居
- 二人家庭
- 三人家庭
- 四人或以上

5. 您現在的職業狀況是：

- 受僱人士
- 自僱人士

- 退休
- 其他，請說明_____

6. 您個人平均每月入收入（包括薪金、利息、租金、以及其他收益等）大約是：

- HK\$4,000 以下
- HK\$4,000 - HK\$9,999
- HK\$10,000 - HK\$15,499
- HK\$15,500 - HK\$19,999
- HK\$20,000 - HK\$27,499
- HK\$27,500 - HK\$39,999
- HK\$40,000 - HK\$59,999
- HK\$60,000 或以上

7. 您的家庭平均每月入收入（包括薪金、利息、租金、以及其他收益等）大約是：

- HK\$4,000 以下
- HK\$4,000 - HK\$9,999
- HK\$10,000 - HK\$15,499
- HK\$15,500 - HK\$19,999
- HK\$20,000 - HK\$27,499
- HK\$27,500 - HK\$39,999
- HK\$40,000 - HK\$59,999
- HK\$60,000 或以上

乙、在儲蓄互助社的狀況及對社的觀感和評價

8. 您成為儲蓄互助社社員的年資為：

- 少於 5 年
- 5 -9 年
- 10 -19 年
- 20-29 年
- 30 年或以上

9. 您在儲蓄互助社的股金結餘是：

- HK\$1,000 以下
- HK\$1,000 - HK\$9,999
- HK\$10,000 - HK\$49,999
- HK\$50,000 - HK\$99,999
- HK\$100,000 或以上

10. 您在儲蓄互助社的貸款結餘是：

- HK\$1,000 以下
- HK\$1,000 - HK\$9,999
- HK\$10,000 - HK\$49,999
- HK\$50,000 - HK\$99,999
- HK\$100,000 或以上

11. 您通常使用儲蓄互助社的那些服務? (可選多於一項)

- 儲蓄存款
- 貸款
- 聯誼活動
- 諮詢服務
- 其他，請說明 _____

12. 您每月使用儲蓄互助社的次數為：

- 1 次
- 2-5 次
- 多過 5 次
- 其他，請說明 _____

13. 您為什麼會加入儲蓄互助社？(可選多於一項)

- 賺取較高的利息
- 獲取利息較低的貸款
- 所屬團體成員的更緊密聯繫
- 希望獲得儲蓄互助社對自己在理財方面的特別照顧
- 支持以自助及互助方式來解決經濟上的困難為宗旨的儲蓄互助社運動

14. 您對本儲蓄互助社的評價：

	非常好	←—————→			非常差
	5	4	3	2	1
a. 民主(如選舉董事)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 管理(如日常社務)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. 服務(如存款及貸款)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. 創新與發展(如新服務)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. 在社區/機構的認受性	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. 整體印象	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. 您會否向其他人推介儲蓄互助社？

- 會 不會

丙、你對其他金融機構的觀感和儲蓄互助社的比較

16. 選擇存款機構 (如銀行) 時, 您認為什麼因素最重要? (同分項目不可超過二項)

	最重要	←—————→			最不重要
	5	4	3	2	1
a. 安全可靠	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 利息(股息)高	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. 存款種類多	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. 免手續費	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. 員工服務態度	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. 支付系統完善 (如轉帳和支票結算)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. 地點方便	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. 選擇貸款機構 (如銀行) 時, 您認為什麼因素最重要? (同分項目不可超過二項)

	最重要	←—————→			最不重要
	5	4	3	2	1
a. 利息低	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. 信貸額高	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. 還款期長	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. 手續費低	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. 審批寬鬆快捷	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. 保障私隱	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. 員工服務態度	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. 您有否使用其他金融機構(如銀行)的存款或貸款服務?
- 沒有 (本問卷已完成, 您毋須回答以下問題。謝謝!)
- 有 (請續答下題)

19. 您在其他金融機構(如銀行)的存款總額與在儲蓄互助社股金結餘的比例是：
- 少於金融機構存款額的十分一(如有 100 元在金融機構，在本社不足 10 元)
 - 融機構存款額的十分一至一半(如有 100 元在金融機構，在本社 10 至 50 元)
 - 少於金融機構存款額，但多過它的一半 (如有 100 元在金融機構，在本社 51 元至 99 元)
 - 與儲蓄互助社股金結餘相約
 - 儲蓄互助社股金結餘是金融機構存款額的一倍或以上
20. 您在儲蓄互助社和其他金融機構 (如銀行) 除了樓宇按揭以外，有沒有貸款？
- 沒有 (本問卷已完成，您毋須回答以下問題。謝謝！)
 - 有 (請續答下題)
21. 您在其他金融機構 (如銀行) 除了樓宇按揭以外，貸款總額與在儲蓄互助社貸款結餘的比例是：
- 少於金融機構貸款額的十分一(如有 100 元在金融機構，在本社不足 10 元)
 - 融機構貸款額的十分一至一半(如有 100 元在金融機構，在本社 10 至 50 元)
 - 少於金融機構貸款額，但多過它的一半 (如有 100 元在金融機構，在本社 51 元至 99 元)
 - 與在其他金融機構貸款額相約
 - 儲蓄互助社之貸款結餘是金融機構貸款額的一倍或以上

~ 十分多謝你的寶貴意見 ~

Appendix 2

No. _____

A Survey on Credit Union Performance in Hong Kong

Target Population: Hong Kong Credit unions

The Purpose: The information obtained from this questionnaire will be used for statistical analysis to identify the savings and borrowing characteristics among credit unions in Hong Kong.
(The collected data will be treated in the strictest confidence. Statistics will be published in aggregate form only, and no individual credit unions will be identifiable.)

Duration of the Survey: 25 June 2007 to 15 July 2007

1. Credit Union Name: _____

1. Established in: _____

2. Current Membership: _____

3. Distribution of share balances by members:

Amount of share balances	Number of members
Less than HK\$1,000	
HK\$1,000 – HK\$9,999	
HK\$10,000 – HK\$49,999	
HK\$50,000 – HK\$99,999	
HK\$100,000 or above	
Total	

4. Distribution of outstanding loan balances by members (Including arrears of repayment):

Amount of outstanding loans	Number of cases
Less than HK\$1,000	
HK\$1,000 – HK\$9,999	
HK\$10,000 – HK\$49,999	
HK\$50,000 – HK\$99,999	
HK\$100,000 or above	
Total	

5. Please provide statistics in 1996 (or the adjacent year, please specify) and 2006 respectively regarding dividends on shares, lending interest rate and the purpose of loans (These figures should be available in the respective annual report):

	1996 ()			2006		
Dividends on shares (%)						
Lending interest rate (%) (As declared in the AGM)						
Classification of loans by purpose	Productive	Provident	Others	Productive	Provident	Others
Number of cases						
Loan amount						

The information you provide in the survey is very important for our study. Whether your credit union can fill in all or only some of the blanks on the questionnaire, please kindly complete the questionnaire and return it to Che-cheong Poon, Department of Economics, Hong Kong Shue Yan University, Wai Tsui Crescent, Braemar Hill Road, North Point, Hong Kong before **15 July 2007**.

~ **Thanks for your help** ~

編號： _____

香港儲蓄互助社調查問卷

調查對象：香港儲蓄互助社

調查日期：2007年6月25日至7月15日

調查目的：收集香港儲蓄互助社有關的整體性資料數據

(問卷所獲的資料，會保密處理及以不具名方式供教育和學術研究之用，不會作其他用途。)

1. 儲蓄互助社之名稱： _____

2. 成立年份： _____

3. 現時社員人數： _____

4. 社員股東持股分佈：

社員持有股份	社員人數
HK\$1,000 以下	
HK\$1,000 - HK\$9,999	
HK\$10,000 - HK\$49,999	
HK\$50,000 - HK\$99,999	
HK\$100,000 或以上	
合計	

5. 社員貸款結欠額分佈 (包括逾期還款個案)：

社員貸款結欠額	個案宗數
HK\$1,000 以下	
HK\$1,000 - HK\$9,999	
HK\$10,000 - HK\$49,999	
HK\$50,000 - HK\$99,999	
HK\$100,000 或以上	
合計	

6. 貴社 1996(或最接近的年份，請註明該年份) 及 2006 的兩項數據(一般來說是登錄在年報內):

	1996 ()			2006		
派發股息率(%)						
貸款利息率(%) (以周年大會當日為 準)						
按貸款目的分類	生產	改善生活	其他	生產	改善生活	其他
---該年度的個案宗數						
---該年度的貸款總額						

貴社如只能填上部份資料，也請寄回給我們。

回郵地址：

潘志昌
香港樹仁大學經濟學系
北角寶馬山，慧翠道

~ 十分多謝你的幫忙 ~

REFERENCES

1. Agriculture, Fishery and Conservative Department (Hong Kong), Annual Report, issues 1971-2006, HKSAR Government Printer.
2. Arrow, K. J. (1984), Statistical Requirements for Greek Economic Planning, Collected Papers of Kenneth J. Arrow, vol. 4: "The Economics of Information", Oxford: Blackwell.
3. Boucher, Stephen; Barham, Bradford; and branch, Brian (1993), Financial Market Niche: Member behaviour profile credit unions in Guatemala, 1987-1992, WOCCU research Monograph Series: No. 2.
4. Cochran, Mosteller, and Tukey (1954), Principles of Sampling, Journal of the American Statistical Association, Vol. 49, pages 13-35. The paper was reproduced in Cochran, William G. (1982), Contributions to Statistics, John Wiley & Sons, 55.32.
5. Cochran, William G. (1977), Sampling Techniques, 3rd Edition, John Wiley & Sons.
6. Credit Union League of Hong Kong (2004), Special Edition – 40th Anniversary of Hong Kong Credit Union Movement.
7. Credit Union League of Hong Kong (2005), International Credit Union Day, October 20, 2005.
8. Credit Unions Ordinance, Chapter 119, Laws of Hong Kong, The Hong Kong Government Printer, 2002.
9. Croteau, John T. (1963), The Economics of The Credit Union, Wayne State University Press.
10. Eisenhauer, Janet Marie (1995), Malawi Union of Savings and Credit Cooperatives: Member service survey, WOCCU research Monograph Series: No. 8.
11. Kumar, Ranjit (2005), Research Methodology: A Step-by-step Guide for beginners, Sage Publication.
12. Mesbah, Dina (1998), The role of credit unions in Salvadoran financial markets: expanding and improving the delivery of financial services to the rural poor, WOCCU research Monograph Series: No. 16.
13. Nyirabega, Euthalie (2005), Assessing the Financial Impact of HIV/AIDs: A Survey of Rwandan Credit Union Members, The Unites States Agency for International Development (USAID).
14. Nyirabega, Euthalie and Ford, Catherine (2005), Impact Assessment of the 2000-2005 WOCCU Project in Rwanda: A time series survey of Rwandan credit union members, The Unites States Agency for International Development (USAID).
15. Petrie, Ragan (2002), Rwanda credit unions member & non-member survey 2002,

WOCCU Research Monograph Series:No.20.

16. Samuelson, Paul A. and Nordhaus, William D. (2005), Economics, 18th Edition, McGraw-Hill.
17. Spector, Paul E. (1981), Research Designs, Sage Publications.
18. Stewart, Chris and Clay, Sarah (2004), A report into the factors affecting membership of Whitmore Reams Credit Union, Whitmore Ream Credit Union.
19. Sundaram-Stukel (2006), Evaluating the Role of Peruvian Credit Unions: A case Study of 8 Credit Unions, WOCCU.

The working paper series is a series of occasional papers funded by the Research and Staff Development Committee. The objective of the series is to arouse intellectual curiosity and encourage research activities. The expected readership will include colleagues within Hong Kong Shue Yan University, as well as academics and professionals in Hong Kong and beyond.

Important Note

All opinions, information and/or statements made in the papers are exclusively those of the authors. Hong Kong Shue Yan University and its officers, employees and agents are not responsible, in whatsoever manner and capacity, for any loss and/or damage suffered by any reader or readers of these papers.