

# **Analysis of Financial Status for the Self-Employed - Effect of Economy Change and Comparison of the Self-employed and Earners -**

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**Abstract :** The purpose of this study is to examine the changes in financial structure of the self-employed brought on the economic crisis in Korea.. We use financial ratio analysis, such as income to expenditure ratio, liquidity ratio, debt ratio, and capital accumulation ratio to analyze financial well-being of self-employed households. This study used a 1997 and 1998 Korean Household Panel Study collected by Daewoo Economic Research Institute. The average amount of holding of each type of asset showed that the investment of self-employed households decreased in the banking industry and the stock market in 1998 compared to 1997. On the other hand, asset allocation in bond and real estate increased, which implied preference for a stable type of asset with the increase in uncertainty of the future and economic instability. Devaluation of real estate allowed households to easily obtain real estate and increase preference for asset allocation in real estate after the crisis. The changes in financial ratio for the year 1998 shows that such ratios as income to expenditure, liquidity, and capital accumulation, decreased compared to the year 1997. Among those ratios, the income to expenditure ratio showed the biggest decline because of reduced income of self-employed households. The results implied that the income structure of the self-employed is unstable, thus the self-employed were likely to be greatly affected during the economic downturn. Earners have more average income and net assets than the self-employed. However, using financial ratios, it was found that self-employed households were more stable than employees. The results shows that the financial ratio analysis is better tool to estimate households financial status. Implications for financial educators, counselors, and planners are offered. The results will provide implications for policy makers to establish appropriate policies for the self-employed and help them financially survive.

**Key Words :** Financial Ratio, self-employed households, economic crisis, net-asset, investment asset

## **I. Introduction**

The decision to give financial aid to Korea from the International Monetary Fund on December 5<sup>th</sup> in 1997 has brought about tremendous change the economy and industry in terms of macroeconomic polices, finance, and the labor market. During the period, many corporations have shut down resulting in the increase of unemployment and job insecurity. This unstable situation lead to many households in Korea going through financial problems

and declared personal bankruptcy. Korea government administrators started to establish many policies to resolve households' financial difficulties. To provide relevant information in making effective policy, it is important to examine the income and asset structure of the self-employed before and after the economic crisis, and to understand the consumption and investment behavior of the self-employed during the period. It is also important to investigate the effects of the economic recession on the financial asset structure of the self-employed.

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During the last few decades, the self-employed play a significant role in the national economy in Korea (Bae, 2002). Since the crisis, their impact has been even increasing. In general, the self-employed are more responsive to macroeconomic changes compared to salaried workers (non self-employed). The unemployment status of the self-employed, therefore, needs to be reflected upon carefully when establishing national economic policy.

In this study we use a financial ratio analysis to analyze the financial well-being of self-employed households and use the guideline developed by U.S. data. It is plausible that financial ratio guidelines developed in the United States might not be as relevant in other countries such as the Republic of Korea (Moon, Yuh & Hanna, 1992). The purpose of this study is to examine the changes in financial structure of the self-employed brought on the economic crisis in Korea. In addition, the comparison analysis between salaried earners and self-employed will be measured. The results will provide implications for policy makers to establish appropriate policy for the self-employed and help them financially survive. The financial ratios analysis for the self-employed, compared to salaried workers, will provide more rigid information for establishing financial policy since it allows researchers to examine the changes in the more fluctuating financial structure of the self-employed on a macroeconomic basis. For this, financial ratios are used in this study to compare the changes in financial structure of the self-employed before and after the economic crisis.

## **II. Review of Literature**

### **1. Economic changes after the economic crisis**

The changes after the economic crisis can be summarized with respect to unemployment rate, the polarization of wealth, and high inflation and interest

rates. First, after the economic crisis, companies' restructuring and downsizing efforts greatly increased the unemployment rate in Korea. For example, the unemployment rate in 1998 was nearly 5%, which was two times the unemployment rate in 1997 and was scored the highest rate after 5.2% in the 80's recession due to the oil shock (Samsung Economic Research Institute, 1997). In particular, the ratio of the self-employed to overall national unemployment increased more during the economic downturn (Hwang & Joo, 1999). Moreover, the economic changes after the economic crisis destabilized the financial structure of households in Korea.

Second, the polarization of wealth increase in the number of households for the high and the low classes, but decreased in the middle classes. After the economic crisis, the consumption level of the high class increased as the number of homeless rapidly increased, and also there was decrease in income and increase in unemployment aggravated by the polarization of wealth in Korea.

Third, high inflation and high interest rates were some of the significant changes after the crisis. For example, the consumer price index showed a rapid increase in consumer price level reaching 109.6 in 1997 and 121.0 in 1998, compared to 100 in 1995 as a basis. High inflation and interest rates decreased the domestic demand and investment in business activity.

### **2. Review of literature on financial ratios**

Financial ratios are designed to assess the financial status and strength of corporations by comparing one aspect with others in a financial statement (Part, 1997). Since financial ratios compare more than two financial aspects, it is utilized for assessing the financial status of households. An analysis of financial ratios help households achieve financial goals by suggesting appropriate savings and investment methods. The analysis result is useful for counseling a household by assessing the household's financial status (DeVaney, 1993). Although the raw information such as level of income, expenditure,

and asset and debt are useful to assess the financial stability of households, they cannot provide specific information on asset and debt structure as well as information on the preparation for emergencies (Hong & Swanson, 1995). According to Lytton, Garman, and Porter (1991), financial ratios provide insight on financial statement and make it easy to analyze several aspects of financial status.

No single ratio can provide an absolute guideline for assessing financial strength; various types of financial ratios need to be used to assess the comprehensive financial well-being of households depending on the purpose of the analysis (Quinn, 1987; Radner, 1992). However, several studies examined empirical data to suggest the most useful financial ratios in assessing the financial status of households. Prather (1987, 1990) suggested the five financial ratios which were the most useful ratios: monthly expenditure to liquid asset ratios, debt to liquid asset ratio, non-mortgage debt to liquid asset, annual short-term debt repayments to liquid asset, and the sum of net worth and real asset minus the value of house to net worth.

According to several authors (DeVaney, 1993; Fanslow, 1994; Griffith, 1985; Hanna, Change, Fan & Bae, 1993), household financial ratio analysis could be used. a) as an objective measure of analysis of family finances, b) as a measurement of change in financial progress over time, and c) as a tool for financial educators, counselors, and planners to make recommendations to families. For example, the use of ratios to determine trends such as increasing levels of debt or increased savings may be particularly important to families when the economy is uncertain.

Moreover, a family and the family's financial advisor may want to know more than two items to compare. Some guidelines for comparison would be more informative than the ratio itself, e.g. The consumer debt ratio indicates the portion of disposable income committed to the payment of debt and therefore, not available for savings or other purpose. Financial practitioners caution that families with a 16 to 20% ratio

of consumer debt to disposable income are fully extended and that a ratio value less than 15% is preferred (Garman & Forgue, 1991). Further, it would be useful to know whether several ratios should be used simultaneously to measure household financial status. DeVaney (1994) suggested that liquidity ratio, debt to asset ratio, and debt service ratio were important in predicting household insolvency.

### **3. Studies of financial status for self-employed households**

The National Bank of Korea (1996) investigated the relationship between income and job status. Among various occupations, households employed in professional job have the highest incomes than the self-employed, and other earners in that order.

Yang (1991) examined that job status and saving rate is positively related. Hwang & Joo (1999) compared the income and financial assets between salaried and self-employed households. They concluded that the self-employed tend to have more income and financial assets, especially more asset allocation in bank accounts, real estate, and stock. Self-employed households are more likely to increase their income irregularly and when they earn greatly irregular income, they have more changes to invest in real estate. Also, self-employed households tend to allocate their assets in insurance to prepare for their own retirement (Hira, 1987).

The variables affecting the financial status of self-employed households were shown to be age, education, gender of head of the household occupation, number of family, number of income earners, and region (Heck, *et al.*, 1993; Walker, 1993).

## **III. Methodology**

### **1. Data and sample**

This study used a 1997 and 1998 Korean Household

<Table 1> Measurement of financial ratios

1) Income to expenditure ratio (DeVaney, 1994; Moon, Yuh, & Hanna, 2002)	
Ratio 1: Monthly Average Expenditure/ Monthly Average Disposable Income	Guideline was set at 1.0 level since excess of 1.0 implies that the cost of living exceeds disposable income.
2) Liquidity ratio (Prather, 1990; DeVaney, 1994)	
Ratio 2: Liquid Asset/ Monthly Expenditure	Each household is recommended that liquid asset to monthly expenditure ratio exceed 3.0 because of an emergency fund should to last 3 to 6 months expenditure.
Ratio 3: Liquid Asset/ Net worth	Household should possess more than 25% of liquid asset over net worth in order to be categorized as household with liquidity.
3) Debt ratio (DeVaney, 1994; Lytton, Garman & Porter, 1991)	
Ratio 4: Liquid Asset/ Total Debt	Indicator that shows financial capability to pay off debt of household with liquid assets.
Ratio 5: Total Debt/Net Worth	Shows household's ability to pay. It is recommended to be below 1.0 in order for total debt not to exceed net worth.
4) Capital Accumulation Ratio (Garman & Forgue, 2002)	
Ratio 6 Investment/Net Worth	Indicates the portion of investment asset over net worth. Which is recommended to exceed 0.2

Panel Study collected by Daewoo Economic Research Institute. The total number of households in the KHPS was 2,724 in 1997 and 2,468 in 1998, respectively. Only the self-employed were included in this study, resulting in 692 households in 1997 and 600 households in 1998, and also the earners sample totaled 966 households in 1998 as the comparison part of this study..

**1) Measurement of the variables**

(1) Ratio1-Ratio 6

The self-employed were measured to find if a household ran its own business including sales and services industry. This study used four categories of financial ratios: income to expenditure ratio, liquidity ratio, debt ratio, and capital accumulating ratio. Among the four categories of financial ratio, liquidity ratio was measured with two financial ratios and debt ratio was measured with two financial ratios. The detailed measurement of the financial ratios is shown in <Table 1>.

(2) Different type of assets

- Net worth = total assets-total debt,
- Liquidity assets = includes commercial bank, other type of financial institutes, stock, bond, insurance.
- Total assets = liquidity asset+real estate
- Total debt = bank debt, debt from other financial

institutions & installment and accounts payable

**2) Data analysis**

Using the SAS statistics package, the mean and percentage were used to compare the changes in financial ratios of the self-employed between 1997 and 1998. The mean values of financial asset structure were used to examine changes between 1997 and 1998.

**IV. Results**

**1. Comparison of the characteristics of the sample in two years**

The results showed that the number of households whose income with was below 1 million won increased and the number of households in the middle income class is greater in 1998, compared to 1997. In terms of age change, the percentage of the households between 25 to 35 years old is less in 1998, compared to 1997. The level of education did not show much difference during those two years. However, the number of households living in the Seoul area is greater and the number of households living in the 5 big cities other than Seoul and in small cities was relatively less in 1998,

&lt;Table 2&gt; Characteristics of self employed household in two years

Demographic Characteristics		1997		1998	
		Frequency	%	Frequency	%
Income (in 10,000 won units)	Under 100	163	23.6	232	38.7
	100 ~ < 200	303	43.8	250	41.7
	200 ~ < 300	157	22.7	79	13.2
	300 ~ < 400	34	4.9	17	2.8
	Over 400	35	5.1	22	3.7
Age	25 ~ < 35	135	19.5	93	15.5
	35 ~ < 45	319	46.1	258	43.0
	45 ~ < 55	142	20.5	142	23.7
	55 ~ < 65	77	11.1	81	13.5
	Over 65	19	2.7	26	4.3
Education	None	30	4.4	20	3.4
	Elementary school	84	12.2	68	11.4
	Junior high school	109	15.8	103	17.2
	High school	315	45.5	271	45.2
	2-year college	54	7.8	48	7.9
	4-year college & over	100	14.4	90	14.9
Geographic area	Seoul (Capital)	272	39.3	279	46.5
	5 Large cities	158	22.8	111	18.5
	Mid-City	186	26.9	108	18.0
	Small town	76	11.0	102	17.0
Marital status	Married	649	93.5	560	93.3
	Single	12	1.7	11	1.8
	Other	30	4.5	29	4.9
Total		692		600	

compared to 1997. Among the sample, most of the households (more than 90%) were married households.

## 2. Changes in financial structure before and after the economy depression

The changes in financial structure of the self-employed are presented in <Table 3>. The financial structure consists of assets in banks or other types financial institutions, stocks, bonds, insurance, gye, personal loan, real estate, and debts (e.g., loan from banks or other type of financial institutions). The results showed that, in 1998, assets in banks and stock ownership decreased whereas asset allocation in bonds and real estate increased. In terms of debt, loan from other types of financial institutions increased compared

to loan from banks after the economic crisis.

In 1997, the average income of self-employed households exceeded average expenditures. However, after the crisis, average expenditure slightly exceeded the average income. This indicated that although average expenditure decreased in 1998, the decreases in average income were greater than the average expenditures.

## 3. Changes in financial ratios of the self-employed before and after the economy depression

The changes in expenditure to income ratio (Ratio 1) showed that 57% of the households met the suggested guideline in 1997 while less than half (45.5%) of the households met the guideline in 1998; hence, the

&lt;Table 3&gt; Change in asset structure of the self employed (\* = .05, \*\* = .01)

Type of Asset	Average Holding Amount (Unit = 10,000won)			
	Mean (%) in 1997	Mean (%) in 1998	Changes of %	T-test
Commercial bank	871.74(22.5)	781.12(15.7)	-	6.78**
Other type of financial institutions	201.82(5.21)	224.52(4.51)	-	5.54*
Stock	64.24(1.66)	47.88(0.96)	-	4.45*
Bonds	1.62 (0.04)	56.76(1.14)	+	135.9**
Insurance	15.00(3.87)	13.02(0.26)	-	1.21
Gae <sup>1</sup>	244.49(6.31)	587.83(11.8)	+	57.6**
Sache <sup>2</sup>	149.51(3.86)	176.77(3.55)	+	12.4*
Real estate	2339.27(60.4)	3503.08(70.4)	-	79.7**
Total assets	3872.68	5391.28		69.6**
Bank debt	1059.35(75.63)	1126.45(66.10)	-	18.7*
Debt from other financial institutions	311.74(22.26)	535.51(31.42)	+	25.4*
Installment and accounts payable	29.61(2.11)	42.28(2.48)	+	7.9*
Total debt	1400.70	1704.24	+	34.7*
Liquidity assets	1533.41	1470.82	-	9.7*
Net worth	2471.98	3269.65	+	27.3*
Income	201.59	175.04	-	3.42*
Expenditures	183.60	181.56	-	0.86

<sup>1</sup>Gae: accumulation of private relation, used to be related financially <sup>2</sup>Sache: owned debt by the private sector mostly at a higher interest rate paid

&lt;Table 4&gt; Analysis of change in the financial ratio of the self-employed

Financial Ratio	Guideline	Median		% meeting		Change
		1997	1998	1997	1998	
Ratio 1 Income to expenditure ratio	< 1.0	1	1.12	57.1	45.5	-11.6
Ratio 2 Liquid Asset/ Monthly Expenditure	> 3.0	3.35	2.89	54.3	48.2	-6.1
Ratio 3 Liquid Asset/ Net worth	> 0.25	2.00	1.85	83.5	77.2	-6.3
Ratio 4 Liquid Asset/ Total Debt	> 0.1	1.00	0.45	60.5	53.2	-7.3
Ratio 5 Total Debt/Net Worth	< 1.0	0.00	0.00	94.5	95.5	+1.0
Ratio 6 Investment Asset/ Net Worth	> 0.2	1.00	1.00	54.5	48.8	-5.7

households that met the expenditure to income ratio guideline decreased by 11.6% after the economic crisis <Table 4> This result suggested that the income drops were greater than expenditure cut during these periods rather than an increases in the level of expenditure

increased after the crisis.

The liquidity of self-employed households was measured using two ratios (Ratio 2 & 3) liquid asset to monthly expenditure to measure short-term liquidity and liquid asset to net worth to measure long-term liquidity.

The percentage of households that met the liquid asset to monthly expenditure ratio decreased by 6.1% from 54.3% in 1997 to 48.2% in 1998. In terms of long term liquidity, the percentage of households that met liquid asset to net worth ratio decreased by 6.3% after the crisis <Table 4>.

Therefore, both the short-term and long-term liquidity of self-employed households decreased after the economic crisis, indicating the difficulty of financing of self-employed households during the economic downturn. This result suggested that banks or other financial institutions needed to manage their credit line for the self-employed with flexibility and efficiency depending on the credit rating of the self-employed.

The changes in burden of debt between 1997 and 1998 were measured using liquid asset to total debt ratio and total debt to net worth ratio (Ratio 4 & 5). Although households that met liquid asset to total debt ratio decreased 7.3%, households that met total debt to net worth ratio increased by 1% after the crisis <Table 4>. Due to the increase in asset allocation in real estate in net worth and a decrease in liquid asset, households that met the liquid asset to total debt ratio fell, while those that met the total debt to net worth rose.

In order to measure the level of capital accumulation, the investment assets to net worth ratio was used (Ratio 6). The capital accumulation ratio indicated the progress toward financial goals. Due to the economic downturn, the investment asset to net worth ratio of the self-employed decreased by 5.7% after the economic crisis <Table 4>. This result indicated the decline of the stock market after the economic crisis.

<Table 5> illustrates the detailed changes of ratios between the two years using 5%, 25%, median, 75%, and 95%. Among 6 ratios, ratio 5 and ratio 6 using the net worth shows the minus sign in the lower 5% and 25% and it indicates that the net assets of the self employed might be negative in those groups. Even though households who met the guidelines in Ratio1, expenditure/disposable income and Ratio 6, Investment/ Net Worth were less in 1998. However those groups in 75% and 95% in 1998 had much higher ratios and it may indicate that inequality of income among different income levels becoming worse after the economic depression. In case of the capital accumulation ratio, the ratio of households in the 95 percentile becomes 3 times that in 1998 compared to 1997. It means that their preference of investment assets has been greatly affected by rapid economic changes.

<Table 5> Analysis of change in the financial ratio of the self-employed: 1997 vs 1998

	5%	25%	Median	75%	95%
Ratio 1 Income to expenditure ratio					
1997	0.46	0.7	0.9	1.16	3.33
1998	0.50	0.79	1.00	1.5	6.08
Ratio 2 Liquid Asset/ Monthly Expenditure					
1997	0.01	0.50	3.68	10.01	34.79
1998	0.01	0.01	2.57	8.75	38.57
Ratio 3 Liquid Asset/ Net worth					
1997	-0.01	0.37	2.97	1323.07	6073.00
1998	-0.02	0.14	1.86	716	5787
Ratio 4 Liquid Asset/ Total Debt					
1997	0.00	0.00	1.00	1.00	1.67
1998	0.00	0.00	0.49	1.00	1.44
Ratio 5 Total Debt/Net Worth					
1997	-2.08	-1.00	0.00	0.05	1.08
1998	-1.87	-1.00	0.00	0.11	0.96
Ratio 6 Investment Asset//Net Worth					
1997	-0.07	-0.00	0.34	1.02	2.21
1998	-0.04	-0.00	0.15	1.02	7.22

&lt;Table 6&gt; Financial statuscomparison between earners and the self-employed (\* = .05)

Financial ratios		Guideline	Group	Mean	T-test	5%	25%	median	75%	95%
Income to expenditure ratio	Ratio1	<1.0	Earners	0.98	3.56*	0.5	0.72	0.85	1.07	1.84
			Self-employed	2.16		0.5	0.7	0.88	1.08	2.25
Liquidity ratio	Ratio2	>3.0	Earners	7.59	1.22	0.01	0.94	4.45	9.89	27.45
			Self-employed	7.66		0.00	0.51	3.64	9.91	30.73
	Ratio3	>0.25	Earners	0.33	0.78	-1.14	-0.00	1.00	1.00	1.61
			Self-employed	0.44		-1.03	-0.00	1.00	1.00	1.44
Debt ratio	Ratio4	>0.1	Earners	860.9	5.44*	0.00	0.48	19.46	965.8	4287.4
			Self-employed	970.9		0.00	0.34	3.20	1358.7	4715.9
	Ratio5	<1.0	Earners	-0.56	1.18	-2.32	-1.00	0.00	0.03	0.78
			Self-employed	-0.37		-2.29	-1.00	0.00	0.04	0.98
Capital Accumulation Ratio	Ratio6	>0.2	Earners	0.53	0.09	-0.86	-0.00	0.76	1.01	1.78
			Self-employed	0.61		-0.66	-0.00	0.27	1.01	1.77

&lt;Table 7&gt; Financial ratio comparison using guideline for 1997 vs 1998

Financial ratio		Guideline	%meeting			
			Earners (changes)		Self-employed (changes)	
			1997	1998	1997	1998
Income to expenditure ratio	Ratio1	< 1.0	66.2	64.3 (-1.9)	57.1	45.5 (-11.6)
Liquidity ratio	Ratio2	> 3.0	59.7	55.1 (-4.6)	54.3	48.2 (-6.1)
	Ratio3	> 0.25	83.9	81.7 (2.0)	83.5	77.2 (-6.3)
Debt ratio	Ratio4	> 0.1	87.2	86.5 (-0.7)	60.5	53.2 (-7.3)
	Ratio5	< 1.0	96.1	97.4 (1.3)	94.5	95.5 (1.0)
Asset accumulation ratio	Ratio6	> 0.2	58.3	54.8 (-3.5)	54.5	48.8 (-5.7)

#### 4. Comparison of the self-employed and earners using financial ratio analysis

<Table 6> illustrates a comparison analysis for 6 different ratios between earners and self-employed using 5%, 25%, median, 75%, and 95%. The mean of Ratio1 for the self-employed was much greater than that of earner but their median is almost similar. It may reflect that the upper 90% of households that are self-employed might dramatically overspend. For Ratio 2 and 3 as liquidity ratios, the median was better measure than the mean because there are many households that fall in the

extreme amounts.

<Table 7> shows the % of households who met the guidelines suggested by financial planners. The income to expenditure ratio has a greater percentage association for earners than self-employed and it might be caused by the irregular income for self-employed households. Households who met the guidelines in Ratio 2 & 3 as liquidity ratio, were 59.7% & 62.8% for earners and 53.8% & 58.5% for the self-employed slightly less. A study found that self-employed households are likely to invest more in real-estate and the results of this study supported the findings of previous results. In terms of debt ratios, households which met the guidelines for



earner is also greater than those of self-employed households.

However the guidelines for debt ratio has to be developed properly for Korea instead of using those developed for U.S. households because some households does not depend on debt when they purchase their own house. Ratio 6, which the asset accumulation ratio has a greater percentage association for earner than self-employed. The results of this study relatively gives us the need to analyze self-employed households which grow by more percentage in the domestic economy.

## V. Conclusion and Implications

This research analyzed overall changes in financial structures between the years 1997 and 1998, the periods which showed extreme economic changes, to assess how the economic downturn affected the asset structure and financial ratios of self-employed households.

Compared to full-time employees, self-employed households are more responsive to the macroeconomic changes because of their irregular income; thus, the statistical interpretation of change in asset structure would be helpful for establishing economic policies.

In general, the average amount of holding each type of asset showed that the investment of the self-employed households decreased in the banking industry and stock market in 1998 compared to 1997. On the other hand, investment in bonds and real estate increased, which implied preference for the stable type of asset with an increase in uncertainty of the future and economic instability. In addition, devaluation of real estate allowed households to easily obtain real estate and increase in their preference for investment in real estate after the crisis.

The results are summarized as follows: the changes in the financial ratio of the year 1998 shows that such ratios as income to expenditure, liquidity, and capital accumulation, decreased compared to the year 1997. Among those ratios, expenditures to disposable income ratio

showed the biggest decline because of reduced income of self employed households. The results implied that the income structure of the self-employed is unstable, thus the self-employed were likely to be greatly affected during the economic downturn. In other words, different from salaried workers, the self-employed should be able to obtain a certain level of support from the government with tax incentives or financial subsidiaries. Different from salaried workers, the income level of the self-employed is very unstable. Hence, for the self-employed, tax should be imposed depending on the financial ratio analysis rather than income itself. Among the liquidity ratios, the liquid assets to disposable income ratio showed the most decrease, thereby resulting in the greater effect on reduced income.

In case of the debt ratio, as the results indicated, the self employed had a higher portion of real estate in their net worth. This result was consistent with previous research (Hwang & Joo, 1998), suggesting that the self-employed preferred real estate because their level of income greatly fluctuated depending on the macroeconomic situation. In addition, as expected, more than 90% of households met the guideline for ratio 6 because the net worth included the value of current housing. However, many households in western countries possess housing with loan from banks. Therefore it is expected that their debt ratio using net worth would be lower while using the same measurement.

Earners have a greater average income and net assets than the self-employed. However, using financial ratios, it was found that self-employed households were more stable than earner. The results shows that the financial ratio analysis gives us a better tool to estimate households' financial status. Implications for financial educators, counselors, and planners are offered.

Even though the average amount of investment asset greatly increased in 1998, the percentage of households that met the guidelines of the capital accumulation ratio decreased. This implies the polarization of wealth between the rich and the poor after the economic crisis in Korea.

This research focused on assessing financial ratios of the self-employed. However, for future research, it would be useful to investigate changes in financial ratios by each group of income level or by occupation. In light of the importance of self-employed households in Korea, asset structure needs to be analyzed in more detail before setting up economic policies such as national pension or medical insurance for the self-employed. In addition, research on changes in portfolio structure of subdivided groups of self-employed households would be important.

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