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## *Private Pension Plans: A Major Factor to be Considered in Needs Analysis*

*by Carol Mackintosh*

When the Uniform Methodology was adopted in 1975, no provision was made in the formula for consideration of private pension plans as an asset. Since 1975, several federal laws have regulated, insured, and encouraged the growth of private pension plans. Private pension plans can now be a substantial asset for a family.

Utica College, during the 1982-83 Academic Year, instituted a study designed to measure how widespread private retirement plans are in the families of the student aid population, and to identify characteristics of families which are related to the existence of a retirement plan. Each student applicant was required to answer a series of retirement related questions as part of the aid application process. The preliminary finding is that pension plans are widespread in the student aid population. Indeed, 67 percent of the students' families have verified pension plans. The percentage of workers covered by such plans varied according to income level, type of employer, and type of occupation.

### *Background*

Financial aid officers regularly deal with the Uniform Methodology. Terms such as assets, asset protection allowance, and income supplements are part of their daily working vocabulary and have been since 1975 when the Uniform Methodology was adopted. They assume that assets are not totally available to pay for a college education and that families have the right to accumulate assets to provide for retirement. These assumptions lie behind the figures represented as asset protection allowances, and the use of the following annuity formula every year by the needs analysis services:

$$APA = \text{Balance} (1 + f)^{\frac{n+r}{2}} \left[ \frac{1 - (1+i)^{-n-r}}{i} \right] (1+i)^{-n} (1+L)$$

APA	=	Asset Protection Allowance
Balance	=	Annual annuity income needed to bridge the gap between an intermediate budget and average social security benefits for a retired couple or person
f	=	rate of inflation
i	=	rate of return on annuity
n	=	number of years to retirement at age 65
r	=	life expectancy
l	=	Loading charge (2)

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This formula ignores the entire issue of private retirement plans of corporations, unions, and individuals. Perhaps this is not surprising, since prior to 1974 there was no substantial federal regulation which governed private corporate or union pension plans, and few substantial federal tax incentives for individuals to start personal retirement plans.

If financial aid officers truly believe that the asset protection allowance is a set-aside for retirement, they should become aware of federal legislation affecting retirement benefits that has come into effect since the Uniform Methodology was introduced in 1975. The Employee Retirement Income Security Act (ERISA) of 1974 regulated private corporate retirement plans for the first time. The regulations became effective in 1975 for new plans and in 1976 for old plans. The legislation calls for insurance for corporate plans, requires funding from employers in defined benefit plans to cover total normal cost of funding the plans plus amortization of past service costs, and requires vesting under one of three alternative plans, the most simple of which is 100 percent vesting after 10 years' service (1). Vesting is "the granting to a worker of an irrevocable right to receive the pension benefits earned through his employment" (1).

The insurance aspect was strengthened by ERISA Amendments of 1980. Also in 1974, ERISA provided for tax exempt personal contributions to Individual Retirement Accounts (IRA) for all individuals with earned income for personal services who did not participate in a qualified employer pension plan. The Economic Recovery Act of 1981 extended tax exempt personal contribution to Individual Retirement Accounts to all individuals with income earned from personal services regardless of participation in a qualified employer pension plan. The Economic Recovery Act also increased the tax incentives for individuals making personal contributions to Keogh retirement plans, which were originally authorized in the late 1960's by the Self-Employed Individuals Tax Retirement Act and liberalized by ERISA of 1974 for self-employed people and their employees.

How does this legislation affect the Uniform Methodology? Using the example from *CSS Need Analysis: Theory and Computation Procedures for the 1982-83 FAF* (College Scholarship Service, 1982), the effect of private retirement plans becomes more clear. The major wage earner in the example is married and 45 years old, has 20 years to retirement, and expects to live 31.9 more years. The rate of inflation is assumed to be .06, the rate of return on an annuity .08, the loading charge .06 and the balance (the annual annuity income needed to bridge the gap between an intermediate budget and average social security benefits for a retired couple or person) is equal to \$3,638 annually.

$$\text{Asset Protection Allowance} = \$3638 (1.06) \left[ \frac{20+31.9}{2} \frac{1-(1.08)^{20-31.9}}{.08} \right] (1.08)^{-20} (1.06)$$

$$\text{APA} = \$28,132 (1)$$

If it is assumed this family has a vested defined benefit plan which pays \$1,800 per year (average in 1978) (1), the formula would show the balance as \$1,832 which is the difference between the balance of \$3,638 and the income received from the wage earner's defined benefit retirement plan. The private plan would help close the gap between social security payments and an intermediate budget, and thus the formula would read:

$$\begin{aligned}
 \text{APA} &= \$1838 (1.06)^{\frac{20+31.9}{2}} \left[ \frac{1-(1.08)^{20-31.9}}{.08} \right] (1.08)^{-20} (1.06) \\
 \text{APA} &= \$14,213
 \end{aligned}$$

The asset protection allowance drops from \$28,132 to \$14,213 when the private retirement plan is considered in the formula. If the difference, \$13,919, is multiplied by the discretionary net worth conversion rate of 12 percent, the income supplement increases by \$1,670. As a consequence, the family contribution increases. In lower income categories at the conversion rate of 22 percent, this \$1,670 increase in adjusted available income would yield a \$367 increase in parent contribution; in higher income categories at the 47 percent conversion rate, the increase in adjusted available income yields a \$785 increase.

Further assume that the family has \$5,000 in an individual retirement account. This reduces the \$14,213 asset protection allowance needed for retirement to \$9,213. When the discretionary net worth conversion rate and the parent contribution rate are applied to the additional \$5,000, an increase of \$132 in parental contribution occurs at the 22 percent rate, and of \$282 at the 47 percent rate.

It is clear from this example that retirement programs are a significant family asset which are ignored in the Uniform Methodology. The retirement plans in this example could increase a family's contribution, depending on income level, from \$499 to \$1,067. It may be hard to defend the same family contribution for otherwise similar families, one of which has a corporate and/or private retirement plan, and the other of which has no retirement plan.

There are enormous problems in collecting data on retirement plans for the purposes of financial aid needs analysis. Many workers do not fully understand the plans they are covered by. To complicate matters, the terms of the plans often change as the length of employment increases. Families may have trouble completing questions on a financial aid form because the pension information to which they have access may be in highly technical language, or the personnel office at their place of employment may be relatively inaccessible. But if retirement annuity factors are to be used in the financial aid formula, technical information as to the nature of private pension plans - vested versus non-vested, defined benefit versus defined contribution, personal plans versus group plans - will be necessary.

#### *Research at Utica College*

While recognizing the complexities of assessing retirement plans, it has become essential for financial aid administrators to begin exploring methods to assess these plans. The rather startling effect a moderate pension and a small IRA have on the parent contribution in the example above prompted the Utica College financial aid staff to begin to explore the use of retirement related questions on the College's 1982-83 financial aid application. The aim was twofold: to find out if retirement plans are widespread in the student aid population, and to identify family characteristics which predict the existence of a retirement plan. The questions asked of each parent read as follows:

1. Occupation/Title \_\_\_\_\_
2. Employer \_\_\_\_\_
3. Number of years with employer \_\_\_\_\_
4. Does his/her employer offer him/her a retirement plan? \_\_\_\_\_

All the information received was classified by categories. The occupations or titles were coded into one of nine categories of jobs used in the *United States Department of Labor Dictionary of Occupational Titles*:

1. Professional, Technical, and Managerial Occupations
2. Clerical and Sales Occupations
3. Service Occupations
4. Agricultural, Fishery, Forestry, and Related Occupations
5. Processing Occupations
6. Machine Trades Occupations
7. Benchwork Occupations
8. Structural Work Occupations
9. Miscellaneous Occupations

The employer information was classified by employer type: business, government, non-profit, and self-employed. Number of years with employer was classified by whole numbers; partial years were rounded up. The retirement plan responses were simple yes/no responses. An IRA or Keogh that showed either as a random response to the question, "Does his/her employer offer him/her a retirement plan?" or that showed on the current income tax required as part of the Utica College Application were treated as a yes for self-employed workers. Non-employed parents' responses were considered as blanks. To find out how widespread retirement plans are in the student population, only the families who indicated an employer (business, government, non-profit, self-employed) for one or both parents were examined. Families solely supported through welfare, social security, retirement plans, and other such programs were excluded. Nine hundred eighty families were selected; there were 1,409 employed parents in these families.

### *Results*

#### *Families with one working parent*

Five hundred fifty-one families had one parent employed. Of these families, 286, or 52 percent, indicated the existence of a retirement plan; 135 indicated no retirement plan; and 130 left the question unanswered (see Table 1). Retirement responses were divided by number of years employed. If it is conservatively assumed that 10 years is the point at which vesting takes place, 36 percent of this entire population had vested retirement plans.

The non-response rate was high for incomes below \$15,000 and for incomes above \$35,000. It appears that low-income workers may not be informed about retirement plans, but the same conclusion does not hold in the higher income brackets. It is suspected that there are substantial retirement benefits above \$35,000 and that these families are sophisticated enough to recognize that these plans represent a significant family asset and, therefore, may affect the students' opportunity for aid. Certainly, a follow-up questionnaire with non-responding families is indicated. At this point, the College can verify that 52 percent of its one working-parent families have retirement benefits, but it seems reasonable that upwards of 70 percent have plans.

#### *Families with two working parents*

Four hundred twenty-nine families reported two parents employed. Of these families, 367, or 86 percent, indicated the existence of at least one retirement plan. No retirement plan for either parent was indicated by 50 families. There was no response from 12 families (see Table 2). It is clear that the vast majority of two working-parent families at the College have assets available for retirement. Of the families in this population, 60 per cent have vested plans.

Table 1  
Families with One Working Parent

Gross Family Income	No Retirement	Yes Retirement		No Response	Total	% No Response
		<10 Yrs.	>10 Yrs.			
0	2	0	4	6	12	50
1 - 15,000	74	33	42	45	194	23.2
15,001 - 20,000	20	15	27	11	73	15.1
20,001 - 25,000	16	15	50	13	94	13.8
25,001 - 30,000	9	7	28	7	51	13.7
30,001 - 35,000	4	6	19	6	35	17.1
35,001 - 40,000	5	3	11	11	30	36.6
40,001 - 45,000	1	3	10	4	18	22.2
45,000 +	4	5	8	27	44	61.4
Total	135	87	199	130	551	23.6

*All families*

For the Utica College aid applicant population, 67 percent of the families with employed parents verified having pension plans. Seventy-five percent of the verified plans appear to be vested. In fact, 4 percent of these families have not one but two verified vested pension plans. It is suspected that a follow-up with non-responding families would indicate that 70 percent, not 67 percent of these families actually have some retirement plan (see Table 3).

The preliminary finding (subject to follow-up questioning of non-respondents) is that pension plans are widespread in the student aid population. It also seems that throughout the income levels there are families who are not covered; therefore, there is a major inequity in a needs analysis system which ignores these differences in retirement assets at all income levels.

*Characteristics related to existence of retirement plans*

The second aim of the study was to identify characteristics which predict the existence of retirement plans. Relationships to income, employer, and occupation were examined.

Among respondents, the percentage of families covered by retirement plans generally increased as income increased. As income increased, so did percentage of retirement plans which are vested. The relationship of income and retirement plans seems to be positive (see Table 4).

In examining retirement benefits in relation to employer type and occupation, use of family units was not feasible. The analysis is based on worker units which totaled 1,409.

The percentage of employees covered by retirement plans varies according to employer type. Ninety-one percent of government employees are covered by plans, while only 14 percent of self-employed workers are covered. Business covers 63 percent of its employees, while the comparable figure for non-profit agencies is 71 percent (see Table 5).

Different occupations showed different percentages of coverage. The percentage of employees covered by retirement plans varies from 48 percent for workers in structural work occupations to 79 percent for professional, technical, and managerial occupations. A follow-up questionnaire for non-responses among high

Table 2  
Families with Two Working Parents

Gross Family Income	No Retirement	Both Parents < 10 Yrs.			One Parent < 10 Yrs. Other Parent > 10 Yrs. or Blank			No Response	Total	% No Response
		< 10 Yrs.	One Parent < 10 Yrs. Other Parent > 10 Yrs. or Blank	One Parent > 10 Yrs. Both Parents > 10 Yrs.	< 10 Yrs.	One Parent < 10 Yrs. Other Parent > 10 Yrs. or Blank	> 10 Yrs.			
0	0	2	0	1	1	0	4	0	0	
1 - 15,000	13	12	9	10	2	5	51	9.8	9.8	
15,001 - 20,000	13	14	8	14	3	1	53	1.9	1.9	
20,001 - 25,000	6	12	1	30	2	2	53	3.8	3.8	
25,001 - 30,000	5	18	2	36	3	1	65	1.5	1.5	
30,001 - 35,000	4	12	2	42	9	0	69	0	0	
35,001 - 40,000	1	7	0	38	8	1	55	1.8	1.8	
40,001 - 45,000	4	3	1	15	9	0	32	0	0	
45,000 +	4	4	1	30	6	2	47	4.3	4.3	
TOTAL	50	84	24	216	43	12	420	2.8	2.8	

Table 3  
All Families at Utica College

Gross Family Income	No Retirement	Both Parents < 10 Yrs.			One Parent < 10 Yrs. Other Parent > 10 Yrs. or Blank			No Response	Total	% No Response
		< 10 Yrs.	One Parent < 10 Yrs. Other Parent > 10 Yrs. or Blank	One Parent > 10 Yrs. Both Parents > 10 Yrs.	< 10 Yrs.	One Parent < 10 Yrs. Other Parent > 10 Yrs. or Blank	> 10 Yrs.			
0	2	2	0	5	1	6	16	37.5	37.5	
1 - 15,000	87	45	9	52	2	50	245	20.4	20.4	
15,001 - 20,000	33	29	8	41	3	12	126	9.5	9.5	
20,001 - 25,000	22	27	1	80	2	15	147	10.2	10.2	
25,001 - 30,000	14	25	2	64	3	8	116	6.9	6.9	
30,001 - 35,000	8	18	2	61	9	6	104	5.8	5.8	
35,001 - 40,000	6	10	0	49	8	12	85	14.1	14.1	
40,001 - 45,000	5	6	1	25	9	4	50	8	8	
45,000 +	8	9	1	38	6	29	91	31.7	31.7	
TOTAL	185	171	24	415	43	142	980	14.5	14.5	

Table 4  
Income and Retirement Coverage

Income	Percent Covered by Retirement Plans	Percent of Plans Vested
0	60	75
1 - 15,000	55	58
15,001 - 20,000	71	64
20,001 - 25,000	83	75
25,001 - 30,000	87	73
30,001 - 35,000	92	80
35,001 - 40,000	92	85
40,001 - 45,000	89	85
45,000 +	87	83

Table 5  
Retirement Plans by Employer

Employer	No Retirement	<10 Yrs.	>10 Yrs.	No Response	Total	% Respondents with Plan
Business	255	149	287	110	801	63
Government	15	61	92	14	182	91
Non-Profit	85	97	114	28	324	71
Self-employed	55	1	8	38	102	14
Total	410	308	501	190	1,409	66

Table 6  
Retirement Plans by Occupation

Type	No Retirement	<10 Yrs.	>10 Yrs.	No Response	Total	% Respondents with Plan
1. Professional, etc.	99	112	267	83	561	79
2. Clerical; sales	130	93	61	20	304	54
3. Service	93	62	73	18	246	59
4. Agricultural, etc.	7	2	6	9	24	53
5. Processing	7	2	9	2	20	61
6. Machine Trades	21	14	35	10	80	70
7. Benchwork	5	2	4	3	14	54
8. Structural	14	3	10	4	31	48
9. Miscellaneous	26	13	25	15	79	59
TOTAL	402	303	490	164	1,359*	66

\* 59 were not classified



income workers may reveal an even higher percentage of coverage in the professional, technical, and managerial occupations (see Table 6).

### *Conclusion*

Retirement benefits are widespread among the families of Utica College students. The higher income levels are more likely to have benefits. The type of employer and the type of occupation are related to the likelihood of the existence of a retirement plan.

It appears from this analysis of the student aid population that a universal asset protection allowance for retirement simply does not reflect the diversity of retirement situations among student families. It appears that a system that relates the allowance to several factors would be more appropriate. Among the factors to be considered are:

1. Income - Retirement benefits seem to be tied to level of income. Investigation of this relationship in the population as a whole would be appropriate. A typical level of coverage by income may provide better guidelines for an asset protection allowance than the approach currently used.
2. Employer - The nature and amount of benefits vary by type of employer. These relationships must be investigated in the population as a whole. These relationships, if they exist, may provide better guidelines for a more representative asset protection allowance. One particular concern is the relationship between government and non-profit agency employees and social security. Currently, under many agreements in government and non-profit agencies, the retirement plans do not supplement social security, they replace it. This situation needs particular attention in any multi-faceted approach to an asset protection allowance.
3. Occupation - The effect of occupation also needs investigation in the population as a whole so that better guidelines for financial aid needs analysis may be developed. Group plans available under unions also need investigation in certain occupations since many workers may not consider these employer plans even if employers make substantial contributions. This phenomenon may account for the low rate of coverage identified in the Utica College study in certain occupational groups such as construction and structural occupations.
4. Existence of an IRA, Keogh and/or a group retirement plan for each parent.
5. Vested versus non-vested status of a pension plan for each parent.

This study indicates that private retirement plans are an asset in a large portion of the families that are applying for financial aid. It is hoped this study will prompt

research concerning private pension plans in general and a professional review of a needs analysis methodology that has not changed in eight years even though the laws that govern accumulation of assets for retirement have changed considerably.

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