Social Security Abroad

Social Security Funding Practices in Selected Countries*

Recent discussions regarding the size of the social security trust fund in the United States have triggered a number of inquiries with respect to funding practices in other Western countries The general belief is that the practice of accumulating large funds to safeguard or stabilize the social security system is quite common In fact, however, few countries follow this practice The programs with sizable reserves are, for the most part, relatively new and will not pay full benefits for some time When full benefits are eventually paid, the funds are expected to dwindle

Most countries base their social security programs on pay-as-you-go financing The long-time practice of accumulating sizable capital funds largely disappeared in the post-World War II period as a result of inflation In the newer social security systems, the pay-as-you-go approach appears to require only modest contribution rates to cover the small number of retirees initially receiving benefits To avoid subsequent frequent increases as the number of beneficiaries grow, however, contribution rates are initially set higher than needed As a result, funds are built up in the early stages of the program, while pensioners are few and benefits low, with a subsequent decline as benefits overtake contributions

Funding practices in Austria, Canada, Finland, France, Germany, Norway, Sweden, Switzerland, the United Kingdom, and the United States are presented here in some detail For easy comparison, the development of each country's fund in terms of size in relation to expenditures is shown in tabular form when appropriate Some of the programs are relatively new and will not pay full benefits for some time Canada (1965), Finland (1961), Norway (1966), Sweden (1962)—all earnings-related programs—and Switzerland (1948)

By far the largest fund is being created in Sweden for the earnings-related pension program In 1975, it was more than 21 times total benefit payments Emphasis is being placed on its rate as a source of investment, however, rather than on its pension-funding potential

* Prepared by Leif Haanes-Olsen, Office of Research and Statistics, Comparative Studies Staff

AUSTRIA

Austria uses a pay-as-you-go funding system. Employee and employer contributions (at 8 75 percent of wages and 8 5 percent of salaries each) provide the main source of revenue for the old-age, invalidity, and survivor program, with any deficit covered by the Government A "support fund" for the health insurance system is limited to 5 percent of contributions A similar fund for accident insurance is limited to 2 percent of contributions

CANADA

The Canadian social security program illustrates the buildup of funds that often takes place during the early stages of a program In the Canada Pension Plan—the earnings-related portion of the Canadian social security program—the relatively modest amounts paid out since the program's inception in 1964 had resulted in a buildup of funds of more than $8 billion (Canadian) by 1975, or about 19 years' payments at the current rate of expenditures

Table 1 reflects the year-to-year growth of the balance in the Canada Pension Plan account, as well as the increasing expenditures, through fiscal year 1975 Contributions and benefits are projected to become equal by 1982, however, with the fund disappearing in the early part of the next century

Employers and employees contribute to the program in equal proportions—1 8 percent each of annual earnings from $700 (Canadian) to $7,400 (Canadian)

FINLAND

The Finnish old-age, invalidity, and survivor program has a basic pension as well as an employment-related component The basic program is based on the pay-as-you-go principle Contin-

TABLE 1 —Canada Status of Pension Plan Fund, 1966–75

[In millions of Canadian dollars, US $1 equaled Can $1 01, as of Dec 31, 1975]

Year ending March 31	Size of fund at end of year	Expenditures
1966	89	6
1967	681	8
1968	1,353	13
1969	2,108	30
1970	2 932	65
1971	3,844	109
1972	4,779	167
1973	5 793	229
1974	6,934	304
1975	8 262	430

Source Canada Pension Plan, *Statistical Bulletin*, various issues

gency funds are built up only to the extent necessary for maintaining liquidity Insured persons and employers are the main sources of revenue Employers contribute a percentage of payroll according to a unique system of capital intensity, as expressed in the annual depreciation of capital used in the production process From 4 5 percent of payroll to 5 5 percent, depending on the amount of depreciation of capital assets Employee contributions are 2 25 percent of income subject to municipal tax

The employment-related program is financed from employer contributions exclusively 7 9 percent of payroll in enterprises with fewer than 50 employees; in larger enterprises, according to the age of the individual employee In 1972, slightly more than half the premiums collected were paid back in benefits The employer may automatically borrow back his contribution to the fund (at 7-percent interest); in which case, the premiums in practice are paid in insured promissory notes Since not all employers take advantage of this option, the remaining funds may be made available as investment loans (at 9¾–10 percent in 1973–74) or invested in bonds (utilities, housing, etc)

Table 2 shows the growth of the fund during the 11-year period ending in 1972 It is worth noting that the relative size of the fund has been reduced by one-half in the 4-year period 1968–72 and the coverage cut from 16 years of paid-out benefits to 8 years

FRANCE

An employer tax (7 25 percent of payroll) provides the main source of income for the old-age and survivors insurance programs, with the

TABLE 2 —Finland Status of Employment Pension Program Reserve, 1962–72

[In millions of markkaa, US $1 equaled 3.87 markkaa, as of Dec 31, 1975]

Year	Size of reserve at end of year	Expenditures
1962	98	---
1963	339	3
1964	765	13
1965	1 112	29
1966	1,441	55
1967	1,796	86
1968	2 196	140
1969	2,621	210
1970	3,165	287
1971	3,845	407
1972	4,667	598

Source Bank of Finland, *Social Insurance in Finland*, 1974

insured contributing at a lower rate (3 percent of earnings) The system is basically pay-as-you-go, with a relatively small contingency fund (table 3)

There has not been a general revenue contribution per se, but taxes on alcohol, tobacco, and automobile insurance have been used to make up deficits in related health care and other programs It is also the custom in France to transfer funds from one program to another within the general social security system, according to need In 1974, for example, a reported 1 5 percent of contributions to the family allowance program (a major program in France) was transferred to the old-age program Such transfers contribute to maintenance of a contingency fund generally sufficient to cover expenditures for 2–4 months and to the stability of the program

In table 3, the contingency fund is shown to be increasing or decreasing according to whether the old-age program is running a surplus or deficit The 1974 surplus of 2 6 billion francs is related to the transfer from the family allowances program, mentioned above Data for total expenditures on the old-age and survivors insur-

TABLE 3 —France Status of old-age and survivor insurance fund, 1972–76

[In millions of francs, US $1 equaled 4 44 francs, as of Dec 31, 1975]

Year	Size of fund at end of year	
	Contingency fund balance	OASI annual balance
1972	1,463	---
1973	513	−950
1974	3 076	2,563
1975	4,739	1 663
1976	4,165	−573

Source *Liaisons Sociales*, Documents No 88/75, November 3, 1975, Paris ance programs are difficult to obtain but appear to have amounted to about 24 billion francs for the general system

GERMANY (FEDERAL REPUBLIC)

The payroll tax provides the main source of income in the pension system of the Federal Republic of Germany with employers contributing 9 percent of payroll and the insured 9 percent of earnings Historically, the system had attempted to maintain a reserve fund, and until 1957 statutory regulations called for a fully funded pension program with accumulated reserves large enough for capital accumulation to cover pension expenditures Economic conditions prevented compliance for long periods of time, however The reserve was wiped out by inflation in 1923, and by currency reform in 1948

With the introduction of the pension reforms in 1957, a new process was begun whereby, over 10-year periods, reserves accumulated year by year would equal expenditures during the last year of the period A long-term balance in inflow and outgo was to be maintained Because of an increasing number of pensioners in relation to contributors, subsequent (1967) legislation provided for successive increases in the combined employer-employee contribution rates To 14 percent in 1967, 15 percent in 1968, 16 percent in 1969, and 17 percent in 1970

With the unfavorable age pattern expected to peak during the 1976–80 period, the procedures for covering pension fund expenses were again changed in 1969 It was decided to maintain the reserves at approximately the level at that time, instead of building them up in 10-year phases As a result, the function of the fund was basically downgraded to cover only 3 months' expenditures, down from a previous full year's coverage The contribution rate was fixed for the period up to 1985, including an increase to 18 percent from 1973 on, with provision for rate increases under certain circumstances Each year, financial forecasts are made for the 15 subsequent years, providing a more rapid evaluation of the pension reserves [1] If, according to these forecasts, reserves are too small to cover 3 months' expenditures for 3 consecutive years, the rate of contribution may be changed to increase the reserves accordingly

Thus, the fund has been reduced to the status of a contingency fund An example of the forecasting method used, covering the years 1972 through 1987, is shown in table 4 The size of the fund is predicted here to dip below the 3-month mark only once (2 9 months in 1985), with the need for an increase in the contribution rate thus eliminated If, on the other hand, this condition had been maintained for 3 consecutive years during the 15-year timespan, present rules would have demanded a rate increase

The current monitoring system rests on and reflects the economic conditions in the country in the year of the forecast, and the results of the forecasts have therefore varied substantially from one year to the next

[1] Separate funds are maintained for manual and nonmanual workers Data here reflect the combination of the two, as shown in German statistics

NORWAY

The Norwegian social security system is based on the pay-as-you-go principle Employers provide most of the financing by contributing at approximately twice the rate for the insured person (17 percent of income, compared with 8 9 percent), with relatively minor support from national and local governments (each 2 25 percent of income) In contrast to most other coun-

TABLE 4 —Federal Republic of Germany Status of old-age, invalidity, and survivor insurance fund and number of months of coverage, 1972–87[1]

Year	Size of fund at end of year (in millions of deutsche marks [2])	Months of coverage
1972	34 0	9 1
1973	40 0	9 8
1974	43 8	9 1
1975	45 3	8 4
1976	44 7	7 4
1977	42 6	6 4
1978	39 6	5 5
1979	36 8	4 7
1980	34 6	4 2
1981	33 3	3 8
1982	32 5	3 5
1983	31 6	3 2
1984	31 4	3 0
1985	32 5	2 9
1986	35 2	3 0
1987	39 6	3 2

[1] For manual and nonmanual workers Data projected
[2] US $1 equaled 2 61 DM, as of Dec 31, 1975

Source Bericht der Bundesregierung über die gesetzlichen Rentenversicherungen *Rentenanpassungsbericht 1973* Deutscher Bundestag, 7 Wahlperiode, Drucksache 7/88, Jan 31, 1973 tries, where the rate of contribution to each individual program has been earmarked, only one contribution is made and the collected funds are subsequently distributed to the individual programs The reason for this procedure is that, since 1970, the Norwegian social security system has incorporated work injury and unemployment insurance programs, as well as the usual old-age, invalidity, survivor, and health insurance (Children's allowances are financed from general revenue funds exclusively and are regarded as a Government subsidy)

Collected revenues not used for benefits and administrative costs are transferred to a national insurance fund whose primary function is to maintain liquidity In the 4-year period 1970–74, as shown in table 5, the fund had increased 250 percent To some extent, this growth reflects the increasing costs of the social security system, although the coverage provided by the fund had risen from 4 months of total outlays in 1970 to more than 7 months in 1973

TABLE 5—Norway Status of National Insurance Fund, 1967–74

[In billions of kroner, US $1 equaled 5.54 kroner, as of Dec 31, 1975]

Year	Size of fund at at end of year [1]	Expenditures for social insurance program [2]
1967	2 0	([3])
1968	2 6	7 8
1969	2 6	([3])
1970	3 3	9 8
1971	5 1	10 7
1972	6 4	11 8
1973	8 9	14 4
1974	11 8	([3])

[1] Data from Trygdekontorenes Landsforening, *Social Trygd* No 8/9, September 1975

[2] Data from the *Statistical Yearbook of Norway*, various issues and from National Insurance Institution, *Social Insurance in Norway* (various issues) and *The National Insurance Scheme—an outline*, 1972

[3] Data not available

SWEDEN

The Swedish old-age, invalidity, and survivor insurance program consists of a basic pension, available to residents, and an earnings-related pension introduced in 1960 and financed entirely by employers In anticipation of heavy outlays when the latter matures in 1990, high initial contribution rates have resulted in the planned accumulation of a large fund Projections indicate that it will reach more than 100 billion kronor—or approximately 25–30 percent of the gross national product—in 1976

This fund is now the major source of capital formation in Sweden For administrative purposes it is divided into three parts, each administered by a board, according to source of contribution—employer, Government, and the employee and self-employed

The role of the employer as a contributor has been steadily increasing and, as a group, employers are the major source of financing for the social security system They currently contribute to the old-age, invalidity, and survivor insurance program at the rate of about 14 5 percent of payroll In addition, they contribute about 8 percent toward health, work injury, and unemployment insurance combined The employee's participation is limited to a small contribution to the union-related unemployment insurance program The Government still contributes substantially to certain social security programs, notably health insurance (about 25 percent of the cost of the program), children's allowances (entire cost), and unemployment (entire cost of labor-market support program).

Table 6 shows the rapid increase in the size of the national pension fund (the ATP fund), as projected through 1979 In terms of the growing expenditures in the earnings-related program,

TABLE 6—Sweden Status of National Pension Fund, 1974–79[1]

[In billions of kronor, US $1 equaled 4 40 kronor, as of Dec 31, 1975]

Year	Size of fund at end of year	Benefit payments
1960	0 5	
1961	1 2	
1962	2 6	
1963	4 7	([2])
1964	7 3	0 1
1965	10 5	2
1966	14 4	3
1967	19 0	4
1968	24 9	6
1969	31 3	8
1970	38 4	1 2
1971	46 7	1 7
1972	56 3	2 2
1973	66 1	2 9
1974	77 5	3 4
1975	89 8	4 1
1976	103 0	5 0
1977	117 2	5 9
1978	132 3	7 0
1979	148 4	8 3

[1] Data for 1974–79 projected

[2] Less than 0 1 billion kronor

Source National Social Insurance Board, *The Swedish National Insurance Scheme* (9th ed), *Social Försäkring*, Nos 3/1972 and 1/1973, *OECD Observer* April 1968, International Monetary Fund, *International Financial News Survey*, No 6, Feb 17, 1971, Swedish Employer Association, *Arbetsgivaren*, No 10, Mar 14, 1974 however, the fund has been declining In 1970, for example, the fund was 32 times the size of annual expenditures By 1975, its size had decreased to equal 22 years of expenditures and, according to the projected figures, will have dropped to 18 years' expenditures by 1979 Thus, over a 10-year period, the relative size of the fund will have declined by almost one-half

SWITZERLAND

The Swiss social security system maintains a central equalization fund, which is a contingency fund designed to absorb fluctuations in income and outgo and assure the stability of the system Employees and employers—each contributing 4 2 percent of earnings and payroll, respectively, for the old-age pension and 0 5 percent for the invalidity pension—provide most of the financing, with national and cantonal governments underwriting a smaller proportion of the cost (20 percent for old-age, 50 percent for invalidity) As the contribution from public authorities has not been used fully every year, the excess (plus the interest accrued) has been used to keep up the reserve fund

Substantial increases in pensions have caused expenditures to rise at a much faster rate than the fund itself In table 7, the relative decline in the size of the fund follows the pattern observed in other countries In the 10-year period 1966–75, for example, the coverage of the fund

TABLE 7—Switzerland Status of Central Equalization Fund, selected years, 1948–75

[In billions of francs, US $1 equaled 2 67 Sw francs, as of Dec 31, 1975]

Year	Size of fund at end of year	Expenditures
1948	0 5	0 1
1950	1 4	2
1955	3 8	4
1960	5 6	7
1965	7 2	1 7
1966	7 5	1 7
1967	7 7	2 0
1968	7 9	2 1
1969	8 1	2 9
1970	8 5	3 0
1971	9 1	3 4
1972	9 7	3 8
1973	10 4	6 5
1974 [1]	10 8	7 4
1975 [1]	10 3	8 7

[1] Estimated

Source Office Fédéral des Assurances Sociales, *AVS, AI, APG—Rapport Annuel*, 1973, p 57

TABLE 8—United Kingdom Status of the National Insurance (Reserve) Fund, selected years, 1948–71

[In billions of pounds, US $1 equaled £0 49, as of Dec 31, 1975]

Year	Size of fund at end of year [1]	Expenditures
1948	0 8	0 3
1952	8	5
1953	1 1	5
1955	1 1	6
1956	1 2	7
1968	1 2	2 1
1969	9	2 3
1970	9	2 5
1971	9	2 6

[1] Fund remained unchanged during 1948–52, 1953–55, and 1956–68

Source Department of Health and Social Security, *Annual Report*, 1970, p 360, and 1971, p 356

in terms of current expenditures has decreased from 4 years and 5 months to 1 year and 2 months According to current estimates, this relationship will continue to deteriorate as the fund becomes progressively smaller after peaking in 1974, while expenditures continue to increase

UNITED KINGDOM

The United Kingdom approach to social security financing is basically pay-as-you-go The system maintains a national insurance (reserve) fund whose resources are applied to the whole range of social security programs health, work injury, unemployment, as well as old-age, invalidity, and survivor insurance The fund is relatively small, however, and has been steadily declining in terms of current benefit payments The custom of keeping the fund at certain levels for extended periods in the face of increasing expenditures accounts for the decline Thus, at the beginning of the program in 1948, the fund was sufficient for the payment of benefits for 2 years and 8 months By 1971 (the latest year for which data are available), that period had been reduced to 4 months With improved benefit payments, the relative size of the fund is probably still lower today

The size of the fund and the amount of expenditures over a period of time are outlined in table 8 Contributions by employees and employers cover about three-fourths of the costs of old-age, invalidity, and survivor pensions, and Government contributions cover the remainder. The National Health Service carries about 85 percent of health care costs

UNITED STATES

Separate trust funds are maintained for old-age and survivors insurance (OASI), disability insurance, hospital insurance, and supplementary medical insurance The entire system has been increasingly financed on a pay-as-you-go basis, and the trust funds are therefore essentially contingency funds, designed to ensure the smooth operation of the social security system Table 9 reflects the operations of the old-age and survivors insurance trust fund only

As is common in maturing social security systems, the rate of increase in the fund has fallen behind the growth in expenditures Thus, the coverage provided by the fund in terms of current expenditures dropped from 1 year and 11 months in 1960 to 1 year and 2 months in 1970 and had declined to about 8 months' expenditures by 1975 Nevertheless, the fund itself had been growing during the 1970's The recent discussions regarding the state of the social security system are based on projections of the employee/beneficiary numerical relationship and on the levels of income and employment, among others

TABLE 9 —United States Status of old-age and survivors insurance trust fund, selected years, 1940–75

[In billions]

Year	Size of fund at end of year	Expenditures[1]
1940	$1 7	([2])
1945	6 6	$0 3
1950	12 9	8
1955	21 1	4 4
1960	20 8	11 1
1965	20 2	16 0
1970	32 6	27 3
1971	34 3	32 3
1972	36 4	35 8
1973	36 4	43 6
1974	37 9	49 5
1975	39 9	56 7

[1] Cash benefit payments, rehabilitation services for disabled, transfers to railroad retirement account, plus net administrative expenses

[2] Less than $50,000,000

Source *Social Security Bulletin*, January 1976, page 50

Old-age, survivor, and disability cash benefits are financed equally from employee and employer contributions, each currently at the rate of 4 95 percent of earnings and payroll, respectively The Federal Government finances the special monthly benefits to those aged 72 or older