Chapter Title: Government Saving Incentives in the United States

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1   Government Saving Incentives in the United States

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Public policies in the United States affect incentives for household saving in many ways. While income from capital is included in the federal income tax base, investments through private pension plans, individual retirement accounts (IRAs), some types of life insurance policies, and various other special programs receive favorable tax treatment. Public policy toward saving has been unstable during the past two decades. IRAs were introduced in 1981 to encourage household saving, but they were significantly restricted in the 1986 Tax Reform Act. Major changes in marginal tax rates affected the incentives for households to save through traditional saving vehicles, and coincident changes in the technology of financial services affected opportunities for both borrowing and investing.

This paper provides an overview of government policies that affect household saving incentives. It is divided into five sections. The first provides background information on saving in the United States, including information on the asset composition of household net worth. Section 1.2 describes the tax treatment of capital income and outlines the changes in capital taxation that have taken place during the last two decades. Section 1.3 focuses on saving through private pension plans, which is the single most important channel for tax-favored saving. Assets in pension plans account for more than one-sixth of household net worth. It also includes a brief discussion of the U.S. Social Security system. The fourth section describes several specialized policies which raise the return to private saving: IRAs, 401(k) pension plans, tax-favored life insurance policies, and related saving vehicles. There is a brief concluding section.

Table 1.1   **Distribution of Household Net Worth, 1989 (thousand 1989 $)**

	Family Income (thousand 1989 $)				
	<10	10–20	20–30	30–50	>50
Net worth					
Mean	30.1	63.1	89.6	150.2	586.7
Median	2.3	27.1	37.0	69.2	185.6
Share of:					
Households	20	20	17	23	20
Total wealth	3.2	6.8	8.2	18.6	63.2
	Age of Family Head				
	<35	35–44	45–54	55–64	>65
Net worth					
Mean	46.9	148.3	286.4	292.5	244.0
Median	6.8	52.8	86.7	91.3	71.9
Share of:					
Households	26	23	14	14	22
Total wealth	6.6	18.5	21.8	23.9	29.1

Sources: Kennickell and Shack-Marquez (1992) and author's calculations.

1.1   The Household Balance Sheet

Table 1.1 presents summary statistics on the distribution of wealth holdings from the Survey of Consumer Finances, the single best source of information on the wealth and income of households with capital assets. The table shows that the vast majority of all nonhuman wealth is concentrated in a small group of high-wealth households. Nearly two-thirds of the household sector's wealth is held by the one-fifth of the households with the highest net worth; even this wealth is highly concentrated within this population subgroup. In contrast, the bottom 40 percent of households account for less than 10 percent of the household sector's net worth. Table 1.1 also shows the pattern of net worth across households of different ages and demonstrates some concentration of net worth among older households.

Table 1.2 shows the composition of net worth by asset types and reveals several simple patterns. First, owner-occupied housing is a crucial component of household wealth, accounting for nearly one-quarter of total assets. When home mortgages are subtracted from the total, *net* owner-occupied housing equity accounts for just over 10 percent of net worth. Second, pension reserves account for nearly one-sixth of net worth. Although the table does not show this, for many households, owner-occupied housing and pension reserves account for virtually all of their net worth. Direct holdings of financial assets are near zero for the majority of U.S. households. Third, households have substantial holdings of corporate equities, both traded equities and nontraded equity

Table 1.2   Composition of Household Wealth, 1991 (trillion $)

Asset or Liability	Amount
Tangible assets	7.27
Owner-occupied residences and land	4.72
Consumer durables	2.07
Other	0.48
Marketed financial assets	8.57
Checkable deposits and currency	0.55
Other deposits (including money market fund shares)	2.94
U.S. government securities	1.09
Tax-exempt bonds	0.34
Corporate bonds and open market paper	0.63
Corporate equities	2.64
Life insurance reserves	0.40
Pension fund reserves	3.14
Equity in noncorporate business	2.66
Miscellaneous assets	0.28
Total assets	21.92
Home mortgages	2.73
Installment consumer debt	0.73
Other loans and debts	0.58
Total liabilities	4.04
Net worth	17.88

Source: Board of Governors of the Federal Reserve System, *Private Sector Net Worth* (Washington, D.C., September 1991).

shares in unincorporated businesses. Each of these categories accounts for nearly one-eighth of household net worth.

Household debt is small in comparison to the stock of household assets, with a liability-to-asset ratio of less than 20 percent. By far the most important household debt is the home mortgage, followed by consumer installment debt (typically to finance durables). Households have relatively little debt that does not fall into one of these categories. Tax and other policy incentives for households *to borrow* can have important effects on the personal saving rate. The 1986 Tax Reform Act eliminated the income tax deduction for consumer installment interest on all types of borrowing except home mortgages. While this may have raised the cost of borrowing for some liquidity-constrained households, for many with built-up equity in their homes, it probably induced a reallocation of borrowing from credit cards or auto loans to home mortgages or home-equity lines of credit (see Manchester and Poterba [1989] for further discussion). The ratio of mortgage debt to housing equity in 1991, 58 percent, was higher than at any previous time in the postwar period.

Table 1.3 provides a broad overview of the most important government policies that affect saving and guides the remainder of the paper. The next section considers the taxation of capital income when households save through tradi-

Table 1.3   Overview of Saving Incentives

1. Tax Burdens on Capital Income
Dividends: Top marginal tax rate = 31% (+ state tax)
Interest income: Top marginal tax rate = 31% (+ state tax)
Capital gains: Taxed at top marginal rate of 28% on realization, basis step-up at death

2. Pension and Life Insurance Provisions
Employer pension contributions: No tax on contributions, taxed when paid out as income
Pension funds untaxed
401(k) plans: Additional individual retirement saving vehicle, contributions limited to $7,000
    (1986 dollars)
Life insurance: "Inside build-up" untaxed

3. Government Incentive Programs: IRAs
Eligibility: Universal for tax-deductible IRA if not covered by employer pension plan, income-
    conditioned eligibility if have pension coverage (alternative is IRA from after-tax dollars)
Contribution limit: $2,000/year
Asset restrictions: None
Withdrawal provisions: 10% penalty tax if withdrawn before age 59 and a half, afterwards
    ordinary income tax on withdrawals; must withdraw beginning at age 70 and a half

4. Other Special Provisions
403(b) plans: Similar to 401(k) plans for employees of tax-exempt institutions
Keogh plans: Similar to private pensions for self-employed individuals

tional channels—for example, by holding corporate stock or buying shares in a money-market mutual fund backed by short-term credit instruments. Section 1.3 considers private pension plans, and section 1.4 analyzes special incentive programs such as IRAs.

1.2   The Taxation of Capital Income

There are three types of capital income: interest payments, dividends, and capital gains. Interest and dividends are taxed in similar fashion, while a number of special provisions apply to capital gains income. Capital income is taxed by the federal, state, and, in some cases, local government; my analysis will focus on federal and state taxes.

The current U.S. federal tax code is structured around three basic income tax brackets, with marginal tax rates of 15, 28, and 31 percent, respectively. Table 1.4 shows the levels of taxable income that place different types of tax filers into each of these categories. There are also a number of tax code provisions that make it possible for some households to face tax rates above the "top rate" of 31 percent. Phase-out provisions on both personal exemptions and itemized deductions can raise the marginal tax rate on some high-income households to 35 percent.[1]

1. The phase-out provisions introduce substantial heterogeneity in marginal tax rates across households, due for example to different numbers of dependents in different households.

Table 1.4   **Marginal Tax Brackets in the Federal Income Tax, 1991**

Marginal Tax Rate (%)	Single Filer ($)	Married Joint Filer ($)
15	0–20,350	0–34,000
28	20,530–49,300	34,000–82,150
31	>49,300	>82,150

Source: Internal Revenue Service, *1991 Form 1040 Forms and Instructions.*

The rate structure of the federal income tax, particularly with respect to capital income, was changed substantially by the Economic Recovery Tax Act of 1981 and the Tax Reform Act of 1986. Prior to 1981, the highest marginal tax rate applicable to dividend and interest income was 70 percent. The 1981 reform reduced this rate to 50 percent, and the 1986 reform in turn lowered the marginal rate for very high income households to 28 percent. In less than a decade, the highest statutory marginal tax rate on capital income was therefore reduced by nearly two-thirds. Minor tax changes enacted since the 1986 Tax Reform Act have raised the top marginal tax rate from 28 percent to the current constellation of rates above 31 percent.

Weighted average marginal federal tax rates on dividend and interest income, with weights proportional to these income flows, are shown in table 1.5. The sharp changes in higher-income tax rates as a result of the 1981 and 1986 tax reforms are particularly important for the taxation of dividend income. The weighted average marginal tax rate on dividend income fell from 44.2 percent in 1980 to 24.9 percent in 1988. The change in the tax burden on interest income is less pronounced, since interest income is less concentrated in high income brackets than dividend income.

Table 1.5   **Weighted Average Marginal Tax Rates on Dividend and Interest Income**

	Weighted Average Marginal Tax Rate (%)		
Year	Dividends	Interest	Wages
1979	42.7	29.7	28.6
1980	44.2	31.9	30.2
1981	41.1	32.1	31.2
1982	35.0	27.9	28.2
1983	32.8	25.3	26.3
1984	31.1	25.5	25.8
1985	30.7	25.4	26.0
1986	28.4	23.8	25.9
1987	30.5	23.9	24.2
1988	24.9	22.1	22.5

Source: NBER TAXSIM program.

Note: Each column shows the ratio of increased taxes to increased income flow, when all dividends, interest receipts, or wages are increased by one percent of their reported value.

State tax rates on dividends and interest income differ substantially across jurisdictions. In many cases, state taxes add significantly to the tax burden on capital income. In California, for example, the top state tax rate is 11 percent. Even after allowing for the deductibility of state taxes from federal taxable income, this adds $(1 - .34) \times 11 = 7.3$ percent to the marginal tax burden. While most states follow the federal practice of applying equal tax rates to labor and capital income, a few states, such as Massachusetts, tax capital income at rates substantially above the tax rate on wages and salaries (12 percent vs. 6 percent). The average state marginal tax rate on dividends is approximately 5 percent. Recognizing state tax payments for those taxpayers who itemize reduces these net marginal tax rates to between 3 and 4 percent.

The taxation of capital gains is more complicated than the taxation of other capital income for three reasons. First, gains are taxed at realization rather than accrual, so there can be important differences between statutory and effective tax rates. Because deferral amounts, in effect, to the government granting the taxpayer an interest-free loan, it reduces the effective tax burden on capital gains. Second, the maximum statutory tax rate on capital gains is currently 28 percent. This is a smaller differential between the marginal tax rates on capital gains and dividends than during most of the postwar period, when the statutory tax rate on long-term capital gains was often less than half that on interest or dividends. Proposals to reduce the tax burden on capital gains have been debated almost continuously since the Tax Reform Act of 1986 eliminated the historical capital gains exclusion provision. Third, capital losses can be offset without limit against realized capital gains, and up to $3,000 of losses in excess of gains can be offset against other taxable income. Losses that cannot be offset against current income can be carried back, or carried forward, to offset taxable income in other years. Finally, the tax code includes special provisions for the taxation of gains on assets that are transferred from one taxpayer to another as part of an estate. The "basis step-up rule" allows the recipient of a bequest to increase the tax basis of an asset to the value when it was bequeathed, in effect extinguishing all capital gains tax liability on gains during the decedent's lifetime.

Deferral and basis step-up at death combine to reduce the effective tax burden on accruing capital gains below the tax burden that would be associated with accrual taxation. Bailey (1969) and Feldstein and Summers (1979) estimate that these provisions combine to make the effective accrual rate roughly one-quarter of the statutory rate. There is great heterogeneity across investors, with higher effective accrual rates on investors who are unable to defer realization or to structure their financial affairs in a way that takes advantage of the basis step-up provisions. Most capital gains are realized by households with high taxable incomes, so the average marginal tax rate *conditional on realization* is near the statutory maximum.

1.3   Employment-linked Retirement Saving

Favorable tax treatment of employee pension plans is the single most important public policy incentive for household saving in the United States. The revenue loss in fiscal year 1992 from excluding pension contributions and earnings from taxable income is $51.2 billion, compared with $7.3 billion of lost revenue from IRAs, $8.0 billion from generous taxation of life insurance savings, and $1.8 billion from the existence of Keogh accounts (U.S. Congress, Joint Committee on Taxation 1991). Pension plan assets totaled nearly $3 trillion in 1990 and accounted for roughly one-sixth of household net worth.

There are two tax incentives for accumulating wealth through private pensions. First, pension contributions can be made before tax. Rather than earning one dollar and investing $(1 - \tau)$ dollars in a traditional saving vehicle, an individual can contribute one dollar before tax to a pension plan. Second, pension accumulation is not taxed. If an individual is investing in an asset with a return of i percent per year, the after-tax return on a traditional saving vehicle will be $(1 - \tau)i$, while the same asset held in a pension fund will yield a return of i. When assets are withdrawn from a pension fund, they are taxed as ordinary income.

The tax benefits associated with pensions can substantially increase the return to saving. Assuming that an individual faces the same tax rate throughout his lifetime, the after-tax proceeds from investing one dollar in a pension fund T years before withdrawal is

$$(1) \qquad\qquad V_{\text{pension}} = (1 - \tau)e^{iT},$$

compared with

$$(2) \qquad\qquad V_{\text{traditional}} = (1 - \tau)e^{(1 - \tau)iT}$$

in a traditional taxable saving vehicle. The difference between these two expressions can be large, especially when the time horizon is long. The table below shows the ratio $V_{\text{pension}}/V_{\text{traditional}}$ for an individual with a marginal tax rate of 28 percent:

	Time Horizon		
Nominal Return(%)	10 Years	20 Years	40 Years
5	1.15	1.32	1.75
10	1.32	1.75	3.06

The benefit of untaxed accumulation is larger for taxpayers facing high marginal tax rates.

The tax benefits of saving through pension funds explain their importance for U.S. households. Table 1.6 presents information on the prevalence of private pensions. Half of all full-time workers are currently covered by private

Table 1.6   **Private Pension Plan Coverage Rates (%)**

	Private Wage and Salary Workers	Private Full-Time Wage and Salary Workers
1950	25	29
1960	41	47
1970	45	52
1980	46	53
1987	46	52

Source: Beller and Lawrence (1992).

pension plans; another substantial group receives coverage through government pensions. The fraction of workers covered by private pensions rose sharply in the two decades after World War II but has not increased substantially since then. Table 1.7 provides some information on the composition of pension plans. Until the early 1980s, most private pension plans were defined-benefit (DB) plans: the worker was eligible for benefits equal to a prespecified function of his age, years of service, and lifetime earnings profile with the firm. In 1980, for example, DB plans covered 80 percent of the workers with private pension coverage.

A variety of legislative changes during the 1980s reduced the appeal of DB plans relative to the alternative type of pension arrangement, defined-contribution (DC) plans. In DC plans, there is an account for each participant, recording his or her contributions. Upon retirement, each participant is entitled to the current market value of the account; this can be annuitized or withdrawn in other ways. The number of participants in DC plans nearly tripled during the 1980s. In 1988, the last year of data availability, one-third of pension plan participants were in DC plans.

There is an important distinction between DB and DC plans from the standpoint of household saving. A DB plan consists of corporate liabilities and associated corporate contributions to accounts that prefund these liabilities. These contributions can be viewed as corporate, rather than household, saving. Contributions to DC plans, however, are the property of the account beneficiaries, and as such should be viewed as household saving. The switch from DB to DC

Table 1.7   **Numbers of Pension Plan Participants, 1975–88 (millions)**

	Defined-Benefit Plan Participants	Defined-Contribution Plan Participants
1975	26.8	3.9
1980	29.7	5.8
1985	28.9	11.6
1988	28.0	14.3

Sources: Employee Benefit Research Institute, *EBRI Issue Brief* (Washington, D.C., April 1989), and idem, *Trends in Pensions 1992.*

Table 1.8   **Pension Assets and Household Net Worth (billion $)**

	1982	1985	1988	1990
Single-employer plans				
Defined benefit	399	545	680	757
Defined contribution	196	325	427	437
Multiemployer plans	61	98	130	144
Private insured plans	211	343	517	580[a]
Federal government plan	98	149	208	251
State/local government plans	262	404	605	756
Total pension plan assets	1,227	1,864	2,567	2,925
(% of household net worth)	(12.1)	(14.7)	(16.4)	(17.1)

Source: Employee Benefit Research Institute, Issue Briefs 97 and 116 (Washington, D.C., December 1989 and July 1991).
[a]Value for 1989, not 1990.

plans may therefore affect the allocation of private saving between households and corporations, but probably has little effect on total private saving.[2] There is an important behavioral issue about the extent to which individuals perceive corporate pension contributions as part of their own saving; there is little satisfactory empirical work on this issue.

Table 1.8 describes the importance of private pensions in household net worth. Pension plan assets totaled $2.9 trillion in 1990, or 17 percent of household wealth. A substantial component of this wealth is accounted for by various government pension plans, most of which are DB plans.

Table 1.9 examines the role of pension plans in providing for retirement living. Pensions are an income source for more than 40 percent of households with someone aged 65 or older. Despite their wide distribution, however, pensions account for a relatively small share of *income.* The third and fourth columns show that the fraction of retirement *income* from private pensions is less than 10 percent. This reflects the presence of many small income flows from private pensions and relatively large income flows from Social Security, earnings for those in households with someone still in the labor force, and asset income, which is highly concentrated among high-wealth elderly households.

The U.S. government also operates an important retirement saving program, the Social Security system. This is a pay-as-you-go system.[3] In 1992, the payroll tax was 15.3 percent, equally divided between an employer and an employee component. Social Security benefits are a function of an individual's work history, with the broad structure involving a minimum benefit, rising benefits for workers with higher lifetime earnings, and a maximum monthly benefit cap. For each worker, the Social Security Administration computes Average

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2. Poterba (1987) discusses the interaction between corporate and household saving in more detail.
3. There is a separate system of retirement benefits for government workers.

Table 1.9   Sources of Retirement Income, 1980 and 1988 (%)

Income Source	Share of Over-65 Households Receiving		Share of Over-65 Households' Income	
	1980	1988	1980	1988
Social Security	90	92	39	38
Asset income	66	68	22	25
Earnings	23	22	19	17
Private pension/annuity	22	29	7	8
Government pension	12	14	7	9
Public assistance	10	7	1	1

Source: Chen (1992).

Indexed Monthly Earnings, a constant-dollar index of the worker's average wage in jobs covered by Social Security. This amount is used to compute a primary insurance amount, which is the benefit the worker would be entitled to if she retired at the Social Security retirement age. For all workers who have retired to date, this age was 65, but current law calls for a gradual increase to 67 by the year 2030. The Social Security system allows early retirement at ages above 62, and early retirees are eligible for lower benefits per month than those who retire at 65. Workers who do not retire by age 65 also receive a monthly benefit adjustment that increases their benefit once they retire.

Social Security benefits are a central contributor to the retirement income of currently aged Americans. Table 1.9 shows that Social Security is received by more than 90 percent of elderly households and accounts for nearly 40 percent of their income. Social Security represents a smaller share of the retirement income for high-income or high-wealth elderly than for their low-income counterparts.

There have been important changes over time in the generosity of the Social Security system. Until the early 1970s, Social Security benefits did not include an automatic cost-of-living adjustment. This made the level of benefits an outcome of the political process, and several years of real benefit increase significantly increased the level of real Social Security benefits. Since the mid-1970s, benefits have been indexed to the consumer price index.

1.4   Targeted Incentives for Saving Promotion

This section considers a range of specialized tax policies that are designed to encourage saving by particular subgroups in the population. It begins with a discussion of IRAs, then turns to 401(k) plans, which are becoming increasingly important, and concludes with a discussion of several more limited programs.

1.4.1   Individual Retirement Accounts

A number of specialized programs designed to encourage household saving were introduced during the 1980s. Individual retirement accounts (IRAs), which were created by the 1981 Economic Recovery Tax Act, are the most widely discussed. As originally enacted, taxpayers could make tax-deductible contributions to IRAs subject to a limit of $2,000 per earner per year and $250 for a nonworking spouse. Withdrawals could be made without penalty, any time after the account holder turned age 59 and a half; early withdrawals were subject to a 10 percent tax penalty. Withdrawals are taxed as ordinary income.

The power of compound interest makes the IRA an important vehicle for long-term saving. The return to investing through an IRA is similar to that for pension plans, as described in the preceding section. In part because of this high return, IRAs became very popular investment vehicles in the early 1980s. To reduce the current revenue cost of this program, the 1986 Tax Reform Act limited access to tax-deductible IRAs by imposing income tests on the use of tax-deductible IRA contributions. In 1991, single taxpayers with incomes of $25,000 or less and joint filers with taxable incomes of $40,000 or less could make fully deductible contributions. Single filers with incomes above $35,000 and joint filers with incomes above $50,000 could not make tax-deductible contributions if they were covered by an employer-provided pension plan.[4] They could still make after-tax contributions, which will generate tax-free withdrawals from the IRA. For these higher-income taxpayers, the value of the IRA contribution is

$$(3) \qquad V_{\text{nondeductible}} = (1 - \tau)(e^{iT} - \tau(e^{iT} - 1)).$$

The second term in this expression reflects the tax liability that is due when the value of the account *in excess of the original contribution* is included in taxable income.

Even nondeductible IRA contributions accumulate tax free, so these accounts yield a higher return than traditional saving vehicles. Individual retirement accounts are nevertheless less liquid than traditional, more heavily taxed, saving vehicles, which may account in part for their limited appeal. Table 1.10 shows the number of taxpayers making IRA contributions in each year since the early 1980s. These accounts became quite popular almost immediately after they were introduced, and at their peak in 1985, more than 16 million taxpayers contributed nearly $40 billion to them. The changes of the 1986 Tax Reform Act reduced the incentives for households to contribute, both by eliminating deductible contributions for some taxpayers and by reducing marginal tax rates on capital income accruing through traditional channels. There was also a substantial decline in IRA promotion by financial institutions in the post-

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4. Taxpayers with incomes between the thresholds for tax-deductible and taxable IRAs are eligible for partially deductible IRAs.

Table 1.10   **Number of Tax Returns Claiming IRA Contributions, 1982–90**

Year	Number of IRA Contributor Returns (millions)	Total IRA Contributions (billion $)
1984	15.232	35.374
1985	16.205	38.211
1986	15.535	37.758
1987	7.318	14.065
1988	6.361	11.882
1989	5.882	10.960

Source: U.S. Department of the Treasury, *Statistics of Income: Individual Tax Returns* (Washington, D.C., various issues).

1986 period, and this may have affected the level of contributions. Many taxpayers who could have made tax-deductible contributions in the post-1986 period also appear to have been confused about the IRA program and, therefore, erroneously concluded that they were not eligible for it. Table 1.10 shows that the number of contributors fell by half between 1986 and 1987 and that, by 1990, fewer than 6 million taxpayers reported contributions of just over $10 billion.

The political decision to limit IRAs as part of the 1986 Tax Reform Act reflected two factors. First, the U.S. personal saving rate fell during the early 1980s, although the proponents of IRAs had argued that this program would raise private saving. Many other factors changed during this time period, but the simple correlation between the falling saving rate and the introduction of IRAs had a powerful effect on policymakers. Second, the IRA program spawned an ongoing debate about the effect of targeted saving programs on household saving. This debate centers on the extent to which IRA-like programs encourage new household saving, rather than simply providing an opportunity for households with existing assets or who would have saved otherwise to place their wealth in tax-favored accounts.

Table 1.11 presents an important set of background facts for evaluating this literature. The table shows the distribution of IRA contributions for one of the peak program years, 1983, by taxable income classes. It demonstrates that contributions are more concentrated at high income levels than are contributors. While only 31.6 percent of all contributors had taxable incomes of more than $50,000, they accounted for 39.7 percent of all contributions. The concentration of IRA contributions is lower than for many other types of capital income, because the $2,000 contribution limit prevents a few wealthy households from accumulating large amounts in these accounts. Similarly, the effect of the contribution limit varies over the income distribution. While roughly half of the IRA contributors in middle-income brackets made limit contributions, more than 80 percent of IRA contributors with incomes of $100,000 or more made limit contributions. This distributional pattern played an important

Table 1.11   **Distribution of IRA Participants and Contributions, 1983**

| 1983 Taxable Income | % of: | | | Probability of Contributing | Probability of a Limit Contribution, Given a Contribution |
	Returns	Contributors	Contributions		
< 5	18.5	0.3	0.2	0.3	7.6
5–10	17.5	2.2	1.3	2.0	41.1
10–15	14.4	4.6	2.9	4.8	48.6
15–20	11.2	6.9	5.1	8.8	51.2
20–30	16.8	17.9	14.6	15.4	55.5
30–50	16.2	36.5	36.3	31.1	56.9
50–100	4.6	25.1	31.4	61.1	73.9
100–200	0.6	4.8	6.2	75.7	84.0
>200	0.2	1.7	2.1	74.6	82.9

Source: Galper and Byce (1986).

role in discussions of whether the IRA limit should be raised, since high-income taxpayers would be more likely to take advantage of the tax saving permitted by such a reform. The simple arithmetic of the income distribution, however, still implies that most of the benefits from such a change would ac-crue to lower-income households, because their greater numbers more than offset their lower probability of making limit contributions.[5]

Table 1.12 presents summary information on the median financial asset bal-ances of all households ($2,849), as well as of all households who made IRA contributions in 1987 ($22,300, including IRAs and other tax-deferred, hence possibly illiquid, accounts, and $10,025, excluding these accounts).

1.4.2   401(k) Plans

While IRAs have been the most widely discussed tax incentive for house-hold saving in the United States, they are not the only targeted saving program. A second program, known as the 401(k) plan after the section of the Internal Revenue Code which established it, has become an increasingly important sav-ing incentive. The 401(k) plans were established by legislation in 1978, but their use expanded rapidly after the Treasury Department clarified their opera-tion in 1981. These plans, which are established by employers, allow employ-ees to contribute before-tax dollars to qualified retirement plans. Participants in 401(k) plans can defer income tax liability on the income they contribute to

5. There are several strands of empirical work on how IRAs affect personal saving. The most substantial research program, described in Venti and Wise (1990,1992), has used household survey data to analyze the saving behavior of IRA contributors and noncontributors. Contributors do not appear to run down their holdings of non-IRA assets when they make IRA contributions. This contradicts the simplest asset-switching explanation of how IRAs could reduce tax revenue with-out encouraging additional saving. In fact, the majority of IRA contributors have relatively few non-IRA financial assets, which makes it difficult for them to engage in asset switching. Gale and Scholz (1990) present some evidence that suggests that limit contributors could engage in asset switching to a greater extent than nonlimit contributors.

Table 1.12   **Asset Balances for Participants in Tax-deferred Saving Plans, 1987 ($)**

	All Households	IRA Households	401(k) Households
Mean holdings of:			
Financial assets	16,299	40,456	36,693
Non-IRA, 401(k) assets	12,227	27,901	26,614
IRA assets	2,836	9,841	5,186
401(k) assets	1,237	2,714	9,862
Median holdings of:			
Financial assets	2,849	22,300	17,100
Non-IRA, 401(k) assets	2,250	18,600	14,300
IRA assets	0	8,000	0
401(k) assets	0	0	4,000

Source: Poterba, Venti, and Wise (1992).

the plan. Assets in 401(k) plans accumulate tax free, and just as with IRAs, income from these plans is taxed when the funds are withdrawn. An individual can currently contribute up $8,475 per year to a 401(k), making these plans potentially more powerful saving vehicles than IRAs.[6] In addition, the plans are often made still more attractive by employer matching of employee contributions. A General Accounting Office (1988) survey found that three-quarters of employers offering 401(k) plans matched at least some of their employees' contributions to these plans.

The number of employees making 401(k) contributions is now substantially larger than the number of IRA contributors. In 1988, 15.7 million workers participated in 401(k) plans, up from only 2.7 million in 1983. These plans are now available at virtually all large firms and are currently diffusing through smaller firms as well. Participation in a plan indicates only that an employee has a 401(k) account, not that he made a contribution in a given year. The probability of contributing, given 401(k) eligibility, however, is more than 60 percent.

Table 1.13 reports summary information on both 401(k) and IRA participation rates in 1987. The tabulations are based on information from the Survey of Income and Program Participation, a random sample of U.S. households. The table shows that while both the IRA and the 401(k) participation rates rise with income, the 401(k) participation rate *conditional on being eligible for such a plan* is much higher than the IRA participation rate. This general pattern suggests that some features of the 401(k) program—for example, the often-generous employer matching rate or the link to the workplace, which can encourage all workers to participate together—are important aspects of the plan. The high 401(k) participation rates also suggest that as these plans diffuse

6. Prior to 1986, individuals could contribute up to $30,000 per year to their 401(k) plan. The 1986 Tax Reform Act reduced this limit to $7,000 per year and indexed this amount for inflation, yielding the $8,475 limit in 1991.

across firms, and more workers become eligible, there will be increased use of 401(k) plans for retirement saving.

Table 1.13 also suggests that 401(k) participants are spread more equally across the income distribution than are post-1986 IRA contributors. This pattern is confirmed by the statistics reported in table 1.12. That table shows that median holding of all financial assets by 401(k) participants was $17,100 in 1987, compared with $22,300 for IRA participants. The average balance in 401(k) accounts, just under $10,000, is comparable to the balance IRA contributors have in their IRA accounts. Table 1.14 tracks the growth of total assets

Table 1.13   **Participation in IRA and 401(k) Saving Plans, 1987**

Age or Income Group	IRA Participation Rate (%)	401(k) Plan	
		Eligibility Rate (%)	Participation Rate (%)
All	28.8	20.0	12.5
Income (thousands)			
<10	8.3	3.9	1.9
10–20	12.3	10.3	5.1
20–30	22.7	16.7	9.2
30–40	31.9	24.1	14.9
40–50	41.1	31.9	20.6
50–75	56.1	35.8	24.3
>75	66.6	33.2	27.8
Age			
25–35	16.3	18.3	9.7
35–45	25.1	22.2	14.1
45–55	37.4	21.3	14.3
55–65	48.1	17.6	12.7

Source: Poterba, Venti, and Wise (1992).

Table 1.14   **Asset Balances in IRAs and Keogh Plans, 1981–90**

Year	Asset Balance (billion $)	Asset Balance/ Net Worth (%)
1981	38.6	0.4
1982	68.0	0.7
1983	113.0	1.0
1984	163.1	1.4
1985	230.4	1.8
1986	304.9	2.2
1987	366.2	2.5
1988	426.8	2.7
1989	501.7	2.9
1990	563.9	3.3

Source: Employee Benefit Research Institute, Issue Brief 119 (Washington, D.C., October 1991).

Table 1.15   Growth of 401(k) Plans

Year	Number of Plans (millions)	Number of Participants (millions)	Contributions (billion $)	Assets (billion $)
1984	17.3	7.5	16.3	91.8
1985	29.9	10.4	24.3	143.9
1986	37.4	11.6	29.2	182.8
1987	45.1	13.1	33.2	215.4
1988	68.1	15.5	39.4	277.0

Source: Turner and Beller (1992).

in IRAs and Keogh plans. While these assets accounted for less than one-half of one percent of household net worth at the beginning of the 1980s, they represented more than 3 percent of net worth by 1990. If 401(k) balances were included as well, this share would be substantially greater.

Table 1.15 charts the rapid growth of 401(k) plan assets during the past decade. Between 1984 and 1988, the number of plans more than tripled, and the number of participants more than doubled. Contributions increased even more than the number of participants, even though the 1986 Tax Reform Act limited the maximum contribution. Despite this rapid growth, 401(k) plans still account for a relatively small share of household net worth—in 1988, roughly 1.8 percent.

1.4.3   Other Special Plans

IRAs and 401(k) plans are the two most significant incentive plans for personal saving. A partial listing of other programs and their provisions follows.

403(b) Tax-sheltered Annuity Plans

These plans are available to employees of educational institutions and some other nonprofit institutions. These plans allow taxpayers to make contributions from before-tax dollars, and they function in the same way as 401(k) plans in allowing tax-free accumulation subject to some restrictions on withdrawal. The current limit on contributions to a 403(b) plan is $9,500 per year, but this amount is reduced by any contributions an individual has made to 401(k) retirement plans.[7]

Keogh Plans

These are retirement plans for self-employed individuals. They are effectively substitutes for the employer-provided defined-benefit and defined-contribution plans that wage and salary workers can participate in, and they offer the same tax treatment and the same favorable opportunities for invest-

7. Contributions to 403(b) plans may not exceed 25 percent of a taxpayer's "reduced salary," defined as salary excluding 403(b) and other contributions to tax-deferred saving plans.

ment. There are limits on contributions. In most cases, an individual cannot contribute more than 20 percent of total earnings or $30,000, whichever is smaller.

1.5   Insurance-based Saving Vehicles

Saving through insurance plans is a relatively uncommon form of asset accumulation in the United States, especially for currently young households. There is effectively no saving through any instrument other than whole life insurance and various hybrid policies.

Most U.S. households that purchase life insurance purchase *term* insurance, in effect paying a premium each year equal to the actuarial estimate of the payoff on their policy, plus additional charges to cover administrative and other expenses. There is another type of insurance, *whole-life* insurance, for which individuals make a payment to the insurance company that is larger than the expected payout on the policy in the next year. The excess contribution is invested by the insurance company, and the investment income receives favorable tax treatment. The accruing investment income is not taxed until the money is withdrawn, often as an annuity when the insured is retired. Saving through whole-life policies is therefore another way to achieve tax-free asset accumulation. Unlike saving through IRAs or Keoghs, however, which enable households to receive the same pretax return that they could earn on taxable investments but to save the tax payment, saving through insurance may not yield the full pretax return. Insurance companies frequently offer returns on whole-life policies that are below the pretax return on the assets that back the policies. The differential is explained by the costs of administering insurance policies. In addition, insurance purchases are made with after-tax rather than before-tax dollars, so they do not offer the opportunity to defer tax liability on earned income. In part because of the complexity of insurance investments, and in part because for many households they do not offer attractive rates of return, the total value of accumulated reserves in life insurance contracts accounted for little more than two percent of household net worth in 1990.

1.6   Conclusion

The analysis in this chapter has focused on the incentives to accumulate financial assets. A critical stylized fact about the distribution of wealth in the U.S. economy is that many households have very little accumulated wealth in financial assets. For a sizable number of households, their home is their principal asset. Investment in housing is encouraged by a variety of provisions in the U.S. tax code, notably the exclusion of imputed income on owner-occupied houses from the definition of taxable income (see Poterba [1992] and the references therein). Another important omission from this analysis is accumulation of wealth in unincorporated businesses. This item is an important component

of the household balance sheet, and saving through this form can be affected by some of the tax rules discussed above, for example the capital gains tax, as well as estate and gift taxes that may affect the ultimate disposition of a private business.

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