The Case for IRAs

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Executive Summary

A new bill introduced by Lloyd Bentsen (D-TX) and William Roth (R-DE) would restore the right of every American to contribute up to $2,000 a year to an IRA account. As an alternative, the bill would give people the option to contribute up to $2,000 to a "backended IRA," where contributions are made with aftertax dollars and withdrawals are tax free. Because the marginal tax rate will be higher at the time of retirement than currently for a significant number of people, we predict that about 60 percent of new contributions would be to backended, rather than traditional, IRAs.

Because marginal tax rates are lower today than they were in 1986, IRA contributions under the Bentsen-Roth bill will be only about 60 percent of what they would have been under the old tax law. Specifically,

- New annual IRA contributions would total about $11.8 billion in 1992, rising to $37.3 billion in the year 2000.
- The total amount of new contributions will accumulate to $107 billion by 1996 and $328 billion by the end of the decade.

Because of their tax-favored treatment, IRA accounts provide a less expensive source of funds to people who invest in plants, equipment and other producer goods. When IRA funds are combined with other sources of capital under the Bentsen-Roth bill, the overall cost of capital in the United States will ultimately be lowered by about 3.9 percent, leading to a 4.2 percent increase in the nation's capital stock by the end of the decade. As a result of new investment and capital accumulation:

- By the year 2000, the Bentsen-Roth bill would lead to the creation of 357,000 new jobs in the United States.
- By the end of the decade, the annual gross national product would be $142 billion higher than otherwise.

Creating new IRA options will cause a direct loss of revenue to the federal government as people take advantage of these options. The new investment and higher level of output, however, will generate new tax revenue which will more than offset the direct revenue loss.

- Over the first five years (through 1996), net federal revenue will actually increase by $1.5 billion.
- Over the next nine years (through 2000), net federal revenue will increase by almost $20 billion.

Introduction

Senators Lloyd Bentsen (D-TX) and William Roth (R-DE) have introduced a new bill to expand the use of Individual Retirement Accounts (IRAs).[1] With 77 Senate co-sponsors, the bill is designed to increase the U.S. saving rate and promote long-term economic growth.[2]

"The Bentsen-Roth bill restores the right to contribute to IRAs and creates a new option called a 'backended IRA.'"

Specifically, the bill would restore the opportunity to contribute to traditional IRA accounts that was present before tax reform in 1986. Traditional IRAs defer taxes by allowing initial contributions to be deducted and taxing the entire amount of withdrawals at the time of retirement. As an alternative, the bill allows aftertax contributions to "backended" IRAs[3] from which all withdrawals would be completely tax free. The bill also liberalizes opportunities for withdrawals from tax-favored savings accounts and indexes IRA contribution limits for the effects of inflation.

Restoring Traditional IRAs. The Bentsen-Roth bill removes the income restrictions placed on IRAs by the 1986 Tax Reform Act. All Americans would once again be eligible to make fully deductible IRA contributions of up to $2,000 annually. Both the contribution and accumulated earnings would be taxed at the time of withdrawal.

Creating Backended IRAs. Taxpayers also could chose to contribute some or all of the $2,000 limit (with no deduction) to a backended IRA. These contributions would be made with aftertax dollars, and after five years the funds could be withdrawn tax free. Earnings withdrawn before five years would be subject to a 10 percent penalty.

"Contributions to backended IRAs are made with aftertax dollars and withdrawals are completely tax free."

Creating New Withdrawal Options. Individuals could make penalty-free withdrawals from either IRA before age 59-1/2 to purchase a home for the first time, to pay educational expenses or to defray financially devastating medical expenses. Young couples, their parents or their grandparents could use IRAs to pay for first-time home purchases without incurring the 10 percent early-withdrawal penalty. Individuals could also make penalty-free withdrawals from 401(k) or 403(b) plans to purchase a home for the first time or pay educational expenses.

Inflation Indexing. The Bentsen-Roth bill indexes the $2,000 IRA contribution limit, in $500 increments, to increases in the Consumer Price Index. In other words, once the CPI has increased by 25 percent, the limit would increase to $2,500.

How 1986 Tax Reform Affected IRAs

The Tax Reform Act of 1986 affected IRAs in two significant ways. First, it limited the tax-free IRA contribution to people with no employer-provided pension or to people with incomes less than $25,000 for individuals and $40,000 for couples. Second, and perhaps more importantly, tax reform dramatically reduced marginal tax rates, making tax advantages of IRA contributions less attractive. As a result of these two changes:

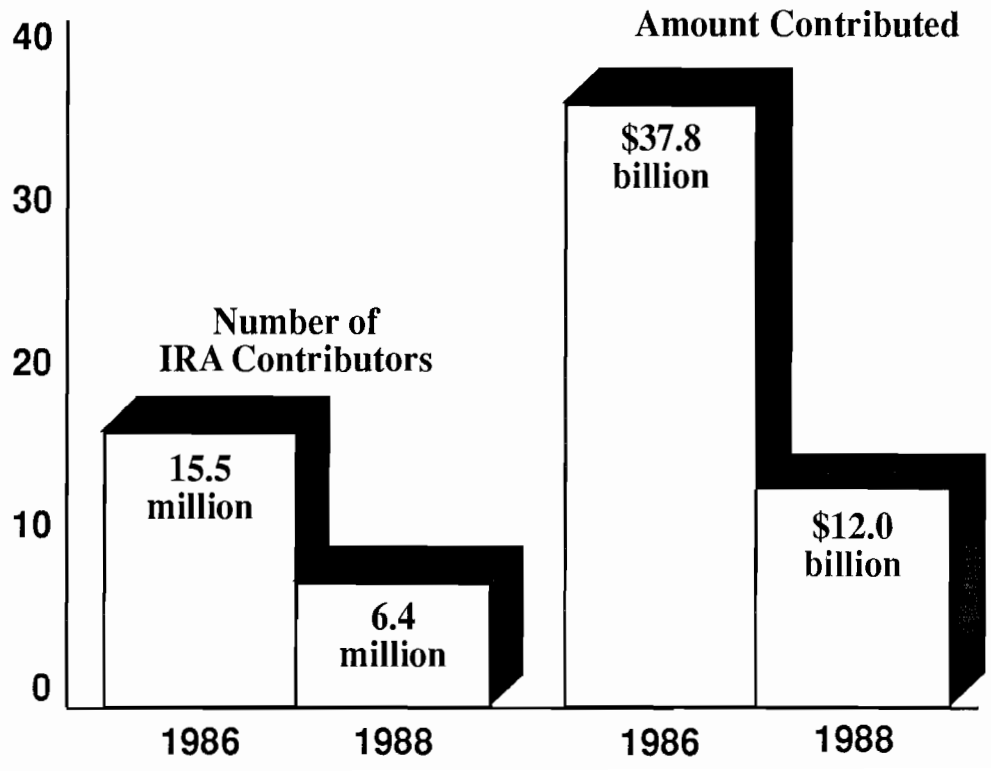
- The number of people making annual IRA contributions dropped from 15.5 million in 1986 to 6.4 million in 1988 — a decrease of almost 60 percent.
- The total amount contributed to IRAs each year dropped from $37.8 billion in 1986 to $12.0 billion in 1988 — a decrease of almost 70 percent. [See Figure I.]

We estimate that 45 to 50 percent of the decline in IRA participation was due to the income limits established in the 1986 law. The remaining drop in participation was due to the drop in marginal tax rates. [See Appendix A.]

"The number of IRA contributors has dropped by almost 60 percent and total contributions are down almost 70 percent."

FIGURE I

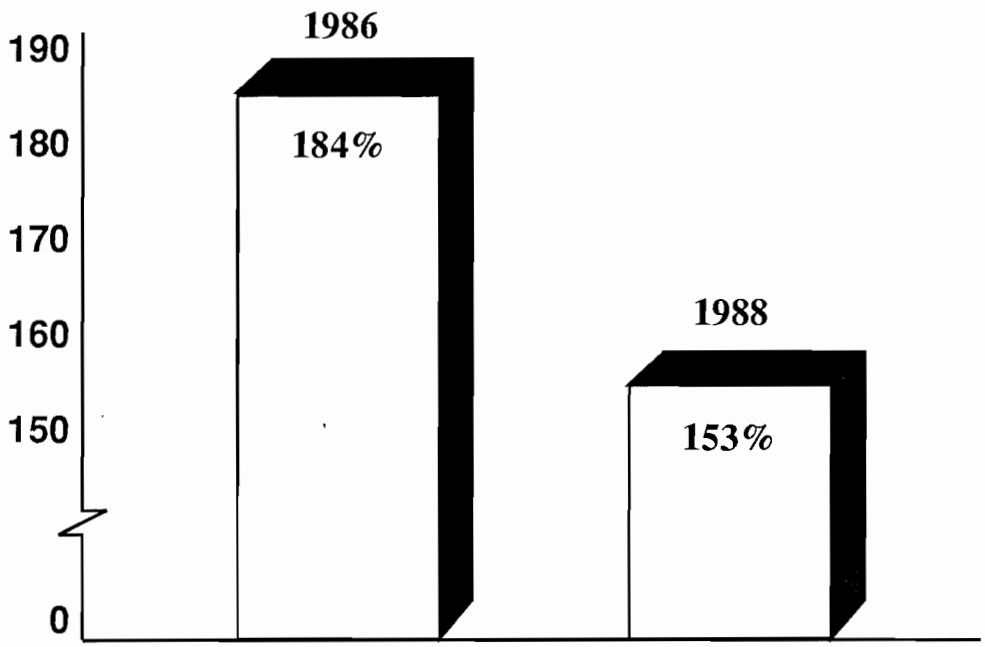
How Tax Reform Affected IRAs



"Because marginal tax rates are lower, IRAs are less attractive than they used to be."

FIGURE II

Value of an IRA Relative to a Normal Investment
(8 percent interest; 30-year period)



In general:

- The average marginal tax rate for IRA contributors dropped from 27.1 percent in 1986 to 19.1 percent in 1988.
- As a result, the value of the tax advantage associated with IRA contributions fell by 35 to 40 percent. [See Figure II.]

Why the Backended IRA May Be More Valuable

The tax values of a dollar in a backended IRA or in a traditional IRA are exactly equal if tax rates remain constant over time. The value of the immediate tax write-off is exactly equal to the value of the future withdrawal exemption in terms of present value.

When tax rates vary between the time of deposit and withdrawal, however, the options are not equally valuable. For example, making a tax-deductible contribution to a traditional IRA when the tax rate is 15 percent and withdrawing the funds when the tax rate is 28 percent reduces the IRA's value. A deposit in a backended IRA, however, allows the taxpayer to avoid a

future 28 percent tax rate by paying the current 15 percent rate. The expectation of higher future tax rates, therefore, enhances the value of the backended IRA.

"More than half of today's workers will face higher tax rates by the time of retirement."

We estimate that over half of today's workers will face higher tax rates in the future than they do today.[4] The primary causes of this rate increase are expansions in pension coverage, greater personal savings and the growth of Social Security benefits which are subject to the Social Security benefit tax.

The Social Security Benefit Tax.[5] Under current law, the elderly pay income taxes on up to one-half of their Social Security benefits if their total income exceeds $25,000 (individual) or $32,000 (couples). They pay taxes on 50 cents of benefits for each $1 of income above these income thresholds.

Suppose an elderly individual receives $8,000 in Social Security benefits and $17,000 in other taxable income.[6] Since the *total* income (including benefits) is $25,000, the income tax applies *only* to the $17,000 of ordinary taxable income. If the taxpayer receives $1 *more* of income, however, the income tax applies to that $1 *plus* 50 cents of Social Security benefits. For $8,000 of additional income, the income tax applies to that $8,000 plus $4,000 (one-half of Social Security benefits).

"The Social Security benefit tax is really a tax on income — including IRA income."

Although the Social Security benefit tax usually is described as a tax on *benefits,* it is actually a tax on *income.* No tax is paid unless a taxpayer's income reaches a certain level. Beyond that point, the tax rises as income rises. When elderly taxpayers earn $1 they pay taxes on $1.50. Thus the effective tax rate on income is 50 percent higher than otherwise. Because of the Social Security benefit tax:[7]

- Elderly taxpayers in the 15 percent income tax bracket pay an effective rate of 22.5 percent (15% x 1.5).

- Elderly taxpayers in the 28 percent tax bracket pay an effective rate of 42 percent (28% x 1.5). [See Table I.]

Prospects for Higher Future Tax Rates. Currently, only about 20 percent of elderly taxpayers pay the Social Security benefit tax. In the future, however, almost all retirees will pay the tax and it will apply to a larger amount of other income. For example, in the year 2010 the *average* Social Security benefit for a couple will be $36,000. Thus the Social Security benefit tax will apply to as much as $36,000 of other income.

TABLE I

How the Social Security Benefit Tax Affects Marginal Tax Rates on Income from IRAs

"The Social Security benefit tax raises elderly marginal tax rates by 50 percent."

Income Tax Bracket	Social Security Benefit Tax	Total Tax
15%	7.5%	23%
28%	14.0%	42%

In addition, there have been a number of congressional proposals to extend the tax to 85 percent of benefits and/or to lower the income threshold beyond which the tax applies.[8] Figure III shows what these proposals would mean for elderly marginal tax rates today.

One way people can avoid paying the Social Security benefit tax on their IRA funds is to withdraw the funds after age 59-1/2 but before retiring, say at age 62. This option is not costless, however. Large lump sum withdrawals are likely to push people into a higher tax bracket. In addition, they prevent taxpayers from making smaller annual withdrawals beginning at age 70 (which the tax law requires) — thus surrendering the advantages of at least a decade of tax-free buildup in the IRA.

"The backended IRA is an ideal solution for this problem."

The backended IRA is an ideal solution for this problem. The worker can pay taxes at today's lower rates and receive the proceeds later while avoiding the higher future rates.

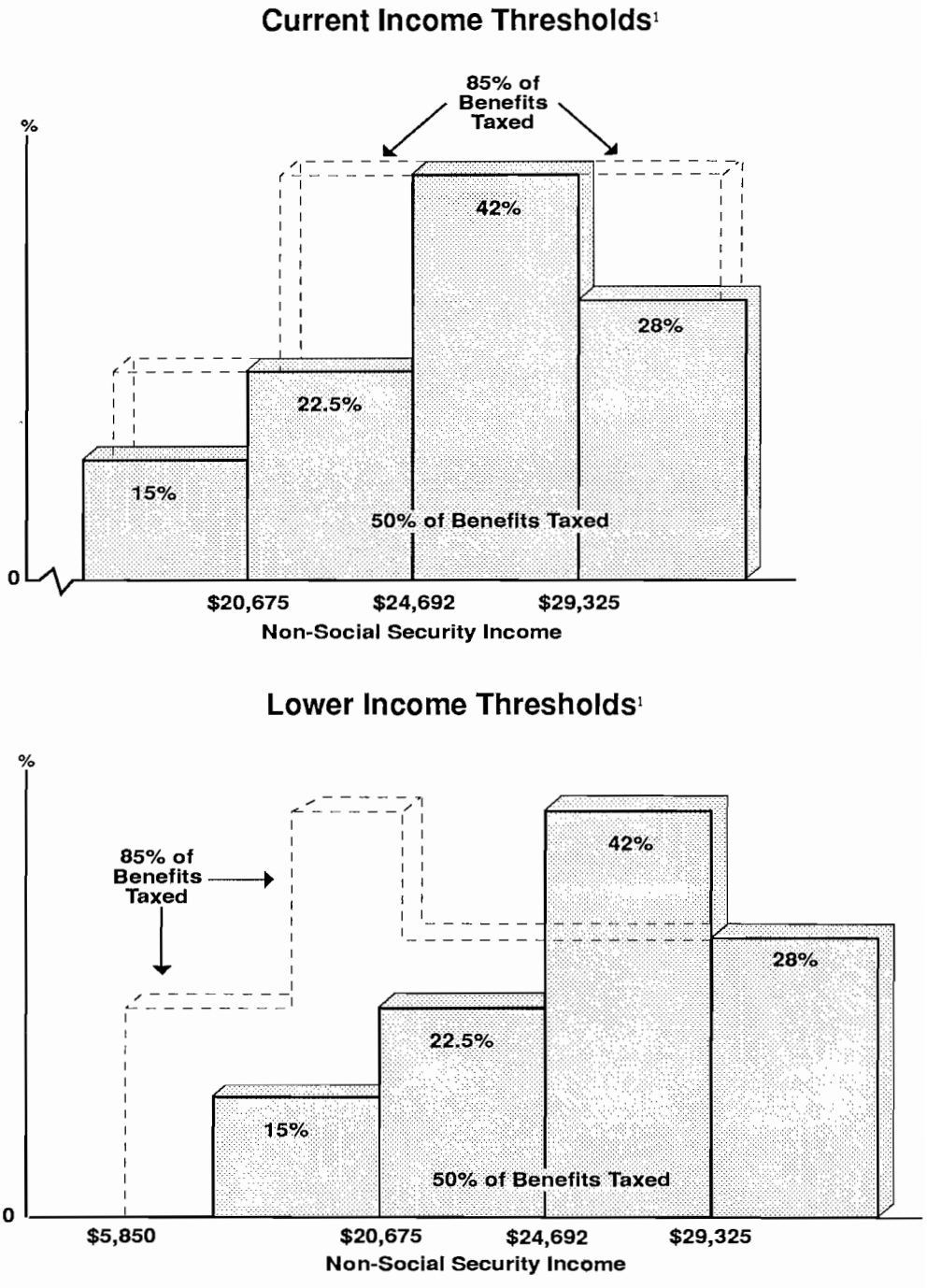
Other Advantages of Backended IRAs. Another advantage to the backended IRA is its treatment of capital gains income. Under current law, assets held for many years are taxed on increases in value due to the effects of inflation alone. Because all income is tax free at withdrawal, capital gains in a backended IRA would not be taxed, making growth assets particularly attractive.

Finally, the backended IRA can give the investor a greater aftertax withdrawal at the time of retirement because taxes have already been paid. Viewed in another way, if the taxes paid on funds deposited in a backended IRA are considered part of the initial investment, the backended IRA allows investors to make a larger investment in a tax-favored savings account.

"Some congressional proposals would extend the Social Security benefit tax to more income."

FIGURE III

Marginal Tax Rates on Income From Savings for an Elderly Individual



[1]Assumes $8,650 of Social Security benefits. The Social Security benefit tax applies when Social Security benefits plus all other income reach $25,000 (top graph) or $12,000 (bottom graph).

How People Will React to the New Options

Table II shows the contributions, earnings and direct tax losses associated with the Bentsen-Roth bill.[9] Under an option to participate in either IRA, 40 percent of contributions would be to traditional IRAs and 60 percent to backended IRAs. [See Appendix A.] In general:

"Under the Bentsen-Roth proposal, IRA contributions would be $11.8 billion in 1992, rising to $37.3 billion by the end of the decade."

- We estimate that annual new IRA contributions under the Bentsen-Roth bill would be $11.8 billion in 1991, rising to $37.3 billion by the year 2000.[10] [See Table II.]
- As a result of these contributions, new deposits to IRAs would accumulate to $107 billion at the end of five years and $328 billion by the end of the decade.

Economic Effects of the Bentsen-Roth Bill

Simply putting money into IRA accounts does not assure new investment. One option people have is to make IRA contributions with funds that otherwise would have been saved in some other way. New saving and new investment will occur only to the extent that the aftertax cost of capital is lowered — making new investment more attractive.

Effects on the Cost of Capital. The Bentsen-Roth bill will lead to new saving, new investment, more jobs and higher output, precisely because the bill lowers the tax on capital and, therefore, the cost of capital. Specifically:

"The proposal would lower the cost of capital by 3.9 percent, leading to a 4.2 percent increase in the stock of capital by the end of the decade."

- The Bentsen-Roth bill would lower the overall tax on capital by 7.8 percent.
- The lower tax on capital translates into a 3.9 percent reduction in the aftertax cost of capital to investors.
- The 3.9 percent reduction in the cost of capital will lead to a 4.2 percent increase in the total stock of capital in the United States by the end of the decade.

It is important to note that the amount of new investment over the decade is not limited to the amount of new contributions to IRAs. Because of their tax-favored treatment, IRAs provide a less expensive source of funds to people who invest in plants, equipment and other producer goods. When IRA funds are combined with other funds, the overall cost of capital will be lower.

TABLE II

New IRA Contributions
($ millions)

Year	Annual IRA Contributions	Cumulative Balances	Cumulative Earnings	Annual Direct Tax Loss
1992	$ 11,763	$ 11,763	$ 0	$ 848
1993	13,354	26,528	1,412	1,157
1994	18,415	48,126	4,595	1,952
1995	20,797	74,698	10,370	2,893
1996	23,487	107,149	19,334	4,260
1997	30,023	150,031	32,192	6,384
1998	32,744	200,779	50,195	8,856
1999	34,959	259,831	74,289	12,008
2000	37,274	328,284	105,469	15,974

"New IRA funds would accumulate to $107 billion by 1996 and $328 billion by the year 2000."

Thus, additional non-IRA funds will be combined with IRA funds to take advantage of the new investment opportunities.

New Saving and New Investment. The prediction that a 3.9 percent reduction in the cost of capital will lead to a 4.2 percent increase in the stock of capital is consistent with all previous studies on the effects of taxes on capital produced by the National Center for Policy Analysis and Fiscal Associates. The forecast is grounded in the well-documented fact that the aftertax rate of return on real capital in the United States tends to be a constant 3.5 percent. Historically, whenever the rate of return on capital rises above 3.5 percent (because, say, taxes on capital are lowered), the nation's capital stock has expanded to bring the rate of return back to 3.5 percent. This relationship holds as far back in time as we have consistent measurements of rate of return on capital.[11]

"About 80 percent of new IRA contributions would represent new saving."

Although the forecast made here is based solely on the Bentsen-Roth bill's effects on the cost of capital, it is consistent with other studies of IRA contributor behavior. For example, Table III shows that the reduction in the cost of capital will generate $9.6 billion in additional capital stock in the first year. This means that $9.6 billion of the $11.8 billion in new IRA contributions in the first year will represent new saving. This forecast is consistent with earlier behavioral studies which concluded that about 80 percent of IRA contributions represent new saving.[12]

Effects on Jobs and Output. Because the Bentsen-Roth bill would result in new saving and investment, it would also generate more jobs and higher output. As Table 2 shows:

"The bill would lead to a new saving, new investment and higher economic growth."

- The U.S. capital stock would be $1.2 trillion (in nominal terms) higher than otherwise by the year 2000.
- Because of the higher capital stock, 357,000 more jobs would be created by the year 2000.
- Over the period 1992-2000, GNP would be $447.2 billion (in nominal terms) higher than otherwise.

Effects on Government Revenues

When the positive economic effects of the Bentsen-Roth IRA bill are taken into account, the bill is self-financing — generating more new revenue than it loses. As Table IV shows:

- Over the period 1992-1996, the additional federal revenues because of more economic growth would be $12.6 billion, more than offsetting the $11.1 billion revenue loss due to IRA deductions and the tax free buildup in IRA accounts. [See Figure IV.]
- Over the period 1992-2000, the federal government would receive $74.2 billion in additional revenues because of higher growth, substantially offsetting the $54.3 billion direct revenue loss.

"The static revenue loss would be offset by dynamic revenue gains."

- Overall, the Bentsen-Roth bill would pay for itself — generating a $1.5 billion "profit" for the federal government by 1996 and a $20 billion "profit" by the year 2000.
- Taking into account state and local governments, the net revenue gain to all governments would be $10.3 billion by 1996 and $73.5 billion by the year 2000.

The New Budget Rules

Under Congress's new pay-as-you-go rules, any revenue loss must be offset by a tax increase or spending cut. Under the forecasting rules used by government revenue estimators, however, Congress is required to look only at the direct (static) revenue losses ($11.1 billion through 1996) and ignore the

dynamic revenue gains ($12.6 billion through 1996) produced by more jobs and more income. Thus in estimating the future effects of a bill designed to increase saving, investment and jobs, the official forecasters are required to pretend that the bill will produce no new saving or investment and no new jobs.

Since the Bentsen-Roth bill already has 77 Senate cosponsors, the opportunity exists to suspend the rules and pass the bill as is. Failure to do so could have tragic consequences. Without a rule suspension, in order to pass the Bentsen-Roth bill Congress would be required to couple the bill with another designed to raise an additional $11.1 billion in taxes over the next five years. Following that course, Congress could very likely decide to impose new taxes on other sources of capital income — thus destroying some or all of the economic benefits of the Bentsen-Roth proposal.

"With 77 cosponsors, the 'pay-as-you-go' rule could be suspended."

TABLE III

Economic Impact of the Bentsen-Roth Bill[1]

	Output		Employment		Capital Stock	
Year	$bil.	% change	thous.	% change	$bil.	% change
1992	1.0	0.02%	2	0.00%	9.6	0.05%
1993	4.1	0.07%	8	0.01%	38.1	0.19%
1994	10.6	0.17%	27	0.02%	96.1	0.46%
1995	20.4	0.31%	52	0.05%	182.7	0.82%
1996	34.1	0.50%	91	0.08%	301.7	1.29%
1997	52.5	0.72%	142	0.12%	458.5	1.85%
1998	76.2	0.98%	201	0.17%	660.9	2.52%
1999	105.9	1.28%	273	0.23%	911.6	3.29%
2000	142.4	1.62%	357	0.30%	1,218.3	4.16%

[1]Output changes are annual; employment and capital stock are cumulative.

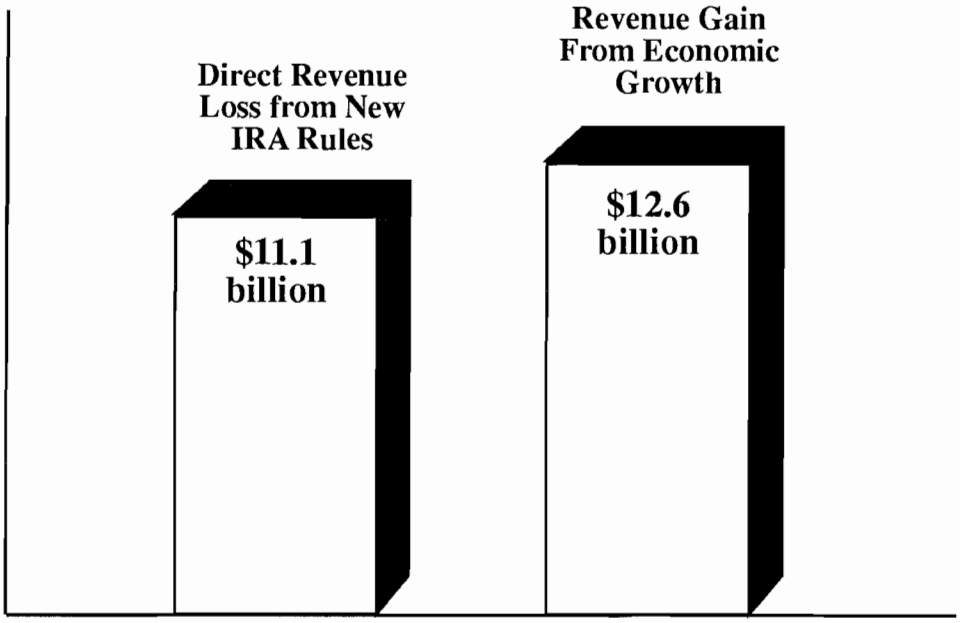
"By the end of the decade, 357,000 new jobs will have been created and annual GNP will be $142 billion higher than otherwise."

"The bill will generate a $1.5 billion 'profit' for the federal government in the first five years."

FIGURE IV

The Bentsen-Roth Proposal Pays for Itself

(Effects on Federal Revenue, 1992-1996)



"The bill pays for itself because new taxes from higher growth will more than offset the tax loss due to the new IRA options."

TABLE IV

Effects on Federal Revenues

(Annual Changes; $ billions)

Calendar Year	Direct (Static) Revenue Loss	Dynamic Revenue Gain	Net Change	Net Gain to Federal Plus State and Local
1992	$ -0.8	$ 0.3	$ -0.6	$ -0.4
1993	-1.2	0.8	-0.3	0.2
1994	-2.0	2.0	0.1	1.4
1995	-2.9	3.6	0.7	3.3
1996	-4.3	5.8	1.6	5.8
1997	-6.4	8.8	2.5	8.8
1998	-8.9	12.6	3.8	12.9
1999	-12.0	17.2	5.2	17.8
2000	-16.0	22.9	6.9	23.7
Totals				
1992-1996	-11.1	12.6	1.5	10.3
1992-2000	-54.3	74.2	19.9	73.5

Conclusion

Restoration and expansion of IRAs, as proposed by Senators Bentsen and Roth, would generate new IRA deposits with more than 80 percent of the new contributions representing new saving — rather than a transfer from other forms of saving. Because the new saving leads to new investment, more jobs and more output, the federal government would gain new revenue — more than offsetting the revenue losses from the IRA tax breaks.

"If Congress tries to 'pay for the bill' with new taxes, most of the economic benefits could vanish."

The worst thing Congress could do is combine the Bentsen-Roth bill with additional taxes on other capital income in a misguideed attempt to "pay for" it. New taxes on capital income could destroy all of the benefits which the Bentsen-Roth bill promises to create.

NOTE: Nothing written here should be construed as necessarily reflecting the views of the National Center for Policy Analysis or as an attempt to aid or hinder the passage of any bill before Congress.

Appendix A

Normally we report our revenue estimates and give an abbreviated explanation of the method used. In this study, we go into greater detail because revenue estimates will be of extreme importance. Under the new Omnibus Budget Reconciliation Act of 1990, any revenue loss will have to be made up through a tax increase or spending cut. And because the new scorekeeping rules essentially mandate a "static" estimation method, government estimators will ignore the beneficial effects of greater savings and investment generated by the new IRA option.

This is unfortunate because small increases in growth will offset the static revenue losses due to the program. If as little as half of the funds invested in the new IRAs represent new saving, the program will more than pay for itself through the federal personal tax system. Adding the other federal taxes and those flowing to state and local governments reduces the new saving requirement to well below half. Because all parties will stipulate the worthiness of the goal of increased saving, the policy debate will revolve around the cost estimates and how they were prepared.

The Effects of Tax Law on IRA Participation

Tax reform directly affects the likely impact of the proposed IRA restorations. Table A-1 shows the distribution of IRA participation in 1986 (before tax reform) and in 1988 (when it was fully phased in). The table shows that the 1986 tax law changes dramatically reduced IRA participation. The number of returns claiming an IRA deduction dropped by nearly 60 percent, and the total amount of savings in IRAs dropped by almost 70 percent. Considering the prior rapid growth of IRAs, the actual drop was probably higher.

Using IRS information on taxpayers' incomes in 1988, we estimate that the income limitation on IRA contributions for incomes above $40,000 ($25,000 for singles) leads to a 45 to 50 percent reduction in IRA participation. About 49 percent of 1986 returns with IRAs had incomes above $40,000 and accounted for 58 percent of all contributions. Not all of these taxpayers completely lost their deductions, but a large portion did — hence the 45 to 50 percent estimate for the effect of the IRA income cap.

The income limitation can explain only a portion of the drop in IRA participation. It is necessary to assess the relative incentives of an IRA under the two tax rate schedules to explain the remaining drop from 1986 to 1988.

The marginal tax rate reduction affected the attractiveness of IRAs relative to investments in general. Reducing the marginal tax rate on investments in general reduces both the advantage of the initial IRA deduction and the value of the tax free earnings build-up. Ignoring this change in the incentive offered by an IRA could lead one to estimate that removing the income limitation would fully restore IRAs to their former high levels. Official government revenue estimates frequently make this error because they believe that taxpayers use IRAs merely as a "tax dodge," moving unsheltered savings to their IRA. The 1988 data demonstrate this would not be the case, however.

TABLE A-1

Distribution of IRA Contributions

(Returns in thousands, amounts in $ millions)

Size of Adjusted Gross Income	1986 Returns	1986 Amount	1988 Returns	1988 Amount
No adjusted gross income	37	$ 60	15	$ 30
$1 to $5,000	133	244	91	136
$5,000 to $10,000	435	704	280	441
$10,000 to $15,000	739	1,352	439	756
$15,000 to $20,000	1,031	1,894	601	997
$20,000 to $25,000	1,288	2,495	813	1,413
$25,000 to $30,000	1,423	2,878	796	1,404
$30,000 to $40,000	2,856	6,418	1,393	2,620
$40,000 to $50,000	2,487	6,274	964	1,460
$50,000 to $75,000	3,102	9,108	534	1,345
$75,000 to $100,000	972	3,083	198	559
$100,000 to $200,000	794	2,507	187	545
$200,000 to $500,000	190	583	61	184
$500,000 to $1,000,000	36	116	12	36
$1,000,000 or more	14	41	7	19
Total	15,536	$37,758	6,391	$11,946

Source: Internal Revenue Service, Statistics of Income Division

The IRA's tax advantage comes at some expense. Rules limit the assets which can be purchased within an IRA. Moreover, because IRA funds cannot be withdrawn for a long period, the taxpayer has less liquidity. These considerations suggest that an IRA investment would not trade perfectly with a general investment.[13]

To assess the tax advantage, one must look at alternative rates of return available to an investor over a long time. We chose a 35-year-old considering alternative investments over a 30-year period, the likely time to retirement. The two investments were simple interest-bearing instruments reinvested (net of all taxes) at each period. Using a distribution of tax rates and number of taxpayers paying each rate, we calculated the tax advantage of the IRA under the 1986 rates and the 1988 rates. As Table A-2 shows, the tax advantage dropped by 35 to 40 percent under the current rate structure — consistent with the actual overall 70 percent decline in IRA participation. [14]

TABLE A-2

Advantage of an IRA Before and After Tax Reform

(Based on $1 investment in an IRA)

	Return Relative to Normal Investment:		Extra Return to IRAs:		Ratio of IRA Advantage:
	1986	1988	1986	1988	1988/1986
Normal Inv.	$1.00	$1.00			
IRA @ 12 %	$2.42	$1.86	$1.42	$0.86	60.5%
IRA @ 11 %	$2.26	$1.77	$1.26	$0.77	61.3%
IRA @ 10 %	$2.11	$1.69	$1.11	$0.69	62.1%
IRA @ 9 %	$1.97	$1.61	$0.97	$0.61	62.9%
IRA @ 8 %	$1.84	$1.53	$0.84	$0.53	63.7%

Normal and IRA investments are discounted by the same real aftertax rate of return to find the dollar value shown in the table. It is determined as the internal rate of return necessary to bring the normal investment to one. The extra value is the inducement to accept the restrictions placed on the IRA. The tax rates are assumed to be 27.1 percent in 1986 and 19.1 percent in 1988.

Tax Advantages of the Traditional and Backended IRA

Both saving vehicles provide similar incentives. In the case of the traditional IRA, the preference is awarded initially in the form of an immediate exclusion of the deposit from tax. In the case of the "backended" alternative, preference occurs at the time of withdrawal.

The tax values of a dollar in a backended or traditional IRA are exactly equal if tax rates remain constant over time. The value of the immediate tax write-off is exactly equal to the value of the future withdrawal exemption when it is adjusted for interest compounding.

Table A-3 compares the compounded amount in the account of a normally taxed investment, a traditional IRA and a backended IRA at the end of 30 years. Because the contribution to a traditional IRA is tax free, the investor has to deposit only $0.81 in order to make the investments comparable.

Table A-4 shows the present value of the three investments at the end of 30 years. The normally taxed investment yields a dollar for each dollar invested, while the traditional and backended IRA each leave the investor with $1.86 for every dollar invested.[15]

Developing the Baseline IRA Estimate

Table A-5 develops a baseline estimate for the proposed IRA changes. The first column extrapolates the 1986 distribution of IRA participation from Table A-1 and adjusts for the increase in the number of taxpayers and workers between 1986 and 1992 and subsequent years.

TABLE A-3a

Comparison of Alternative Investments[1]

Year	Normally Taxed Investment	Traditional IRA	Backended IRA
0	$1.00	$0.81	$1.00
1	$1.10	$1.12	$1.12
2	$1.20	$1.25	$1.25
...	...	...	...
28	$13.39	$23.88	$23.88
29	$14.69	$26.75	$26.75
30	$16.11	$24.24	$29.96

[1]The average marginal tax rate on IRAs is 19.1 percent.

TABLE A-3b

Tax Cost Per $ of IRA Contribution[2]

0	$0.19	$0.00
1	$0.02	$0.02
2	$0.05	$0.05
...	...	...
28	$10.50	$10.50
29	$12.06	$12.06
30	$8.13	$13.85

[2]The tax cost is simply the difference between the compounded amounts in the traditional and backended IRAs and that in the normal investment which has been taxed along the way.

TABLE A-4

Comparison of the Value of Alternative Investments

	Ending Real Value	Real Present Value	Initial Cost	Real Present Value Per $
Normally Taxed Investment	$4.97	$1.00	$1.00	$1.00
Traditional IRA	$7.47	$1.50	$0.81	$1.86
Backended IRA	$9.24	$1.86	$1.00	$1.86

Because IRA participation generally rises with income, the second step is to adjust the participation rates for the increasing average income of taxpayers. Because the first column posits a continuation of 1986 law, "real" bracket-creep would move some taxpayers into higher income levels — and higher marginal tax rates — in which the IRA participation rates are higher. The income effect was constructed by measuring, from Table A-1, how IRA participation increased as income increased in 1986. (The ends of the distribution were assumed to equal the nearest income group.) The percentage increase in IRA participation for each income group (the responsiveness of participation to income changes) was multiplied by the overall growth rate in income from 1986 to the target year. The participation rate times the number of eligible taxpayers yields the number of IRA participants.

The average IRA contribution for each income class was multiplied by the projected future participation levels to yield the final estimate of IRA contributions for the target year.[16] Column 1 contains the result of these calculations.

Column 2 shows the effect of the earnings ceiling under the 1986 tax rates. This estimate was obtained using the same general procedure outlined above. The 1986 AGI distribution was extrapolated to obtain an estimated future average income for each income class. If this income exceeded the income limit ($40,000 for married, $25,000 for single), 70 percent of the participants were deemed to be subject to the limit and therefore would not participate. (This is consistent with the observation that about 70 percent of workers earning above $20,000 are covered by retirement plans, while the 30 percent not covered would not be subject to the ceiling.) The number of participants was computed with and without the limitation and roughly 50 percent were limited. The percentage of IRA limitation was multiplied times column 1 to obtain column 2.

Column 3 is 65 percent of column 2, based on the information in Table A-2 that 1986 rate changes reduced the IRA incentive by about 35 to 40 percent of its 1986 levels. This provides the estimated current law baseline estimate of IRA participation.

The final column reverses the adjustment made to obtain column 2, the income limit, and applies an assumed adjustment path for obtaining the new participation levels. Specifically, it was assumed that 80 percent of the final adjustment would occur in the first year and it would increase by 5 percent per year until reaching 100 percent. Subtracting column 3 from 4 yields the increase in IRA contribution that could be expected were the income limit removed. The "restored" IRA would not achieve the old participation levels due primarily to the reduced incentives which resulted from the general rate reduction in the 1986 Tax Reform Act.

New IRA Contributions

Table A-6 shows the contributions, earnings and direct tax losses associated with a traditional IRA, a backended IRA and the option of either IRA as proposed in the Bentsen-Roth bill. Additional contributions would be made to a traditional IRA if the current income limit were eliminated.[17] Contributions to the backended IRA would be 10 percent higher than those to the traditional IRA because of its more

TABLE A-5

Estimates of IRA Participation

(Baseline for estimates, $ millions)

Year	Old IRA Continued 1986 Law	IRA with Income Limit 1986 Rates	Current Law IRA	Restored IRA without Income Limit
1992	$45,406	$24,065	$15,642	$26,739
1993	48,547	25,745	16,734	29,332
1994	57,315	27,619	17,952	35,324
1995	61,361	29,589	19,233	38,853
1996	65,878	31,788	20,662	42,820
1997	77,499	33,922	22,049	50,373
1998	83,681	36,158	23,503	54,394
1999	89,364	38,627	25,108	58,088
2000	95,304	41,206	26,784	61,948

attractive features. Under an option to participate in either IRA, 40 percent of contributions would be to traditional IRAs and 60 percent to backended IRAs.

Effects on the Cost of Capital

The amount of physical capital available in our economy depends on the willingness of people to invest in business capital. In making these decisions, investors are guided by the return they will receive on their investment. The income to the investor must be adjusted for inflation, depreciation and taxes. After these adjustments are made, we can calculate the investor's aftertax, real rate of return on the investment.

The U.S. Department of Commerce has kept careful records of different types of physical capital in different industries since 1865. Currently, the department maintains data on 37 types of capital in 73 industries. Since a particular type of capital may have a different productivity and a different useful life depending on the industry in which it is used, there are in principle 2,701 discrete types of capital on which data is maintained.

Based on the Department of Commerce data set and U.S. tax law, Fiscal Associates has calculated an economy-wide aftertax rate of return on capital each year since 1954. Over the past 37 years, the rate of return on real capital in the U.S. economy has tended to be remarkably stable — averaging about 3.5 percent per year. This stability has persisted despite radical changes in the structure of the economy and substantial changes in the taxation of income from capital. Events which change the rate of return on capital (such as changes in the tax law) rarely cause variations of more than 1 percentage point above or below the average, and a return to the 3.5 percent rate usually occurs within five years.[18]

TABLE A-6

New IRA Contributions

($ millions)

Regular IRA Only

Year	Annual IRA Contributions	Cumulative Balances	Cumulative Earnings	Annual Direct Tax Loss
1992	$ 11,097	$ 11,097	$ 0	$ 2,120
1993	12,598	25,027	1,332	2,590
1994	17,372	45,402	4,335	3,908
1995	19,620	70,470	9,783	5,063
1996	22,158	101,084	18,239	6,654
1997	28,324	141,538	30,370	9,391
1998	30,891	189,414	47,354	12,029
1999	32,980	245,124	70,084	15,251
2000	35,164	309,702	99,499	19,252

Backended IRA Only

1992	$12,207	$ 12,207	$ 0	$ 0
1993	13,858	27,529	1,465	202
1994	19,109	49,942	4,768	649
1995	21,582	77,517	10,761	1,447
1996	24,374	111,193	20,063	2,664
1997	31,156	155,692	33,407	4,379
1998	33,980	208,355	52,090	6,741
1999	36,278	269,636	77,092	9,847
2000	38,680	340,672	109,449	13,789

Bentsen-Roth IRA Option

1992	$ 11,763	$ 11,763	$ 0	$ 848
1993	13,354	26,528	1,412	1,157
1994	18,415	48,126	4,595	1,952
1995	20,797	74,698	10,370	2,893
1996	23,487	107,149	19,334	4,260
1997	30,023	150,031	32,192	6,384
1998	32,744	200,779	50,195	8,856
1999	34,959	259,831	74,289	12,008
2000	37,274	328,284	105,469	15,974

TABLE A-7

Changes in the Cost of Capital

(Amounts in $ billions)

Calendar Year	Capital Tax Rate Changes	Capital Tax Revenue Changes	Percent Change in Cost of Capital
1992	-0.4%	-0.8	-0.2%
1993	-0.9%	-1.2	-0.5%
1994	-1.7%	-2.0	-0.9%
1995	-2.3%	-2.9	-1.2%
1996	-3.2%	-4.3	-1.6%
1997	-4.2%	-6.4	-2.2%
1998	-5.3%	-8.9	-2.7%
1999	-6.5%	-12.0	-3.3%
2000	-7.8%	-16.0	-3.9%

We used the Fiscal Associates tax model to calculate the effects of the Bentsen-Roth proposal on the overall cost of capital in the United States. [See Table A-7.] Following the historical relationship, this change in the cost of capital should lead to the increase in the capital stock shown in Table III in the text.

The substantial change in the amount of capital taxes paid by individuals translates into a lower overall change in business taxes. Currently capital is taxed twice — once at the business level and again when the income accruing to business capital goes to individual owners in the form of interest, dividends or capital gains. Accumulating IRAs protect as much as 30 percent of the retirement income of individual owners against double taxation.

Although representing a considerable reduction at the individual level, the new IRA options translate into a substantially smaller reduction in overall marginal tax rates on capital for several reasons. First, only about 75 percent of all capital is business capital. The remainder is principally the stock of owner-occupied housing. Further, only a portion of business profits go to individuals. Some is taxed away before distribution by property taxes, corporate income taxes and other indirect taxes not related to income. Some business capital income is retained by corporations to provide new investment funds. As a result of these factors, only 30 percent of capital income shows up on individual income tax returns each year.

Income taxes equal about 80 percent of all taxes on business capital. The remaining 20 percent are indirect taxes such as property, excise and sales. Changes in taxes at the individual income tax level, therefore, are only about one-quarter (30% x 80%) as large when applied to all capital.

Effects on Economy

To calculate the effects of an increase in the capital stock on the output of goods and services, Fiscal Associates uses a conventional Cobb-Douglas production function with input elasticities roughly equal to 0.7 for labor and 0.3 for capital.[19] We used the economic assumptions prepared by the Congressional Budget Office for its fiscal year 1992 budget as the baseline forecast. The dynamic effects of additional revenue produced by the additional output are shown in Table A-8.

Relative Efficiency of Different IRAs

As Table A-9 shows, from the point of view of government revenue the traditional IRA provides less "bang for the buck" than a backended IRA. While both provide virtually the same economic benefits, the traditional IRA loses revenue from the start. Revenue losses from the backended IRA, on the other hand, occur much later. The optional Bentsen-Roth IRA is a hybrid of the two and picks up federal revenue, as does the backended IRA.

TABLE A-8

Additional Revenue Due to Higher Growth

($ billions)

Year	Federal Soc.Sec Tax	Federal Corporate Inc.Tax	Federal Personal Inc.Tax	Other Federal Taxes	Federal Total	State and Local	Total Govt.
1992	$ 0.1	$ 0.0	$ 0.2	$ 0.0	$ 0.3	$ 0.2	$ 0.4
1993	0.3	0.0	0.4	0.1	0.8	0.5	1.4
1994	0.8	0.1	1.0	0.2	2.0	1.4	3.4
1995	1.6	0.1	1.6	0.3	3.6	2.5	6.2
1996	2.6	0.2	2.6	0.5	5.8	4.2	10.0
1997	3.9	0.3	3.8	0.7	8.8	6.3	15.2
1998	5.7	0.5	5.4	1.1	12.6	9.1	21.7
1999	7.9	0.7	7.2	1.5	17.2	12.6	29.8
2000	10.6	0.9	9.3	2.0	22.9	16.8	39.7
Totals							
1992-1996	5.4	0.4	5.8	1.0	12.6	8.8	21.4
1992-2000	33.6	2.8	31.5	6.3	74.2	53.6	127.8

TABLE A-9

Total Net Changes in Federal Revenue

($ billions)

Calendar Year	Traditional IRA	Backended IRA	Optional IRA
1992	$ -1.9	$ 0.3	$ -0.6
1993	-1.8	0.7	-0.3
1994	-1.2	1.4	0.1
1995	-0.9	2.3	0.7
1996	-0.5	3.3	1.6
1997	-0.3	4.7	2.5
1998	0.4	6.3	3.8
1999	1.3	8.0	5.2
2000	2.6	10.0	6.9
Totals			
1992-1996	-6.3	8.1	1.5
1992-2000	-2.3	37.1	19.9

About the Authors

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THE NATIONAL CENTER FOR POLICY ANALYSIS

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NCPA forecasts show that repeal of the Social Security earnings test would cause no loss of federal revenue, that a capital gains tax cut would increase federal revenue and that the federal government gets virtually all the money back from the current child care tax credit. These forecasts are an alternative to the forecasts of the Congressional Budget Office and the Joint Committee on Taxation and are frequently used by Republicans and Democrats in Congress. The NCPA also has produced a first-of-its-kind, pro-free-enterprise health care task force report, representing the views of 40 representatives of think tanks and research institutes.

The NCPA is the source of numerous discoveries that have been reported in the national news. According to NCPA reports:

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