

**The Economic Impact of a Windfall Profits Tax
On Federal, State and Local Public Employee Pension Funds**

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Introduction

Worldwide prices for energy, like other global commodities, periodically rise and fall dramatically. When the worldwide price of oil and gas goes up sharply, rising costs for American families often spur calls in Washington for new taxes on the “windfall profits” of oil and gas companies. However politically appealing those proposals may seem, research and experience teach us that such taxes create serious economic problems.

As explored in our previous study, “The Economic Impact of a Windfall Profits Tax for Savers and Shareholders,” the case for a windfall profits tax typically relies on an economically-unsound notion of “normal” profits to justify new charges on an industry when shifts in supply and/or demand sharply increase the market price of its product.² A special tax on additional revenues generated by domestic oil companies when world oil prices rise is no more defensible economically than a special tax for the “abnormal” profits of homeowners who sell their houses when falling interest rate push up those prices or for investors who sell shares when the stock market rises significantly.³ Moreover, all profits are already subject to the corporate income tax; and our previous study found that since windfall profits taxes are deductible from the corporate tax, 44 percent of revenues raised by the new tax would be paid anyway under the corporate tax.

Our experience with a windfall profits tax in the 1980s shows that it also tends to discourage industry investment and thereby reduce U.S. oil production – a particular drawback at a time when the United States is striving to reduce its dependency on foreign energy sources. Finally, since the burden of a windfall profits tax must fall on the investors in U.S. oil and gas companies, and more than 40 percent of the shares of those companies are now held in retirement accounts and pension funds, much of the cost of a new windfall profits tax necessarily would be borne by American savers and retirees.

This study analyzes in greater detail the economic impact of the proposed “Windfall Profits Rebate Act of 2005” on federal, state and local public employee pension funds. Our previous study found that public employee pensions plans are especially vulnerable to the costs of a windfall profits tax, because they hold a relatively large share of their assets in corporate stocks, including shares in domestic oil and gas companies, and because the average pension-account in these plans is relatively large. Here, we examine the range of those costs for some 28 million accounts in more than 2,650 public employee pension funds, based on their state and the price of oil. These 28 million public-pension

¹ This study was supported by a grant from the Investors Action Foundation.

² Robert J. Shapiro and Nam D. Pham, “The Economic Impact of a Windfall Profits Tax for Savers and Shareholders”, November 2005, www.windfallprofitstax.org.

³ In these cases, the profits that market forces generate are properly and appropriately subject to the corporate income tax or capital gains tax that applies to all such profits.

accounts, provided and run by federal, state and local governments, represent the major retirement security for the nation's current and already-retired soldiers, teachers, police, fire personnel, social workers and office workers employed at every level of government.

The data show that while a windfall profit tax would reduce the future value of all public employee pension funds, the impact varies greatly from state to state depending on the investment strategy of the plans in various states. The impact on a specific state and its public pension funds depends mainly on how much of the assets are invested in oil and gas shares and the size of the pensions. On average, state and local pension funds invest more than 66 percent of their assets in equities, including mutual funds and index funds. Across the 50 states and the District of Columbia, these funds hold approximately \$64 billion in shares of U.S. oil and gas companies, or about 9.9 percent of the oil sector's market value. From plan to plan, the share of pension fund assets held in common stocks ranges from zero for the Texas pension plan for municipal workers and less than 10 percent for federal employee pension plans, to some 82 percent for Pennsylvania state workers' pension funds and 87 percent for the Colorado pension funds for municipal and state workers and teachers. And while state and local plans overall invest about 2.5 percent of their assets in the shares of U.S. oil and gas companies, among those funds that invest in equities, the share of their assets held in oil and gas company stocks, directly or indirectly through mutual and index funds, ranges from 1.1 percent to 4.9 percent.

The impact of the windfall profits tax on these funds also depends on the extent of the profits, which in turn depends largely on world oil prices. Higher oil prices increase not only the oil company revenues claimed by such a tax, but also the value of the oil company stocks held by shareholders (including public pension funds), by roughly 4 percent a year (at \$45 per-barrel oil) to 20 percent a year (at \$70 per-barrel oil).⁴ Our estimates in this study measure the "opportunity cost" imposed by a windfall profits tax on public employee pension funds under five scenarios for oil prices and inflation over the next five years -- the four price scenarios used in our previous study of \$45 per-barrel and 3.0 percent inflation, \$50 per-barrel and 4.5 percent inflation, \$55 per-barrel and 5.5 percent inflation, and \$60 per barrel and 6.5 percent inflation, plus a fifth scenario of \$70 per-barrel and 7.5 percent inflation based on recent energy prices. These opportunity costs measure the extent to which a windfall profits tax reduces the value of public pension fund holdings -- in foregone capital gains and dividend payouts -- calculated from the increased value of oil company shares under the five oil-price scenarios.

Finally, who directly bears these opportunity costs depends on whether the public pension fund offers a defined-benefit or defined-contribution plan. Under defined-contribution plans, these future costs fall directly on the personal pensions of the federal, state or local public employees. Under defined-benefit plans which guarantee their

⁴ Taking into account additional earnings from higher oil prices, the oil sector's historical price-earning ratio of 11, and higher inflation associated with higher oil prices, we estimate that the current \$650 billion market capitalization of U.S. domestic oil and gas companies would rise by 2010 to \$794 billion with \$45 per-barrel oil and 3.0% annual inflation, \$909 billion with \$50 per-barrel oil and 4.5% annual inflation, \$1,015 billion with \$55 per-barrel oil and 5.5% annual inflation, \$1,120 billion with \$60 per-barrel oil and 6.5% annual inflation, and \$1,307 billion with \$70 per-barrel oil and 7.5% annual inflation.

participants specific retirement annuities tied to their salaries, regardless of how the pension plan’s assets perform, the opportunity costs shift from the account holders to the pension plan itself, the government that sponsors it and, ultimately, its taxpayers. While most private pensions and retirement accounts today are defined-contribution plans, more than 85 percent of federal, state and local pension participants and more than 90 percent of the assets for their accounts are currently held in defined-benefit plans.

Our analysis found that over the next five years, the proposed “Windfall Profits Rebate Act of 2005” would impose moderate opportunity costs on the federal employee pension system -- as low as \$100 million per-year (at \$45 per-barrel oil) to \$1.3 billion per-year (at \$70 per-barrel oil) – but much larger costs on state and local pension systems, ranging from \$2.1 billion a year (at \$45 per-barrel oil) to \$19.6 billion per year (at \$70 per-barrel oil). The average cost per-state would range from \$41 million per-year to \$384 million per-year, depending on oil prices. Finally, on a per-account basis, the proposed tax would reduce the future value of the assets behind an average state or local pension account by between \$117 per-year (at \$45 per-barrel oil) and \$1,093 per-year (at \$70 per-barrel oil).

Table 1: Summary of the Opportunity Costs of a Windfall Profits Tax For State and Local Public Pension Funds and Their Accounts⁵

	OIL PRICE PER-BARREL				
	\$45	\$50	\$55	\$60	\$70
Average Cost Per-Year, All States (\$ mil.)	\$2,096	\$5,165	\$8,589	\$11,998	\$19,559
Total Cost 2006-2010, All States (\$ million)	\$10,480	\$25,825	\$42,945	\$59,990	\$97,795
Average Cost Per-Year, Per-State (\$ mil.)	\$41	\$101	\$168	\$235	\$384
Total Cost, 2006-2010, Per-State (\$ mil.)	\$205	\$505	\$840	\$1,175	\$1,920
Average Cost Per-Year, Per-Account (\$)	\$117	\$289	\$480	\$671	\$1,093
Average Cost 2006-2010, Per-Account (\$)	\$585	\$1,445	\$2,400	\$3,355	\$5,465

These costs vary widely from state to state. The state and local pension systems affected most seriously by a windfall profits tax, California and New York, could sacrifice between \$300 million per-year and \$3 billion per-year, depending on oil prices. (See Appendix 5 for the costs in each state.) By contrast, the opportunity costs for the public pension systems in states such as Vermont and North Dakota could be as small as \$2 million a year. The future costs on a per-account basis also vary greatly from place to place. The proposed tax could reduce the future value of the assets behind an average public pension account for teachers, police or fire personnel in New York by \$239 per-year to \$2,225 per-year, depending on oil prices; and an average public pension account in Florida could forfeit future gains of \$174 per-year to \$1,626 per-year (see Appendix 6). By contrast, the opportunity cost for an average public-pension account in Kansas would range from \$28 per-year to \$257 per-year, depending on oil prices.

As noted in our previous study, the federal employee pension system holds a much smaller share of its assets in equities generally and oil stocks in particular – less than 10 percent in equities and less than 0.5 percent in shares of oil and gas companies. The

⁵ These calculations cover the 50 states and the District of Columbia.

impact of a windfall profits tax, therefore, would be much more modest for federal pension funds than for their counterparts in the states and localities. The opportunity cost of the windfall profits tax for an average federal pension account ranges from just \$12 per-year (at \$45 per barrel oil) to \$120 per-year (at \$70 per-barrel oil).

Data: Our estimates of the holdings of public employee pension funds are derived from “Flows of Funds” data from the Federal Reserve System and data from Census Bureau surveys of employee retirement systems. The detailed estimates of the oil company holdings of public pension systems, by state, are derived from the 2003 Wilshire Report on State Retirement Systems and annual reports of state and local pension systems.

Public Employee Pension Fund Systems in the United States

The Federal Employee Pension System. The federal employee pension system includes numerous plans, including the federal employee thrift saving plan, the civil service retirement and disability fund, the judicial retirement fund, the military retirement fund, and the foreign-service retirement and disability fund. The assets of federal pension funds totaled \$1,024 billion in 2004. As noted above, the federal employee pension system allocates its assets in a markedly different manner than both most state and local public pension systems and private pension funds. While equities account for some 50 percent of the assets of private pension funds and more than 66 percent of the assets of state and local public pension systems, common stock represent just 9.7 percent of the federal system’s total assets (Tables 2a and 2b, below). Nearly 84 percent of the assets of the federal pension system are held in non-marketable government securities that ultimately must be redeemed by taxpayers or new federal securities.

Table 2a: Asset Allocation of the Federal Employee Pension System, (\$ billion)⁶

	2000	2001	2002	2003	2004
Total Assets	796.7	859.7	894.0	959.0	1,024.0
Bonds	35.1	44.8	57.8	64.2	68.7
Corporate Equities	56.6	49.1	45.9	79.9	99.3
Non-marketable Gov’t Securities	704.9	765.8	790.3	815.0	855.9

Table 2b: Asset Allocation as a Percentage of Total Assets (%)

	2000	2001	2002	2003	2004
Total Assets	100.0	100.0	100.0	100.0	100.0
Bonds	4.4	5.2	6.5	6.7	6.7
Corporate Equities	7.1	5.7	5.1	8.3	9.7
Non-marketable Gov’t Securities	88.5	89.1	88.4	85.0	83.6

⁶ Board of Governors of the Federal Reserve System, “Flow of Funds Accounts of the United States,” December 2005.

Federal employee pension fund assets are held in accounts for more than 11 million participants. The number of participants rose by more than 70 percent following the introduction of the defined-contribution, Federal Thrift Savings Plan in 1986-1987. However, the older, defined benefit plans for civil servants, military personnel, foreign-service officers, judicial personnel, members of Congress and others still dominate both the number of participants and the holdings of the federal employee retirement system. (Many federal employees now participate in both the Thrift Saving Plan and the defined benefit plan.) More than 78 percent of all participants in the federal pension system hold accounts in defined-benefit plans. Moreover, defined-benefit plans account for almost 86 percent of the total assets of the federal employee pension system, with the Thrift Saving Plan accounting for the remaining 14 percent.

Table 3: Federal Public Pension Participants and Distribution of Assets⁷

	PARTICIPANTS (MILLION)	SHARE OF TOTAL ASSETS
Total Participants	11.015	100.0%
Defined Benefit Plans	8.615	85.9%
Civil Service Retirement System	3.362	46.8%
Federal Employees Retirement System	1.879	19.0%
Military Service Retirement System	3.374	20.1%
Defined Contribution (Thrift Savings Plan)	2.400	14.1%

State and Local Public Employee Pension Systems. The nation’s state and local public employee pension systems are comprised of some 2,659 plans with assets of \$2,572 billion at the end of 2004. In contrast to the federal pension system, these systems hold two-thirds of their assets in private equities: \$1,607 billion or more than 62 percent of the assets of state and local public pension funds are held in corporate stocks, plus another \$115.1 billion or 4.5 percent in mutual stock funds (Tables 4a and 4b, below).⁸ Further, more than 85 percent of state and local pension accounts and more than 90 percent of their underlying assets are held in defined-benefit plans.⁹ The preponderance of stock holdings by state and local public pension plans increases the opportunity costs of a windfall profits tax for these systems and for the governments and taxpayers that ultimately guarantee every public pension account.

⁷ Employee Benefit Research Institute, *Databook on Employee Benefits*, 2005.

⁸ Board of Governors of the Federal Reserve System., *Ibid*. This study uses the Flows of Funds Accounts for December 2005, so its estimates differ somewhat from our previous study which used the Flows of Funds Accounts for September 2005. In its December 2005 release, the Fed revised upward its estimate of the total assets of state and local public employee retirement funds from \$2,537 billion to \$2,572 billion. The Board also revised downward its estimates of the corporate equity holdings of those funds from \$1,667 billion to \$1,607 billion (and revised estimates of mutual fund holdings from \$227.1 billion to \$230.5 billion). As a result of these revisions, the estimate of these funds’ equity holdings (direct and indirect), as a share of total assets, fell from 70.2 percent to 67.0 percent. This reduces our estimates of the value of oil sector shares held by these public pension funds, compared to the previous report, and consequently our estimates of the cost of windfall profits tax for state and local public pension funds.

⁹ Bureau of Labor Statistics, “Employee Benefits in State and Local Governments, Table 2, Department of Labor, 2005.

Table 4a: Asset Allocation of State and Local Public Pension Systems (\$ billion)¹⁰

	2000	2001	2002	2003	2004
Total Assets	2,293.1	2,206.6	1,930.5	2,344.0	2,572.0
Cash & Short-term	64.5	62.6	57.2	53.2	45.7
Bonds	743.2	689.4	638.7	649.9	677.1
Corporate Equities	1,298.7	1,260.4	1,056.8	1,421.5	1,607.0
Mutual Stock Funds	89.2	92.2	83.7	104.0	115.3
Mutual Bond Funds	89.2	92.2	83.7	104.0	115.3
Miscellaneous	8.2	10.0	10.4	11.3	11.8

Table 4b: Asset Allocation as a Percentage of Total Assets (%)

	2000	2001	2002	2003	2004
Total Assets	100.0	100.0	100.0	100.0	100.0
Cash & Short-term	2.8	2.8	3.0	2.3	1.8
Bonds	32.4	31.2	33.1	27.7	26.3
Corporate Equities	56.6	57.1	54.7	60.6	62.5
Mutual Stock Funds	3.9	4.2	4.4	4.4	4.5
Mutual Bond Funds	3.9	4.2	4.4	4.4	4.5
Miscellaneous	0.4	0.5	0.5	0.5	0.5

The Census Bureau's latest survey of "Employee-Retirement Systems of State and Local Governments" (2004) covers the financial and economic activities of 220 state pension systems and 2,439 local pension systems. This survey estimates the total assets of these public pension systems at \$2,495.4 billion, or approximately 97 percent of the total cited above, derived from the "Flow of Funds" accounts of the Board of Governors of the Federal Reserve System.¹¹ The Census Bureau further found that there are 17.9 million members or participants, both active and inactive, in the nation's 2,659 state and local public pension funds.¹² While local public pension funds outnumber state pension funds, the state pension systems account for most of assets and participants: 220 state pension funds hold \$2,143 billion in assets for some 16 million participants, compared to \$29 billion in assets held by 2,439 local public pension funds for 1.8 million participants.

The characteristics of these pension systems vary greatly across the 50 states and the District of Columbia (Table 5 below). For example, nine states have five or fewer public pension funds, while Pennsylvania alone has more than 900. The average fund in Pennsylvania has 605 members, compared to more than 202,000 members in the average fund in Ohio. And while the average state system holds assets of \$50.4 billion, the largest state system, California, has \$492.4 billion in assets, and the smallest, Vermont, has just

¹⁰ *Ibid.*

¹¹ U.S. Census Bureau, 2004 Employee-Retirement Systems of State and Local Governments.. Our November 2005 study estimated 16.2 million state and local accounts.

¹² Active members are current employees of state and local governments; inactive members are former employees with vested rights to pension payments or employees on military or extended leave without pay who still retain credits in a system

\$2.7 billion in assets. Appendix 1 provides the basic characteristics of the public pension systems in each of the 50 states and the District of Columbia.

Table 5: Characteristics of State and Local Public Pension Systems, by State, 2004¹³

	NUMBER OF FUNDS	NUMBER OF PARTICIPANTS	ASSETS (\$ BILLION)
All States and D.C.	2,659	17,890,506	\$2,572.0
State	220	16,057,903	\$2,142.7
Local	2,439	1,832,603	\$429.3
Average State	52	350,794	\$50.4
Largest State System	927	2,115,457	\$492.4
Smallest State System	1	12,513	\$2.7

Asset Allocations of State and Local Public Pension Systems. This study relies on the “Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation” (March 2005) to estimate how state and local public pension funds allocate their assets.¹⁴ The Wilshire report is based on data from the financial and actuarial reports issued by 123 retirement systems sponsored by state and local governments in 2001 and 2002, covering some \$1,800 billion in assets or more than 90 percent of the total assets of state and local public pension systems at that time. The Wilshire estimates of asset allocations are also consistent with primary sources, including the Federal Reserve Board’s “Flow of Funds” accounts and the Public Pension Coordinating Council’s Survey Report.

Our analysis of these sources shows that investment strategies vary significantly among those 123 state and local public pension systems. For example, smaller public pension plans tend to invest more heavily in fixed-income securities and less heavily in equities than the larger plans, reducing the opportunity costs of a windfall profits tax for smaller plans. On average, state and local public pension systems with less than \$20 billion in assets allocated almost 40 percent of those assets to fixed-income securities, compared to roughly 30 percent for state and local pension funds with more than \$20 billion in assets. Among the vast majority of public employee pension funds that hold common stock, most invested heavily in broadly-diversified large-cap funds and equity-index funds such as the S&P 500 and Russell 1000 funds.¹⁵

¹³ U.S. Census Bureau, 2004, *Ibid.*; Board of Governors of Federal Reserve System, December 2005, *Ibid.*.

¹⁴ The Census Bureau conducts an annual survey of the economic and financial activities of pension funds, including the asset allocation of state and local public employee funds. However, the asset classes used by the Census Bureau are not fully compatible with standard financial accounting and therefore produce asset allocation estimates that vary considerably from those relying on standard financial measures. (Technical Documentation Employee-Retirement Systems of State and Local Governments, U.S. Census Bureau) For example, the Maine State retirement System’s allocation of 30 percent of its assets to Treasury Inflation Protected Securities (TIPS) are counted by the Census Bureau survey as other, non-governmental instruments, rather than government securities. U.S. Census Bureau, 2004, *Ibid.*

¹⁵ Large public pension systems also are most likely to diversify their investments among numerous asset classes, including U.S. and foreign corporate equities and real estate, than the smaller systems.

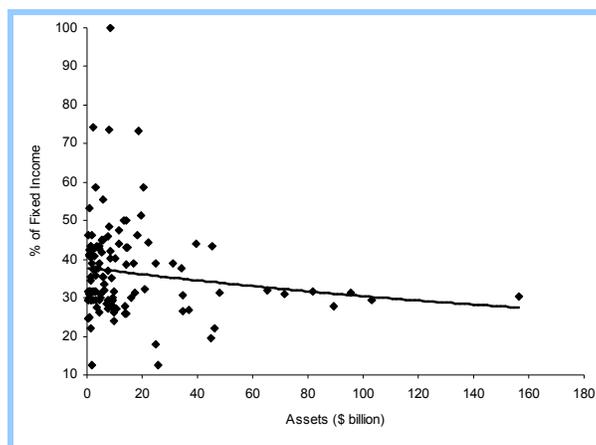
The following table (Table 6) shows the general investment strategies of the state and local public employee pensions systems covered in the Wilshire report, and the range of the asset allocations across all the systems. The data show that about one-third of the \$2,572 billion in assets held by state and local pension funds are invested in fixed-income securities and about two-thirds are invested in U.S. or foreign non-fixed income securities. Domestic stocks account for about 50 percent of those total assets, foreign stocks account for about 13 percent. Approximately 55 percent of the domestic stock holdings are invested in large-cap index funds such as S&P 500 and Russell 1000 index funds. The largest share of assets invested by any of the 123 systems in fixed-income instruments was 100 percent (the Texas Municipal Pension System), while the smallest share invested in those instruments was 10.2 percent (the Colorado Municipal Division Pension System). Similarly the largest share of assets invested by a public pension plan in U.S. equities was 74.2 percent, while the smallest was zero. Appendix 2 provides asset levels and allocations for all 123 public pensions plans covered by the Wilshire report.

Table 6: Asset Allocation of 123 State and Local Public Pension Systems¹⁶

	ASSETS (BILLION)	FIXED INCOME AND CASH		EQUITIES AND OTHER	
		U.S.	Foreign	U.S.	Foreign
Average	\$14.6	35.2%	1.4%	50.5%	12.9%
Largest		100.0%	19.0%	74.2%	26.0%
Smallest		10.2%	0.0%	0.0%	0.0%

The following figure illustrates graphically that among the 123 public pensions systems covered in the Wilshire report, the percentage of total assets invested in fixed-income securities tends to decline as the total assets of a public pension fund increase. As a result, smaller public pension systems should incur smaller opportunity costs from a windfall profits tax, on average, than larger systems.

Figure 1: Total Assets and Percentage Invested in Fixed-Income Securities



¹⁶ Board of Governors of the Federal Reserve System, December 2005, *Ibid.*; Stephen L. Nesbitt, “2003 Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation,” March 2005.

Oil and Gas Company Stock Holdings. To estimate how much of the equity assets of state and local pension funds are held in U.S. oil and gas company shares, we analyzed a sample of the annual reports issued by those funds. Most state and local pension systems report the value of their largest equity holdings in such companies as Exxon or Microsoft, the percentage of their investments held in index funds such as the S&P 500, and the percentage invested in various sectors including energy. For example, the New York State Teachers’ Retirement System reports holding 6.6 percent of its domestic equity assets in energy companies, including some \$1.5 billion in Exxon (3 percent of its equity holdings) and \$500 million in Chevron (1 percent of its equity holdings).

Based on these annual reports as well as data from the Wilshire report and the Federal Reserve Board’s Flow of Funds accounts, we estimate that, on average, state and local public pension systems hold nearly 2.4 percent of their total assets and 3.9 percent of their equity holdings in shares of U.S. oil and gas companies, including shares held through mutual funds and index funds.¹⁷ Based on these calculations, state and local public pension systems today hold some \$64 billion in domestic oil company shares, or 9.86 percent of the total market value of U.S. oil and gas companies.

The following table (Table 7) summarizes the total asset holdings and oil-company holdings of state and local public pension funds, organized by state. Behind these totals and averages lie great variations among the states, in how the public pension funds within each state invest their assets. For example, the various public employee pension funds in South Carolina hold just 26.7 percent of their assets in domestic stocks, while the public pension funds in Colorado invest 86 percent of their assets in equities. Similarly, the public pension plans in Montana have directed 8.6 percent of their equity investments to shares of domestic oil companies, compared to neighboring Idaho, where public pension funds allocate just only 1.8 percent of their equity holdings to domestic oil and gas companies. Appendix 3 and Appendix 4 provide detailed asset allocations and oil holdings for state and local public pensions systems, by state.

Table 7: Asset Allocation and Oil and Gas Company Holdings of State and Local Public Pension Systems (\$ billion)

	TOTAL ASSETS	FIXED INCOME AND CASH	EQUITIES	
			Total	Oil Sector
All 50 States and D.C.	\$2,572.0	\$863.6	\$1,708.4	\$64.0
Percentage of Total Assets	100.0%	33.6%	66.4%	2.5%
Average of States and D.C.	\$50.4	\$16.9	\$33.5	\$1.3

¹⁷ In our previous study, we estimated that state and local pension fund systems hold some 12 percent of the shares of U.S. oil and gas companies. This study uses updated aggregate data and detailed asset allocations of individual state and local pension fund systems and therefore the estimates are more accurate.

Impact of a Windfall Profits Tax on Public Pension Funds

The proposed “Windfall Profits Rebate Act of 2005” would impose a temporary excise tax on U.S. integrated oil and gas producers equal to 50 percent of the difference between the market or “removal” price of a barrel of taxable crude oil and a “base price” of \$40, adjusted annually for inflation. As analyzed in our previous study, the proposed tax would reduce both domestic oil production and the future value of the holdings of shareholders of domestic oil producers. As in the 1980s, a windfall profits tax would be expected to reduce oil company investment and consequently domestic oil production, by about 100 million barrels per year.¹⁸ In addition, corporate earnings would be reduced by the net new taxes paid, plus the foregone earnings from the reduction in production; and those lower earnings translate into lower dividends and stock prices for shareholders.

Our previous study analyzed these effects under four scenarios for market oil prices over the period, 2006-2010. We found that depending on oil prices, the proposed tax would cost shareholders over those five years an estimated \$21 billion (oil at \$45 per-barrel and 3.0 percent annual inflation), \$52 billion (\$50 per-barrel and 4.5 percent inflation), \$87 billion (\$55 per-barrel and 5.5 percent inflation) or \$122 billion (\$60 per-barrel and 6.5 percent inflation).¹⁹ We further calculated that a little over two-fifths of those costs would be borne by people with retirement accounts or pension accounts, because some \$267 billion in oil company stocks or about 41 percent of the total shares of U.S. oil companies are currently held in those accounts.²⁰ Among the various types of pension and retirement accounts, the largest holdings of oil stocks were found in state and local public pension funds and IRA accounts.

This analysis uses more recent data from the Federal Reserve, the Census Bureau, the Wilshire Report and pension fund annual reports to update and refine our previous estimates of the impact on federal, state and local public pension funds. This study also includes an additional oil-price scenario of \$70 per barrel and 7.5 percent inflation, based on recent oil prices (for example, \$68 per-barrel on January 20, 2006).

Impact on Federal Retirement Funds. As noted above and in the previous study, the federal employee pension system holds just 9.7 percent of its assets in equities and less than 0.5 percent of those assets – about \$4 billion worth -- in shares of domestic oil and gas companies. These federal pension funds, therefore, hold just 0.6 percent of the total market value of domestic oil and gas companies, compared to state and local public pension funds which hold about 10 percent of the sector’s equity. As a result, the proposed windfall profits tax would have only modest effects on the federal retirement system. Such a tax would reduce the future value of those funds by between \$100 million and \$1.3 billion per-year, depending on the price of oil – in foregone dividend payments and capital gains -- or \$500 million to \$6.5 billion over five years (Table 8, below). On a per-account basis, the tax would reduce the future value of the assets behind an average participant’s account by between \$13 and \$119 per-year, again depending on

¹⁸ Shapiro and Pham, *Ibid.*, Table 3.

¹⁹ *Op. cit.*, Table 5.

²⁰ *Op. cit.*, Table 10.

the price of oil. Therefore, the five-year opportunity cost for an average federal employee pension account would be \$65 to \$595, depending on market oil prices.

Table 8: Impact of a Windfall Profits Tax on the Federal Employee Pension System: Opportunity Costs Per-Year, 2006-2010

	\$45/ barrel	\$50/barrel	\$55/barrel	\$60/barrel	\$70/barrel
Total Costs	\$0.1 billion	\$0.3 billion	\$0.6 billion	\$0.8 billion	\$1.3 billion
Cost per-Account	\$13	\$31	\$52	\$73	\$119

Impact on State and Local Public Pension Funds, by State. We have calculated that state and local public pension systems currently invest some \$64 billion of their assets in shares of domestic oil and gas companies, or almost 10 percent of the sector’s total market capitalization. Based on the terms of the “Windfall Profits Rebate Act of 2005,” such a tax would produce opportunity costs for state and local public pension funds, considered together, ranging from \$2.1 billion per-year (at \$45 per-barrel oil) to \$19.6 billion per-year (at \$70 per-barrel oil). (See Table 9, below.) Over the next five years (2006-2010, therefore, the opportunity cost of the proposed tax for all state and local public pension systems would range roughly from \$10.5 billion to \$98 billion.

For an average state, the opportunity cost would range from \$41 million per-year (\$45 per-barrel oil) to \$384 million per-year (\$70 per-barrel oil), for a five-year cost to an average state of between \$205 million and \$1.92 billion. Once again, these future costs vary greatly from state to state, based on its size and how much of its public pension funds are invested in oil and gas company stocks. State by state, the opportunity costs of the proposed windfall profit tax range from a low in the District of Columbia of \$2 million per-year (\$45 per-barrel oil) to \$20 million per-year (\$70 per-barrel oil), to a high in California of between \$324 million per-year (\$45 per-barrel oil) to \$3 billion per-year (\$70 per-barrel oil). Appendix 5 provides the annual opportunity costs for the state and local public pension systems in each of the 50 states and the District of Columbia.

Table 9: Impact of a Windfall Profits Tax on State and Local Public Pension Funds: Opportunity Costs for States, Average Per-Year, 2006-2010 (million)

	\$45/ barrel	\$50/barrel	\$55/barrel	\$60/barrel	\$70/barrel
Total of All States	\$2,096	\$5,165	\$8,589	\$11,998	\$19,559
National Average	\$41	\$101	\$168	\$235	\$384
Highest Cost State	\$324	\$797	\$1,326	\$1,852	\$3,019
Lowest Cost State	\$2	\$5	\$9	\$12	\$20

Impact on State and Local Public Pension Fund Accounts, by State. The opportunity costs imposed by a windfall profits tax directly on state and local employees participating in defined-contribution pension funds, or indirectly on taxpayers in cities and states with defined-benefit plans, are both considerable and necessarily vary significantly. Across the nation, such a tax would reduce the future assets of an average account by between

\$117 per-year (at \$45 per-barrel oil) and \$1,093 per-year (at \$70 per-barrel oil), or a five-year reduction in the future assets of an average pension account of between \$585 (at \$45 per-barrel oil) and \$5,465 (at \$70 per-barrel oil). (See Table 10.) By this measure, the state which stands to forfeit the most is New York: An average account in a state or local public pension fund in New York can expect to forfeit between \$239 per-year and \$2,225 per-year in its future value, depending on the price of oil. That impact will produce a five-year opportunity cost for a typical public pension account in New York of \$1,195 (at \$45 per-barrel oil) to \$11,125 (at \$70 per-barrel oil). At the other end of the scale, a typical account in a state or local public pension fund in Kansas stands to forfeit between just \$28 per year (\$45 per-barrel oil) and \$257 per-year (\$70 per-barrel oil) in its future value. That impact suggests a minimum, five-year opportunity cost for an average state or local public pension account in Kansas of \$140 to \$1,285, depending on the price of oil. Appendix 6 presents the annual opportunity costs for an average participant-account in each of the 50 states and the District of Columbia.

Table 10: Impact of a Windfall Profits Tax on State and Local Public Pension Funds: Opportunity Costs Per-Account, Average Per-Year, 2006-2010

	\$45/ barrel	\$50/barrel	\$55/barrel	\$60/barrel	\$70/barrel
National Average	\$117	\$289	\$480	\$671	\$1,093
Highest-Cost State	\$239	\$588	\$977	\$1,365	\$2,225
Lowest-Cost State	\$28	\$68	\$113	\$158	\$257

The Ten States with the Largest and Smallest Opportunity Costs from a Windfall Profits Tax. The impact of a windfall profits tax on the public pension systems of various states, their participants and taxpayers ranges from relatively modest to very large. The tables below list the ten state public pension systems that would have to absorb the largest and smallest reductions in the future value of their assets (Table 11a and 11b), and the ten states with the largest and smallest reductions, per-pension account or participant (Tables 12a and 12b).

The 10 states whose state and local pension systems stand to incur the largest future costs from a windfall profits tax (Table 11a, below) generally track the 10 states with the greatest state and local public pension fund assets. The one exception is North Carolina, which ranks eleventh in total assets but eighth in prospective opportunity costs, because its state and local public pension funds hold 3.2 percent of their assets in oil and gas company shares, compared to the national average of 2.5 percent (see Appendices 3 and 4). Over the next five years, the proposed tax will reduce the future value of the public pension assets of the top 10 states by between \$1.4 billion per-year (at \$45 per-barrel oil) and \$12.8 billion per-year (at \$70 per-barrel oil), or by \$6.9 billion to \$64.3 billion over the 2006-2010 period.

Table 11a: Ten States with the Highest Opportunity Costs Per-State, Average Per-Year, 2006-2010 (\$ million)

	OIL PRICE/BARREL				
	\$45	\$50	\$55	\$60	\$70
California	\$323.6	\$797.2	\$1,325.6	\$1,851.8	\$3,018.8
New York	\$301.8	\$743.6	\$1,236.5	\$1,727.3	\$2,815.8
Texas	\$158.3	\$390.1	\$648.6	\$906.1	\$1,477.1
Florida	\$133.1	\$327.9	\$545.3	\$761.7	\$1,241.7
Ohio	\$115.9	\$285.6	\$474.9	\$663.4	\$1,081.5
Illinois	\$81.2	\$200.0	\$332.6	\$464.6	\$757.4
Pennsylvania	\$70.7	\$174.1	\$289.6	\$404.5	\$659.5
North Carolina	\$66.0	\$162.7	\$270.5	\$377.9	\$616.0
Wisconsin	\$64.8	\$159.5	\$265.3	\$370.6	\$604.1
Michigan	\$62.4	\$153.7	\$255.6	\$357.0	\$582.0
Total	\$1,377.8	\$3,394.4	\$5,644.1	\$7,884.9	\$12,853.9

Similarly, the 10 states whose state and local public pension systems face the smallest prospective costs from a windfall profits tax generally track the states with the smallest total public-pension-fund assets. The exceptions are Maine and Kansas, which hold, respectively, just 1.4 percent and 1.8 percent of their assets in oil and gas company stocks. Even among these 10 small-impact states, the proposed windfall profits tax would entail five-year opportunity costs of \$180.5 million (at \$45 per-barrel oil) to \$1.7 billion (at \$70 per-barrel oil).

Table 11b: Ten States with the Smallest Opportunity Costs Per-State, Average Per-Year, 2006-2010 (million)

	OIL PRICE/BARREL				
	\$45	\$50	\$55	\$60	\$70
D.C.	\$2.1	\$5.2	\$8.7	\$12.2	\$19.8
Vermont	\$2.1	\$5.3	\$8.7	\$12.2	\$19.9
North Dakota	\$2.2	\$5.4	\$9.0	\$12.6	\$20.5
New Hampshire	\$2.7	\$6.6	\$11.0	\$15.3	\$25.0
Idaho	\$2.9	\$7.1	\$11.9	\$16.6	\$27.0
Delaware	\$4.4	\$10.8	\$17.9	\$25.0	\$40.8
West Virginia	\$4.4	\$11.0	\$18.2	\$25.5	\$41.5
Wyoming	\$4.9	\$12.2	\$20.2	\$28.2	\$46.0
Maine	\$5.1	\$12.7	\$21.1	\$29.5	\$48.0
Kansas	\$5.3	\$13.1	\$21.7	\$30.4	\$49.5
Total	\$36.1	\$89.4	\$148.4	\$207.5	\$338.0

The opportunity costs, per-account, depend not on the size of the funds in a state and the share of assets held in oil and gas companies, but on the share of the state public pension funds' assets held in oil and gas company shares and the number of teachers, police and others with accounts in those funds. The 10 states with the largest prospective costs, per-account (Table 12a) include states of all sizes, from Rhode Island and the District of Columbia, to Oregon and Connecticut, and New York and California. Among these top 10 states, annual opportunity costs, per-account, range from New York at \$239 (at \$45 per-barrel oil) to \$2,225 per-year (at \$70 per-barrel oil), to Maryland at \$162 to \$1,512 per-year. The average, five-year opportunity cost, per-account, for these top 10 states ranges from \$810 per-account to \$7,560 per-account, depending on the price of oil.

Once again, in the minority of state and local public pension funds with defined contribution plans, these costs represent the amounts by which the windfall profits tax would directly reduce the prospective value of an average person's pension account. For the majority of public pension funds with defined benefit plans, these costs represent the amount by which the tax would reduce the prospective value of the pension-fund assets behind an average account, costs ultimately borne by taxpayers in the fund's city or state.

Table 12a: Ten States with the Highest Opportunity Costs Per-Account, Per-Year, 2006-2010

	OIL PRICE/BARREL				
	\$45	\$50	\$55	\$60	\$70
New York	\$239	\$588	\$977	\$1,365	\$2,225
Florida	\$174	\$429	\$714	\$998	\$1,626
D.C.	\$170	\$418	\$696	\$972	\$1,585
Oregon	\$163	\$402	\$668	\$933	\$1,522
Wisconsin	\$158	\$389	\$648	\$905	\$1,475
Rhode Island	\$155	\$382	\$635	\$887	\$1,445
California	\$153	\$377	\$627	\$875	\$1,427
Montana	\$137	\$339	\$563	\$787	\$1,282
Connecticut	\$136	\$335	\$557	\$778	\$1,269
Maryland	\$135	\$333	\$554	\$774	\$1,262
Average	\$162	\$399	\$664	\$927	\$1,512

The 10 states with the smallest opportunity costs, per-account (Table 12b, below), include a range of medium-size and smaller states in New England, the South and the Midwest. In nine of these 10 states, state and local public pension plans invest a substantially smaller share of their assets in oil companies than the national average. (The exception, West Virginia, provides smaller public pensions than the national average, based on a relatively low ratio of total public pension assets to the number of participants.) Even among these 10 low opportunity-cost states, the prospective costs, per-account, will be substantial if the price of oil remains high. With oil selling for \$60 per-barrel or \$70 per-barrel – the range of market oil prices in recent months – the

proposed windfall profits tax would reduce the assets behind an average public pension in these 10 states by \$286 per-year (at \$60 per-barrel oil) or \$465 (at \$70 per-barrel oil), for five-year average, opportunity costs per-account of \$1,430 or \$2,325.

Table 12b: Ten States with the Lowest Opportunity Costs Per Account, Per-Year, 2006-2010

	OIL PRICE/BARREL				
	\$45	\$50	\$55	\$60	\$70
Kansas	\$28	\$68	\$113	\$158	\$257
South Carolina	\$36	\$89	\$148	\$206	\$336
Idaho	\$40	\$100	\$166	\$231	\$377
Iowa	\$43	\$106	\$176	\$246	\$401
New Hampshire	\$45	\$112	\$186	\$259	\$423
Kentucky	\$51	\$126	\$210	\$294	\$479
West Virginia	\$62	\$152	\$253	\$354	\$576
North Dakota	\$63	\$156	\$260	\$363	\$592
Alabama	\$64	\$159	\$264	\$369	\$601
Vermont	\$65	\$160	\$266	\$371	\$605
Average	\$50	\$123	\$204	\$286	\$465

Conclusion

Evidence and analysis show us clearly that the proposed windfall profits tax on U.S. oil and gas companies would have substantial adverse effects on public employee pension funds and the assets which back up the accounts of 28 million current and past teachers, soldiers, police, fire personnel, office workers, and others. The burden of such a tax will fall on the shareholders of oil and gas companies; and state, local and federal public employee pension plans hold roughly 10 percent of those shares. The proposed tax would cost public pension funds, as 10-percent owners of the U.S. oil sector, some \$2.1 billion to \$12.0 billion a year in foregone dividend payouts and capital gains.

The prospective costs of the tax vary substantially among different state or local public pension plans, and depending on the price of oil. Federal public pension funds would bear relatively small burdens, because their assets are invested largely in non-marketable government securities. The 2,659 state and local pension plans for some 17 million people who worked in the past or work today for state or local governments face larger costs. For an average account in a state of local public pension plan, the proposed tax would impose opportunity costs ranging from \$117 per-year at \$45 per-barrel oil to \$1,093 per-year at \$70 per barrel oil, or between \$585 and \$5,465 over five years. The largest prospective costs, per account, would fall to state and local public pension plans in New York, where the tax would reduce the assets behind an average account by between \$239 and \$2,225 per-year, depending on world oil prices. At the other end of the scale, the proposed windfall profits tax would reduce the capital gains and dividends supporting

an average public pension account in Kansas by \$28 to \$257 per-year, depending on the price of oil.

The economic and political worlds are full of unintended consequences. One such unintended consequence is that much of the cost of any new tax on the profits of oil and gas companies will be borne by everyone with a retirement or pension account, because their accounts now hold some 41 percent of the shares of U.S. oil and gas companies. And another such unintended consequence is that of all the various forms of retirement saving in America, the ones that would bear the greatest burden from a new windfall profits tax are the state and local public pension funds that provide retirement security for the nation's teachers, police, fire personnel and other public servants.

Appendix 1
Characteristics of Local and State Public Pension Fund Systems by State, 2004²¹.

States	Number of Plans	Number of Participants	Average Number of Participants Per Plan
Alabama	12	255,573	21,298
Alaska	5	68,115	13,623
Arizona	7	381,682	54,526
Arkansas	38	138,658	3,649
California	59	2,115,457	35,855
Colorado	65	323,414	4,976
Connecticut	63	148,195	2,352
Delaware	6	42,049	7,008
District of Columbia	6	12,513	2,086
Florida	157	763,472	4,863
Georgia	31	538,677	17,377
Hawaii	1	67,074	67,074
Idaho	4	71,564	17,891
Illinois	371	938,508	2,530
Indiana	76	270,619	3,561
Iowa	12	269,188	22,432
Kansas	8	192,602	24,075
Kentucky	21	293,476	13,975
Louisiana	35	260,817	7,452
Maine	1	48,514	48,514
Maryland	13	276,651	21,281
Massachusetts	99	377,915	3,817
Michigan	141	485,046	3,440
Minnesota	146	499,580	3,422
Mississippi	4	272,219	68,055
Missouri	63	324,179	5,146
Montana	9	73,568	8,174
Nebraska	14	74,782	5,342
Nevada	2	85,311	42,656
New Hampshire	3	59,071	19,690
New Jersey	10	515,224	51,522
New Mexico	5	155,094	31,019
New York	15	1,265,263	84,351
North Carolina	10	534,613	53,461
North Dakota	12	34,700	2,892
Ohio	6	1,214,227	202,371
Oklahoma	12	161,093	13,424
Oregon	4	211,055	52,764

²¹ 2004 Employee-Retirement Systems of State and Local Governments, US Census Bureau. Total assets of the Census Bureau's 2004 survey accounts for 97 percent of the Board of Governors' Flows of Funds December 2005.

Pennsylvania	927	560,538	605
Rhode Island	11	45,161	4,106
South Carolina	6	361,017	60,170
South Dakota	4	49,575	12,394
Tennessee	14	256,417	18,316
Texas	49	1,396,125	28,492
Utah	6	120,471	20,079
Vermont	5	32,877	6,575
Virginia	14	471,499	33,679
Washington	27	253,177	9,377
West Virginia	41	71,994	1,756
Wisconsin	3	409,595	136,532
Wyoming	6	42,302	7,050

Appendix 2
Total Assets and Asset Allocation of 123 State and Local Public Pension Systems²²

	Assets (\$ billion)	Fixed Income		Equity	
		US	Foreign	US	Foreign
Alabama ERS	\$7.5	45.2%	0.8%	46.5%	7.5%
Alabama Teachers	\$14.2	49.6%	0.6%	42.4%	7.4%
Alaska PERS	\$5.8	32.2%	3.4%	46.1%	18.3%
Alaska Teachers	43.3	32.3%	3.4%	46.1%	18.2%
Arizona SRS	\$20.8	32.4%	0.0%	51.4%	16.2%
Arkansas Highways ERS	\$1.0	53.4%	0.0%	46.6%	0.0%
Arkansas PERS	\$3.8	43.4%	0.0%	47.2%	9.4%
Arkansas Teachers	\$7.6	36.9%	0.0%	51.0%	12.1%
California PERS	\$156.5	26.6%	3.8%	51.0%	18.6%
California UC System	\$34.4	37.7%	0.0%	55.3%	7.0%
California Teachers	\$103.1	29.3%	0.0%	48.8%	21.9%
Colorado Fire & Police	\$2.5	31.7%	0.0%	68.3%	0.0%
Colorado State & School	\$25.6	10.2%	2.5%	74.2%	13.1%
Colorado Municipal Div	\$1.6	10.2%	2.5%	74.2%	13.1%
Connecticut PERS	\$8.3	40.1%	0.0%	48.3%	11.6%
Connecticut Teachers	\$10.1	40.1%	0.0%	48.3%	11.6%
Delaware PERS	\$4.8	27.3%	2.7%	58.1%	11.9%
DC PERS	\$1.0	41.1%	0.0%	43.4%	15.5%
DC Teachers	\$0.7	41.1%	0.0%	43.4%	15.5%
Florida RS	\$89.5	27.8%	0.0%	59.2%	13%
Georgia PERS	\$14.4	43.0%	0.0%	57.0%	0.0%
Georgia Teachers	\$39.7	44.0%	0.0%	56.0%	0.0%
Hawaii ERS	\$8.8	22.5%	6.6%	56.7%	14.2%
Idaho PERS	\$6.3	33.2%	0.3%	40.55	26%
Illinois PERS	\$8.1	28.0%	0.0%	56.0%	16%
Illinois SURS	\$9.8	24.0%	0.0%	57.0%	19%
Illinois Teachers	\$22.4	35.5%	8.7%	41.4%	14.4%
Indiana PERS	\$8.5	42.1%	0.0%	47.0%	10.9%
Indiana Police and Fire	\$1.5	42.1%	0.0%	47.0%	10.9%
Indiana Teachers	\$5.6	55.6%	0.0%	44.4%	0.0%
Iowa Fire & Police	\$1.2	31.9%	11.6%	35.1%	21.4%
Iowa PERS	\$14.9	43.2%	0.0%	41.2%	15.6%
Kansas PERS	\$8.9	35.0%	0.0%	47.0%	18%
Kentucky PERS	\$5.6	45.0%	0.0%	43.0%	12%
Kentucky Counties	\$5.3	45.0%	0.0%	41.0%	14%
Kentucky Teachers	\$11.8	47.6%	0.0%	52.4%	0.0%
Louisiana Municipal Police	\$1.2	40.4%	0.0%	46.8%	12.8%
Louisiana PERS	\$5.6	28.6%	7.0%	49.7%	14.7%
Louisiana Teachers	\$10.6	22.7%	4.5%	62.6%	10.2%
Maine PERS	\$2.2	37.5%	0.0%	49.6%	12.9%
Maine Teachers	\$3.2	37.5%	0.0%	49.6%	12.9%

²² 2003 Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation.

Maryland PERS	\$9.5	29.7%	0.3%	52.2%	17.8%
Maryland State Police	\$1.0	29.7%	0.3%	52.2%	17.8%
Maryland Teachers	\$16.1	29.75%	0.3%	52.2%	17.8%
Massachusetts PERS	\$13.6	26.0%	0.0%	54.0%	20.0%
Massachusetts Teachers	\$14.2	26.0%	0.0%	54.0%	20.0%
Michigan Municipal	\$3.8	37.7%	0.0%	52.1%	10.2%
Michigan SERS	\$9.9	26.1%	0.0%	66.4%	7.5%
Michigan Police	\$1.0	24.9%	0.0%	67.4%	7.7%
Michigan Teachers	\$34.8	26.4%	0.0%	66.1%	7.5%
Minnesota PERA	\$8.9	27.6%	0.0%	56.5%	15.9%
Minnesota Police & Fire	\$3.8	27.6%	0.0%	56.5%	15.9%
Minnesota SRS	\$7.5	27.3%	0.0%	58.6%	14.1%
Minnesota State Patrol	\$0.5	24.6%	0.0%	61.5%	13.9%
Minnesota Teachers	\$14.0	27.9%	0.0%	56.2%	15.9%
Mississippi PERS	\$14.2	38.7%	0.0%	45.3%	16.0%
Missouri Highway ERS	\$1.5	35.6%	0.0%	64.4%	0.0%
Missouri PERS	\$5.1	31.0%	0.0%	44.3%	24.7%
Missouri Teachers	\$19.4	51.4%	0.0%	34.6%	14.0%
Missouri Non-Teacher	\$1.6	46.1%	0.0%	39.9%	14.0%
Montana PERS	\$3.1	43.0%	0.0%	48.6%	8.4%
Montana Teachers	\$2.0	42.6%	0.0%	48.9%	8.5%
Nebraska RS	\$4.3	39.0%	0.0%	46.0%	15.0%
Nevada PERS	\$13.2	39.0%	11.2%	39.9%	9.9%
New Hampshire PERS	\$1.2	25.0%	4.5%	62.3%	8.2%
New Hampshire Police	\$0.6	25.0%	4.5%	62.3%	8.2%
New Hampshire Teachers	\$1.3	25.0%	4.5%	62.3%	8.2%
New Jersey PERS	\$24.8	38.0%	1.0%	45.4%	15.6%
New Jersey Police & Fire	\$16.8	38.0%	1.0%	45.4%	15.6%
New Jersey State Police	\$1.8	38.0%	1.0%	45.4%	15.6%
New Jersey Teachers	\$30.9	38.0%	1.0%	45.4%	15.6%
New Mexico PERA	\$7.9	48.4%	0.0%	36.4%	15.2%
New Mexico Teachers	\$6.0	32.0%	0.0%	51.5%	16.5%
New York PERS	\$95.4	31.3%	0.0%	57.0%	11.7%
New York Police & Fire	\$17.3	31.3%	0.0%	57.0%	11.7%
New York Teachers	\$81.7	31.7%	0.0%	60.2%	8.1%
North Carolina PERS	\$45.3	43.4%	0.0%	56.6%	0.0%
North Carolina Local	\$11.5	43.9%	0.0%	56.1%	0.0%
North Dakota PERS	\$1.1	36.7%	5.7%	44.5%	13.1%
North Dakota Teachers	\$1.2	16.0%	6.0%	52.0%	26.0%
Ohio PERS	\$46.3	22.0%	0.0%	57.8%	20.2%
Ohio Police and Fire	\$8.8	28.0%	0.0%	54.0%	18.0%
Ohio SERS	\$7.1	28.3%	0.0%	55.0%	16.7%
Ohio STRS	\$44.9	19.4%	0.2%	59.0%	21.4%
Oklahoma Firefighters	\$1.3	34.4%	0.0%	54.1%	11.5%
Oklahoma PERS	\$4.5	43.5%	0.0%	43.5%	13.0%
Oklahoma Police	\$1.2	43.5%	0.0%	43.5%	13.0%
Oklahoma Teachers	\$5.4	41.1%	0.8%	45.3%	12.8%
Oregon PERS	\$34.6	26.7%	3.9%	52.0%	17.4%

Pennsylvania PERS	\$24.7	17.8%	0.0%	61.7%	20.5%
Pennsylvania Teachers	\$48.1	28.7%	2.5%	51.6%	17.2%
Rhode Island ERS	\$2.1	31.7%	0.0%	49.4%	18.9%
Rhode Island Municipal	\$0.8	31.7%	0.0%	49.4%	18.9%
Rhode Island Teachers	\$3.1	31.7%	0.0%	49.4%	18.9%
South Carolina RS	\$18.8	73.2%	0.0%	26.8%	0.0%
South Carolina Police	\$2.2	74.1%	0.0%	25.9%	0.0%
South Dakota RS	\$4.6	26.1%	0.0%	55.8%	18.1%
Tennessee SETHEEPP	\$20.6	55.9%	2.7%	31.7%	9.7%
Tennessee PSPP	\$3.2	55.9%	2.7%	31.7%	9.7%
Texas CDRS	\$8.2	73.6%	0.0%	23.0%	3.4%
Texas ERS	\$18.2	46.1%	0.0%	39.8%	14.1%
Texas LECOSRF	\$0.6	46.1%	0.0%	39.8%	14.1%
Texas Municipal	\$8.6	100.0%	0.0%	0.0%	0.0%
Texas Teachers	\$71.7	31.1%	0.0%	68.9%	0.0%
Utah Non-contributory	\$10.0	25.7%	5.9%	54.5%	13.9%
Utah Contributory	\$0.8	25.7%	5.9%	54.5%	13.9%
Utah Public Safety	\$1.2	25.7%	5.9%	54.5%	13.9%
Utah Fire Fighters	\$0.5	25.7%	5.9%	54.5%	13.9%
Vermont PERS	\$1.1	21.0%	10.0%	52.0%	17.0%
Vermont Teachers	\$1.1	12.0%	19.0%	52.0%	17.0%
Virginia RS	\$36.7	27.0%	0.0%	57.0%	16.0%
Washington PERS 1	\$9.0	29.3%	0.0%	55.7%	15.0%
Washington PERS 2	\$9.5	29.3%	0.0%	55.7%	15.0%
Washington LEOFF 1	\$4.4	29.3%	0.0%	55.7%	15.0%
Washington LEOFF 2	\$2.3	29.3%	0.0%	55.7%	15.0%
Washington WSPRS	\$0.6	29.3%	0.0%	55.7%	15.0%
Washington SERS 2-3	\$1.2	29.3%	0.0%	55.7%	15.0%
Washington Teachers 1	\$7.7	29.3%	0.0%	55.7%	15.0%
Washington Teachers 2	\$3.1	29.3%	0.0%	55.7%	15.0%
West Virginia PERS	\$2.7	41.0%	0.0%	45.0%	14.0%
West Virginia Teachers	\$1.1	41.0%	0.0%	45.0%	14.0%
Wisconsin RS	\$65.1	25.6%	6.4%	51.3%	16.7%
Wyoming RS	\$4.5	42.9%	0.0%	49.2%	7.9%

Appendix 3
The Value of the Assets of State and Local Public Pension Systems,
By Type of Asset and State, 2004 (\$ billion) ²³

State	Total Assets	Fixed Income	Equities	Oil and Gas
United States	\$2,572.0	\$863.6	\$1,708.4	\$63.996
Alabama	\$25.8	\$12.6	\$13.2	\$0.503
Alaska	\$12.9	\$4.6	\$8.3	\$0.256
Arizona	\$31.5	\$10.2	\$21.3	\$0.965
Arkansas	\$15.3	\$6.1	\$9.1	\$0.285
California	\$492.4	\$152.0	\$340.4	\$9.878
Colorado	\$38.0	\$5.4	\$32.6	\$0.806
Connecticut	\$25.3	\$10.1	\$15.1	\$0.615
Delaware	\$6.1	\$1.8	\$4.3	\$0.133
District of Columbia	\$2.8	\$1.2	\$1.7	\$0.065
Florida	\$132.6	\$36.9	\$95.7	\$4.063
Georgia	\$63.4	\$27.7	\$35.7	\$1.389
Hawaii	\$8.8	\$2.6	\$6.3	\$0.244
Idaho	\$7.8	\$2.6	\$5.2	\$0.088
Illinois	\$115.7	\$41.7	\$74.0	\$2.478
Indiana	\$20.7	\$9.7	\$11.0	\$0.567
Iowa	\$20.5	\$8.8	\$11.6	\$0.353
Kansas	\$11.9	\$4.2	\$7.7	\$0.162
Kentucky	\$26.4	\$12.2	\$14.2	\$0.460
Louisiana	\$31.6	\$9.7	\$21.9	\$0.823
Maine	\$8.6	\$3.2	\$5.4	\$0.157
Maryland	\$41.8	\$12.5	\$29.3	\$1.142
Massachusetts	\$48.3	\$12.6	\$35.7	\$1.207
Michigan	\$69.4	\$18.9	\$50.6	\$1.904
Minnesota	\$46.2	\$12.7	\$33.4	\$1.140
Mississippi	\$18.9	\$7.3	\$11.6	\$0.601
Missouri	\$48.8	\$22.7	\$26.1	\$1.063
Montana	\$6.3	\$2.7	\$3.6	\$0.309
Nebraska	\$8.6	\$3.4	\$5.3	\$0.236
Nevada	\$18.6	\$9.3	\$9.3	\$0.335
New Hampshire	\$4.6	\$1.3	\$3.2	\$0.082
New Jersey	\$55.2	\$21.5	\$33.6	\$1.302
New Mexico	\$18.0	\$7.5	\$10.6	\$0.459
New York	\$305.3	\$96.1	\$209.2	\$9.213
North Carolina	\$62.1	\$27.0	\$35.1	\$2.016
North Dakota	\$3.0	\$0.9	\$2.0	\$0.067
Ohio	\$139.1	\$30.5	\$108.6	\$3.539
Oklahoma	\$19.5	\$8.2	\$11.4	\$0.520
Oregon	\$48.3	\$14.8	\$33.5	\$1.051

²³ Flows of Funds Accounts of the United States, Board of Governors of the Federal Reserve System, December 2005; 2004 Employee-Retirement Systems of State and Local Governments, US Census Bureau; and, 2003 Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation, March 2003.

Pennsylvania	\$90.9	\$24.2	\$66.7	\$2.158
Rhode Island	\$8.1	\$2.6	\$5.5	\$0.214
South Carolina	\$25.0	\$18.3	\$6.7	\$0.397
South Dakota	\$6.0	\$1.6	\$4.5	\$0.164
Tennessee	\$34.0	\$19.9	\$14.1	\$0.729
Texas	\$143.8	\$61.2	\$82.7	\$4.833
Utah	\$15.0	\$4.7	\$10.3	\$0.365
Vermont	\$2.7	\$0.8	\$1.8	\$0.065
Virginia	\$49.4	\$13.3	\$36.1	\$1.392
Washington	\$48.6	\$14.3	\$34.4	\$0.939
West Virginia	\$5.1	\$2.1	\$3.0	\$0.136
Wisconsin	\$78.0	\$25.0	\$53.0	\$1.977
Wyoming	\$5.1	\$2.2	\$2.9	\$0.151

Appendix 4
The Asset Allocations of State and Local Public Pension Systems, by State,
Percentage of Total Assets²⁴

State	Fixed Income and Cash	Global Equities	Domestic Oil and Gas Company Shares
United States	33.6%	66.4%	2.5%
Alabama	48.8%	51.2%	1.9%
Alaska	35.7%	64.3%	2.0%
Arizona	32.4%	67.6%	3.1%
Arkansas	39.9%	59.5%	1.9%
California	30.9%	69.1%	2.0%
Colorado	14.2%	85.8%	2.1%
Connecticut	39.9%	59.7%	2.4%
Delaware	29.5%	70.5%	2.2%
District of Columbia	42.9%	60.7%	2.3%
Florida	27.8%	72.2%	3.1%
Georgia	43.7%	56.3%	2.2%
Hawaii	29.5%	71.6%	2.8%
Idaho	33.3%	66.7%	1.1%
Illinois	36.0%	64.0%	2.1%
Indiana	46.9%	53.1%	2.7%
Iowa	42.9%	56.6%	1.7%
Kansas	35.3%	64.7%	1.4%
Kentucky	46.2%	53.8%	1.7%
Louisiana	30.7%	69.3%	2.6%
Maine	37.2%	62.8%	1.8%
Maryland	29.9%	70.1%	2.7%
Massachusetts	26.1%	73.9%	2.5%
Michigan	27.2%	72.9%	2.7%
Minnesota	27.5%	72.3%	2.5%
Mississippi	38.6%	61.4%	3.2%
Missouri	46.5%	53.5%	2.2%
Montana	42.9%	57.1%	4.9%
Nebraska	39.5%	61.6%	2.7%
Nevada	50.0%	50.0%	1.8%
New Hampshire	28.3%	69.6%	1.8%
New Jersey	38.9%	60.9%	2.4%
New Mexico	41.7%	58.9%	2.6%
New York	31.5%	68.5%	3.0%
North Carolina	43.5%	56.5%	3.2%

²⁴ Flows of Funds Accounts of the United States, Board of Governors of the Federal Reserve System, December 2005; 2004 Employee-Retirement Systems of State and Local Governments, US Census Bureau; and, 2003 Wilshire Report on State Retirement Systems: Funding Levels and Asset Allocation, March 2003.

North Dakota	30.0%	66.7%	2.2%
Ohio	21.9%	78.1%	2.5%
Oklahoma	42.1%	58.5%	2.7%
Oregon	30.6%	69.4%	2.2%
Pennsylvania	26.6%	73.4%	2.4%
Rhode Island	32.1%	67.9%	2.6%
South Carolina	73.2%	26.8%	1.6%
South Dakota	26.7%	75.0%	2.7%
Tennessee	58.5%	41.5%	2.1%
Texas	42.6%	57.5%	3.4%
Utah	31.3%	68.7%	2.4%
Vermont	29.6%	66.7%	2.4%
Virginia	26.9%	73.1%	2.8%
Washington	29.4%	70.8%	1.9%
West Virginia	41.2%	58.8%	2.7%
Wisconsin	32.1%	67.9%	2.5%
Wyoming	43.1%	56.9%	3.0%

Appendix 5
Average Annual Opportunity Costs of a Windfall Profits Tax
For State and Local Public Pension Funds, By State, 2006-2010 (\$ million)

	Oil Price Per-Barrel				
	\$45	\$50	\$55	\$60	\$70
United States	\$2,096.5	\$5,164.9	\$8,588.6	\$11,997.7	\$19,558.6
Alabama	\$16.5	\$40.6	\$67.5	\$94.2	\$153.6
Alaska	\$8.4	\$20.7	\$34.4	\$48.1	\$78.4
Arizona	\$31.6	\$77.9	\$129.5	\$180.8	\$294.8
Arkansas	\$9.3	\$23.0	\$38.2	\$53.3	\$87.0
California	\$323.6	\$797.2	\$1,325.6	\$1,851.8	\$3,018.8
Colorado	\$26.4	\$65.1	\$108.2	\$151.2	\$246.4
Connecticut	\$20.2	\$49.6	\$82.6	\$115.3	\$188.0
Delaware	\$4.4	\$10.8	\$17.9	\$25.0	\$40.8
District of Columbia	\$2.1	\$5.2	\$8.7	\$12.2	\$19.8
Florida	\$133.1	\$327.9	\$545.3	\$761.7	\$1,241.7
Georgia	\$45.5	\$112.1	\$186.4	\$260.3	\$424.4
Hawaii	\$8.0	\$19.7	\$32.8	\$45.8	\$74.6
Idaho	\$2.9	\$7.1	\$11.9	\$16.6	\$27.0
Illinois	\$81.2	\$200.0	\$332.6	\$464.6	\$757.4
Indiana	\$18.6	\$45.7	\$76.1	\$106.2	\$173.2
Iowa	\$11.6	\$28.5	\$47.4	\$66.2	\$108.0
Kansas	\$5.3	\$13.1	\$21.7	\$30.4	\$49.5
Kentucky	\$15.1	\$37.1	\$61.7	\$86.2	\$140.5
Louisiana	\$27.0	\$66.4	\$110.4	\$154.3	\$251.5
Maine	\$5.1	\$12.7	\$21.1	\$29.5	\$48.0
Maryland	\$37.4	\$92.2	\$153.3	\$214.2	\$349.1
Massachusetts	\$39.5	\$97.4	\$161.9	\$226.2	\$368.8
Michigan	\$62.4	\$153.7	\$255.6	\$357.0	\$582.0
Minnesota	\$37.4	\$92.0	\$153.0	\$213.8	\$348.5
Mississippi	\$19.7	\$48.5	\$80.6	\$112.6	\$183.6
Missouri	\$34.8	\$85.8	\$142.7	\$199.3	\$324.9
Montana	\$10.1	\$24.9	\$41.4	\$57.9	\$94.3
Nebraska	\$7.7	\$19.1	\$31.7	\$44.3	\$72.2
Nevada	\$11.0	\$27.0	\$44.9	\$62.8	\$102.4
New Hampshire	\$2.7	\$6.6	\$11.0	\$15.3	\$25.0
New Jersey	\$42.7	\$105.1	\$174.7	\$244.1	\$397.9
New Mexico	\$15.1	\$37.1	\$61.7	\$86.1	\$140.4
New York	\$301.8	\$743.6	\$1,236.5	\$1,727.3	\$2,815.8
North Carolina	\$66.0	\$162.7	\$270.5	\$377.9	\$616.0
North Dakota	\$2.2	\$5.4	\$9.0	\$12.6	\$20.5
Ohio	\$115.9	\$285.6	\$474.9	\$663.4	\$1,081.5
Oklahoma	\$17.0	\$41.9	\$69.7	\$97.4	\$158.8
Oregon	\$34.4	\$84.8	\$141.0	\$197.0	\$321.1
Pennsylvania	\$70.7	\$174.1	\$289.6	\$404.5	\$659.5
Rhode Island	\$7.0	\$17.2	\$28.7	\$40.0	\$65.3
South Carolina	\$13.0	\$32.1	\$53.3	\$74.5	\$121.4

South Dakota	\$5.4	\$13.3	\$22.1	\$30.8	\$50.3
Tennessee	\$23.9	\$58.9	\$97.9	\$136.8	\$222.9
Texas	\$158.3	\$390.1	\$648.6	\$906.1	\$1,477.1
Utah	\$12.0	\$29.5	\$49.0	\$68.5	\$111.6
Vermont	\$2.1	\$5.3	\$8.7	\$12.2	\$19.9
Virginia	\$45.6	\$112.4	\$186.8	\$261.0	\$425.5
Washington	\$30.8	\$75.8	\$126.1	\$176.1	\$287.1
West Virginia	\$4.4	\$11.0	\$18.2	\$25.5	\$41.5
Wisconsin	\$64.8	\$159.5	\$265.3	\$370.6	\$604.1
Wyoming	\$4.9	\$12.2	\$20.2	\$28.2	\$46.0

Appendix 6
Average Annual Opportunity Costs of a Windfall Profits Tax
For an Account in a State and Local Public Pension Plan, by State, 2006-2010

	Members (000)	Oil Price Per-Barrel				
		\$45	\$50	\$55	\$60	\$70
United States	17,891	\$117	\$289	\$480	\$671	\$1,093
Alabama	256	\$64	\$159	\$264	\$369	\$601
Alaska	68	\$123	\$304	\$505	\$706	\$1,151
Arizona	382	\$83	\$204	\$339	\$474	\$772
Arkansas	139	\$67	\$166	\$275	\$385	\$627
California	2,115	\$153	\$377	\$627	\$875	\$1,427
Colorado	323	\$82	\$201	\$335	\$467	\$762
Connecticut	148	\$136	\$335	\$557	\$778	\$1,269
Delaware	42	\$104	\$256	\$426	\$595	\$969
D.C.	13	\$170	\$418	\$696	\$972	\$1,585
Florida	763	\$174	\$429	\$714	\$998	\$1,626
Georgia	539	\$84	\$208	\$346	\$483	\$788
Hawaii	67	\$119	\$294	\$488	\$682	\$1,112
Idaho	72	\$40	\$100	\$166	\$231	\$377
Illinois	939	\$87	\$213	\$354	\$495	\$807
Indiana	271	\$69	\$169	\$281	\$393	\$640
Iowa	269	\$43	\$106	\$176	\$246	\$401
Kansas	193	\$28	\$68	\$113	\$158	\$257
Kentucky	293	\$51	\$126	\$210	\$294	\$479
Louisiana	261	\$103	\$255	\$423	\$591	\$964
Maine	49	\$106	\$261	\$435	\$607	\$990
Maryland	277	\$135	\$333	\$554	\$774	\$1,262
Massachusetts	378	\$105	\$258	\$429	\$599	\$976
Michigan	485	\$129	\$317	\$527	\$736	\$1,200
Minnesota	500	\$75	\$184	\$306	\$428	\$698
Mississippi	272	\$72	\$178	\$296	\$414	\$675
Missouri	324	\$107	\$265	\$440	\$615	\$1,002
Montana	74	\$137	\$339	\$563	\$787	\$1,282
Nebraska	75	\$104	\$255	\$424	\$592	\$966
Nevada	85	\$129	\$317	\$527	\$736	\$1,200
New Hampshire	59	\$45	\$112	\$186	\$259	\$423
New Jersey	515	\$83	\$204	\$339	\$474	\$772
New Mexico	155	\$97	\$239	\$398	\$555	\$905
New York	1,265	\$239	\$588	\$977	\$1,365	\$2,225
North Carolina	535	\$124	\$304	\$506	\$707	\$1,152
North Dakota	35	\$63	\$156	\$260	\$363	\$592
Ohio	1,214	\$95	\$235	\$391	\$546	\$891
Oklahoma	161	\$106	\$260	\$433	\$605	\$986
Oregon	211	\$163	\$402	\$668	\$933	\$1,522
Pennsylvania	561	\$126	\$311	\$517	\$722	\$1,177
Rhode Island	45	\$155	\$382	\$635	\$887	\$1,445
South Carolina	361	\$36	\$89	\$148	\$206	\$336

South Dakota	50	\$109	\$268	\$445	\$622	\$1,014
Tennessee	256	\$93	\$230	\$382	\$533	\$869
Texas	1,396	\$113	\$279	\$465	\$649	\$1,058
Utah	120	\$99	\$245	\$407	\$568	\$927
Vermont	33	\$65	\$160	\$266	\$371	\$605
Virginia	471	\$97	\$238	\$396	\$554	\$902
Washington	253	\$122	\$299	\$498	\$696	\$1,134
West Virginia	72	\$62	\$152	\$253	\$354	\$576
Wisconsin	410	\$158	\$389	\$648	\$905	\$1,475
Wyoming	42	\$117	\$287	\$478	\$668	\$1,088

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