The Neutrality of Massachusetts' Taxation of Financial Institutions

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The author thanks Pei Zhu for her excellent research assistance and the Boston office of KPMG Peat Marwick for assistance in research on state taxation of financial institutions. Any errors remain the author's responsibility.

The provision of financial services has changed dramatically over the past two decades. Technological innovation and deregulation have extended providers' geographic range and broadened the array of products they are capable of delivering. Constraints on bank branching across state lines have been all but eliminated. A single holding company can now offer a full array of financial services, from insurance and banking to securities underwriting and investment management.

These changes have intensified competition among financial service institutions. As their competitive interface has expanded, so have the potential inefficiencies and inequities created by tax regimes favoring some types of institutions over others. Consequently, in recent years Massachusetts, like other states, has passed legislation designed to narrow disparities among the tax burdens of insurance companies, banks, credit agencies, and mutual fund service corporations (MFSCs) doing business within the Commonwealth. At the same time, the Commonwealth has passed tax cuts, designed to enhance the competitiveness of Massachusetts-based financial institutions, which have widened tax disparities among financial service providers. Consequently, the degree to which the Commonwealth has actually leveled the tax playing field for financial services is unclear. This article attempts to resolve the issue. Have tax disparities within Massachusetts' financial services sector narrowed or widened? Has the identity of the "winners" and "losers" changed? Are the financial institutions that used to be tax-preferred now the disadvantaged?

By way of background, Section I briefly describes the percentage of Massachusetts employment and payroll comprising the financial services sector and its components. Section II explains why policymakers should care about disparities in the tax treatment of competing financial service industries and discusses difficulties in evaluating them. Section III explains the Commonwealth's tax treatment of financial institutions and how it has changed in recent years. Section IV attempts to estimate the

extent to which these changes have narrowed or widened disparities in tax burdens among Massachusetts-based financial service providers. The final section summarizes the article and discusses policy implications.

The article concludes that tax changes enacted in recent years have widened some disparities in tax treatment of Massachusetts-based financial institutions while narrowing others. Currently, life insurance companies with a geographically dispersed nationwide clientele and managers of mutual funds enjoy the lowest effective rates of taxation. By contrast, as recently as six years ago, credit agencies were taxed lightly relative to Massachusetts-based banks, life insurers, and mutual fund managers. Life insurers whose policyholders were concentrated in the Commonwealth bore especially high effective rates of taxation. Nevertheless, tax burdens on most Massachusetts-based financial institutions have been reduced, enhancing their competitive standing vis-à-vis their out-of-state rivals.

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I. Financial Services' Shares of Massachusetts Employment and Payroll

Between 1991 and 1998, consolidation and the substitution of capital for labor shrank financial services' share of Massachusetts employment from 6.2 percent to 5.9 percent (Table 1). Within this sector, employment shifted away from depositories, insurance carriers, and insurance agents to nondepository credit institutions;[1] security and commodity brokers, dealers, exchanges, and services; and holding and other investment offices.

While growth in employment within the sector lagged, growth in wages outpaced the statewide norm. Employees in the financial services sector accounted for 9.9 percent of the Commonwealth's total nonfarm wages in 1998, up from 8.0 percent in 1991. By 1998, the average annual wage of the Commonwealth's financial service employees, $63,391, was 68 percent higher than the statewide average. In 1991, the comparable advantage was only 30 percent. With the exception of insurance agents, brokers, and services, every financial services industry has exhibited above-average wage growth. Financial services have become an important source of high-paying jobs for the Commonwealth, especially in the Greater Boston area. For this reason alone, the Commonwealth's taxation of financial services merits the close attention of policymakers.

II. Why Should Policymakers Care About Differences in Tax Burdens Across Types of Financial Service Providers?

Disparities in tax burdens matter because they are unfair and inefficient.

Unfairness

Many policymakers and taxpayer advocates believe that an equitable business tax regime should compel all businesses to pay the same share of their profits in taxes, that is, to bear the same average "effective" tax rate. Implicit in this belief is the notion of "horizontal equity": because firms with the same profits have the same "ability to pay" taxes, they should bear similar tax burdens. Adherents to this standard have conducted numerous studies comparing average effective tax rates across both individual companies and industries. Upon finding wide dispersion in such rates, some conclude that those corporations and industries bearing relatively low tax burdens have not been paying their "fair share" of taxes.[2]

This standard is less popular within the economics profession than among the public at large. According to most economists, horizontal equity requires that *people* earning similar incomes, not *businesses,* should pay similar taxes. Ultimately, all taxes burden people, not businesses. Businesses are simply groups of peo-

[1] Such institutions include credit card agencies, sales financing agencies, consumer finance companies, mortgage companies, international trade finance companies, factoring agencies, and pawnshops.

[2] See Citizens for Tax Justice (1984, 1985, 1986), and Wisconsin Action Coalition (1992). For a study finding a reasonably level tax playing field, see Kodrzycki (1993).

ple organized to extract resources or to produce or distribute goods and services. While firms are legally liable for many taxes, in the short run tax burdens are borne by shareholders in the form of lower profits, by customers in the form of higher prices, or by workers in the form of lower compensation. In the long run, affected people adjust their behavior to shift tax burdens to others.[3] As a result, the ultimate incidence of many business taxes is unknown and the degree to which they enhance or diminish tax equity is unclear.

The standard of tax fairness most applicable to general business taxation is the "benefit principle"—businesses should pay taxes in proportion to the benefits they receive from government. If governmental benefits were distributed among firms in proportion to the profits they earned, then dispersion in average effective tax rates across firms and industries would be a useful indicator of the degree to which the principle prevails. As a whole, economists doubt that the benefits conferred on businesses by the public sector are, in fact, so distributed. According to the U.S. Advisory Commission on Intergovernmental Relations (1978), the benefit principle cannot be implemented because the distribution of governmental benefits among businesses cannot be determined. Oakland and Testa (1996, p. 11) argue that governmental benefits are distributed among businesses according to size, approximated by value added. In their view, a system of business taxes that collected a uniform percentage of each firm's value added would conform most closely to the benefit principle.[4]

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Although the benefits of public services conferred on businesses are probably distributed roughly in proportion to firm size, the author has chosen dispersion in average effective tax rates to evaluate fairness.

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Differences among firms in total profits (as opposed to rates of profit) are closely correlated with differences in size, especially within a sector such as financial services, whose component industries have similar production technologies.[5] According to tax return data provided by the Internal Revenue Service, in 1996 the correlation coefficient between gross business receipts and net profit among financial service industries was 0.85.[6] In addition, contrary to abstract economic theory, firms do differ in their ability to pay taxes, and in a manner affected by profitability. While in theory firms can borrow money in unprofitable years to pay their taxes, in practice, given imperfections in credit markets, their capacity to do so is constrained. Consequently, indicators of business tax fairness should take profitability into account.[7]

Inefficiency

This article focuses on the inefficiency arising

[3] For example, if corporations try to shift the burden of a tax on corporate profits to their workers, some workers will seek employment in industries comprising firms that are largely unincorporated. The supply of labor to these industries will rise, slowing growth in wages in these industries and, therefore, forcing workers employed in these industries to share the burden of the tax.

[4] Oakland and Testa argue that states could maximize fairness and economic efficiency in business taxation if they imposed only one general business tax on value added measured on the basis of origin.

[5] Since profits are the return to capital, capital intensity is an important determinant of the relationship between size and profits.

[6] Based on 45 "minor" financial service industries defined by the Internal Revenue Service at the 3-digit level. The Internal Revenue Service's industrial classificatory scheme is similar to the Standard Industrial Classification system of the U.S. Office of Management and Budget.

[7] Given such inefficiencies in capital markets, relating tax liabilities to profits may also enhance efficiency as well as fairness.

Table 1
Employment and Wages of Financial Services Industries in Massachusetts, 1991 vs. 1998

Industry	SIC[a]	Employment 1991	Employment 1998	Employment as a Percentage of MA Total 1991	Employment as a Percentage of MA Total 1998	Total Wages ($000) 1991	Total Wages ($000) 1998
Financial institutions and insurance	60–64, 67	170,113	183,868	6.2	5.9	6,186,414	11,655,645
Depository institutions	60	63,260	59,840	2.3	1.9	1,796,775	2,760,207
Commercial banks	602	36,450	34,926	1.3	1.1	1,134,065	1,880,653
Thrifts	603	20,010	17,499	.7	.6	484,136	614,134
Credit unions	606	4,111	4,695	.1	.2	86,904	133,154
Others related to depositories	609	1,105	1,420	.0	.0	37,103	67,961
Credit institutions	61	6,628	9,628	.2	.3	223,848	627,057
Securities and commodities	62	22,706	45,410	.8	1.5	1,473,285	4,534,577
Insurance carriers	63	50,907	43,698	1.8	1.4	1,726,373	2,300,286
Life insurance	631	28,687	20,619	1.0	.7	985,178	1,127,289
Accident and health	632	5,849	6,857	.2	.2	193,545	345,880
Fire, marine, and casualty	633	15,099	14,486	.5	.5	507,185	735,592
Insurance agents, brokers, and services	64	22,746	20,644	.8	.7	781,271	952,766
Holding and other investment offices	67	3,866	4,648	.1	.1	184,863	480,752
Total Massachusetts nonfarm employment		2,758,188	3,123,736	100.0	100.0	77,312,694	118,036,357

[a] Standard Industrial Classification number, 1987 version. The Massachusetts Division of Employment and Training uses the 1987 version, although a new scheme, the North American Industrial Classification, is now in general use.
Source: Massachusetts Department of Labor and Workforce Development, Division of Employment and Training, *Employment and Wages, State Summary,* 1991 and 1998, and author's calculations.

from the tax-induced distortion of resource allocation across industries within Massachusetts' financial services sector.[8] Interindustry allocative efficiency requires that the tax burden on the return to the last dollar invested in each industry be the same. Given this condition, resources seek their most productive use. However, this condition does not hold in the Commonwealth. The marginal tax rate faced by a Massachusetts-based financial institution varies according to its industrial classification, that is, whether it is a life insurance company, a bank, a mutual fund service corporation, a credit agency, and so on. As a result, capital and labor migrate among financial service firms in part to reduce their tax burden, not solely to maximize the value of their production. In this manner, the interindustry allocation of resources is deflected from its optimal pattern.

This article also discusses tax-induced distortions in the geographic allocation of resources used to provide financial services to Massachusetts households, businesses, and governments. As explained in Section III, these distortions arise from unequal tax treatment of similar institutions differing only according to the jurisdiction in which their headquarters are located. When such tax differences favor out-of-state firms, the resulting distortions, inefficient from a national standpoint, are also considered "anticompetitive" from the state's point of view.

This study uses dispersion in average effective tax

[8] Disparities in tax burdens among financial institutions also have implications for the efficiency of resource allocation among nonfinancial industries, since some industries depend more on certain types of financial institutions than others. An analysis of these potential inefficiencies is beyond the scope of this article.

Table 1 continued

Total Wages as a Percentage of MA Total 1991	1998	Average Annual Wage ($) 1991	1998	Percent Change in Average Annual Wage 1991–1998
8.0	9.9	36,367	63,391	74.3
2.3	2.3	28,403	46,126	62.4
1.5	1.6	31,112	53,847	73.1
.6	.5	24,194	35,095	45.1
.1	.1	21,139	28,361	34.2
.0	.1	33,577	47,860	42.5
.3	.5	33,773	65,129	92.8
1.9	3.8	64,885	99,859	53.9
2.2	1.9	33,912	52,641	55.2
1.3	1.0	34,342	54,672	59.2
.3	.3	33,090	50,442	52.4
.7	.6	33,590	50,780	51.2
1.0	.8	34,347	46,152	34.4
.2	.4	47,817	103,432	116.3
100.0	100.0	28,030	37,787	34.8

rates as a proxy for dispersion in marginal tax rates.[9] Within Massachusetts' financial services sector, this proxy is reasonably accurate, for at least two reasons. First, statutory tax rates on the profits of financial institutions have never been graduated, that is, one statutory rate has been applied to all income earned in each industry. (Under graduated rates, the statutory tax rate applicable to the last dollar of income earned rises with income.) Second, no financial services firm has been eligible for significant tax benefits that subsidize marginal investment or employment except accelerated depreciation.[10] Since differences in production technology among financial services are probably small (that is, these industries have similar ratios of capital to labor as well as similar ratios of equipment to structures in their stocks of capital assets), accelerated tax depreciation probably does not significantly affect their *relative* marginal tax rates.[11]

Issues in the Measurement of Average Effective State Tax Rates

Estimating the average effective state tax rate of an industry is difficult. Data limitations complicate estimation of both the numerator (taxes paid to the state) and the denominator (pretax profits earned within the state). States and their municipalities generally do not collect detailed industry-specific statistics on the total amount that businesses pay through all the various state and local taxes (for example, corporate income, sales, property, and license taxes). Many lack such data even for the corporate income tax. Massachusetts reports some state corporate income tax data on an industry-by-industry basis, but lumps the finance, insurance, and real estate industries all into one category. The Commonwealth does break out annual receipts from the state bank tax and insurance taxes (Commonwealth of Massachusetts 1999).

Even more troublesome is measuring the amount of income earned by an industry within a state's borders. Because multistate corporations are so thoroughly integrated, their profits cannot be separated geographically. For this reason, statistics on profits disaggregated by both industry and state are not collected. However, state tax laws provide some insight into how one might estimate the total pretax profits earned in Massachusetts by various financial service industries. States have devised formulas to determine what proportion of the worldwide income of each corporation is earned within their borders and therefore subject to their profits tax. The formula

[9] The estimation of industry-specific marginal tax rates is beyond the scope of this study. See Fullerton (1984) for an overview of the various means of estimating both marginal and average effective tax rates.

[10] For example, none of the Commonwealth's financial service firms have been eligible for any significant investment tax credits or jobs tax credits.

[11] Differences in financing methods among types of financial institutions could affect disparities in relative marginal rates differently than disparities in relative average effective rates. Partially for this reason, estimating industry-specific marginal rates is difficult. Hypothetical companies contemplating hypothetical marginal investment projects must be constructed. The impact of taxation on the rate of return to the marginal product must be estimated. This impact will vary according to the hypothetical firm's assumed financial characteristics, production technology, and a host of other characteristics. As a result, there is no single marginal tax rate for an industry; an average of the marginal tax rates of several different hypothetical firms representative of the industry must be computed. Such an analytical exercise is beyond the scope of this study.

considered to be the most accurate consists of equally weighted shares of a corporation's total property, payroll, and sales in the state. Specifically, a state's share of the corporation's taxable profits is calculated as

$$\frac{\frac{\textit{property in-state}}{\textit{total property}} + \frac{\textit{payroll in-state}}{\textit{total payroll}} + \frac{\textit{sales in-state}}{\textit{total sales}}}{3}$$

The property and payroll factors are proxies for the "supply side" of a company's activities, roughly mirroring the productive inputs of capital and labor. Sales represent "demand-side" influences on the value of the company's output.[12] In addition to being correlated with supply and demand influences, these factors are used as proxies for income because their geographic loci are identifiable. This study uses the three-factor formula to estimate the denominator in average effective tax rates.

III. Massachusetts' Taxation of Financial Service Providers

Like many other states, Massachusetts has imposed a unique tax regime on each of several types of financial firms.

Life Insurance Companies

Like all state governments, the Commonwealth taxes the premiums collected by life insurance companies conducting business within its borders. It taxes these premiums at a rate of 2 percent, the median and modal rate imposed by the 50 states. The Commonwealth taxes only premiums paid by Massachusetts residents on life, health, and accident insurance policies. Annuity premiums are exempt from tax.[13] Companies can deduct from their taxable premiums the dividends paid to policyholders.[14]

Until this year, *domestic* life insurance companies (those headquartered in Massachusetts) also had to pay a separate tax of 14 percent on their net investment income, the gross income earned by investment activities minus an amount credited to policyholders as compensation for the use of their money. In apportioning the taxable net investment income of multistate companies liable for the tax, Massachusetts used a formula based solely on payroll and premiums. Since the formula placed a 90 percent weight on premiums and a 10 percent weight on payroll, the taxable investment income of a Massachusetts-based insurer was:

$$TII_m = TII_n \times [(.9 \times \textit{premiums}_m/\textit{premiums}_n) + (.1 \times \textit{payroll}_m/\textit{payroll}_n)],$$

where TII = taxable investment income
m = Massachusetts
n = nationwide.

This formula significantly reduced the percentage of the company's nationwide income apportioned to Massachusetts for tax purposes. As an illustration, suppose that a life insurance company had 80 percent of its payroll and 60 percent of its property located in Massachusetts, but sold products worth only 5 percent of its gross receipts to customers located in the Commonwealth. According to the standard formula, the share of the company's income earned within Massachusetts would be (.8 + .6 + .05)/3, or 0.48. Under Massachusetts law, the share of the company's investment income apportioned to the Commonwealth would be (.1 × .8 + (.9 × .05)), or 0.125. The net investment income tax will be phased out by 2003.[15]

The Commonwealth, like all other states except Hawaii, imposes a retaliatory tax on foreign insurance companies conducting business within its borders. The amount of retaliatory tax paid by a given out-of-state life insurer depends on the tax treatment of Massachusetts life insurance companies operating in

[12] It has also been argued that double-weighting the sales tax factor provides an even more accurate formula, since demand-side and supply-side factors contribute equally to value. See Francis and McGavin (1992).

[13] States may generally grant favorable tax treatment to annuity premiums because most such premiums are paid in connection with qualified pension plans, which the federal tax system treats favorably in order to promote retirement savings. States may want their tax systems to be consistent with this federal policy goal (Pike 1987).

[14] In theory, accurate measurement of taxable premiums would require the deductibility only of that portion of policyholder dividends that represents a refund of previously paid premiums and therefore is already taxed, and not that portion of dividends representing a return on the policyholders' investment. In practice, states do not try to distinguish between the two components, perhaps because it is too difficult to do so (Pike 1987).

[15] Despite anticompetitive consequences, domestic insurers asked the Commonwealth to exempt out-of-state insurance companies from the tax on net investment income in order to avoid retaliatory taxation in other states (Pike 1987). Recently, finding this disparate tax treatment unpalatable, Massachusetts-based companies asked that the tax be repealed.

that insurer's home state. If Massachusetts-based companies are taxed more heavily in the insurer's home state than the Commonwealth taxes the insurer, then the insurer must pay the difference. For example, Ohio taxes the premiums earned by out-of-state life insurers on policies held by Ohio residents and businesses at a rate of 2.5 percent. In the absence of retaliation, Massachusetts taxes the premiums of out-of-state life insurers on policies held by Massachusetts residents and businesses at a rate of 2 percent. Consequently, Ohio-based insurers must pay a retaliatory tax equal to 0.5 percent of premiums.

Mutual Fund Service Corporations (MFSCs)[16]

Companies managing mutual funds are subject to the Commonwealth's corporations excise tax, the state tax applicable to most corporations. It is a two-part levy consisting of a 9.5 percent tax on net income and a tax on either personal property or net worth at a rate of $2.60 per $1,000 of valuation.[17] Massachusetts' rules for apportioning the income of MFSCs differ from those applied to providers of other services in two respects. First, the Commonwealth uses an apportionment formula based solely on the value of the shares owned by the shareholders of the investment companies managed by the MFSC. Second, the Commonwealth sites share values on the basis of shareholders' residences. Thus, Massachusetts' share of the taxable income of an MFSC is $shares_m/shares_n$. As an illustration, suppose that Investco, a fictitious Massachusetts-based MFSC, manages a mutual fund. Nonresidents own shares accounting for 95 percent of the fund's total value. Under current Massachusetts law, 5 percent of the MFSC's entire income would be apportioned to Massachusetts for tax purposes. Tax analysts refer to this method as "destination" siting because it sites receipts at the point where the service is ultimately delivered to the consumer.[18]

Prior to 1997, MFSCs were subject to the same three-factor formula (with sales double-weighted) as other nonmanufacturers, and receipts were sited by "origin." According to this rule, which applies to other service providers subject to the corporations excise tax as well, receipts are sited where the majority of the economic activity producing the service takes place. If a Massachusetts-based MFSC had shareholders in another state but neither payroll nor property located within that state's borders, the receipts attributable to these shareholders would be sited in Massachusetts for apportionment purposes. Since the largest MFSCs based in Massachusetts, such as Fidelity, Scudder, and Putnam, are global in scope, only a small fraction of their shares are owned by Massachusetts residents.

In 1996 Massachusetts adopted an approach similar to Rhode Island's, allowing mutual fund service corporations to use single-factor apportionment based on receipts and to site receipts on a destination basis.

Yet, large fractions of their property and payroll are located in the Commonwealth. Under these circumstances a large fraction of MFSCs' out-of-state receipts were sited in the Commonwealth for apportionment purposes, raising their effective tax rates. Meanwhile Rhode Island, attempting to lure finance service employers to the state, allowed mutual fund service corporations to use single-factor apportionment based on receipts and to site receipts on a destination basis. In 1996, after Fidelity Investments announced the relocation of some of its facilities from Boston to Smithfield, Rhode Island (Donovan 1995), the Commonwealth adopted a similar approach.[19]

Banks and Business Credit Agencies

The Commonwealth, like many other states, has subjected banks to unique tax regimes for almost 200 years, largely because during most of this period the Congress and the federal courts have required them to do so. During the nineteenth and the early part of the

[16] The General Laws of Massachusetts (Chapter 63, Section 38) define a mutual fund service corporation as "a corporation doing business in the commonwealth which derives more than fifty percent of its gross income from the provision directly or indirectly of management, distribution or administration services to or on behalf of a regulated investment company and from trustees, sponsors, and participants of employee benefit plans which have accounts in a regulated investment company."

[17] For analyses of Massachusetts' corporate excise tax, see Henderson (1987) and Kodrzycki (1993).

[18] See Weinstein (1995) for an explanation of this point and its relevance to the mutual fund industry.

[19] *Massachusetts General Laws*, Chapter 264, 1996.

twentieth centuries, nationally chartered banks were instrumentalities of the federal government, issuing its currency, serving as its fiscal agents, and receiving deposits of federal monies. As such, the Supreme Court ruled in *McCulloch* v. *Maryland* (1819) that all state taxes on national banks were unconstitutional except for those on real property or on the value of bank shares. In the interest of fairness, states applied the same limitations to the taxation of state-chartered banks. The National Bank Act of 1864 limited the maximum tax rate on bank shares to that imposed on "other moneyed capital." Although Congress removed all restrictions on state bank taxation in 1976 (other than the requirement that states not discriminate against banks), many states continue to apply a unique tax regime to banks.

Currently, the statutory tax rate applicable to the income of Massachusetts' banks is 10.5 percent, higher than the 9.5 percent applied to the taxable income of most other corporations. The higher rate compensates for banks' exemption from a tax on personal property or net worth for which most other corporations are also liable (levied at $2.60 per $1,000 of valuation). As in the case of other state business taxes, Massachusetts treats each separately incorporated bank as a distinct taxable entity, even if affiliated with a bank holding company. Bank income is apportioned according to the unweighted three-factor formula. The bank tax applies to a wide variety of financial institutions, including all depositories, collection agencies, check cashers, credit agencies, mortgage lenders, mortgage brokers, and any other business "in substantial competition" with financial institutions deriving more than 50 percent of its gross income from loan origination, lending activities, or credit card activities. Credit unions are exempt from taxation.

Prior to 1995, the statutory bank tax rate was 12.54 percent, one of the highest in the nation.[20] The bank tax applied to banks, banking associations, trust companies, and savings and loans associations. Almost all other financial institutions currently subject to the tax, including business credit agencies, were liable for the two-part general corporations excise tax.[21]

Rather than apportioning bank income among the states, Massachusetts, like other states, applied its bank tax according to the residence principle. It taxed all income, wherever earned, of its "resident" or "domiciliary" banks—banks whose headquarters were located within its borders.[22] However, it exempted from tax all income earned by "nondomiciliary" banks. Thus, under prior law the headquarters bank of BankBoston was taxed on its entire worldwide income, but Morgan Guaranty of New York was exempt from Massachusetts tax, even though it transacted businesses within Massachusetts. (However, it paid taxes to New York on income it earned in other states, including Massachusetts.) The broadening of banks' geographic scope and the intensification of competition between banks and nonbank financial institutions induced the Commonwealth to lower the statutory bank tax rate, to broaden the array of financial institutions subject to the bank tax, and to apportion bank income (Tannenwald 1988; Fox 1993).

The broadened geographic scope and intensified competition induced the Commonwealth to lower the bank tax rate, broaden the array of institutions subject to the bank tax, and apportion bank income.

IV. State Tax Burdens on Financial Institutions Compared

How have changes in Massachusetts' taxation of financial institutions altered the relative tax burdens borne by various types of financial service providers? Given the difficulty of using reported statistics to answer this question, as discussed in Section II, this

[20] This was the tax rate set by the Commonwealth in 1976 in its attempt to equate *effective* tax rates on bank and nonbank income. In that year the Commonwealth halted annual adjustments to the statutory bank tax rate because it felt that the gap between it and the *statutory* tax rate on nonbank income should not widen further. SeeTannenwald (1988, p. 33, footnote 8).

[21] As it is today, the general corporations excise tax was a two-part levy consisting of a tax on net income at 9.5 percent and a tax on the larger of the value of personal property or net worth, whichever is larger, at $2.60 per $1,000 valuation.

[22] More precisely, a national bank is domiciled in the state "where its operations of discount and deposit" are carried on, as indicated in its organization certificate filed with the U.S. Comptroller of the Currency. See 12 *United States Code, Annotated*, Para. 22. A state-chartered bank is domiciled in the state that holds its corporate charter. The domiciliary state is usually the state in which the bank's headquarters are located.

article uses the "representative firm" approach. The author treated each nationwide industry as a single giant "company" representative of that industry. Using industrywide data gleaned primarily from several years of federal corporate income tax returns (U.S. Internal Revenue Service, various years), the author estimated each company's average effective tax rate. For each industry, he evaluated the sensitivity of the results to two different sets of assumptions concerning the geographic allocation of the firm's apportionment factors. In the "concentrated" alternative, most or all of the firm's payroll and property are located in the Commonwealth. The geographic allocation of the firm's receipts varies according to the pattern typically found within the industry represented. In the "dispersed" alternative, payroll, property, and receipts are spread out over a wider geographic range. The geographic configuration assumed for each representative firm is presented in Table 2.

Each representative firm's average effective income tax rate depends on the following rates and ratios: 1) S, the applicable statutory income tax rate; 2) P, the fraction of each company's pre-tax net income taxable under Massachusetts law; 3) APP, the fraction of the company's taxable income *apportioned* to the Commonwealth, and 4) ATT, the fraction of the company's income *attributable* to Massachusetts according to the traditional three-factor formula. The company's average effective income tax rate was equal to

$$(S \times P \times APP)/ATT.$$

The average effective tax rate imposed by taxes other than those on income (premiums tax and net worth tax) were computed in a similar fashion. Average effective income and non-income tax rates were added to arrive at each company's total average effective tax burden. (See the methodological appendix for details, available from the author.)

All of the representative banks, business credit agencies, and MFSCs were based in the Commonwealth, and in general only taxes owed to the Commonwealth were computed.[23] Out-of-state companies doing business within the Commonwealth's borders were not modeled. Given these limits, one should be cautious in drawing conclusions from the analysis. Although tax inequities among different types of Massachusetts-based financial institutions are revealed, those between in-state and out-of-state firms are not.

Table 2
Assumed Geographic Allocation of Apportionment Factors, Representative Massachusetts-Based Financial Service Providers
Percent

		Property	Payroll	Receipts
Bank	Concentrated	100	100	100
	Dispersed	95	95	50[a]
Business Credit Agency	Concentrated	100	100	100
	Dispersed	25	25	8.5[b]
Life Insurance Company[c]	Concentrated	75	75	50
	Dispersed	50	50	8.5
Mutual Fund Service Corporation[d]	Concentrated	100	100	5.6
	Dispersed	50	50	5.6

[a] The remaining 50 percent is allocated among the 43 states that taxed bank income in 1993, as reported by Fox (1993), in proportion to the personal income of the states' residents.

[b] The percentage of receipts earned within Massachusetts was assumed to equal three times the percentage of nationwide personal income earned by the Commonwealth's residents. The remaining receipts were allocated among the other 49 states and the District of Columbia in proportion to the personal income of their residents.

[c] In the dispersed alternative, the percentage of receipts earned within Massachusetts was assumed to equal three times the percentage of nationwide personal income earned by the Commonwealth's residents. In both the dispersed and concentrated alternatives, following the methodology of Pike (1987), payroll, property, and receipts earned outside of Massachusetts were assumed to be allocated among 18 states. They included the 14 other states that domiciled at least one of the nation's largest life insurance companies in 1994 (one of which was Connecticut) plus, Maine, New Hampshire, Rhode Island, and Vermont. Payroll and property were allocated among these states according to population, while receipts were allocated according to personal income.

[d] The percentage of receipts allocated to Massachusetts was assumed to equal twice the percentage of personal income accounted for by the Commonwealth's residents. The remainder of receipts was allocated among the other 49 states and the District of Columbia according to the personal income of their residents. Payroll and property located outside of the Commonwealth were allocated among the 20 states in which Fidelity Investments, Inc. had offices, in proportion to the personal income of those states' residents (see Fidelity's web site http://www300.fidelity.com:80/about/aboutfid.html).

Tax-induced interindustry distortions are indicated by differences in tax burdens among industry types. However, tax incentives for relocation created by interjurisdictional differences in tax regimes could theoretically induce offsetting flows of labor and capital into the Commonwealth. As a result, although the geographic allocation of resources might be distorted, the mix of resources among the Commonwealth's financial service industries might be optimal. Never-

[23] Retaliatory taxes paid by Massachusetts-based life insurers to other states are exceptions.

Table 3
Estimated Average Effective Tax Rates for Representative Massachusetts-Based Financial Service Providers, 1994 Law and Current Law

Type	Geographic Allocation of Operation	Statutory Income Tax Rate (Percent)		Taxable Income As a Percent of Pretax Income	Percent of Taxable Income Apportioned to Massachusetts		Percent of Pretax Income Attributed to Massachusetts
(1)	(2)	(3) Old	(4) New	(5)	(6) Old	(7) New	(8)
Bank	Concentrated	12.54	10.5	92	100	100	100
	Dispersed	16.69[a]	10.5	92	100	80	80
Business Credit Agency	Concentrated	9.5	10.5	79	100	100	100
	Dispersed	9.5	10.5	79	16.8	19.5	19.5
Life Insurance Company	Concentrated with retaliation	14	.0	176	52.5	n.a.[b]	66.7
	Dispersed with retaliation	14	.0	176	12.7	n.a.[b]	36.2
Mutual Fund Service Corporation	Concentrated	9.5	9.5	90	100	5.6	68.5
	Dispersed	9.5	9.5	90	42.9	5.6	35.2

[a] See text footnote 25 for derivation and further explanation.
[b] Not applicable.
Source: author's calculations.

theless, inferences are made concerning how tax changes have affected geographic as well as interindustry resource allocation.

Banks

1994 law. Estimation of firms' average effective tax rates was complicated by the Commonwealth's use of the residence principle until 1995. Given this practice, one could argue that Massachusetts banks paid taxes on all their income even if they earned only a fraction of it from operations within the Commonwealth. With apportioned income APP equal to attributable income ATT, a bank whose sales and operations were confined to the Commonwealth would have borne a tax burden equal to $.1254 \times P$. Since P equaled .92, the estimated average effective tax rate for a bank earning all of its income in Massachusetts was $.1254 \times .92$, or .115 (Table 3, column 11, row 1).

Several years ago, when interstate branching was generally prohibited, most small banks and even some large ones earned income only in the Commonwealth. However, some large Massachusetts banks, such as the former BankBoston and State Street Bank, had (and still have) clients all over the world. For them, APP was less than one, P/APP could have exceeded one, and, therefore, their average effective tax rate could have exceeded the statutory rate of 12.54 percent. However, because all states followed the residence principle, the state bank tax system as a whole functioned similarly to one based on the source principle.[24] In effect, multistate banks domiciled in Massachusetts earned implicit "credits" against the taxes they owed to the Commonwealth on income earned outside its borders. These tax credits equaled the taxes the banks would have owed to other states had they practiced source taxation. Since the Commonwealth imposed a higher tax burden on banks than almost all other states, these credits were insufficient to "offset" all of the tax paid to the Commonwealth by geograph-

[24] Conversely, Massachusetts in effect granted a credit to each out-of-state bank for the taxes the bank paid to its domiciliary state on income earned within the Commonwealth.

Table 3 continued

Non-Income Taxes As a Percent of Income Attributed to Massachusetts		Estimated Average Effective Tax Rate		
(9) Old	(10) New	(11) Old	(12) New	
n.a.[b]	n.a.[b]	11.5	9.6	(1)
n.a.[b]	n.a.[b]	15.4	9.6	(2)
1.1	n.a.[b]	8.6	8.3	(3)
.9	n.a.[b]	7.4	8.3	(4)
7.0	7.4	26.8	7.4	(5)
		26.9	8.9	(6)
2.0	2.3	10.9	2.3	(7)
		11.0	3.9	(8)
1.1	.1	13.6	.8	(9)
.9	.1	11.4	1.5	(10)

ically dispersed Massachusetts-based banks on their out-of-state income. The representative dispersed bank, with 20 percent of its income earned outside of Massachusetts, bore an estimated overall effective tax burden of 15.4 percent (column 11, row 2).[25]

Current law. Since Massachusetts now apportions bank income under the unweighted three-factor formula, the formula for computing a prototypical bank's average effective tax rate is the statutory tax rate, 10.5 percent, times the ratio of taxable income to pretax income, 0.92. This formula holds regardless of the geographic allocation of a bank's operations and sales. The resulting estimate is 9.6 percent (column 12, rows 1 and 2).

Out-of-state versus in-state banks. Under 1994 law, when residence taxation was the norm among all states, the average effective tax rate on a foreign bank's income earned within Massachusetts depended on the tax laws of the bank's home state. Since the Commonwealth generally imposed a relatively high statutory tax rate on its banks and defined their taxable income broadly, most bank income earned by out-of-state banks doing business within the Commonwealth's borders bore a lower average effective tax rate than income earned by in-state banks. As a result, banks serving Massachusetts customers had a tax incentive to locate their operations outside the Commonwealth (see Fox 1993). Under current law, the unweighted three-factor formula assures that all banks compete within the Commonwealth on an equal tax footing.

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Business Credit Agencies

1994 law. Most Massachusetts-based credit agencies confine their operations and sales to the Commonwealth, the "concentrated" scenario presented in Table 3, row 3. The formula for average effective income tax rate reduces to the statutory tax rate times the ratio of taxable to pre-tax Massachusetts net income, 0.79 (column 5). Under 1994 law this formula produced an estimated average effective income tax rate of 9.5 percent (column 3) × .79, or 7.5 percent. Estimated net worth taxes added another 1.1 percent (column 9), yielding an estimated total effective tax rate of 8.6 percent (column 11).

A Massachusetts multistate credit agency lending to businesses throughout the country (the "dispersed"

[25] This estimate was derived from the following formula for the bank's average effective tax rate under 1994 law:

$$P \times [12.54 \times ATT + [12.54 + (12.54 - C)] \times (1 - ATT)]/(ATT)$$

where:
C = the average statutory tax rate imposed on bank income by states other than Massachusetts in 1993, weighted by state personal income (Source: Fox 1993 and author's calculations). C was estimated at 8.5 percent. It was assumed that the representative bank conducted business only in the 43 states that taxed bank income. Consequently, only states that taxed bank income in 1993 were included in the sample for weighting purposes. (The other seven states tax banks on some base other than income, such as the value of their shares, capital stock, or net worth.) The term [12.54 × ATT + [12.54 + (12.54−C)] × (1−ATT)] equals 13.35 percent, the weighted average of 12.54 percent, the statutory tax rate imposed by Massachusetts on income earned within the Commonwealth, and 16.58 percent, the average statutory tax rate imposed by the Commonwealth on income earned outside its borders.

alternative, presented in row 4) enjoyed a lower average effective tax rate than its concentrated counterpart. The double-weighting of sales in the apportionment formula reduced the fraction of income apportioned (column 6) below the fraction of income attributable to Massachusetts (column 7). The disproportionate weight on sales also reduced the percentage of net worth apportioned to the Commonwealth and therefore the effective burden of the net worth component (column 9). As a result, the dispersed business credit agency bore an average effective tax rate of only 7.4 percent (column 11).

Current law. Since business credit agencies are currently taxed under the bank tax, both the concentrated and dispersed prototypes face a statutory income tax rate of 10.5 percent (rows 3 and 4, column 4) and bear an average effective tax rate of 10.5 percent × .79, or 8.3 percent (column 12). The average effective tax rate is reduced because, although the effective income tax rate rises, business credit agencies are no longer liable for the net worth tax.

Out-of-state versus in-state agencies. Under 1994 law, the double-weighting of sales gave in-state agencies an advantage over those of their out-of-state rivals that also had payroll and property located within Massachusetts. However, out-of-state agencies with no facilities located within the Commonwealth lacked a sufficient presence within its borders ("nexus") to be considered taxable. Depending on the tax laws in their home state, they could have entirely escaped being taxed on the income they earned within the Commonwealth. Under current law, all agencies competing within Massachusetts, including those without payroll or property located there, are considered taxable and, under the unweighted three-factor formula, are subject to equal tax treatment.

Life Insurance Companies

1994 law. Under 1994 law, the greater the concentration of payroll and property *relative to that of receipts*, the lower the tax burden.[26] Concentration of payroll and property raised the denominator of the effective tax rate. Dispersion of receipts lowered the numerator of this rate by reducing liability for Massachusetts premiums taxes and, given the 90 percent weighting of receipts, lowering the percentage of taxable investment income apportioned to the Commonwealth.[27] Consequently, the geographically concentrated firm, with 75 percent of payroll and property and 50 percent of receipts attributed to Massachusetts, bore an effective tax rate of 26.8 percent (row 5, column 11). The geographically dispersed company, with 50 percent of payroll and property and 8.5 percent of receipts attributed to the Commonwealth (less concentrated payroll and property, but more concentrated payroll and property *relative to receipts*), experienced an average effective tax burden of only 10.9 percent (row 7, column 11).[28]

Retaliatory taxes are more burdensome under current law than under 1994 law because Connecticut, Illinois, and Texas have lowered their premiums tax rate applicable to foreign insurance companies below Massachusetts' rate of 2 percent.

One could argue that the retaliatory taxes paid by the representative companies to other states should be included in the estimation of their average effective Massachusetts tax burden. Life insurance companies are liable for retaliatory taxes in part because the Commonwealth has chosen to impose a higher premium tax burden on its life insurers than some other states. Taking this view, the author conducted alternative estimates of the representative life insurers' average effective tax rate that includes retaliatory taxes

[26] The author was unable to obtain data on the geographic allocation of the payroll and property of actual Massachusetts-based life insurers. However, state-by-state premiums figures were obtainable for the largest domestic insurers in the Commonwealth. In 1998 the five largest collected 8.6 percent of their aggregate premiums on policies insuring the lives of Massachusetts residents. The percentages ranged from 4.4 percent for Mass Mutual LIC to 42.1 percent for Boston Mutual Group (National Association of Insurance Commissioners 1999).

[27] Dispersing receipts also shrinks the denominator of the effective tax rate. However, given 90 percent weighting of sales in apportionment, dispersing receipts shrinks the numerator by even a larger percentage.

[28] The effective tax rate was less than the statutory tax rate even though taxable income was 176 percent of pre-tax income (column 5, rows 5 and 8). It was not unusual for taxable *investment* income to exceed pre-tax *total net* income by such a wide margin.

owed to other states. In order to simplify the task, he limited the number of jurisdictions in which insurers conducted business to 18 states. They included the 14 other states that domiciled at least one of the nation's 50 largest life insurance companies in 1994 (one of which was Connecticut) plus Maine, New Hampshire, Rhode Island, and Vermont. Taking retaliatory taxes into account barely raised the estimated average effective tax rate under 1994 law (column 11) because in that year 16 of the 18 states imposed tax burdens on foreign life insurers equal to or higher than that imposed by Massachusetts.

Current law. Since under current law domestic life insurance companies are not liable for the net investment tax, the prototypical life insurer's average effective tax rate, without taking into account retaliation, plummets to between 2.3 percent and 7.4 percent (column 12, rows 5 and 7). This range, 5.1 percentage points, is considerably narrower than that of the estimated tax burdens under 1994 law. Retaliatory taxes are more burdensome than under 1994 law because Connecticut, Illinois, and Texas, all of which are market states for the representative insurer, have lowered their premiums tax rate applicable to foreign insurance companies below Massachusetts' rate of 2 percent. As a result, taking retaliatory taxes into account drives the estimated range of effective tax burdens up to between 3.9 and 8.9 percent (rows 6 and 8).

Out-of-state versus in-state insurers. Massachusetts-based life insurers have always borne lower average effective tax rates within the Commonwealth than most of their out-of-state rivals. This was true even when the net investment income tax was in full force and out-of-state companies were exempt from it. The advantage to the Commonwealth's insurers resulted from the tendency of most life insurance companies to concentrate their operations in their home state but to diversify their clientele geographically. Consequently, when out-of-state insurers compete within the Massachusetts market, the percentage of their nationwide receipts attributable to the Commonwealth is usually higher than the percentage of their nationwide property or payroll. As a result, Massachusetts premiums tax liabilities impose a high effective tax rate on the income they earn within the Commonwealth. Any retaliatory taxes they owe accentuates the tax advantage of Massachusetts-based insurers. The elimination of the net investment income tax has increased their advantage. However, by the same reasoning, Massachusetts companies compete at a tax disadvantage in life insurance markets outside of the Commonwealth.

Mutual Fund Service Corporations

1994 law. Given the siting of receipts by origin and the double-weighting of receipts in apportionment, one might conclude that under 1994 law an MFSC's average effective tax rate would be highly sensitive to the geographic allocation of its operations. However, the estimates displayed in Table 3, rows 9 and 10, suggest otherwise. In 1994 the Commonwealth, practicing origin siting, would have taxed all of the concentrated MFSC's nationwide taxable income regardless of the geographic allocation of its receipts (100 percent of its property and payroll were in Massachusetts). About 69 percent of its nationwide income was attributable to the Commonwealth (column 6). The MFSC's average effective tax rate was estimated at 13.6 percent (row 11).

With single-factor apportionment based on receipts and only 5 percent of receipts attributable to Massachusetts, neither type of mutual fund service corporation owes much tax to the Commonwealth.

The estimated average effective tax rate of the dispersed MFSC was 11.4 percent. This representative firm located 50 percent of its payroll and property in Massachusetts. Remaining payroll and property were located in 20 other states.[29] For two reasons, the percentage of this MFSC's pretax income apportioned to the Commonwealth (43 percent) was smaller than that of its more geographically concentrated counterpart (compare column 6, rows 9 and 10). First, its payroll and property apportionment factors were smaller. Second, because the firm had a physical presence in several other states, Massachusetts considered a smaller percentage of its out-of-state receipts to have originated within the Commonwealth's borders.

[29] These are the 20 states outside of Massachusetts in which Fidelity Investments, the largest MFSC headquartered in the Commonwealth, had facilities as of January 1, 2000 according to Fidelity's web site.

However, the percentage of the geographically dispersed MFSC's pre-tax income attributable to the Commonwealth was also smaller than that of its geographically concentrated counterpart (compare column 8, rows 9 and 10). Since the downward adjustments to both the numerator and denominator of the average effective tax rate were roughly proportional, the tax burdens of the two MFSCs were only about 2 percentage points apart (column 11, rows 9 and 10).

It is not clear that the Commonwealth has narrowed interindustry differences in tax burdens imposed on Massachusetts-based financial service providers.

Current law. With single-factor apportionment based on receipts and only 5 percent of receipts attributable to Massachusetts, neither type of MFSC owes much tax to the Commonwealth (column 12, rows 9 and 10). Since only a small percentage of the funds managed by Massachusetts-based MFSCs are owned by Massachusetts-based shareholders, the state corporate excise tax liability of these companies has been all but eliminated.

Out-of-state versus in-state MFSCs. The tax regime in effect in 1994 favored many MFSCs based out-of-state vis-à-vis their competitors headquartered in the Commonwealth. Out-of-state MFSCs with neither payroll nor property in Massachusetts had no taxable presence in the Commonwealth, even if Massachusetts residents owned a significant percentage of the funds that the out-of-state firms managed. In cases where out-of-state MFSCs had some facilities within the Commonwealth, their tax advantage was less clear-cut. On the one hand, siting receipts by origin handicapped Massachusetts-based MFSCs. On the other hand, the double-weighting of sales helped them to the extent that their receipts were sited to states other than the Commonwealth (states where they had facilities). Under current law, the combination of single-factor apportionment based on receipts and destination siting unambiguously favors in-state MFSCs.

V. Summary and Policy Implications

Over the past several years, Massachusetts has lowered the tax burden of financial institutions based within its borders. A comparison of columns 11 and 12 in Table 3 reveals that seven of the eight representative firms bear a lower average effective tax burden under current law than they did six years earlier. The only exception, the dispersed business credit agency, has an atypical geographic configuration for Massachusetts. Life insurance companies and MFSCs have enjoyed especially dramatic reductions in their tax burdens.

The problems caused by persistent tax disparities among Massachusetts-based financial service providers will become more serious as financial institutions respond to the Gramm-Leach-Bliley Act of 1999, which eliminates long-standing barriers to affiliation among them.

The Commonwealth has also reduced the sensitivity of the tax burden it imposes on financial institutions to the geographic dispersion of its operations and sales. In all four industries, differences in tax burden between the concentrated and dispersed alternatives representing each industry have been narrowed or eliminated by recent changes in tax law. As a result, in-state and out-of-state firms within each industry now compete on a more equal tax footing.

However, it is not clear that the Commonwealth has narrowed interindustry differences in tax burdens imposed on Massachusetts-based financial service providers. Under 1994 law, average effective tax rates ranged from 7.4 percent to 15.4 percent among dispersed firms and from 8.6 percent to 13.6 percent among concentrated firms, disregarding the concentrated life insurance company (Table 3, column 11). The comparable ranges under current law are, respectively, 1.5 percent to 9.6 percent and 0.8 percent to 9.6

In the interests of tax neutrality, fairness, and administrative simplicity, the Commonwealth might consider narrowing disparities in tax treatment among financial institutions.

percent (column 12). While MFSCs used to bear tax burdens comparable to those of banks and dispersed life insurers, they now enjoy much lighter burdens. Geographically dispersed life insurance companies also currently enjoy a large tax advantage over their concentrated counterparts and their competitors in the banking and business credit industries.

The problems caused by persistent tax disparities among Massachusetts-based financial service providers will become more serious as financial institutions respond to the Gramm-Leach-Bliley Act of 1999. This Act eliminates long-standing barriers prohibiting affiliations among banking organizations, insurance companies, securities firms, mutual funds, Internet trading services, providers of personal finance software, and other financial services. As a prominent Boston law firm put it, "the Act now paves the way for the emergence of financial conglomerates that will offer consumers virtually any type of financial service" (Goodwin, Procter & Hoar, LLP 1999). If tax burdens on the provision of different types of financial services differ dramatically, such conglomerates will have a strong incentive to engage in tax avoidance tactics designed to minimize the tax bases of more heavily taxed activities. The ability of the Commonwealth's Department of Revenue to thwart such tactics will be diminished by the expanded opportunities for affiliation afforded by the Act.

In the interests of tax neutrality, fairness, and administrative simplicity, the Commonwealth might consider narrowing disparities in tax treatment among financial institutions. Such a change would have to be implemented gradually to give firms time to adjust. Some adjustment would probably have to made for insurance companies if the new regime triggered retaliatory taxes (a better solution would be to dismantle the retaliatory system entirely). The transitional costs might outweigh the long-term benefits of greater uniformity. Nevertheless, measures designed to narrow differences in tax burdens merit further attention.

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