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The Economic Ambiguity (and Possible Irrelevance) of Tax Transition Rules

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THE ECONOMIC AMBIGUITY (AND POSSIBLE IRRELEVANCE) OF TAX TRANSITION RULES

*Eric Chason**

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I. INTRODUCTION

Conventional thinking is that tax transition rules matter because of the gains and losses that can arise when Congress changes the Internal Revenue Code (Code). Municipal bonds can illustrate what is normally thought to be at stake. Interest on municipal bonds is exempt from federal income tax.¹ Bond investors rely, at least to some extent, on the continued vitality of this exemption and as such are willing to accept lower yields than they otherwise would on comparable taxable bonds.² After all, bond investors care only about after-tax returns. Unless Congress decided to grandfather the tax treatment of existing bonds, if the exemption were repealed tomorrow, the value of these tax-exempt bonds would fall. Conceptually, but not formally, the federal government has made itself a party to the bond, since investors look to the government for part of their returns. By repealing the exemption, the government has, in a sense, defaulted on its obligation. As a consequence of the repeal, investors are thought to suffer a "transition loss"³ absent some rule grandfathering the tax treatment of old investments.

The issue of tax transitions has produced a rich body of scholarship, and separate articles by Professors Michael Graetz⁴ and Louis Kaplow⁵ are considered to be the preeminent scholarly works in this field. In their articles, Graetz and Kaplow argue that grandfathering old investments is inefficient because it introduces moral hazard (and thus economic distortions)⁶ and it is costly from a revenue perspective.⁷ Their arguments are based on an analogy between the risk of repeal and the risk of market or casualty losses. For example, investments in a factory may be rendered obsolete by changing technology or destroyed altogether by fire. Individuals usually face these risks without government protection. As a result,

¹ See I.R.C. § 103.

² HANDBOOK OF FIXED INCOME SECURITIES 176-77 (Frank J. Fabozzi & T. Dessa Fabozzi eds., 4th ed. 1995).

³ Similar "transition gains" would arise if the exemption were expanded and applied to preexisting bonds.

⁴ Michael J. Graetz, *Legal Transitions: The Case of Retroactivity in Income Tax Revisions*, 126 U. PA. L. REV. 47 (1977).

⁵ Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509 (1986). Kaplow's article is broad in scope, analyzing tax and nontax transitions (such as government takings and product bans).

⁶ See Graetz, *supra* note 4, at 71; Kaplow, *supra* note 5, at 536.

⁷ See Graetz, *supra* note 4, at 72; Kaplow, *supra* note 5, at 555.

they should act efficiently to anticipate and adapt to new technologies and to protect their property from fires. If the government was to provide insurance, it would introduce moral hazard – an inefficient reduction in the incentive to anticipate, adapt, and protect. In Graetz and Kaplow's view, the same issues are present with political risks (e.g., the risk that a tax preference will be repealed). Grandfathering old investments when the tax law changes is analogous to providing an insurance policy against the risk of repeal. Under a grandfathering regime, taxpayers have no incentive to adapt to political changes.⁸ Moreover, since grandfathering is paid for by the public at large, it creates economic distortions separate and distinct from those created by tax increases or governmental borrowing.⁹

The argument that grandfathering produces inefficient incentives has greatly affected subsequent scholarship. Professor Daniel Shaviro refined this incentive-based argument and applied it to a wide variety of issues that would arise by transitioning the present tax regime toward a comprehensive income or consumption tax.¹⁰ Other scholars have questioned Graetz and Kaplow's assumptions and have suggested countervailing factors. For the incentive-based argument to work, we need to make the questionable assumption¹¹ that political changes generally bring about in an increase in societal welfare.¹² Giving taxpayers an incentive to anticipate and respond to bad laws would only compound the problem. Professor Kyle Logue has argued

⁸ Graetz rhetorically asked,

Why should efficiency demand a different result when losses occur because a change in tastes or societal conditions is reflected through the political process, rather than in the market? . . . The risks of a change in law do not seem necessarily different in kind nor [sic] in magnitude from the risks of a change in market demand or technology.

Graetz, *supra* note 4, at 65; *see also* Kaplow, *supra* note 5, at 533-36 (“[T]here is little to distinguish losses arising from government and market risk.”).

⁹ *See* Saul Levmore, *The Case for Retroactive Taxation*, 22 J. LEGAL STUD. 265, 274-75 (1993).

¹⁰ DANIEL SHAVIRO, *WHEN RULES CHANGE: AN ECONOMIC AND POLITICAL ANALYSIS OF TRANSITION RELIEF AND RETROACTIVITY* (2000); *see also* Kyle D. Logue, *If Taxpayers Can't Be Fooled, Maybe Congress Can: A Public Choice Perspective on the Tax Transition Debate*, 67 U. CHI. L. REV. 1507 (2000) [hereinafter Logue Review] (reviewing SHAVIRO, *supra*).

¹¹ *See* J. Mark Ramseyer & Minoru Nakazato, *Tax Transitions and the Protection Racket: A Reply to Professors Graetz and Kaplow*, 75 VA. L. REV. 1155, 1162-65 (1989).

¹² *See* Michael J. Graetz, *Retroactivity Revisited*, 98 HARV. L. REV. 1820, 1825 (1985) (noting “the theology that changes induced by the political process are inherently inefficient”); Kaplow, *supra* note 5, at 521 (noting “assum[ption] that the reforms themselves are desirable at the time they are made”).

that eliminating the possibility of grandfathering may actually make tax preferences more expensive.¹³ A tax preference can be viewed as a subsidy enacted to encourage targeted investments or activities. Without the expectation of grandfathering protection, taxpayers may demand expensive premiums out of fear that they will be whipsawed by an opportunistic government.¹⁴ Finally, Professors Mark Ramseyer and Minoru Nakazato have argued that removing grandfathering protection may increase the level of political lobbying and associated costs, because more is at stake in the legislative process.¹⁵ These criticisms, however, do not address the theoretical underpinnings of the Graetz-Kaplow view, which has influenced the thinking of tax attorneys¹⁶ and Congressional staff.¹⁷ The view that grandfathering is expensive and inefficient enjoys acceptance inside and outside the academy.¹⁸

The goal of this article is to challenge Graetz and Kaplow's theoretical underpinnings directly, setting forth the case that the choice of tax-transition rules is generally irrelevant from an efficiency or revenue perspective. Risk factors may even support a transition policy of grandfathering. Transition rules would seem to matter most where a taxpayer makes an investment today with some expectation of receiving benefits in the future under a tax preference. The tax preference is simply a series of forward subsidy payments, and the transition rule is a way of describing the nature of payments in the event the preference is repealed. Under a grandfathering regime, the subsidy payments continue. Without grandfathering, however, the subsidy payments cease. The government could even retroactively repeal the tax preference, causing negative cash flows (i.e., additional taxes) after repeal. Taxpayers operating under rational expectations will value tax preferences by forecasting the likelihood and nature of these governmental actions. After making this forecast, taxpayers will value tax preferences by discounting all of the cash flows to present value.

¹³ See Kyle D. Logue, *Tax Transitions, Opportunistic Retroactivity, and the Benefits of Government Precommitment*, 94 MICH. L. REV. 1129, 1138-43 (1996) [hereinafter Logue Article]; see also discussion *infra* Part III.B.3.

¹⁴ See Logue Article, *supra* note 13; see also discussion *infra* Part III.B.3.

¹⁵ See Ramseyer & Nakazato, *supra* note 11, at 1171-73; see also *infra* Part IV.C. Ramseyer and Nakazato see the power to grandfather old investments as a valuable prerogative that members of Congress can use to extract campaign contributions and the like. Thus, they see little reason for Congress to give up this right.

¹⁶ See Franklin L. Green, *The Folly of Long-Term Planning: Comments on the Instability of the Tax Law*, 74 TAX NOTES 481, 481 (Jan. 27, 1997).

¹⁷ See STAFF OF JOINT COMM. ON TAXATION, 104TH CONG., DESCRIPTION AND ANALYSIS OF PROPOSALS TO REPLACE THE FEDERAL INCOME TAX (Joint Comm. Print 1995).

¹⁸ See, e.g., Logue Article, *supra* note 13, at 1138.

The inquiry should be framed in terms of the substantive policy (i.e., what is Congress trying to achieve with the tax preference), the nominal tax preference (i.e., how does the Code describe the preference), and the transition policy (i.e., how Congress handles preexisting investments when it repeals tax preferences). Obviously, transition policy affects substantive policy. A change from a grandfathering to a no-grandfathering regime would reduce the present value of a tax preference, because investors today will expect lower subsidy payments in the future. As a result, this change would reduce future revenue costs and the level of tax-motivated investments. To maintain the status quo with respect to substantive tax policy, Congress would need to increase the nominal tax preference. If Congress were simply interested in affecting substantive tax policy, it could do so by lowering the nominal tax preference without altering its transition policy. This raises the question of whether transition policy can produce *unique* efficiency or revenue gains. Thus, the proper inquiry is whether a particular transition policy, when coupled with an appropriate change in the nominal tax preference, can achieve efficiency gains without disrupting the current substantive tax policy. A major goal of this article is to demonstrate that, in this respect, no transition policy is inherently superior.

With respect to substantive tax policy, all that matters is that tax preferences are efficiently priced at the time the initial, tax-preferred investments are made. Economic or political change may occur that requires the repricing or repealing of a tax preference for future investments. What if Congress delays to act? The keen insight of Graetz and Kaplow is that a transition policy of no-grandfathering can result in an automatic repricing of the tax preference. If taxpayers know that repeal without grandfathering is inevitable in the short term, they will also know that the tax preference is nearly worthless. But incentive structures may work both ways, and a rule of no-grandfathering reduces the incentive of Congress to act promptly in repealing obsolete tax preferences. It also gives taxpayers the incentive to duplicate governmental costs in forecasting the need for political change. Moreover, the fact that a tax preference will be repealed in the future speaks only to the appropriate future price associated with the substantive policy; it may not speak to the appropriate present price.

Following this Introduction, Part II describes the issues of tax transitions and tax preferences and the methodology for examining them. The critical points are that tax preferences are a series of cash flows, the transition rule merely describes how political change will alter the cash flows, and taxpayers will forecast expected cash flows without bias. Part III examines the revenue and efficiency effects of different transition regimes and concludes that there generally are

none. Congress cannot achieve its substantive policy goals more cheaply or efficiently by altering transition policy. Part IV introduces risk factors into the analysis, and tentatively suggests that a policy of grandfathering may in fact be optimal. Part V has some concluding thoughts.

II. ANALYZING TAX PREFERENCES AND POLITICAL CHANGE

The purpose of this part is to frame the relevant issues in tax transitions and to explain the methodology of this article. Section A provides formal definitions for the three most prominent transition rules. Section B briefly describes tax preferences, particularly those where tax benefits are paid out in installments. Section B also describes the important assumption that efficiency or revenue gains from a choice of tax transition policy are noteworthy only if they can be achieved without disrupting the substantive policy of the tax preference. Section C notes the importance of ex ante analysis in the tax transitions debate. Section D explains the rational expectations model used in this article.

A. Transition Rules Defined

Transition rules describe the tax treatment of existing investments when the tax law changes. Under a grandfathering regime, the old rules would continue to apply to old investments. Under a prospectivity regime, the new rules would apply to accounting periods beginning on the date the law changes (e.g., all interest received after the date of change would be subject to the new rule). Under a retroactivity regime, the new rules would apply to accounting periods before and after the date the law changes (e.g., all interest received after the date of change and interest received in the prior year would be subject to the new rule).¹⁹ On the rare occasions it is used in tax legislation, retroactive repeal is usually applied to shut down tax shelters or make technical corrections.

These definitions are formal in nature, as almost any law change can affect the value of existing investments.²⁰ Prospectivity can reduce the value of investments where taxpayers expected to receive future benefits. Repeal with grandfathering may even increase the value of existing tax-preferred investments by eliminating the supply of future tax-preferred investments.²¹ Moreover, the availability of delayed effective dates, phase-ins, and restrictions on the transfer of

¹⁹ For a discussion on the constitutional limits on retroactivity, see Levmore, *supra* note 9, at 270 n.12.

²⁰ See Graetz, *supra* note 4, at 52-53.

²¹ See discussion *infra* Part III.C.

grandfathered status make the number of available transition rules uncountable.

As the usual debate is whether to grandfather old investments on repeal,²² the remainder of this article compares the transition policy of grandfathering versus the transition policy of no-grandfathering. As used below, the term no-grandfathering means prospectivity unless noted otherwise.

B. Tax Preferences

Tax preferences are generally thought to be special tax treatments that apply to certain types of investment or consumption. They are equivalent to subsidies.²³ The tax-exemption for municipal bonds²⁴ is the example used throughout the literature²⁵ and will be used in this article as well.²⁶ Tax preferences abound throughout the Code, the largest being for owner-occupied real estate and employee health-care and pension benefits.²⁷ Before knowing whether a tax provision is a preference, we need to know what the optimal tax treatment should

²² Professor Kaplow contends that we should also be concerned about “transition gains” that arise when Congress enacts a new tax preference and applies it to existing investments. In a sense, Congress has applied a policy of prospectivity to the existing investments. Grandfathering the old investments would mean not extending preferential treatment to them. See Kaplow, *supra* note 5, at 552-56. Professor Kaplow objects to the fact that Congress often pursues an asymmetric transition policy by applying a rule of prospectivity when enacting preferences and a rule of grandfathering when repealing them. Thus, Congress allows “transition gains” but prevents “transition losses.” This article concludes that transition rules are irrelevant or ambiguous from the perspective of economic efficiency. For the sake of simplicity, the analysis focuses on the results when Congress repeals a tax preference. The conclusion is equally applicable where Congress enacts a new tax preference.

²³ See Logue Article, *supra* note 13, at 1132.

²⁴ Compare I.R.C. § 103 (exempting municipal bond interest from federal income tax), with I.R.C. § 61(a)(4) (generally including interest in gross income).

²⁵ See Levmore, *supra* note 9, at 266 n.3. As Levmore noted, the exemption is something of an anachronism, enacted under the view that it was constitutionally required. The Supreme Court, however, has held otherwise. See *South Carolina v. Baker*, 485 U.S. 505 (1988).

²⁶ Those who would have the exemption repealed should reflect on its worth to commentators. I can think of no other tax preference that illustrates the issues of tax transitions and tax preferences so well.

²⁷ OFFICE OF MANAGEMENT AND BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2002, at tbl.22-4. By the government’s reckoning, the exemption for municipal bond interest costs \$23.5 billion per year. The preferences that apply to owner-occupied real estate are the deductibility of mortgage interest, the deductibility of state and local taxes, and the exclusion of gains upon sale, which total about \$111 billion per year. The exclusions for employer-provided health care and pensions total about \$212.6 billion per year.

be. Of course, this depends on the baseline tax regime (e.g., income or consumption tax) and second-best analysis when this baseline yields impractical results.²⁸

This article will also focus only on tax preferences involving installment payments.²⁹ To illustrate, a taxpayer will buy a municipal bond with some expectation of receiving tax benefits in future periods. In contrast, the exclusion for employee health-care benefits is paid in a lump sum.

The government essentially makes a purchase when it subsidizes certain activities and investments. Where the subsidy is a lump sum, the price (i.e., the value of the payment) is clear. Where the subsidy is paid in installments, however, the price is not so clear, but is nonetheless amenable to financial analysis because the installment payments are akin to a financial instrument. Under grandfathering, the installment payments are, in a sense, guaranteed. Under no-grandfathering, they are contingent on the future life of the tax preference.

More generally, we can view tax preferences as deviations from some abstract tax ideal (typically a comprehensive income or consumption tax), where the deviation is undertaken to achieve some policy goal. I will refer to this policy goal as the substantive policy throughout the article. The policy goal may be an incentive subsidy for some type of investment, production, or consumption. Or, it may be the administrative feasibility of the tax laws or anything else the government is trying to achieve. For the most part, I will assume that the substantive policy is an incentive subsidy (typically the exemption of municipal bonds undertaken to lower the cost of municipal borrowing).

An important assumption of this article is that the efficiency or revenue benefits of any tax transition regime must be decoupled from the wisdom of the tax preference. In other words, the substantive policy must be held constant. Tax preferences, like any subsidy, create economic distortions and revenue costs. Implementing a rule of no-grandfathering would decrease these distortions and costs if the nominal tax preference was held constant. But this may be only because it reduces the value of the subsidy. For transition policy to be superior, however, we must show that it can produce efficiency gains beyond any gains achieved from altering the substantive policy.

For example, implementing a policy of no-grandfathering would cause municipal bond prices to fall and nominal yields to increase, even without a change to the nominal exemption itself.³⁰ This is

²⁸ See, e.g., Daniel S. Goldberg, *Tax Subsidies: One-Time vs. Periodic: An Economic Analysis of the Tax Policy Alternatives*, 49 TAX L. REV. 305, 307 (1994).

²⁹ For an argument against using such tax preferences, see *id. passim*.

³⁰ This assumes, for sake of simplicity, that the only expected political outcomes

because investors will require higher yields to offset the expected losses in event of future repeal. The increase in yields would make subsequent municipal borrowing more expensive. Presumably, the substantive policy of the exemption is to lower the cost of borrowing by municipalities. To keep the substantive policy intact, Congress would need to increase the nominal tax preference (perhaps with a credit of some type) that would bring the cost of borrowing back down to its prior level. A particular transition policy is superior to another if, but only if, it allows Congress to maintain the same cost of municipal borrowing while lowering economic distortions or revenue costs. More generally, the superior policy will produce efficiency and revenue gains while keeping the price³¹ of the subsidized good or investment constant.³²

C. Rational Expectations and the Relevance of Reliance

A major part of past scholarship is the notion of “reliance” on continued tax transition rules. It was thought at one time that the efficient tax transition rule would always grandfather pre-repeal investments in order to protect reliance on the old law.³³ Refuting these reliance arguments was the project of Professors Graetz and Kaplow, although these arguments experienced a revival in later scholarship.³⁴ Reliance, however, suggests some moral or contractual right to have tax benefits continued into the future. The great importance of Professor Graetz’s article was in refuting any moral right to have tax benefits continue. No subsequent scholar has attempted to argue otherwise (nor will I). As for enforceable legal rights to continued tax benefits after repeal, they do not exist.³⁵

are maintenance of the status quo and full repeal.

³¹ Of course, keeping the price the same would keep the quantity of subsidized goods and investments the same. See generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 9 (Aspen 5th ed. 1998).

³² Congressional goals could conceivably have nothing to do with price levels, increased production, or even transfer payments. Instead, Congress may simply be trying to impress voters with legislation, even if the voters will receive no benefits. In other words, Congress is just trying to make people feel good that it is doing something about an issue. We can probably assume people will not feel any worse if the feel-good legislation were subject to future repeal without grandfathering. I am hesitant to give an example of feel-good legislation, as the question is one of subjective intent. Indeed, almost anything produced by the political process will have serious-minded defenders.

³³ See Levmore, *supra* note 9, at 267-68; Logue Article, *supra* note 13, at 1135-36.

³⁴ See SHAVIRO, *supra* note 10, at 3.

³⁵ Professor Logue argues that something similar to these rights should exist in certain circumstances. See Logue Article, *supra* note 13, *passim*.

Not only is “reliance” a loaded term, it also lacks descriptiveness. The fact that one should or should not rely on the continued tax exemption for municipal bonds is not helpful in describing whether they are good investments. What would help answer this question is a description of expectations about future changes and their effects on economic values. Taxpayers are not prescient, meaning that expectations need to be expressed in probabilistic terms. From an ex ante perspective, taxpayers who expect a very low probability of repeal may not particularly care whether grandfathering will be available if the tax preference is ever repealed. Where the probability of repeal is substantial, however, the transition policy has a more profound effect on subjective economic values.

Suppose a taxpayer is risk neutral and discounts future cash flows at 5%. Suppose further that the taxpayer buys some tax-preferred investment that would produce a \$100 annual tax benefit³⁶ for ten years under current law. The present value of these tax benefits is \$772³⁷ if the expected probability of repeal is 0% or if the expected probability of grandfathering is 100%. Suppose that the annual risk of repeal is 10%, and taxpayers expect with certainty that any such repeal would be prospective (i.e., no grandfathering). Here, the value is only \$472.³⁸ The importance is that the tax benefit still has value even though the taxpayer has no “reliance interest” in receiving benefits after repeal. The value, of course, is lower under no-grandfathering.

The method for discounting cash flows to present value is uncontroversial. But where do expectations of future political change come from? This article generally assumes that taxpayers operate under “rational expectations,” which is an economic term of art implying that forecasts are not systematically biased in an observable way.³⁹ This is not to say that forecasts are always correct or unbiased. Rather, the assumption means that there is no bias that a government or other observer could detect. The justifications for this theory are (1) an individual’s economic interest depends on making the most accurate forecasts possible, (2) information available to governments and observers is widely available, and (3) individuals will use such information to shape their forecasts. Legislation is, after all, enacted according to the public deliberations of Congress. For purposes of this article, I will interpret the rational expectations assumption to

³⁶ For present purposes, I assume that the only change that could affect this benefit is repeal. Other changes (e.g., a change in general tax rates or an expansion of the tax preference) could do so as well.

³⁷ That is, $\$100 \times [1/(1.05)^1 + 1/(1.05)^2 + \dots + 1/(1.05)^9 + 1/(1.05)^{10}]$.

³⁸ That is, $\$100 \times [(0.9/1.05)^1 + (0.9/1.05)^2 + \dots + (0.9/1.05)^9 + (0.9/1.05)^{10}]$.

³⁹ For a more complete introduction, see generally SHAVIRO, *supra* note 10, at 19-25 and discussion *infra* Part III.B.

mean that (1) future political actions are probabilistic and (2) the probability of each possible action is known *ex ante*. This assumption will be relaxed where useful.

D. Testing Efficiency Ex Ante

This article tries to answer the following question: Can Congress use tax transition rules to achieve revenue or efficiency gains while leaving the substantive policy intact? This article further assumes that the inquiry should be made from an *ex ante* perspective. While this is an uncontroversial assumption in many respects,⁴⁰ it is nonetheless important in the tax transition context. The appropriate time to explore this question is the present, rather than at some presupposed time in the future when a political change is assumed to have occurred.

Since transition policies dictate what to do upon the repeal of a tax preference, it might be tempting to presuppose repeal (i.e., examine transition policies from an *ex post* perspective).⁴¹ In the intermediate future,⁴² however, repeal may not occur. So, there are two possible scenarios: repeal and no-repeal. Complete analysis requires an examination of both scenarios.

For the most part, I will assume that the government is trying to achieve a certain substantive policy (e.g., subsidized cost of municipal borrowing) in the cheapest possible fashion. Lower governmental costs also should also result in increased efficiency for two reasons. First, higher spending may result in higher taxes of general applicability or greater governmental borrowing, both of which create undisputed distortions.⁴³ Second, greater governmental spending will make the subsidized assets more attractive, leading taxpayers to invest more money in them. As a result, other, unsubsidized projects will (at the margin) not be undertaken, because the subsidy “crowds out”

⁴⁰ Cf. POSNER, *supra* note 31, at 8 (explaining emphasis on *ex ante* perspective among economists). The “veil of ignorance” methodology employed by John Rawls in constructing his theory of justice could be interpreted as the ultimate *ex ante* analysis. Cf. JOHN RAWLS, A THEORY OF JUSTICE (1971).

⁴¹ I would critique Graetz and Kaplow’s articles as having something of an *ex post* perspective. Cf. Graetz, *supra* note 4; Kaplow, *supra* note 5. Shaviro’s book may be subject to the same criticism, especially as he has such a clear vision of what the *ex post* perspective should be. Cf. SHAVIRO, *supra* note 10, at 93-95 (arguing for a comprehensive tax base without subsidies).

⁴² For example, in the next few decades. Repeal of tax preferences is inevitable at some time in the future, whether by narrow political action, widespread political upheaval, or Armageddon (natural or otherwise).

⁴³ See Levmore, *supra* note 9, at 274-75. A contrary explanation is possible where the government foregoes wasteful spending in order to transfer funds to taxpayers. In this case, an expensive tax preference is more efficient.

private investment.⁴⁴ In other words, taxpayers will invest in less efficient subsidized activities over relatively more efficient unsubsidized activities. Thus, showing that one transition rule is cheaper than another is tantamount to showing that it is more efficient as well.

III. REVENUE AND EFFICIENCY EFFECTS OF GRANDFATHERING

A. Simple Example

A simple example will be the starting point for analysis in this part. Suppose that municipalities can issue bonds with a tax preference for interest payments. Assume that today a municipality issues a series of bonds with a one-year maturity. Immediately prior to the payment of interest one year hence, Congress will vote on whether to retain the tax preference. While the outcome of the meeting is uncertain, it is nonetheless amenable to probabilistic forecasting. This will be the only such meeting that could affect the taxation of the bonds. Investors know this. Investors also know the probability of repeal and the transition policy that will be used in the event of repeal. Assume the following particulars:

Prevailing taxable interest rate:	10%
Face value of bond:	\$1000
Probability of repeal:	50%
Tax rate:	40%
Substantive policy:	6% municipal borrowing rate
Nominal tax preference:	Exclude interest from recipient's income
Transition policy:	Grandfathering

Under these assumptions, tax-exempt bonds will in fact bear interest of 6%, thereby achieving the substantive policy goal. The prevailing taxable interest rate of 10% reduced by taxes of 40% produces an after-tax return of 6%. Investors in the bonds are indifferent to repeal because the transition policy is grandfathering. The expected cash flow to the government is \$0 with respect to the bonds.⁴⁵

⁴⁴ Cf. HANDBOOK OF FIXED INCOME SECURITIES, *supra* note 2, at 1310 (noting that higher Treasury borrowing increases interest rates and crowds out private investment and consumption at the margin).

⁴⁵ The opportunity cost is the lost revenue that the government could have gained from these bonds.

Suppose the same facts, except that we know the transition policy is no-grandfathering. In order to keep the substantive policy constant (i.e., 6% interest on municipal bonds), there would need to be an adjustment to the nominal tax preference. If investors are risk neutral, they would require an additional 40% credit on interest received before they would accept a municipal bond bearing interest of 6%. They would require this additional credit to offset the 50% chance they will have to pay tax of 40% on interest received in the event of repeal. The particulars would change as follows:

Nominal Tax Preference:	Exclude interest from recipient's income plus 40% additional credit
Transition policy:	No-grandfathering

In the event of repeal, interest will be subject to tax and no credit will be paid. Investors will receive \$1000 (face value) plus \$60 (pre-tax interest) minus \$24 (40% tax) in one year. This payment of \$1,036 in one year has a present value of \$977.36.⁴⁶ If there is no repeal, investors will receive \$1000 (face value) plus \$60 (tax-exempt interest) plus \$24 (40% credit). This payment of \$1084 in one year has a present value of \$1022.64.⁴⁷ Obviously, the expected value of the bond is still \$1000. As for cash flows to the government (revenue effects), it will receive \$24 in the event of repeal and will pay \$24 in the event of no repeal (i.e., \$60 times 40% in both cases). Expected cash flows to the government remain zero under a transition policy of no-grandfathering.

The choice of transition policy does not matter in this simple example. The government cannot bring the cost of municipal borrowing to 6% more cheaply or efficiently with either grandfathering or no-grandfathering. Before taxpayers will accept 6% interest on municipal bonds, they will need to have an expected tax bill of \$0. This can be a guarantee of a \$0 tax bill (grandfathering) or a riskier gamble on a higher credit (no-grandfathering).⁴⁸

This simple example is amenable to greater mathematical sophistication. One could examine the choice of transition policies themselves as probabilistic. Or, the prospect of reform could be small but ever present. Surely a more comprehensive model could be developed, but the results should be the same. Tax preferences are simply subsidies, and taxpayers operating under rational expectations know how to value them. Congress cannot achieve a set policy goal more cheaply or more efficiently by tampering with the method of payment in the event of future repeal. More to the point, we should

⁴⁶ $\$1036$ discounted to present value is $\$1036/(1.06) = \977.36 .

⁴⁷ $\$1084$ discounted to present value is $\$1084/(1.06) = \1022.64 .

⁴⁸ See Ramseyer & Nakazato, *supra* note 11, at 1167.

seriously question the accepted thinking that a transition policy of grandfathering is inherently expensive and inefficient.

B. Questioning the Rational Expectations Assumption

Changing the simple example from above will illustrate the cost and efficiency gains that the government can achieve if taxpayers do not operate under rational expectations. To simplify matters, assume that taxpayers overestimate or underestimate the prospects for repeal. If the government knows their estimates and the true likelihood of repeal, then it is able to exploit taxpayers' biases as discussed below.

1. Overestimating the Likelihood for Repeal

Returning to our example from above, suppose that taxpayers estimate the likelihood of repeal to be 90%. The government knows this, but also knows the true likelihood to be 50%. As before, the government can achieve its substantive policy of 6% municipal borrowing by implementing a nominal preference of tax exclusion and a transition policy of grandfathering.⁴⁹ The cash flow to the government is again zero.

Achieving this substantive policy is more expensive under a transition policy of no-grandfathering. In Section A, taxpayers operating under rational expectations and no-grandfathering demanded an additional credit of 40% in order to offset the 50% chance that they would be taxed (at 40%) on interest in the event of repeal. Under the new assumptions, however, taxpayers would demand a credit of 360% in order to offset what they perceive to be a 90% risk of repeal.⁵⁰

The taxpayer mistakenly predicts this to produce an expected payoff of \$1060 in one year (which is worth \$1000 today). In reality, the expected payoff is \$1156.⁵¹ From the government's perspective, the expected cost of no-grandfathering is \$96,⁵² unlike grandfathering which has no actual cash flows. In general terms, grandfathering is

⁴⁹ For simplicity's sake, I have assumed that bias does not extend to taxpayers' expectations about the transition policy.

⁵⁰ As before, the taxpayer must expect a final payment of \$1060. In the event of repeal, the taxpayer would receive \$1036 after tax (i.e., \$1,000 principal plus \$60 interest minus \$24 tax). Without repeal, the taxpayer would receive \$1276 (i.e., \$1000 principal plus \$60 interest plus the 360% credit of \$216). This final payout meets taxpayers flawed expectations, as $(10\% \times \$1036) + (90\% \times \$1276) = \$1060$.

⁵¹ That is, $(50\% \times \$1036) + (50\% \times \$1276) = \$1156$.

⁵² The expected tax in the event of repeal minus the expected credit in the event of no repeal. That is, $(50\% \times \$24) - (50\% \times \$216) = -\$96$.

inherently cheaper and more efficient⁵³ when taxpayers overestimate the possibility of repeal. In demanding an excessive premium to protect themselves, taxpayers are overcompensated for the risk of repeal.⁵⁴

2. Underestimating the Likelihood for Repeal

Returning to our example, suppose this time that taxpayers underestimate the likelihood for repeal. Again, assume that the real likelihood of repeal is 50%, but that taxpayers believe it to be 10%. As before, the substantive policy is 6% municipal borrowing, while the tax rate is 40% and taxable interest rate is 10%. And, as before, a nominal preference of interest exclusion with a transition policy of grandfathering achieves this goal.

Of course, no-grandfathering is now cheaper and more efficient. In Section A, taxpayers operating under rational expectations and no-grandfathering demanded an additional credit of 40% in order to offset the 50% chance that they would be taxed (at 40%) on interest in the event of repeal. Under the new assumptions, taxpayers would demand an additional credit of 5% in order to offset what they perceive to be a 10% risk of repeal.⁵⁵

The taxpayer mistakenly predicts this to produce an expected payoff of \$1060 in one year (which is worth \$1000 today). In reality, the expected payoff is \$1049.50.⁵⁶ From the government's perspective, the expected return of no-grandfathering is \$10.50,⁵⁷ unlike grandfathering which has no actual cash flows. In general terms, no-grandfathering is inherently cheaper and more efficient⁵⁸ when

⁵³ The excessive premium would result in redistribution of wealth to the taxpayers. The social welfare gains from this are doubtful.

⁵⁴ This is implicitly the point of Professor Logue. See discussion *infra* Part III.B.3.

⁵⁵ As before, the taxpayer must expect a final payment of \$1060. In the event of repeal with no-grandfathering, the taxpayer would receive \$1036 after tax (i.e., \$1000 principal plus \$60 interest minus \$24 tax). Without repeal, the taxpayer would receive roughly \$1063 (i.e., \$1000 principal plus \$60 interest plus the 5% credit of \$3). This payout satisfies the taxpayer's flawed expectations, as $(10\% \times \$1036) + (90\% \times \$1063) = \$1060$.

⁵⁶ That is, $(50\% \times \$1036) + (50\% \times \$1063) = \$1049.50$.

⁵⁷ The expected tax in the event of repeal minus the expected credit in the event of no repeal. That is, $(50\% \times \$24) - (50\% \times \$3) = \$10.50$.

⁵⁸ The insufficient premium would result in redistribution of wealth from the taxpayers to society at large. A government could think of this as an added benefit of the no-grandfathering rule. One question that I will raise (but will not try to answer) is whether this strategy is just or fair to the taxpayers. In a sense, the government is taking advantage of their mistake. Once the taxpayers wise up and learn of their exploitation, they may suffer so-called demoralization costs. See Frank I. Michelman,

taxpayers underestimate the possibility of repeal. This is because they demand an economically insufficient premium to protect themselves, which in turn undercompensates for the risk of repeal.⁵⁹

3. Bias and Strategic Behavior

The effect of taxpayer expectations on the efficiency of transition policy has been noted before. The primary works in this vein are separate (and very different) articles by Professor Kyle Logue⁶⁰ and Dean Saul Levmore,⁶¹ as well as a portion of Professor Daniel Shaviro's book, *Rational Expectations Subject to the Possibility of Systematic Error*.⁶² Although I think Shaviro is ultimately right in his defense of the rational expectations assumption, Levmore and Logue are more provocative and, therefore, I discuss them more comprehensively.

Professor Logue and I both analyze tax preferences as incentive subsidies and ask how the government can make them most effective. In Professor Logue's view, taxpayers who rely on tax preferences will feel "burned" if the government repeals tax preferences. Moreover, because the government controls both repeal and the transition rule, taxpayers will be concerned that the government will act opportunistically. The government will dangle false promises of tax preferences before taxpayers. Taxpayers will, at least initially, do the government's bidding. They may, however, become jaded and panicked after the government fails to live up to its promises. Accordingly, taxpayers will eventually assess the likelihood of repeal without grandfathering to be high.⁶³ Logue must mean that this assessment is high relative to the true likelihood of repeal, which would create an incentive for taxpayers to demand expensive "default premiums" (default referring to the government's breach of its commitment to pay the tax preference). Presumably, Logue believes that his default premiums would be expensive for the reasons stated above.⁶⁴

The problem with Logue's analysis is that his taxpayer expectations are erroneous. At first, they leap at the government's tax preferences without thinking they could be repealed. The government realizes this and takes advantage. Once burned,

Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law, 80 HARV. L. REV. 1165, 1214-18 (1967).

⁵⁹ This is implicitly the point of Dean Levmore. See discussion *infra* Part III.C.

⁶⁰ Logue Article, *supra* note 13.

⁶¹ Levmore, *supra* note 9.

⁶² SHAVIRO, *supra* note 10, at 19-25.

⁶³ Logue Article, *supra* note 13, at 1138-43.

⁶⁴ See *supra* Part III.B.1.

taxpayers avoid tax preferences unless they can get high default premiums or grandfathering protection. Essentially, Logue argues that taxpayers overreact to new information,⁶⁵ thereby causing a bias for overestimating the likelihood of repeal.

In contrast to Logue, Levmore believes that the government could very well get away with burning taxpayers,⁶⁶ or in the alternative that it should at least give it a try once in a while. Levmore's point is broader than tax preferences, as he believes that occasional retroactive taxation could be efficient. Prospective taxes distort decisions about investment, consumption, work, and leisure because taxpayers expect the taxes and can plan around them. If unexpected, a retroactive tax would cause fewer such distortions because taxpayers would not have planned around it.⁶⁷

Levmore infers that the government could surprise taxpayers occasionally (or at least once).⁶⁸ If this is true, then the government could attain some of the efficiency gains described in this section, where taxpayers underestimate the likelihood of repeal. Perhaps taxpayers are always a step or two behind Congress, lending credence to the view that individuals are "anchored" to the present.⁶⁹

Professor Logue and Dean Levmore provide fascinating accounts, and perhaps there is some truth to either or both of them. It is fair to say that both scholars view transition policy as a problem of strategic behavior,⁷⁰ with Levmore pondering exploitation and Logue urging restraint. I offer no serious challenge to their works but do believe they can be explained in terms of rational expectations. Whereas Logue's argument depends upon the overestimation of changes in relevant law, Levmore's argument depends upon the underestimation of the same. In other words, there may be some cognitive bias on the part of taxpayers (although we are not sure in which direction). Before we base transition policy on this bias, however, we would have to be confident that Congress could discern and exploit a cognitive

⁶⁵ Cf. SHAVIRO, *supra* note 10, at 23 (discussing overreaction to new information in the context of rational expectations).

⁶⁶ Cf. Logue Review, *supra* note 10, at 1517 n.29 (noting differences between Logue and Levmore).

⁶⁷ [T]axing past transactions means that future behavior may be less distorted by taxes because the [tax] rates applicable to the future can be lower than without the retroactive tax. . . . The central idea is that allocative efficiency is served when taxpayers are unable to shift their activities in the face of a tax.

Levmore, *supra* note 9, at 273.

⁶⁸ See *id.* at 273-74.

⁶⁹ Cf. SHAVIRO, *supra* note 10, at 23 (discussing anchoring).

⁷⁰ Cf. DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW 1* (Harvard Univ. Press 1994) ("Strategic behavior arises when two or more individuals interact and individual's decision turns on what that individual expects the others to do.").

bias that taxpayers are unable to overcome. This is a large task and one that has in no way been accomplished.

Overcoming the rational expectations assumption is particularly difficult in the legislative context. Unlike the Federal Reserve with its power over monetary policy, Congress works rather openly and is subject to lobbying and reelection. We should be careful, then, when our arguments depend upon the assumption that members of Congress (or professors for that matter) are smarter about the world at large than are taxpayers, who have every reason to make the best forecasts possible. This, however, is not to say that taxpayers are necessarily right or that they cannot be outsmarted. Rather, we should expect some clear proof that this is the case. As this clear proof has not been provided, an assumption of rational expectations by taxpayers is the most appropriate when devising transition policy.⁷¹

C. Increasing Asset Prices After Repeal

Professor Graetz suggests the price of tax-preferred investments would increase after repeal under grandfathering.⁷² Presumably, this would occur because the supply of the preferred investments decreases as the investments reach maturity after repeal. Or perhaps demand for bonds in the secondary market increases because new tax-exempt bonds (a substitute) are no longer issued. Either way, prices may increase. As prices of bonds go up, yields go down.⁷³ Of course, yields would never go below $r \times (1 - t_H)$, where r is the rate of return on comparable taxable instruments and t_H is the highest marginal tax rate. This yield acts as a natural floor. Returning to the simple example of Section A, $r = 10\%$, and $t_H = 40\%$; thus, 6% would be the lowest yield at which bonds could trade.

So, for prices to rise after repeal, yields must be greater than 6% ($r \times (1 - t_H)$) prior to repeal. Otherwise, yields could not go down and prices could not go up. However, yields exceeding 6% indicate some market failure or some structural inefficiency in the tax preference. Surprisingly, these inefficiencies can be reduced under a grandfathering rule.

A yield higher than 6% seems to violate the no-arbitrage assumption of financial economics. If arbitrageurs could borrow money at an interest rate of 10%, use the proceeds to buy tax-exempt bonds, and deduct the interest payments, then arbitrageurs (in the 40% t_H bracket) could make risk-free profits because they can borrow at a rate lower than what they earn. Risk-free profits tend to attract

⁷¹ This is more or less the conclusion of Professor Shaviro. See SHAVIRO, *supra* note 10, at 19-25.

⁷² See Graetz, *supra* note 4, at 72.

⁷³ See HANDBOOK OF FIXED INCOME SECURITIES, *supra* note 2, at 54.

considerable attention, so it follows logically that opportunities to exploit them do not last for long. This inability to achieve risk-free profits is referred to by many as the no-arbitrage assumption. In the abstract, arbitrageurs would buy every available bond with a yield higher than 6%. So, there is potentially infinite demand for such bonds. Such demand would drive yields back down to 6%.

A real-world problem is that interest payments are not deductible if borrowing is used to buy tax-exempt investments.⁷⁴ As a result, our hypothetical arbitrageurs may not be able to deduct their interest payments. Without effective arbitrage, the market for tax-exempt bonds may be limited to portfolio investors who, unlike arbitrageurs, do not have an infinite appetite for bonds with yields slightly higher than $r \times (1-t_H)$. Accordingly, municipalities would have to raise their yields (perhaps substantially) to attract the desired level of capital funds. Bonds may even have yields high enough to attract investors in lower brackets (expressed as $r \times (1-t_L)$, where t_L is the lower tax rate). Building on the simple example of Section A, assume that t_L is 30%. As a result, municipalities may need to raise their yield to 7% in order to attract the desired level of capital borrowing. Of course, high-bracket taxpayers get this yield too, meaning they will invest more in municipal bonds than they would at 6% (at which rate high-bracket taxpayers are indifferent between taxable and tax-exempt bonds).

It is a matter of some debate in the world of financial economics as to whether tax-exempt bonds actually have yields higher than $r \times (1-t_H)$, because it is hard to define the comparable taxable investment that produces r . Assuming that the bonds do have higher yields, there appears to be an inefficiency in the structure of the tax preference. Yields higher than $r \times (1-t_H)$ distort the investment decisions of high-bracket taxpayers and reduce the impact of the subsidy on municipal borrowing. Opening tax-exempt bonds to arbitrage, or replacing the exemption with a credit, would directly eliminate the inefficiency.

If these first-order solutions are not taken, then implementing a grandfathering transition policy would reduce (but not eliminate) the inefficiency. A grandfathering transition policy would reduce the inefficiency because high-bracket taxpayers may become the marginal investors after repeal. Before repeal, risk-neutral investors will accept lower nominal yields in the hopes of achieving post-repeal gains by selling to high-bracket investors at higher prices. Grandfathering, and only grandfathering, preserves some prospect that the efficient marginal investor will become the actual marginal investor.

To illustrate, suppose that before repeal expected yields on tax-exempt bonds are $r \times (1-t_L)$, where t_L is a lower marginal tax rate. In other words, the marginal buyer is not in the highest tax bracket before repeal. In the event of repeal with grandfathering, investors in

⁷⁴ See I.R.C. § 265(a)(2).

the highest bracket rush to buy as many tax-exempt bonds as possible, bidding up prices until yields fall to $r \times (1 - t_H)$. High-bracket investors would then become the marginal buyers. If repeal did not occur, then low-bracket investors would remain the marginal buyers.

Assume that a municipality issues bonds with a one-year maturity. It is known that immediately after issuance Congress will decide whether to retain the exemption on municipal bonds. Returning to the simple example of Section A as modified above, the chance of repeal is known to be 50%; $r = 10\%$; $t_L = 30\%$; and $t_H = 40\%$. Under grandfathering, the expected yield must equal 7% (i.e., 10% times $(100\% - 30\%)$). This is not, however, the nominal yield. Repeal would cause a gain for the low-bracket taxpayers (the marginal investors) as they can sell their grandfathered bonds at a higher price. In a sense, marginal purchasers look to three sources for their returns – the borrowing municipality's payment, the government's tax preference, and the high-bracket investor's increased demand. Assuming our investors to be risk-neutral, the nominal yield will be approximately 6.5%.⁷⁵ This is also the cost of borrowing for municipalities under the exemption.

In order to keep the substantive policy the same with no-grandfathering under the same set of assumptions, the cost of borrowing for municipalities must remain at 6.5%. Again, the government cannot attain this with a simple exemption. Rather, it must offer some enhanced tax benefit. The important difference here is that low-bracket taxpayers have no expectation of selling their bonds to high bracket taxpayers for a gain. An exemption plus an additional credit of approximately 45%⁷⁶ of interest received would bring the cost of borrowing to 6.5%.

Grandfathering is cheaper. Grandfathering, as always, involves no net cash flow to the government. No-grandfathering yields a 45% credit without repeal and a 30% or 40% tax with repeal. Recall the interest payment is \$65. Under no-grandfathering, then, the government pays \$29 per bond if there is no repeal, and receives \$26 (40%) or \$20 (30%) per bond if there is repeal. As the likelihood for

⁷⁵ Suppose the face value is \$1000 meaning the coupon is worth \$65.00. In other words, there will be a payment of \$1065.00 in one year. If the exemption is repealed, this payment is discounted according to the preferences of the high-bracket investor, making the value $\$1065/(1.06) = \1005 . If the exemption is not repealed, this payment is discounted according to the preferences of the low-bracket investor, making the value $\$1065.00/(1.07) = \995 . Discounting for probability of repeal (50%) yields $(50\% \times \$1005) + (50\% \times \$995) = \$1000$.

⁷⁶ For a \$1000 bond, the expected payoff must be \$1070. In the event of repeal, the payoff in one year is \$1045 (i.e., \$1000 plus \$65 of interest minus \$20 of taxes at 30%). If there is no repeal, the payoff is \$1094 (i.e., \$1000 plus \$65 of interest plus \$29 credit at 45%). Discounting for probability yields $50\% \times \$1045 + 50\% \times \$1094 = \$1070$.

repeal is 50%, the government has negative expected cash flows under no-grandfathering: \$1.50 per bond for 40% taxpayers and \$4.50 per bond for 30% taxpayers.

Of course, this is because municipalities are selling tax-exempt bonds to low-bracket taxpayers. High-bracket taxpayers are infra-marginal as they would accept a lower exemption and still invest in the tax-exempt bonds. In a sense, they are relatively less infra-marginal under grandfathering because there is a greater likelihood that they will become the marginal investors upon repeal. Thus, grandfathering is more efficient in this context. Municipalities, however, could sell all of their bonds to high-bracket taxpayers if they could effectively arbitrage tax-exempt bonds. An even better result would be to replace the tax-exemption with an equivalent tax credit, which would be equally valuable to all taxpayers. Thus, the results of this section may generate more antipathy for tax exemptions and the anti-arbitrage rules of the tax code than enthusiasm for grandfathering.

D. Changing Expectations

Under the simple example of Section A, I assume that the government's substantive policy is for municipal bonds to bear a subsidized interest rate of 6%. This would be achieved by exempting the interest from tax and providing grandfathering in the event of repeal. Finally, the legislature would decide whether to repeal the exemption one year after the bonds were issued. It is expected that there is a 50% chance of repeal when the legislature meets.

There is, of course, a tension in these assumptions. We assume that municipal bonds must bear 6% exempt interest today. However, we also assume that in one year there is a 50% chance they will bear 10% taxable interest and a 50% chance they will bear 6% tax-exempt interest. Thus, the expected interest rate for bonds issued after the decision one year later is about 8%. If we assume that the legislature acts efficiently,⁷⁷ we must assume then that the efficient expected interest rate in one year is about 8%. Yet, bonds will bear 6% interest under grandfathering even if issued up to the eve of the legislature's meeting. Thus, pricing under grandfathering takes no account of the government's upcoming meeting.⁷⁸

Put another way, suppose that a past legislature agreed that 6% should be the cost of municipal borrowing, and it implemented a tax

⁷⁷ See Graetz, *supra* note 12; Kaplow, *supra* note 5; see also *supra* text accompanying note 12.

⁷⁸ Yields might actually fall on the eve of the meeting for the reason set forth in Part III.C., because high-bracket taxpayers expect the future supply of bonds to decline.

exemption and grandfathering to accomplish this. Subsequent economic events might suggest that the exemption is no longer appropriate. The legislature plans to convene soon to decide the fate of the exemption (with a 50% chance for repeal). Should bonds bear a subsidized 6% rate until the meeting?

Graetz and Kaplow expect that grandfathering will keep municipal borrowings at a subsidized rate of 6%, even though the future decision by the legislature casts doubts on the efficiency of this subsidy.⁷⁹ Municipalities will borrow too heavily when the subsidized rate of interest is 6% but the efficient rate is higher. On the other hand, no-grandfathering allows for something of an automatic adjustment. Under the simple example from Section A, if the nominal preference is income exclusion and the transition policy is no grandfathering, then bonds will yield 7.5% interest on the eve of the decision by the legislature.⁸⁰ If the policy is grandfathering, the yield is 6%. The Graetz-Kaplow view is that grandfathering is inefficient because it fails to reflect the uncertain future of the tax exemption.⁸¹ Any upfront lump-sum subsidy, however, will have the same effect as an installment subsidy under grandfathering. Both are “guaranteed” payments. Accordingly, the Graetz-Kaplow view could be interpreted as holding that guaranteed subsidies are inefficient when compared with contingent subsidies.

There is value to this view when economic changes reflect something like a “discovery” of efficient policy – hence, Graetz and Kaplow’s analogy to market and technological change.⁸² Subsidized borrowing by municipalities may have seemed a good idea years ago. If times (and economic thinking) change, Congress might change its mind as well. Graetz and Kaplow assume these changes in thinking by Congress are for the better and should be implemented as soon as possible because taxpayers will anticipate these changes under a rule of no-grandfathering.⁸³ Perhaps they are right, and the history of the tax code really is nothing other than the progress of the consciousness of efficiency. Others have questioned whether this is reasonable or true.⁸⁴

Even if the history of the Code is the progress of the consciousness of efficiency, efficient legislation would not necessarily require anticipation by taxpayers. It is worth remembering that tax preferences are essentially subsidies and tools for government

⁷⁹ See Graetz, *supra* note 4, at 54-63; Kaplow, *supra* note 5, at 584-87.

⁸⁰ As before, investors must expect a payoff of \$1060. If the preference is not repealed, investors receive \$1075. If it is repealed, they receive \$1045.

⁸¹ See Graetz, *supra* note 4, at 60-73; Kaplow, *supra* note 5, at 551-57, 584-87.

⁸² See Graetz, *supra* note 4, at 65-66; Kaplow, *supra* note 5, at 533-36.

⁸³ See Graetz, *supra* note 4, at 63-73; Kaplow, *supra* note 5, at 550-60.

⁸⁴ See, e.g., Ramseyer & Nakazato, *supra* note 11, at 1166.

economic control (for better or worse). Perhaps tax-exempt bonds are an efficient means for achieving some quantifiable goal (say, construction of X number of schools) and we know that this goal will be reached in the near future at current levels of borrowing. When the goal is reached, the exemption will be repealed. A transition policy of no-grandfathering would actually thwart this goal by decreasing the number of bonds issued as the goal becomes imminent (the last bond sold under the tax preference would not be subsidized at all). Or, perhaps the exemption is being repealed and replaced with a direct subsidy of municipalities in the near future. Is it at all clear that we would want a drop in the subsidy of municipalities between the date we learn of the change and the date it is implemented?

All that changed expectations tell us is that subsidy will be inefficient in the future. It may or may not remain efficient today. Perhaps it was inefficient all along, but there are other explanations as well. Final achievement of policy goals may be imminent, or the tax preference may be replaced but not repealed. In short, expectations about future repeal are inherently ambiguous.

IV. RISK FACTORS

A. *Financial Risk Premiums*

Risk-averse taxpayers may require an additional premium based on the financial risk of no-grandfathering. In financial analysis, an investment has an expected return (i.e., the mean of all possible returns) and an associated risk (i.e., the statistical variance of all possible returns). Risk-averse taxpayers do not, however, demand a premium for all types of risk. Risks that can be diversified away in a portfolio of investments ("unsystematic" or "asset-specific" risk) carry no premium. Risks that cannot be diversified away ("systematic" or "market" risk) do carry a premium.⁸⁵

Conceptually, systematic risk is related to economy-wide factors (e.g., GDP, interest rates, and inflation) whereas unsystematic risk is related to asset-specific factors (e.g., the creditworthiness of a municipal debtor).⁸⁶ Whether the risk of repeal is systematic is unclear. A tax preference might be repealed simply to pay for spending on other projects, signifying unsystematic risk that may not carry a risk premium. Major economic upheavals might cause fundamental tax reform, signifying systematic risk that does carry a risk premium. It is likely there is always an element of both types of risk, meaning there is always a financial risk premium under no-

⁸⁵ See STEPHEN A. ROSS ET AL., CORPORATE FINANCE 293-94 (4th ed. 1996).

⁸⁶ See *id.* at 270, 293-94.

grandfathering. If this is the case, the least risky choice of transition rules would have the lowest revenue costs.⁸⁷

Risk does not refer simply to the possibility that an investment will fall in value, but also to its volatility of return. Grandfathering may not eliminate volatility if grandfathered investments increase in value upon repeal.⁸⁸ Low-bracket taxpayers may accept lower nominal yields in exchange for the opportunity to sell at a gain in the event of repeal with grandfathering.⁸⁹ This opportunity is risky. Accordingly, low-bracket taxpayers may require a risk premium before accepting this lower yield. However, the price fluctuations caused by repeal with grandfathering should be less volatile than the price fluctuations caused by repeal without grandfathering.⁹⁰ Thus, grandfathering should have less financial risk and be cheaper.

B. Efficient Risk Allocation

The crux of Professors Graetz and Kaplow's argument is that it is efficient for taxpayers to forecast future law changes so they can anticipate and respond to the changing likelihood that a tax preference will be repealed.⁹¹ It is certainly true that the ability to seek a tax preference (such as the municipal bond exemption) is within the taxpayer's control. Taxpayers can exercise this control to avoid the possibility of financial loss, which may be greater under a rule of no-grandfathering. Thus, the incentive to avoid loss is greater under no-grandfathering.

It is also true, however, that the ability to grant and repeal tax preferences is within the control of Congress. Congress can exercise this control to avoid financial loss. These losses are greater under a

⁸⁷ Of course, the least risky method of all is a one-time lump sum, versus an installment subsidy. Rather than exempting municipal bond interest from tax, the government could alternatively subsidize the initial purchase. This would also obviate the need for a transition policy. For an argument in favor of this approach, see Goldberg, *supra* note 28, *passim*.

⁸⁸ See discussion *supra* Part III.C.

⁸⁹ *Id.*

⁹⁰ Suppose that low-bracket (30%) taxpayers are the marginal investors, meaning that expected yields are 7% before the decision on repeal is reached. As before, the taxable interest rate is 10%. If prices rise after repeal with grandfathering, it is because high-bracket (40%) taxpayers have become the marginal purchasers. In the examples above, the yield fell from 7% to 6%, a 14% decline. If the exemption is repealed without grandfathering, bond prices fall and yields will rise from 7% to 10%, a 43% increase. A 43% rise in yield will produce a larger absolute impact on bond price than a 14% decline. See HANDBOOK OF FIXED INCOME SECURITIES, *supra* note 2, at 93.

⁹¹ See Graetz, *supra* note 4, at 65-71; Kaplow, *supra* note 5, at 522-36.

rule of grandfathering. Thus, the incentive of Congress to repeal tax preferences may be greater under grandfathering.

In short, both taxpayers and Congress are in a position to avoid losses by anticipating future change. The question then is who should lead in the fandango of tax preferences. We need to answer two preliminary questions to come to a conclusion. First, who is the so-called least-cost avoider with respect to these losses: the taxpayer or Congress? Second, even if Congress is the least-cost avoider, will it respond appropriately to risk allocation?

However, just because one is in a position to avoid loss does not mean that one should bear the risk of it. The law consistently places the risk on one party even if both parties could have avoided the risk. The economic rationale is that the law should place the risk of loss on the "least-cost avoider," absent a contractual allocation to the contrary. The least-cost avoider is the entity that can most cheaply avoid losses.⁹² I can reduce the risk of loss from the tort of battery by wearing a helmet. That does not, however, mean that I should forego compensation if clubbed while not wearing a helmet. Similarly, I can reduce the risk of loss from a contract breach by demanding that funds be placed in an escrow account until performance is complete. That does not, however, mean I should forego compensation if the other party breaches. The legal risk of these losses does not fall upon me even though I could have taken steps to avoid them. The economic story is that the tortfeasor and the contract breacher are better situated to avoid causing these losses *ex ante*. Therefore, it follows logically that they should bear the risk of loss.

Suppose, as Graetz and Kaplow do, that the reasons for repealing a tax preference are either the discovery that it is not efficient, or the occurrence of some economic event that renders it inefficient. An efficiency-minded government⁹³ will try to make the discovery or detect the occurrence of the economic event. This must, at some point, be the case or else the law would never change. These efforts further social welfare if we believe the reason for repealing tax preferences is efficiency. Under a rule of no-grandfathering, taxpayers will have the incentive to pursue these efforts as well in order to anticipate future legislative changes. Under a rule of grandfathering, the incentive is nonexistent or much weaker.

There are two severe problems with allocating the burden of these efforts to taxpayers with a rule of no-grandfathering. First, taxpayers face an obvious collective action problem. The taxpayer

⁹² See generally Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989); POSNER, *supra* note 31, at 105-06, 179-83.

⁹³ See Graetz, *supra* note 12; Kaplow, *supra* note 5; see also *supra* text accompanying note 12.

will invest in determining whether a tax preference is efficient only to the extent that she benefits from such an investment. Second, the government probably cannot free-ride on whatever efforts taxpayers muster, because taxpayers under no-grandfathering will have an incentive to make self-serving reports that are not public-spirited (e.g., they will say the tax preference is always efficient). Accordingly, government will have to duplicate any efforts that taxpayers make. This is a *prima facie* case that the government is the least-cost avoider with respect to responding to changing expectations about tax preferences. Thus, since the government is better situated to respond to economic changes relative to the average taxpayer, the government should bear the burden of responding to such changes – assuming, of course, that the government will respond to this burden in an economically rational manner.

This analysis raises the final question of this section. Would the government actually respond to the imposition of grandfathering costs like an ordinary economic actor would? In other words, will the government internalize and try to avoid the costs it would bear under grandfathering? After all, theory places the risk of loss on the least-cost avoider so that the loss can actually be avoided. Private firms that fail to respond face the risk of reduced profitability or insolvency. The federal government does not seek pecuniary profit, and it faces no danger of insolvency. If the least-cost avoider is institutionally incapable of avoiding the loss, but remains obliged to compensate for it, then it becomes a mere insurer.

Nothing about the structure of government gives us any clear insight into how it would respond. Under one possible (if implausible) story, the government is so efficiency-minded that it will take the optimal level of steps to repeal expired tax preferences regardless of the transition rule.⁹⁴ This would argue for a rule of grandfathering in order to prevent taxpayers from overinvesting in precautions against repeal. Under the converse story, the government is so pathological that it will have the same delay in repealing expired tax preferences regardless of the transition rule. This may argue for a rule of no-grandfathering. Under a middle story, the government response varies depending on the context in which it arises. It may seek efficient legislation in general (e.g., repeal of an expired tax preference) but fail to account for certain social costs in the timing of its action (e.g., unnecessary forecasting costs incurred privately because the government fails to act expediently). The fundamental question is, how does the government respond to the imposition of costs?

⁹⁴ This is a stronger version of Graetz and Kaplow's assumption that tax legislation is efficient.

This is an interesting question, one that has just begun to be addressed.⁹⁵ It may be naive to conclude that the government cannot internalize costs at all. One could imagine a simple model of government, where legislators have a boundless appetite for political spending that is checked only by the political costs of increasing taxes and public debt. This is a corollary model to the economic actor. For example, a wage earner has a boundless appetite for more wages, but this is checked by lost leisure time and fatigue associated with increased work. Our wage earner can be expected to balance these competing concerns in a manner so that the marginal economic benefit and marginal economic costs of additional work are equal. Our political actor can be expected to balance its competing concerns so that the marginal political benefits and marginal political costs of increased spending are offset.

Under this simple model, the government faces real political consequences by incurring avoidable costs that produce no political benefit. The case of constitutional torts comes to mind.⁹⁶ The government presumably achieves no political benefit by compensating the tort victim (contrast this with transfers to special interest groups). In fact, the government incurs political harm by making these payments, because the funds used will no longer be available for projects that would produce political gains (e.g., defense spending, school construction), or the government will need to undertake the politically unpopular acts of raising taxes or public borrowing to replace the funds.

Returning to the issue of tax transitions, we can assume that the calculus for tax preferences has changed when tax preferences are repealed. The government has chosen to deploy the related expenditures elsewhere. Grandfathering would give the government an incentive to act quickly to repeal the tax preference so as to minimize the cost imposed on the government by new tax-motivated investments.⁹⁷ If we think government will respond to this incentive, then the government should bear the cost.

Thus, the transition rule is essentially a contractual term specifying who should bear the cost if the contract comes to an end. Perhaps this should be the government, particularly since it controls the duration of the contract. Moreover, a self-interested government

⁹⁵ For pioneering work, see Daryl J. Levinson, *Making Government Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 U. CHI. L. REV. 345 (2000).

⁹⁶ The theory of making government pay for constitutional torts is discussed at length by Professor Levinson. *See id.*

⁹⁷ This assumes that taxpayers who rely on tax preferences are agents of the government doing its bidding. The taxpayers, however, may simply be clients receiving transfer payments from the government.

may even submit to grandfathering voluntarily. Under a theory of rational expectations discussed above, taxpayers will forecast which transition rule will apply without bias. Under a rule of no-grandfathering, taxpayers will need to incur more costs to forecast the future actions of the government. Taxpayers will know this and accordingly will require a premium in the subsidy to avoid these costs. The government can avoid paying this premium by following a rule of grandfathering.

C. Risk as an Obstacle to Political Reform

In 1989, Professors Mark Ramseyer and Minoru Nakazato questioned the underlying assumptions of the Graetz-Kaplow view and raised concerns about how transition rules would affect the tax legislative process.⁹⁸ In seeking grandfathering of benefits or fighting tax reform altogether, taxpayers will (1) incur real social costs and (2) make direct transfers to legislators. Guaranteeing tax benefits would eliminate both of these activities. Self-interested legislators, however, would not guarantee tax benefits because they would lose the ability to receive the direct transfers.⁹⁹ Leaving the transition issue open unshackles even more sinister impulses of legislators. “Legislators do have tremendous incentives to promote [transfer of wealth to legislators], and tax reform gives them an ideal chance to do just that. In exchange for *not* engaging in tax reform, legislators can demand campaign contributions, honoraria, and bribes.”¹⁰⁰ Thus, Congress can use the tax code to shake down or pay off its constituents.¹⁰¹

⁹⁸ See Ramseyer & Nakazato, *supra* note 11.

⁹⁹ See *id.* at 1171-75.

¹⁰⁰ See *id.* at 1172 (emphasis added) (citing Fred S. McChesney, *Rent Extraction and Rent Creation in the Economic Theory of Regulation*, 16 J. LEGAL STUD. 101 (1987)).

¹⁰¹ Consider the repeated “expiration” and “reenactment” of the research tax credit over the past 21 years. See generally BORIS I. BITTKER & LAWRENCE LOKKEN, FEDERAL TAXATION OF INCOME, ESTATES & GIFTS S27-10 to S27-11, ¶ 27.4.1 (Warren Gorham & Lamont, Supp. No. 3, 2002). Under section 41 of the Code, taxpayers can receive a credit for engaging in certain research activities. Over the history of this section, the credit has always been nominally temporary (e.g., applicable only to research expenditures made before some sunset date in the near future). Congress has extended the provision more than ten times in an annual ritual of corporate lobbying. See Greg Hitt, *What Has 9 Deaths And Always, to Date, A New Lease on Life? – The Answer Has Provided a Very Nice Livelihood for Lobbyist Weinberger*, WALL ST. J., Oct. 23, 1998, at A1. Lobbyists like work and Congress likes lobbyists, so why not plan a get-together at least once a year? In the end, only expenditures made between June 30, 1995 and July 1, 1996 remained ineligible for the credit. The credit is currently set to expire on June 30, 2004. See I.R.C. § 41(h).

In more general terms, financial risk and political costs¹⁰² are positively correlated. Taxpayers who face risk can gain or lose from legislation, and as such will seek to influence it. As noted above, a transition rule of no-grandfathering creates more risk. By creating more risk, it creates more political costs. We should expect these political costs to deliver some type of result. If recipients of tax preferences are mainly interested in maintaining the status quo, then a rule of no-grandfathering would tend to stymie political reform. Assume a reform-minded faction of Congress wanted to do away with the tax exemption for municipal bonds. Grandfathering old bonds would effectively negate opposition from current bondholders.¹⁰³ Future bondholders are unlikely to be organized. Even if they were organized, they are unlikely to be interested because they face far less risk from repeal having not yet purchased a bond. Of course, municipalities are keenly interested in issuing new bonds, and would remain an obstacle to reform. Still, reformers would rather contend with one interest group than two.

The goal of Part III was to demonstrate that grandfathering does not generate any systematic costs or inefficiencies from an ex ante perspective. So, removing current bondholders from the cadre of interest groups may be economically cost free.¹⁰⁴ Doing so, however, would involve something of a political commitment by Congress to grandfather tax preferences upon repeal – whether or not anyone lobbies them to do so. Professors Ramseyer and Nakazato believe there is little reason that Congress would abandon this valuable power to grant or withhold grandfathering protection. Moreover, Congress may well be hostile to pro-grandfathering theories based on the suspected greed of its members.¹⁰⁵

A final point is on the relationship between financial risk and insurance. Professor Kaplow (wrongly, I believe) compares grandfathering rules to mandatory, subsidized insurance. Under his theory, grandfathering should be eliminated and the private market should provide insurance only to those taxpayers who want it.¹⁰⁶ For example, taxpayers who invest in municipal bonds could buy insurance to protect themselves in the event of repeal of the tax exemption. Assuming that a market would arise for such insurance,

¹⁰² By political cost, I mean resources used to influence legislation.

¹⁰³ Current bondholders may even gain from repeal, turning them into advocates for reform. See discussion *supra* Part III.C.

¹⁰⁴ This may be economically cost free because, as I have argued throughout, grandfathering rules do not result in any greater efficiency or fiscal losses than do other transition rules.

¹⁰⁵ Professor Shaviro has a similar problem in his book. See SHAVIRO, *supra* note 10, at 101; Logue Review, *supra* note 10, at 1529-30.

¹⁰⁶ See Kaplow, *supra* note 5, at 536-40.

risk of repeal would be shifted from dispersed investors to organized insurance companies. Insurance companies are themselves no strangers to lobbying, and it seems likely that they would attempt to stymie tax reform when their interests are at stake. In short, insurance companies would themselves become a nexus for political organization. Conceivably, they could even deliver grandfathering protection only to their insureds, taking Ramseyer and Nakazato's protection racket to a new level.

V. CONCLUSION

The goal of this article is not to praise grandfathering as a respected policy, but to exhume it. Transition policy itself is simply a way of specifying cash flows after political change. Cash flows are guaranteed under grandfathering and contingent under no-grandfathering. Our initial reaction to this is that neither policy should be more expensive to the government than the other. In order to achieve a set goal, the government will need to pay a set price. The price might be a lump sum, a guaranteed installment, or a contingent installment. The method of financing the goal should not affect the cost.

The one area where no-grandfathering shines as a policy is its ability to adjust taxpayer incentives automatically without immediate Congressional action when change occurs. It is not altogether clear, however, that automatic adjustments are always (or even usually) needed. Moreover, perhaps Congress, rather than taxpayers, should have the incentive to act immediately. A rule of grandfathering would give Congress this incentive so long as it behaves like an ordinary economic actor. Moreover, grandfathering should lower lobbying and opposition to political reform. It is unclear, however, whether Congress would be inclined to forego using transition policy for political gain.

In essence, transition policy simply describes how government chooses to finance its projects, and this choice is usually ambiguous if not irrelevant. Economists have long since abandoned the notion that the method of financing business activities has an inherent effect on the value of the enterprise.¹⁰⁷ Perhaps tax scholars should do the same.

¹⁰⁷ See Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 AM. ECON. REV. 261 (1958); ROSS ET AL., *supra* note 80, at 472-99 (discussing the Modigliani-Miller theory of corporate finance).