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Estate Tax Complexity Illustrated by the 2010 “Voluntary” Estate Tax

Robert Gordon, David Joulfaian and James Poterba*

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The executors of estates for decedents who died in 2010 had an unusual choice. They could file an estate tax return and in most cases pay a 35% estate tax on value of the estate above \$5 million, or they could choose to have assets pass to beneficiaries without paying an estate tax, but with a carryover in basis. If the executor chose to file an estate tax return, the beneficiaries' basis would be stepped up to the market value of the assets at the time of the decedent's death. This “optional” estate tax regime arose from the expiration of the estate tax at the start of 2010, under the provisions of the 2001 Economic Recovery Tax Act, and the prospective reinstatement of the estate tax in legislation that passed in late 2010. That legislation included an optional estate tax for the estates of 2010 decedents.

The conventional wisdom in 2010 held that executors of estates valued at substantially more than \$5 million would not file estate tax returns. They could avoid paying estate tax by doing so, but they would subject their beneficiaries to capital gains tax with a modified carryover of basis. In contrast, executors of estates worth less than \$5 million were expected to file estate tax returns and to enable their beneficiaries to take advantage of basis step up.

This rule of thumb was based on minimizing the beneficiaries' combined estate and capital gains tax liability for an estate with a commonly-observed set of attributes. Assuming a capital gains tax rate of 20 percent, the potential capital gains tax liability would not exceed 20 percent of the estate's value minus its adjusted basis, and the average rate would be lower if the estate consisted of assets that had positive basis. The adjusted basis would equal the decedent's basis plus \$1.3 million for all estates, plus another \$3 million if the beneficiary was the spouse of the decedent. The basis adjustment could be allocated to any of the assets in the estate at the discretion of the executor. The basis adjustment provisions implied that a carryover basis estate, for which the spouse was the beneficiary, would not face any capital gains tax liability on the first \$4.3 million of accrued capital gains. The estate tax liability in 2010, by comparison, would be $0.35 \times (\text{estate value} - \$5 \text{ million})$, which would approach 35 percent for very large estates. The average tax rate would reach 34 percent, for example, when the value of the taxable estate was \$175 million.

For large estates, the logic underlying the conventional wisdom suggested that the basis carryover regime would entail a smaller capital gains tax payment than the estate tax liability,

* Twenty-First Securities and New York University Stern School of Business; U.S. Treasury Department and Georgetown University; Massachusetts Institute of Technology and National Bureau of Economic Research.

even if the beneficiaries liquidated the assets as soon as they received them. For estates that were valued at more than the \$5 million threshold, but not too much more, however, 35 percent of the excess over \$5 million could be less than 20 percent of the unrealized capital gains, even with the basis adjustment. In this case the estate tax liability could be smaller than the potential capital gains tax payment.

An example illustrates this point. For an estate worth \$6.5 million and consisting of assets with a zero basis, the basis adjustment would be \$1.3 million and the capital gains tax would be $0.2 \times \$5.2 \text{ million} = \1.04 million , while the estate tax would be $0.35 \times \$1.5 \text{ million} = \$525,000$. An executor seeking to minimize the tax burden on the estate could file an estate tax return and thereby allow the beneficiaries to receive assets with a basis equal to their market value at the time of the decedent's passing. By paying the estate tax of \$525,000, the executor could save the beneficiaries \$1.04 million in capital gains taxes, for a net saving of \$515,000. The calculation would be different if the estate consisted only of cash or assets for which the market value and the basis coincided. In that scenario, the carryover basis route would not be associated with any future capital gains tax liability, and would save the beneficiaries \$525,000.

Table 1: Illustration of Capital Gains Tax Calculation for Carry-Over Basis Regime, 2010 Decedent

Current Market Value of Assets in Estate	\$6.5 million
Basis of Assets in Estate	0
Basis Adjustment	(\$1.3 million)
Taxable Gain When Beneficiaries Assuming Beneficiaries Sell Asset Upon Receipt	\$5.2 million
Capital Gains Tax Rate (Combined federal + state and local)	20%
Capital Gains Tax Liability	$0.20 \times \$5.2 \text{ million} = \1.04 million
Estate Tax Liability	$0.35 \times (\$6.5 \text{ million} - \$5 \text{ million}) = \$0.525 \text{ million}$

What if the estate was worth \$10 million and the assets in the estate had zero basis? Under the estate tax regime, the tax would be $0.35 \times (\$10 \text{ million} - \$5 \text{ million exemption}) = \1.75 million . Under the carryover regime, the capital gains tax would be $0.20 \times (\$10 \text{ million} - \1.3

million basis adjustment) = \$1.74 million. This example illustrates that the executor of a \$10 million estate could be roughly indifferent between the estate tax and basis carryover regimes. However, the marginal estate tax liability for another \$1 million in estate value is \$350,000, while the marginal capital gains tax liability for another \$1 million in unrealized gains is at most \$200,000. Thus, for an estate with these characteristics that was worth more than \$10 million, the estate tax would exceed the capital gains tax liability and a tax-minimizing executor would choose to file Form 8939. For an estate of this type that was valued at less than \$10 million, paying the estate tax would be the tax-minimizing choice.

The stark comparison between the estate and capital gains tax regimes that underlies the conventional wisdom assumes a particular set of estate attributes that may be common, but do not describe all estates. The rule of thumb consequently over-simplifies the reality of the tax regime choice for many estates. While some estates consist only of assets for which capital gains would have been taxed at 20 percent, and for which the net value of the estate in excess of \$5 million would have faced a 35 percent estate tax rate, for many estates there are other considerations that can affect the tax-minimizing choice. The possibility of spousal transfers that are not subject to estate tax, the presence of debt, which creates a disparity between the net value of the estate and the gross value of gains that would be subject to capital gains taxation, and the existence of tax rates in excess of 20 percent on some gains, such as recaptured depreciation on real assets, make it difficult to make general statements about the tax-minimizing choice for executors. In this short paper, we describe the circumstances that could arise for some estates, and how they could affect the relative attraction of paying the estate tax or the capital gains tax. We present some evidence that executors took account of these considerations in their filing decisions.

Estate Tax Return Filings for 2010

Data on estate tax filings for decedents who passed away in 2010 are summarized in Gordon, Joulfaian, and Poterba (2016) and Office of Tax Analysis (2014). The data indicate what executors chose to do, although they do not allow a definitive assessment of whether they made tax-minimizing choices. Answering that question requires more information than a Form 706 estate tax return, or the parallel Form 8939 filing for basis carry-over, provides. The central difficulty arises from the fact that for executors who chose to file estate tax returns, there is no information on the basis of assets that made up the estate, and for executors who followed the carry-over basis route, there is no information on many other characteristics of the estate. Thus even a researcher who could access the Forms 706 and 8939 filed for decedents from 2010 would have only a limited subset of the information needed to perform a tax-minimization calculation for each estate.

Despite these data limitations, some conclusions are still possible. Executors largely avoided estate tax payments. While thousands of executors chose to voluntarily file estate tax returns, the estates corresponding to these returns paid little or no estate tax. In 2009, there were 7,949 estate tax returns filed and the estate tax liability for these returns totaled \$13.5 billion. In 2010, the number of estate tax returns fell to 2,788, and total estate tax liability dropped to only \$200 million. In contrast, there were 7,937 Forms 8939 filed for 2010 decedents for whose estates the executor chose carry-over basis. In 2011, the number of estate tax returns rebounded to 9,285, with estate tax liability of \$11.2 billion.

A closer look at the estate tax returns filed in 2010 suggests the richness of the choice problems facing executors. While 81.5 percent of the 2010 estates for which estate tax returns were filed were worth less than \$10 million, there were more than 500 filings for estates worth more than \$10 million, and 146 for estates valued at more than \$20 million. The estates that filed Form 8939 were larger on average than those that filed Form 706: 20.8 percent of the Form 8939 filings were accounted for by estates valued at more than \$20 million, compared with only 5.2 percent for Form 706 filings. Only half of the Form 8939 returns were for estates worth less than \$10 million. As the foregoing example of a \$10 million estate suggests, the executor of an estate of approximately this size could maximize the beneficiaries' net-of-tax inheritance, after subtracting both estate and capital gains taxes, by choosing to pay some estate tax.

We illustrate the ways in which the conventional wisdom might fail to capture the richness of the choice problem facing the executor by describing a number of cases for which filing an estate tax return, even for a large estate, could be the tax-minimizing choice. These cases involve common features of estates such as spousal bequests, large charitable bequests, high state-level estate tax burdens, and assets with substantial carried debt. While the data on estate tax returns is not rich enough to enable us to determine whether considerations related to these specialized estate attributes made filing an estate tax return the tax-minimizing choice for the executor, we do find evidence that estates that fit our various cases were more likely to file estate tax returns than to follow the basis-carryover filing route. The range of cases that we consider illustrate the complexities of estate taxation and the many dimensions of the estate that must be considered in comparing the value of basis step up and the potential burden of the estate tax.

Case 1: A Married Decedent Leaving a Spousal Bequest

This is one of the most common situations that could lead to an estate tax filing. If the decedent was married and left everything to a surviving spouse, then there would be no estate tax liability because spousal beneficiaries are not taxed, and additionally, filing an estate tax return would offer the opportunity to step up the basis of all of the assets in the estate. Single

decedents do not have the option of bequeathing assets tax-free to their spouses, so one would expect that all else equal, estates of married taxpayers would be more likely to file estate tax returns. In the case of the \$10 million, zero-basis estate that we described above, if the beneficiary was the decedent's spouse, the estate tax liability would drop from \$1.75 million to zero. Filing an estate tax return, and taking advantage of basis step-up in this case, would be the tax-efficient way to proceed.

Data from 2010 estate tax and Form 8939 returns suggest that spousal bequests may help to explain some of the estate tax filings associated with high-value estates. Table 2 shows the percentage of estate tax filings from married decedents for both 2009 and 2010, as well as the percentage of Form 8939 filings from married decedents, for estates of various sizes.

Table 2: Fraction of Married Decedents Filing Estate Tax Returns and Forms 8939

Size of Estate	2009 Estate Tax Filers who were Married	Percentage of 2010 Filers	
		Estate Tax	Form 8939
\$5-10M	52%	66%	36%
\$10-15M	53	78	47
\$15-20M	51	62	56
> \$20M	52	75	58

Table 2 illustrates that contrary to the predictions of the rule of thumb described above, the executors of some large estates for 2010 decedents chose to file estate tax returns. Three quarters of the estate tax filings for estates valued at more than \$20 million were for married decedents, nearly 1.5 times the fraction of married decedents for estates of this size in 2009. The effect of spousal bequests in reducing potential estate tax liability is one potential explanation for this pattern.

Case 2: A Decedent with a Large Charitable Bequest

Another situation that could lead to a small estate tax liability even when the market value of the estate is very large involves a charitable bequest. In this case, the executor might file an estate tax return for documentation purposes, even if little or no estate tax is due. A charitable contribution at death reduces the taxable estate without limit, and the estate of a decedent who left all of her assets to charity would not face any estate tax liability. In the

example of the \$10 million zero-basis estate above, if the decedent left \$5 million or more to charity, there would be no estate tax due. Filing an estate tax return would then memorialize the charitable bequest and also provide basis step-up to taxable beneficiaries if some parts of the estate were not assigned to charity.

Among 2010 decedents with gross estates of more than \$10 million, the average charitable bequest for those who filed estate tax returns was much greater than for similar-sized estates in 2009 or 2011. Charitable bequests represented 27.4 percent of the gross value of estates for decedents whose gross estate value was greater than \$20 million in 2010, but only 11.2 percent of the gross value of similar-sized estates in 2009, and 10.1 percent in 2011. A similar pattern emerges for estates with gross values of between \$10 and \$15 million. The share of estate value accounted for by charitable gifts was 6.0 percent in 2009, 15.6 percent in 2010, and 6.9 percent in 2011. For estates valued at between \$15 and \$20 million, the corresponding values were 9.2 percent in 2009, 32.2 percent in 2010, and 9.1 percent in 2011. For the 18 estates of 2010 decedents with gross value of more than \$30 million and for which estate tax returns, the average gross estate size was \$93.87 million and the average charitable bequest was \$89.13 million.

The increase in the relative importance of charitable bequests for 2010 decedents was much less pronounced for smaller estates. For estates with gross values between \$5 and \$10 million, for example, the share of estate value accounted for by charitable bequests was 5.4 percent in both 2009 and 2011, compared with 6.5 percent in 2010. This spike in the relative importance of charitable bequests for large estates that filed estate tax returns in 2010 leads us to conclude that the presence of such bequests was an important factor in the decision of some executors to file estate tax returns.

Case 3: Estates with Substantial Lifetime Gifts

Because the taxation of estates and gifts are integrated in the federal tax code, two estates of equal value could face different estate tax liabilities if one decedent had made substantial lifetime gifts, and the other had not. Greater lifetime gifts translate into a larger estate tax liability, making it possible that an estate which seems small, and for which an estate tax filing would be expected under the conventional wisdom, might choose to follow the carryover basis route.

Consider two estates worth \$10 million, both with zero basis property. If one decedent had made \$3 million in lifetime gifts, and the other had not made any gifts, the estate tax liability for the first would be $0.35 * (\$10 \text{ million} - \{\$5 \text{ million} - \$3 \text{ million in lifetime gifts}\}) = \2.80 million , while for the second it would be $0.35 * (\$10 \text{ million} - \$5 \text{ million}) = \$1.75 \text{ million}$. All else equal, if executors tried to maximize the after-tax value of their beneficiaries' assets,

estates with larger lifetime gifts would be more likely to pursue the carryover basis strategy. With a capital gains tax rate of 20 percent, the estate with \$3 million in lifetime gifts would find the carryover basis regime more attractive than the estate tax regime, while the estate with no lifetime gifts would face virtually identical tax liability in the two cases.

Lifetime gifts averaged \$220,000 for all estate tax returns filed for 2010 decedents, compared with \$1.99 million for all Form 8939 filers. The ratio of the average of lifetime gifts by Form 8939 filers to analogous gifts by estate tax filers was 5.1 to 1 for estates valued at \$5-10 million, 5.9 for \$10-15 million, 3.5 for \$15-20 million, and 8.3 to 1 for estates valued at more than \$20 million. This pattern is consistent with the possibility that the executors for some estates for 2010 decedents with gross value below the threshold at which the carryover basis strategy might seem optimal might have chosen the basis carryover regime because of the presence of substantial lifetime gifts.

Case 4: Estates with Assets Facing Capital Gains Tax Rates Above 20 Percent

The “rule of thumb” analysis above assumed a capital gains tax rate on gains realized by beneficiaries of 20 percent. In some cases, the capital gains tax rate could be higher. The probability of filing an estate tax return should be higher when the estate consists of assets for which gains would be taxed at more than 20 percent, because the value of basis step-up is greater in such cases.

Capital gains tax rates greater than 20% can arise in a number of situations. If an estate held artwork, the federal capital gains tax rate would be 28%. If the estate consisted of real estate, the tax rate on recaptured depreciation would be 25%, and if it consisted of other depreciable or depletable property, recaptured depreciation would be taxed at the ordinary income tax rate, which could be as high as 35 percent in 2010. In the example of the \$10 million zero-basis estate above, if the relevant capital gains tax rate was 28 percent, the potential capital gains tax liability, $.28 * (\$10 \text{ million} - \$1.3 \text{ million basis adjustment}) = \2.44 million would clearly exceed the estate tax liability of \$1.75 million. Filing an estate tax return would be the tax-efficient choice in this case.

There is suggestive evidence that the estates for which executors filed estate tax returns for 2010 decedents derived more of their value from assets that face capital gains tax rates above 20 percent than estates that pursued the carryover basis path. In 2009, improved real estate accounted for 7.2% of the assets reported on estate tax returns. This share rose to 9.8% in 2010, before dropping to 5.9% in 2011. Real estate partnerships display a similar but less pronounced pattern: 3.5%, 4.3%, and 3.6%, respectively. The asset share for depletable and intangible assets also shows a modest rise from 0.5% in 2009, to 1.5% in 2010, and then 0.5% in 2011, although given the small number of estate tax returns with such assets, drawing any

conclusions from this pattern is difficult. We nevertheless conclude that for estates that consist of assets for which capital gains may be taxed at higher rates, the incentive to file an estate tax return and take advantage of the greater value of basis step-up may have affected the decisions of some executors.

Case 5: Estates with Substantial Debt

Outstanding debts are deducted from an estate's gross value in calculating the value of the taxable estate, but debt does nothing to reduce future capital gains tax liability for beneficiaries when the executor chooses the carryover basis route. This factor can loom large for the tax choice when the estate consists of highly leveraged assets.

Consider the case of two estates with a net value of \$10 million, one consisting of \$10 million of assets with zero basis and no debt, and the other with \$50 million of assets also with zero basis, but with \$40 million in outstanding debt. In the second case, the decedent might have borrowed against the value of an appreciated asset to support lifetime spending while avoiding the realization of capital gains. In the first case, the capital gains tax liability of the beneficiaries if the executor chooses carryover basis route would be $0.20 * (\$10 \text{ million} - \$1.3 \text{ million basis adjustment}) = \1.74 million , but in the second case it would be $0.20 * (\$50 \text{ million} - \$1.3 \text{ million basis adjustment}) = \9.74 million . If the assets were subject to a capital gains tax rate above 20 percent, the embedded capital gains tax burden could be even greater. The estate tax burden on both estates would be \$1.75 million. This example illustrates that for estates with substantial debt, the tax saving from filing an estate tax return and paying the estate tax could be substantially greater than the analysis supporting the conventional wisdom suggests.

The data from estate tax returns filed on behalf of 2010 decedents show an increase in the level of debt relative to comparable-sized estates in either 2009 or 2010.

Table 3: Debt as a Percentage of Gross Value of Estate for Decedents in 2009 – 2011 with Estate Tax Filings

Gross Value of Estate	2009	2010	2011
\$5-10 million	4.6%	5.0%	3.5%
\$10-15 million	5.5	6.3	4.6
\$15-20 million	4.6	6.4	4.0
> \$20 million	5.2	9.9	4.7

We conclude that some executors may have chosen to file estate tax returns, even when the conventional wisdom suggested that they should take advantage of the carryover basis route, because the leverage associated with their assets made the potential capital gains tax burden larger than the standard analysis suggests.

Case 6: Estates of Decedents from Community Property States

In a community property state, when the executor files an estate tax return, the assets of the surviving spouse as well as those of the decedent receive a step-up in basis. This increases the value of the capital gains tax savings relative to the savings in other states, and it may affect the calculation underlying the conventional wisdom. An estate in a community property state with \$20 million in zero basis assets not only gets a step up on the deceased spouse's \$10 million in assets but also on the \$10 million in assets held by the surviving spouse, thus doubling the potential capital gains tax savings associated with the estate tax filing.

The evidence from estates filed for 2010 decedents suggests that executors were more likely to file estate tax returns when the decedent lived in a community property state. For estates valued at between \$15 and \$20 million, the fraction of estate tax filings associated with 2010 decedents that were from community property states was 23 percent, compared with 18 percent in both 2009 and 2011. For estates worth more than \$20 million, the disparity was even larger: 28 percent in 2010, compared with 18 percent in 2009 and 20 percent in 2010. The difference was more modest, 20 percent in 2010 compared with 17 percent in 2009 and 16 percent in 2011, for estates with gross value of between \$5 and \$10 million. This pattern suggests that some executors may have deviated from the conventional wisdom advice in order to take advantage of the larger capital gains tax saving that were available to beneficiaries of decedents who resided in community property states.

Case 7: Estates of Decedents from States with Substantial Estate Taxes

States with estate taxes continued to levy them in 2010, regardless of whether the executor filed a federal estate tax return or chose the carryover basis route. State estate tax payments are deductible against the federal taxable estate, so the net cost of a state estate tax is greater when the executor chooses the carryover basis route instead of the estate tax route.

In 2010, many states levied a 16 percent estate tax on taxable estates valued at more than \$1 million. Consider once again the executor's choice for a \$10 million estate of a decedent who held zero basis property. If the decedent lived in a state without a state estate tax, the federal estate tax liability would be \$1.75 million, and the capital gains tax liability

would be \$1.74 million. The comparison of the tax liability under the two regimes suggests approximate parity.

If the state levies a 16 percent tax, however, then the estate would owe a state estate tax of $0.16 * (\$10 \text{ million} - \$1 \text{ million threshold}) = \1.44 million . In the carryover basis case, the total tax liability of the beneficiaries is $\$1.74 \text{ million} + \$1.44 \text{ million} = \$3.18 \text{ million}$, so the net-of-tax proceeds would be \$6.82 million. If the executor chooses to file a federal estate tax return, however, the deduction for the state estate tax payment reduces the federal tax liability to $.35 * (\$10 \text{ million} - \$1.44 \text{ million in state tax} - \$5 \text{ million threshold}) = \1.25 million . If the decedent had lived in a state without an estate tax, the federal estate tax burden would have been \$1.75 million. For the estate of a decedent from a state with a 16 percent estate tax, the total tax liability if the executor files a federal estate tax return would be $\$1.25 \text{ million} + \$1.44 \text{ million} = \$2.69 \text{ million}$, and the net-of-tax proceeds for the beneficiaries would be \$7.31 million. In the presence of a 16 percent state estate tax, the difference between the total tax burden under the federal estate and carryover basis regimes is \$490,000, with the estate tax filing proving the lower-cost option.

Executors for decedents from 2010 who resided in states with estate taxes were more likely to file estate tax returns than to follow the basis carryover route. Twenty-five percent of Form 8939 filers resided in states with an estate tax, while 37 percent of the decedents whose executors filed estate tax returns lived in such states. The presence of state estate taxes thus complicates the analysis underlying the conventional wisdom, and could explain the decision to file federal estate tax returns in some cases for which the conventional wisdom would point toward the carry-over basis choice.

Conclusion: Estates are Complicated, Generalization is Difficult

Our analysis suggests that the complexities of the asset structure and investment history of estates, coupled with the details of the tax environments that surround them, make it difficult to offer simple predictions about the relative attractiveness of the estate tax and basis carryover regimes. This suggests that the impact of estate tax changes could have substantially different effects on estates that have the same value, but that differ on other dimensions.

A number of previous studies, for example Poterba and Weisbenner (2001) and Avery, Grodzicki, and Moore (2013), have used wealth holdings reported in the Survey of Consumer Finances, to compare tax liabilities under the estate tax regime with potential liabilities under a carryover basis regime. The evidence from the “voluntary” estate tax regime of 2010 suggests that executors were very successful in avoiding estate tax liability, but that some estates that analysts had expected to pursue the carryover basis regime, such as estates with gross value of more than \$20 million, filed an estate tax return. This could be the result of optimization errors

on the part of executors, but as the cases we consider above suggest, there were many circumstances under which the tax-minimizing choice was to file an estate tax return, even for estates that were substantially larger than the estate tax threshold and for which the conventional wisdom would have suggested otherwise.

References

- Avery, Robert B., Daniel Grodzicki, and Kevin B. Moore, 2013. "Estate vs. Capital Gains Taxation: An Evaluation of Prospective Policies for Taxing Wealth at the Time of Death." Working Paper 2013-28, Federal Reserve Board, Division of Research & Statistics & Monetary Affairs, Washington, DC.
- Gordon, Robert, David Joulfaian, and James Poterba. 2016. "Revenue and Incentive Effects of Basis Step-up at Death: Lessons from the 2010 'Voluntary' Estate Tax Regime." American Economic Review Papers and Proceedings, 106 (May).
- Office of Tax Analysis, U.S. Treasury Department. 2014. "Tax Expenditure for Exclusion of Capital Gains at Death." Memorandum, Washington D.C.
- Poterba, James and Scott Weisbenner. 2001. "The Distributional Burden of Taxing Estates and Unrealized Capital Gains at the Time of Death." In William Gale, James Hines, and Joel Slemrod, Rethinking Estate and Gift Taxation. Washington: Brookings Institution, 216-247.