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Are corporate inversions good for shareholders?☆

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ABSTRACT

Corporate inversion, the process of redomiciling for tax purposes, reduces corporate income taxes, but it imposes a personal tax cost that is shareholder-specific. We develop a model, incorporating the corporate tax benefits and personal tax costs, to quantify the return to inversion for different shareholders. Foreign and tax-exempt investors, along with the chief executive officer, disproportionately benefit. We show that an inversion simultaneously reduces the wealth of many taxable shareholders. The model illustrates an agency conflict in which heterogeneity in personal taxes generates a wealth transfer between shareholders. Furthermore, personal taxes offset the loss in government revenue by 39%.

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1. Introduction

Corporate inversion, the process by which a company reincorporates overseas for tax purposes, has become increasingly popular in recent years as a way to avoid the worldwide reach of the US tax system.¹ In 2014 alone, US

public companies valued at over half a trillion dollars announced their intention to invert. While an inversion has significant corporate tax benefits, it also entails personal tax costs for the owners of the firm. In particular, US law requires taxable shareholders to recognize a capital gains tax at the time of inversion, even if the shares are retained. Thus, while an inversion benefits shareholders by reducing a firm's corporate income taxes, it imposes a cost on taxable shareholders as they lose the option to defer capital gains taxes on their shares.

We develop a model, incorporating both the personal tax costs and the corporate tax benefits, to evaluate a shareholder's net benefit from an inversion. The model illustrates how an individual's capital gains tax rate, cost basis, and age affect her private return from an inversion.

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¹ The United States is among a small minority of countries with a worldwide tax system. US corporations incur a US corporate income tax

liability on earnings derived anywhere in the world. Although firms receive credit for foreign taxes paid, the US corporate income tax rate exceeds most countries. Therefore, US corporations operating in other countries are at a tax disadvantage relative to foreign firms.

For those shareholders that are tax-exempt or facing a low capital gains tax liability, the reduction in corporate taxes makes an inversion wealth-increasing. However, for taxable shareholders with a sufficiently low basis or high capital gains tax rate, we show that the personal tax costs can exceed the corporate tax benefits. For these investors, an inversion lowers wealth. We show that an inversion gives rise to a conflict among a company's shareholders, that is, it increases the wealth of some while reducing the wealth of others.

We then calibrate the model and quantify shareholder private returns to inversion in a sample of all US public firms that have undergone an inversion. By observing the historical price path leading up to each inversion, we use the model to compute a shareholder's private return as a function of her holding period and tax rate. In the benchmark calibration, we find that the inversions in our sample, on average, lower wealth for taxable shareholders, reducing value by 1.9%. For an investor with a holding period greater than three years, half of the inversions in our sample result in a negative after-tax return. In addition, we construct a hypothetical example of an investor who is especially hurt by an inversion: an older shareholder facing California's top capital gains tax rate who had planned to bequeath her shares. Across inversions in our sample, this investor loses 20.6% on average.

While inversions are wealth reducing for many taxable shareholders, nontaxable shareholders benefit. The model-implied return for nontaxable investors, such as those holding shares in retirement accounts, is 4.9%. Because a significant fraction of shares is held by investors exempt from US capital gains taxes, the aggregate effect across all shareholders—taxable and tax-exempt—is a 3.0% increase in value. However, whether an inversion is beneficial from the shareholder's perspective depends critically on the individual's personal tax status. So, an inversion presents a dilemma in that differences in the personal tax status of shareholders can lead to disagreement over the optimal corporate policy.

An inversion is a way for shareholders to pay an upfront cost in the form of capital gains taxes to reduce the future corporate tax liabilities of the firm. We find that this upfront cost outweighs the future benefits for 19.5% of shareholders. As a result, these losing shareholders are subsidizing the other 80.5% of shareholders who receive a net benefit. This results in a wealth transfer between shareholders, with longer-term taxable investors transferring significant wealth to the investors who benefit.

Much of the policy response to corporate inversions has focused on the reduction in taxes paid at the corporate level, largely ignoring the capital gains taxes these transactions impose on taxable shareholders. We find that the capital gains taxes are large in aggregate, amounting to 39% of the present value of the reduction in corporate taxes. That is, the net loss in government tax revenue from an inversion is only 61% of the gross reduction in corporate taxes.

We next explore the CEO's return to an inversion. Using data on the option and stock holdings of each CEO in our sample of inverting firms, we show that the model-implied private return is significantly positive for CEOs even though

she, along with other taxable shareholders, loses her ability to defer capital gains tax. Because of the tax-advantaged treatment of options, and the relatively high basis of shares held by CEOs, their private returns are significantly higher than for the average taxable shareholder. However, the private return to the CEO is comparable to the aggregate return to all shareholders, taxable and nontaxable. Therefore, the CEO's incentives are aligned with many, but not all, of the firm's shareholders.

Finally, we test whether personal tax consequences, for both the CEO and the shareholder base, predict the decision to invert. Using a logistic regression, we find that a firm is less likely to invert when its shareholders face higher personal tax costs. This is mostly due to the fact that inverting firms are held disproportionately by nontaxable shareholders. Our results suggest a tax clientele effect in which nontaxable shareholders either self-select into ownership of firms likely to invert or use their ownership to advocate for inversion. In addition, we find that the CEO's personal tax situation affects the decision to invert.

In our model, the return to an inversion depends on the corporate tax benefits and the personal tax costs. While we calibrate the model to match moments for the firms in our sample, a limitation of our approach is that we abstract from firm policies that can affect shareholder returns to inversion. A firm's choice of financing and payout policies, as well as the timing of inversion, can affect the benefits and costs of an inversion. For example, debt financing affects the firm's effective corporate tax rate and, therefore, the tax benefit of an inversion. A firm's payout policy, through dividends and repurchases, affects the distribution of shareholder bases and, therefore, the tax cost of an inversion. While we attempt to capture these features indirectly through our calibration approach, we are limited in our ability to assess how changes in firm policies affect shareholder returns to an inversion.

Our paper belongs to a large literature on the effect of taxes on corporate decision making. [Graham \(2003\)](#) provides a review of this literature. A subset of this literature explores the effect of personal taxation on corporate actions, most extensively with respect to payout policy (e.g., [Lie and Lie, 1999](#); [Allen, Bernardo and Welch, 2000](#); [Desai and Jin, 2011](#)) and capital structure (e.g., [Zechner, 1990](#); [Graham, 1999](#); [Lin and Flannery, 2013](#)). We contribute to this literature by exploring the degree to which personal tax characteristics of shareholders affect the benefit of and decision to redomicile outside the US.²

In terms of the model framework, our paper is closest to [Morellec and Schürhoff \(2010\)](#). They study the effect of personal capital gains taxes on a firm's investment and financing decisions. [Green and Hollifield \(2003\)](#) study the effect of personal taxes on a firm's cost of equity financing and optimal capital structure decisions. In contrast, we abstract from a firm's investment and financing decisions and focus on the effects of an inversion. Our model

² Our paper also relates to a literature that studies the effect of personal taxes on an investor's optimal consumption and portfolio decisions. See, for example, ([Constantinides, 1983; 1984](#)), [Dammon, Dunn and Spatt \(1989\)](#), and [Dammon, Spatt and Zhang \(2001\)](#). See [Dammon and Spatt \(2012\)](#) for an overview.

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