

SUMMARIES OF PAPERS IN THIS ISSUE

The Effect of Intellectual Property Boxes on Innovative Activity and Tax Benefits

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Intellectual property (IP) boxes are a tax policy tool that grants preferential tax rates used to promote innovative activity and to attract or retain mobile income and research and development (R&D) activities within a country. In this paper, we investigate the extent to which the adoption of an IP box affects firm-level innovative activity and tax benefits. Using the introduction of an IP box regime in 2007 in Belgium as a quasi-experimental setting, we document increased innovative activity of Belgian firms relative to unaffected control firms around the adoption of the IP box regime. Relative to a sample of control firms, we find that firms, on average, increase patent applications by a maximum of 1.8 percent and patent grants by a maximum of 5.1 percent. However, our results also indicate that the increase in patent applications and patent grants is concentrated in domestic firms rather than subsidiaries of multinational entities (MNEs) and comes at the expense of lower patent quality. Belgian post-IP box sample firms also employ 38.8 percent more employees with university degrees, an important input factor in innovative activity. We also analyze which firms benefit financially from IP boxes in the form of lower effective tax rates (ETRs). On average, firms with patents enjoy up to 7.0 percent lower ETRs, with the most significant tax benefits accruing to multinational firms compared to domestic firms. Our results suggest a more modest response of firms' patenting activity to the introduction of IP boxes than previous research analyzing heterogeneous IP boxes suggests. Overall, our results are important to inform the discussion around the costs and benefits of IP boxes as a tax policy tool to promote innovative activity.

Debt and Taxes? The Effect of Tax Cuts & Jobs Act of 2017 Interest Limitations on Capital Structure

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This paper examines the effects of The Tax Cuts & Jobs Act of 2017 (TCJA) interest deduction limitations on firms' debt decisions. Although business interest expense prior to TCJA enactment was generally fully deductible, beginning in 2018, net interest deductions under §163(j) were effectively limited to 30 percent of income before interest, taxes, depreciation, and amortization (adjusted taxable income). Using a difference-in-differences design, we show that following the enactment of the new limitations, affected firms significantly decrease their leverage. Specifically, we find that relative to unaffected U.S. firms, affected firms experience a decrease in leverage of about 7.6 percent of assets, corresponding to about \$330 million per firm and \$84.8 billion for the treatment sample of 257 firms. These results are driven by decreases in long-term domestic debt and by declines in new issuances rather than debt repayment. We also find firms not currently subject to limitations on interest but subject to future limitations decrease leverage by about half as much as firms currently subject to the limits.

Our study contributes to both the capital structure and tax literatures by offering initial evidence on the economic effect of the interest limitations under TCJA §163(j). Our findings are relevant to policymakers modeling the economic and tax revenue implications of the provision. When scoring the TCJA, the Congressional Budget Office stated the projected increase in tax collections from the interest limitations for 2018 was \$16.4 billion (Congressional Budget Office 2017). Our results should be useful to policymakers as they determine the extent to which firms avoid these additional tax payments and the overall effects of the TCJA. Our findings are also relevant in determining the effect of TCJA on potential systemwide macroeconomic risk created by overleveraging. Over the past decade, corporate debt of nonfinancial companies has increased by nearly 50 percent, to just under \$9 trillion dollars. Proponents of the TCJA limitations argue that they will curtail systematic risk related to overleveraging (Smith 2017; Eavis 2017). Our results contribute to this debate, helping policymakers and market participants determine the actual effect of the interest limitations on corporate debt and consequently the efficiency of policies to target perceived overleveraging.

Furthermore, our findings have broader implications, adding to a long line of research examining how firms adjust capital structure in response to tax incentives. Studies based on classical capital-structure theory assert a positive association between the tax deductibility of interest and leverage (e.g., Modigliani and Miller 1963; Graham 2003). However, more recent dynamic models of capital structure suggest firms face asymmetric incentives with respect to changes in the tax benefits of debt. In particular, they argue, firms lack incentives to decrease leverage following reductions in the tax benefits of debt (e.g., Heider and Ljungqvist 2015; Admati, DeMarzo, Hellwig, and Pfleiderer 2018). Our results show firms indeed decreased leverage following the decrease in the tax benefits of debt that resulted from TCJA interest limitations. However, our results also confirm that firms do not repurchase debt to decrease leverage but instead decrease debt issuance.

Companies' Initial Estimates of the One-Time Transition Tax Imposed by the Tax Cuts and Jobs Act

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The Tax Cuts and Jobs Act (TCJA)—the most comprehensive tax reform since 1986—was signed into law on December 22, 2017. Under U.S. GAAP, companies must account for the financial statement impact of tax law changes in the period of enactment. Due to the TCJA's complexity and late-in-the-year passage, the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin No. 118 (SAB 118) to allow companies up to 1 year after the date of enactment to adjust their initial accounting for the TCJA. We exploit this setting to offer new insights into companies' financial reporting by examining their estimates of the one-time transition tax on previously untaxed foreign earnings, a key provision of the TCJA.

We first examine how information gathering and processing costs related to the transition tax calculation affect the accuracy of companies' initial estimates. We find more accurate initial estimates for companies with political access, with less busy financial statement auditors, and who previously accrued estimated incremental U.S. tax on foreign earnings.

We next examine which companies bias their initial transition tax estimates upward to manage perceptions of their income taxes during a politically sensitive time. Opponents of the TCJA viewed the corporate provisions as a "wasteful giveaway" (Bernstein 2017), and media coverage frequently linked the transition tax to companies' avoidance of U.S. taxes. Thus, many corporations had incentives to navigate public opinion while reaping substantial tax benefits (Davidson and Shell 2017). We find that companies engaging in greater tax avoidance before the TCJA, companies subject to greater media scrutiny, and companies headquartered in Democratic states are more likely to overstate than understate initial transition tax estimates, possibly to appear as though they pay their fair share of tax.

Our study documents cross-sectional differences in companies' financial reporting of income taxes during a politically sensitive time. Despite concerns that companies had little time to account for the TCJA, our results suggest that companies' initial estimates of the transition tax are largely accurate. This finding should be informative to policymakers and financial statement users as more tax law changes are expected in the future. In addition, our findings contribute to the literature on the relation between companies' external stakeholders and their tax reporting by examining quantitative disclosures. Further, our study extends the literature on the accuracy of companies' complex estimates (Hodder, Mayew, McAnally, and Weaver 2006; Bratten, Jennings, and Schwab 2016; Kubic 2021) by exploiting a unique setting where managers had little incentive to manage transition tax estimates to meet or beat earnings targets and where the accuracy of companies' estimates can be objectively measured. Lastly, we provide evidence on the magnitude of companies' transition tax liability as well as the timing and extent of companies' adjustments using a large and diverse sample.

New Evidence on Investors' Valuation of Deferred Tax Liabilities

Russ Hamilton

While deferred tax liabilities (DTLs) are a significant financial statement liability for most public firms, it is unclear how investors price these items. I examine investor pricing of the largest DTL component, DTLs associated with rapid tax depreciation. Prior empirical work does not find evidence that investors treat depreciation-related DTLs as economic burdens, and some textbooks suggest that these items should be ignored when measuring share value. On the other hand, theoretical work argues that depreciation-related DTLs should reduce the firm value, although the value reduction is not the full recorded amount of the DTL but a discounted value based on tax depreciation rates and the firm's cost of capital.

Using a large, novel dataset of hand-collected tax footnote data, I examine the nuanced relation between depreciation-related DTLs and firm value. I focus my study on a time period when the recorded values of depreciation-related DTLs should more closely approximate the economic burden predicted by theory, which I expect will facilitate investors' pricing of these items. Using a levels-based model, I find evidence that investors price depreciation-related DTLs as economic burdens, on average. I find similar results with a changes-based model.

Some prior research and textbooks contend that investors will not price growing depreciation-related DTL balances. They argue that depreciation-related DTLs can only be value relevant when they reverse into cash taxes payable, and this event will occur in the distant future for growing firms. Thus, the net present value burden of the DTL will be very small. In contrast, theoretical work argues that depreciation-related DTLs are constantly reversing, even if offset with later fixed asset purchases. I find evidence that investors price depreciation-related DTLs as economic burdens, even for growing firms.

My results also suggest that the pricing of depreciation-related DTLs is affected by expectations of future profits. In other words, to the extent that investors expect the firm will be incurring losses when the DTL reverses, they appear to be less likely to price the liability. However, due to substantial differences between profitable and unprofitable firms, readers should be cautious when interpreting this finding.

Finally, tax deferral strategies, including rapid tax depreciation, generate equal amounts of cash and DTLs. To the extent that investors view the amount of cash created as larger than the net present value of the DTL created, firm value should increase. I find evidence in both levels- and changes-based models that investors ascribe higher value to each dollar of cash generated, compared to each dollar of DTL generated, suggesting that investors view tax deferral as a value-creating activity.

Does Tax Deductibility Affect Goodwill Impairment Decisions?

Sarah Khalil, Miles Romney, and Steven Utke

Goodwill is a large and important component of firms' balance sheets, and goodwill impairments are costly to firms. Thus, managers generally attempt to avoid recording goodwill impairments. While taxes also represent one of firms' largest expenses, prior research ignores how taxes affect impairment decisions. We examine the effects of a unique tax benefit for impairments on impairment decisions. Specifically, unlike other countries, Luxembourg allows firms to obtain both cash *and* GAAP tax deductions (i.e., book-tax conformity) upon impairment of goodwill located in Luxembourg. Although impairments are costly, we propose that tax deductibility reduces the net cost of impairment, increasing the likelihood of impairment.

Results indicate that tax deductibility—measured by the existence of a Luxembourg subsidiary—increases impairment likelihood, especially when capital market pressure is high, consistent with tax deductibility reducing the net cost of impairments (i.e., partially offsetting high costs of impairment). We rule out known plausible nontax explanations for these effects. Overall, results suggest that taxation is an important, previously overlooked determinant of economically important goodwill impairments.

We contribute to the literature in three ways. First, we provide evidence that tax deductions play a role in major, costly financial reporting goodwill impairment decisions—a setting where it is surprising that taxes matter. These findings are important to auditors, analysts, and investors in evaluating and interpreting firms' goodwill impairment reporting. Second, our findings have policy implications. Accounting standard setters have debated the current impairment-only model of accounting for goodwill. Tax deductibility should not increase impairment likelihood under the current GAAP standards, which instead focus on a comparison of the book value of a reporting unit to its market value. Thus, our results suggest that current GAAP standards may permit more flexibility than intended, providing support for the proposed amortization-and-impairment model which limits flexibility. Third, our setting provides opportunities for future research into the “black box” of specific tax saving tools (often called “tax strategies”), book-tax conformity, and “real” effects that may arise from the availability of tax-deductible goodwill impairments in Luxembourg subsidiaries.

The Economic Impact of Interim CEOs: The Case of Tax Avoidance

Yangmei Wang, Kirsten A. Cook, and Tao Ma

Chief Executive Officer (CEO) succession is an important corporate event and has been the focus of considerable academic research. CEO transitions have become more common in recent years. The business press has characterized this increasing CEO turnover as “the revolving door in the corner office,” and the phenomenon is “spawning the surge of a new breed of executive: the interim CEO” (Hymowitz 2006, B1). Interim CEO appointments are frequent events, involving as many as 20 percent of all successions at publicly traded firms. However, compared with the plethora of studies investigating permanent CEO succession, empirical research on interim CEO succession and the associated performance outcomes is relatively sparse. This dearth of empirical research may reflect that interim CEOs are perceived as temporary placeholders who are not expected to materially affect firm value. However, given the prevalence of interim CEO appointments, it is imperative to understand the economic consequences of appointing an interim CEO. In this paper, we explore how the appointment of an interim CEO affects corporate tax avoidance.

Both the interim nature of the appointment and the empirical evidence suggest that firms with interim CEOs may undertake either less or more tax avoidance. Using a difference-in-differences research design, we find that interim CEOs engage in significantly less tax avoidance. We conduct several tests to shed light on whether this decrease in tax avoidance varies with three interim CEO traits and find that, in subsamples of (1) interim CEOs with high equity-based compensation, (2) interim CEOs who are eventually promoted as permanent successor CEOs, and (3) interim CEOs who previously served as their firms’ CFOs, the lower tax avoidance that we document in our main tests disappears.

Our study quantifies the economic significance of the decrease in tax avoidance associated with hiring an interim CEO and demonstrates that this decrease in tax avoidance may explain the poor financial performance of interim CEOs relative to direct-succession CEOs documented in prior research. We also provide evidence of a previously unexplored manager transition effect on tax avoidance: the “interim CEO effect.” Our results suggest possible ways for boards of directors to mitigate this adverse economic impact of lower tax avoidance. Specifically, companies could (1) provide equity compensation to interim CEOs to better align their interests with those of shareholders, (2) select interim CEOs with stronger potential for promotion as permanent CEOs in order to instill a longer decision horizon, and (3) select tax-savvy interim CEOs who understand the importance of tax avoidance for firm performance.