會計評論
第 29 期，第 101-134 頁
中華民國八十四年十月

會計方法和報稅方式的相互影響：美國公司收購合併的實證結果

Robert Halperin
Fordham University
詹淸麗
California State University-Hayward

摘要

美國公司的收購合併在稅法處理上，可能是會被課稅的，也可能是免稅的。相對的，在會計上也有兩種處理方式：購買(purchase)或權益結合(pooling-of-interests)。雖然會計方法和報稅方式的選擇是相互影響的，但是大多數的學者在做研究時，只單獨做報稅方式的研究，或是只單獨做會計方法的研究。這種排除另外一個其實是相關因素的研究方式，至少部份是因爲他們沒有將有形資產的升值部份，和無形資產的商譽劃分淸楚，我們在這篇的研究報告裡，因爲做了這種劃分所以能同時分析會計方法和報稅方式。這種劃分是必要的，因爲會計上對有形資產的可能升值與對商譽，和稅法有不同的處理方式。

我們的實證研究結果顯示：1. 有形資產在可課稅的購買方式(taxable purchases)下比在免稅的購買方式(tax free purchases)下有較多的升值。2. 可課稅的購買方式(taxable purchases)與「免稅的」權益結合方式(poolings)比免稅的購買方式(tax free purchases)有較高的合併溢價。3. 權益結合方式(poolings)有最高額的商譽。4. 收購公司並沒有爲了要使其收購合併，在會計上能做爲權益結合方式(poolings)的處理，而支付較高的合併溢價。這是與最近其他研究，正好相反的發現。

此文之實證結果與我們基於稅法和經濟上的理論，所做的預期結果，是一致的。

關鍵詞：合併，企業購買，公司改組，權益結合法。

THE CHINESE ACCOUNTING REVIEW
Vol. 29, PP. 101-134
October, 1995

The Interaction of Accounting and Tax Choices: Empirical Evidence from Corporate Acquisitions

Robert Halperin*
Fordham University
Ching-Lih Jan
California State University - Hayward

Abstract

Corporate acquisitions can be taxable or tax free and can be accounted for as purchases or pooling-of-interests. Although the choices of tax form and accounting treatment are interrelated, most researchers have examined only tax form or accounting treatment to the exclusion of the other. This exclusion at least in part may be because researchers have not separated step up in basis of tangible assets from goodwill. We make this separation and consider the tax and accounting dimensions simultaneously. This separation is necessary because step up potential and goodwill are treated differently across the accounting and tax dimensions.

Our results show that: 1. Taxable purchases have higher step up in basis of tangible assets than tax free purchases. 2. Merger premia are higher for taxable purchases and (tax free) poolings than for tax free

* This paper was presented at the accounting area workshop at Fordham University, the 1993 AAA Annual Meeting, and the First (1994) International Conference on Contemporary Accounting Issues, Taipei. The authors thank Frances Ayres and Haim Mozes for their helpful comments concerning this paper and Adil Butt, Stephen Lynn, and Vera Sus for their excellent research assistance.

purchases. 3. Goodwill is highest for poolings. 4. Contrary to recent suggestions, acquiring companies do not pay higher merger premia to have acquisitions accounted for as poolings.

These results are consistent with our predictions based on tax and economic theory.

Key Words: Mergers, Corporate acquisitions, Reorganizations, Pooling-or-interests.

Data Availability: The data used in this study are available on the CRSP, NAARS, Mergers and Acquisitions, COMPUSTAT data bases and the CCH Capital Changes Reporter.

1. Introduction

For financial reporting purposes, corporate acquisitions are accounted for either as purchases or pooling-of-interests while for tax purposes they are treated as being taxable or tax free. The decisions concerning which method to use for financial reporting and tax purposes are not independent of each other, however. If an acquisition is taxable, it must be accounted for as a purchase. If an acquisition is nontaxable, it must also be accounted for as a purchase unless the criteria for pooling-of-interests found in APB Opinion No. 16 are also satisfied. Accordingly, the interaction of tax and financial rules gives rise to the following three types of acquisitions: (1) taxable purchase, (2) tax free purchase and (3) (tax free) pooling. Despite the interrelationship between the tax and financial reporting dimensions, most prior research (e.g., Gagnon 1967; Hayn 1989; Robinson and Shane 1990) examines only one of these dimensions to the exclusion of the other.

The purpose of our study is to explicitly recognize the interaction of the tax and financial reporting decisions by developing and testing some hypotheses

concerning what characteristics of targets make them likely candidates for each of the three types of acquisition. Our hypotheses are all based on the tax law that existed before the Tax Reform Act of 1986. In addition, since some prior research (Robinson and Shane 1990) shows that acquiring corporations pay higher merger premia for the opportunity of accounting for acquisitions as pooling-of-interests, we also tested this hypothesis.

Unlike prior research, with the exception of Hayn (1989) we differentiate between step-up in basis of tangible assets and the intangible asset goodwill. The differentiation is important because step-up in basis of tangible assets and goodwill are treated differently for tax and financial reporting purposes. We hypothesize that, based on tax rules and economic principles (1) taxable purchases have higher step-up in basis of tangible assets and higher merger premium than both types of tax free acquisitions; (2) merger premia are higher for taxable purchases than for both types of tax free acquisitions; (3) goodwill is highest for pooling-of-interests and (4) acquiring companies do not pay higher merger premia to have acquisitions accounted for as pooling-of-interests.

Our hypotheses were tested using a sample of 119 acquisitions of publicly held target firms by publicly held acquiring firms during the period 1981 to 1986. Our test results generally support our hypotheses.

The remainder of this paper is divided as follows: In Section 2, we review the relevant literature. Section 3 presents the tax and accounting rules surrounding corporate acquisitions. Section 4 develops our hypotheses. Section 5 defines variables. Section 6 presents our data collection procedures. Section 7 explains our empirical tests and results. Conclusions are presented in last section.

2. Literature Review

Previous empirical research on the structure of corporate acquisitions has generally focused either on the accounting treatment while holding the tax issue

constant or *vice versa.* The accounting issue of purchases versus pooling is investigated in Gagnon (1967), Copeland and Wojdak (1969), Anderson and Louderback (1975), Hong, Kaplan, and Mandelker (1978), Walkling and Edmister (1985), Nathan (1988), and Robinson and Shane (1990). Generally, the results are consistent with the "maximization of income hypothesis" that acquirings choose pooling when the deal value exceeds the book value of the target's assets. Given that the pooling method is used, however, results become mixed. For example Robinson and Shane (1990) show a positive association between "goodwill", measured as deal value minus book value of assets, and merger premium. On the other hand, Nathan (1988) and Walkling and Edmister (1985) report a negative association between these two variables.

The reason for these mixed results can be traced to the definition of goodwill used in all of the above cited studies. All of them use some variant of fair market value minus book value of total assets. They do not distinguish between fair market value minus book value of tangible assets on the one hand and the intangible asset goodwill as measured by deal value minus fair market value of tangible assets on the other (hereinafter called "goodwill"). It can be demonstrated (see the Appendix) that when this distinction is made, the cause of the mixed results will disappear.

Researches dealing with the tax issues of acquisitions were provided by Robinson (1987), Crawford and Lechner (1989), and Hayn (1989). They demonstrate that tax attributes such as step up potential and unused net operation loss carryovers affect merger premia. They do not consider accounting method choice, however, as part of their studies. Hayn (1989) did measure step-up for taxable purchases. She did this by examining the amounts recorded for targets assets on acquirings' books subsequent to the acquisition. Since she was not concerned with the accounting issues, Hayn did not attempt to measure goodwill. Crawford and Lechner (1989) show that factors such as tax carryovers and step-

up potential are positively associated with a firm's attractiveness as a target. However, they do not distinguish between step-up potential and goodwill.

Crawford (1988) examined both the tax and accounting choice dimensions together. His results generally support Robinson (1987) and Hayn (1989) along the tax dimension. Along the accounting method choice dimension, he shows that the choice of pooling is positively associated with accounting based management compensation packages and is weakly associated with the size of acquiring. As in most of the other studies cited, Crawford (1988) does not differentiate between step-up potential and goodwill.

3. Relevant Tax and Accounting Rules

The following discussion of the relevant tax rules reflects the rules that existed before the enactment of the Tax Reform Act of 1986 (TRA 86) since we could collect data on both step-up potential and goodwill only for the years 1983 through 1985 and since TRA 86 drastically changed the tax rules with respect to taxable purchases.

Since virtually all corporate acquisitions involve the direct or indirect acquisition of target's assets, including depreciable assets, a discussion of recapture of depreciation is in order before discussing the tax rules relating to corporate acquisitions themselves. IRC §1245 states that when personal property is disposed of, the taxpayer who disposes of the property must report the lower of (1) the accumulated depreciation for tax purposes or (2) the gain for tax purposes as ordinary income. Note that when the asset's selling price is less than its original cost, §1245 causes the entire gain to be taxes at ordinary rates.

The recapture rules with respect to depreciable realty are contained in § 1250. It states that when realty is disposed of, the lower of (1) the excess of tax depreciation over straight-line depreciation over the same useful life or (2) the gain for tax purposes must be reported as ordinary income. This implies that

when the asset's selling price is less than its cost net of accumulated straight-line depreciation, §1250 recapture will be the entire gain for tax purposes.

From a tax viewpoint, corporate acquisitions can be either taxable or non-taxable (termed reorganizations by the Internal Revenue Code (IRC) and "reorgs" by us in this paper). There are two types of taxable acquisitions, the stock purchase and the asset purchase. In the stock purchase, acquiring buys target shareholders' stock for any consideration other than acquiring's stock. Target shareholders treat the difference between the fair market value of the consideration received and the basis in their target stock as capital gains or losses. Acquiring can elect to step-up the basis of the assets of target to the price paid for the stock (which is presumably equal to the assets' fair market value) pursuant to IRC §338 without paying any additional tax except that on recapture of depreciation. If a §338 election is made, however, any net operating loss carryovers (NOLCO's) of target are lost.

In the asset purchase, acquiring purchases target's assets for any consideration other than acquiring's stock. If, pursuant to IRC §337, target distributes this consideration to its shareholders in complete liquidation of target, target will pay no tax on the sale of its assets except that on recapture of depreciation. Target shareholders treat the difference between the fair market value of the consideration received and their basis in target stock as capital gains and losses. The basis of the assets which acquiring purchases is the amount paid for them or their fair market value.

It should be noted that, from a tax viewpoint, a stock purchase followed by a §338 election is equivalent to an asset purchase, since, in both cases, assets are reflected at their fair market value. These taxable acquisitions may generate higher deductions for depreciation and/or cost of goods sold than those in stock purchase where a §338 election is not made. A negative aspect of taxable acquisitions from acquiring's viewpoint is that the IRS almost invariably insists that one of the assets purchased in the basket purchase of assets is goodwill. To the

step-up in the basis of target's assets while the pooling method shows target's assets at the same amount as they are shown pursuant to a reorg.

APB Opinion No. 16 lists twelve criteria which must be met in order for a business combination to be accounted for as a pooling. If any of the twelve are not met, the combination must be accounted for as a purchase. For purposes of this paper, the relevant criteria are:

1. The combination must be effected in a single transaction or be completed in accordance with a specific plan within one year after the plan is initiated.
2. The sole consideration which may be used is common stock of acquiring.
3. At least 90% of target's outstanding stock must be acquired in the transaction.

A comparison of these criteria with the tax rules shows that a reorg is a necessary but not sufficient criterion for a pooling. Therefore, it is possible to have taxable acquisitions which are accounted for as purchases (hereinafter called "TPURCHs"), reorgs which are accounted for as purchases (hereinafter called "RPURCHs"), and reorgs which are accounted for as poolings (hereinafter called "POOLs").

4. Hypothesis Development

The preceding discussion of the relevant tax and accounting rules for business combinations points to a source of conflict between shareholders and management of acquiring on the one hand and shareholders of target on the other. All else held constant, acquiring would like the transaction to be taxable, if target does not have substantial NOLCO's or recapture of depreciation, in order to obtain increased deductions associated with the step-up in the basis of target's assets. Contrariwise, target shareholders, if they are in a gain position in their target stock, would like to have the transaction structured as a reorg in order to

of target's assets while the pooling method shows target's as-
ount as they are shown pursuant to a reorg

defer their gain. Ideally, the two sides should cooperate to see which form of the transaction yields the lowest overall tax and share the tax savings, but this becomes effectively impossible as the number of target shareholders grows large. Nevertheless, some predictions are possible. First, it becomes increasingly likely that the tax advantage of a taxable acquisition to acquiring will exceed the tax disadvantage to target shareholders as the absolute amount step-up in basis of tangible assets such as inventory and depreciable assets which become tax deductions increases. Accordingly, we would expect to see that the excess of the fair market value of tangible assets over their book values (step-up potential) not subject to depreciation recapture to be relatively higher for TPURCHs than for RPURCHs or POOLs.

H_1: The step-up potential for tangible assets not subject to depreciation recapture is relatively higher for TPURCHs than for either RPURCHs or POOLs for targets with small or no NOLCO's.

If the transaction is structured as taxable, however, target shareholders must pay tax which they do not have to do so if the transaction is structured as a reorg. Shareholders of target are likely to expect to be compensated for this tax through an increase in the price offered by acquiring to purchase their shares (Gilson, Scholes, and Wolfson 1988; Crawford 1988). Suppose that target share prices, in the absence of a merger announcement, do not reflect the taxes which must be paid upon sale of target stock. This is a reasonable supposition since the market is unaware of whether a particular target shareholder who might sell shares is in a gain or loss position with respect to this stock, or possibly, is a tax exempt institution and no particular group needs to be enticed to sell its shares. Once an offer is made to buy most or all of target's stock, those target shareholders who are in a gain position will be enticed to sell only if they are compensated for the tax they pay. Accordingly, we would expect to see a merger premium or an increase in the price of target shares once a taxable acquisition is announced relative to that if a reorg is announced.

H_2: Merger premia are higher for TPURCHs than for RPURCHs and POOLs.

Although both step-up and merger premium are hypothesized to be higher for TPRUCHs than for the other acquisition forms, we want to rule out step-up as being a reason for higher merger premium. During our test years (1981 to 1986), current cost footnotes were included in annual reports in accordance with the requirements of SFAS No. 33. A number of studies demonstrate that the market place impounds SFAS No. 33 information in stock prices when the annual reports are issued (e.g. McDonald and Morris 1984; Haw and Lustgarten 1988) or before the annual reports are issued (e.g., Beaver, Griffin, and Landsman 1982; Schaefer 1985). The results of these studies suggest that the market place, in our test years, has enough information to include step-up in target's price even if there is no acquisition. In addition, we have argued that tax on target's shareholders is responsible for the premium.

H_3: In TPURCHs merger premia are not correlated with step-up.

If the parties to the acquisition decide upon a reorg, then the type of reorg becomes an issue. Clouding this issue is the question of accounting method choice. For example, if the transaction proceeds as a B or C reorg, it may be difficult to tell whether it is for tax reasons exclusively. It is because acquiring wants to account for the transaction as a POOL, or both. Casual empiricism suggests that accounting method choice may influence the form of an acquisition. Several authors including us (for example, Nathan 1988) have seen SEC merger filings where it was stated that POOL is a condition of the merger. When NCR was acquired by AT&T, an article in *The New York Times* (July 4, 1991) stated that in order for AT&T to exchange only AT&T common stock for NCR shares, the transaction would have to be accounted for as a POOL, otherwise, cash and notes would be given to NCR shareholders in exchange for their shares. This would result in a TPURCH. Some researchers (Nathan 1988; Robinson and