The adoption timing of optional accounting standards: the case of goodwill capitalization in Switzerland

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Reference

THE ADOPTION TIMING OF OPTIONAL ACCOUNTING STANDARDS:
THE CASE OF GOODWILL CAPITALIZATION IN SWITZERLAND

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THE ADOPTION TIMING OF OPTIONAL ACCOUNTING STANDARDS: 
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1. INTRODUCTION

Accounting standards do not generally become effective immediately after they have been issued. In most cases, a multi-year adoption period is allowed, whose main justification is to alleviate firms' implementation costs, particularly the costs of renegotiating agreements with lenders and suppliers (Langer and Lev, 1993). This discretion in adoption timing can be used by firms to begin application of new standards at the time which best serves their interests.

In 1993, the IASC issued revised IAS 22 which requires that goodwill arising from acquisitions be recognized as an asset and amortized over its useful life. One year later, the Swiss standard setting body FER\(^1\) issued a new recommendation ARR 9 which recognizes capitalization as the benchmark treatment for goodwill. An expanded adoption timing was allowed for both standards and revised IAS 22 and ARR 9 became effective for financial statements covering periods beginning on or after 1 January 1995 and 1 January 1996, respectively. Swiss companies which previously used to deduct goodwill from reserves and were willing still to comply with IAS had thus three years (1993, 1994 or 1995) to make their financial statements conform with the new standard. Those which were following FER’s recommendations only had the opportunity to adopt capitalization later or to continue to deduct goodwill from reserves in the year of acquisition. This study examines factors associated with early adoption of goodwill capitalization. More precisely, it compares firms which were capitalizing goodwill prior to 1995 to those which postponed capitalization until the IASC deadline or later.

There is a relatively substantial body of empirical literature on the determinants of early or late adoption of accounting standards. But contrary to previous studies which have involved obligatory national standards followed by all companies within a country, this research investigates the adoption timing of standards whose application is voluntary since, at the time of
the study, neither IAS nor even ARR 9 were mandatory for Swiss companies\(^2\). As such, it extends prior work by providing indirect evidence of how discretionary standards can compensate for the lack of national mandatory regulation. This is also, to our knowledge, the first study on this issue to be conducted outside the US.

The remainder of the paper is organized as follows. The next section provides a survey of prior studies on the adoption timing of new standards. Section 3 discusses the issue of accounting for goodwill and retraces the evolution of the IASC's position on this subject. The hypotheses to be tested are formulated in section 4, while procedures for the selection of the sample and research methodology are presented in section 5. Section 6 reports the results of the statistical analyses and section 7 contains some concluding remarks.

## 2. PRIOR RESEARCH ON THE ADOPTION TIMING OF NEW STANDARDS

Ayres (1986) was the first to carry out a study on the adoption timing of new standards by examining factors associated with early adoption of SFAS 52. Under this standard, balance sheet accounts of foreign subsidiaries are typically translated into US dollars at the current rate of exchange at year end and income statement accounts are translated at average exchange rates for the year. All resulting translation adjustments are made to a separate component of owners' equity. Prior to that standard, certain balance sheet accounts (inventory and property) were translated at historical exchange rates and all translation adjustments had to be made to income. SFAS 52 was mandatory for fiscal years beginning on or after December 15, 1982 but early adoption was allowed. Given that this standard had a positive effect on earnings, Ayres compared

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1. Fachkommission für Empfehlungen zur Rechnungslegung (Foundation for accounting and reporting recommendations).
2. In Switzerland, accounting is regulated by the company law (Code of Obligations) which contains a small number of general principles but no detailed accounting rules. The FER is a private standard setting body which has not the power to enforce its recommendations. Although ARRs can be considered as a kind of Swiss Generally Accepted Accounting Principles, they are not mandatory. It is only in October 1996 that the admission board of the Swiss Exchange has decided to include some of these recommendations in its listing rules. ARR 9 was not among the selected recommendations.
the characteristics of firms which adopted SFAS 52 in 1981 to those of companies which deferred compliance until 1981 or 1982. She found that early adopters had a lower percentage of stock owned by directors and officers, and a smaller percentage of earnings increase from the previous years. They also were smaller and closer to debt and dividend constraints than late adopters. These results support the influence of political costs and agency relationships. Ayres also noted that the change in earnings per share in the adoption period was significant, suggesting that early adoption could be a tool for earnings management.

SFAS 87 is probably the accounting standard whose adoption timing has been the most extensively studied. This standard requires employers sponsoring defined-benefit pension plans to use the projected unit credit method and to make a one-time comparison of plan assets and plan obligations at the date of adoption. Its adoption results in an initial asset or liability to be amortized over the remaining employee service life. SFAS 87 was mandatory for fiscal years beginning on or after January 1, 1987 but it could be adopted as soon as 1986 or even 1985. This standard is generally considered as having the effect of reducing the pension expense in the year of adoption because of the difference between the value of the plan assets and the amount of obligations. As such, its early adoption was an income-increasing decision. Scott (1991) compared the characteristics of firms which adopted SFAS 87 in 1987 and 1986. Explanatory variables were proxies for political costs, agency relationships, change in firm profitability, the income impact of early adoption and the possible occurrence of a "big bath" effect. Results show that early adoption was more likely for firms with management bonus plans, a large impact of SFAS 87 on income and a decrease of earnings from the prior years. In contrast, no effect was found for debt variables. In a similar study, Langer and Lev (1993) found that early adoption of SFAS 87 was strongly related to the increase in reported earnings, suggesting an earnings management phenomenon. No other variable discriminated between early and late adopters. Sami and Welsh (1992) extended the analysis to firms which adopted SFAS 87 as soon as 1985. They investigated the effect of debt covenants, management compensation plans, ownership control, political costs and the impact of the new standard. Unlike prior studies, they found evidence that early adopters of SFAS 87 were more frequently subject to accounting-based debt constraints. Their results also supported the hypothesis that firms adopting SFAS 87 early had a smaller percentage of stock owned by management. Surprisingly, a positive relationship was found
between firm size and early adoption, suggesting that size could surrogate for other factors. This anomaly to the political costs hypothesis was confirmed by Tung and Weygandt (1994) who also found that early adopters were larger than late adopters. Their other results are consistent with the debt contracting hypothesis, implying that firms which adopted SFAS 87 early were primarily motivated by the resulting income-increasing effect which could mitigate financial covenant constraints.

SFAS 106 has also been the subject of several studies. This standard requires that post-retirement benefits (PRB) other than pensions expected to be paid to current and future retirees should be accrued. Two adoption methods were available to US firms: the immediate recognition (catch-up) method and the prospective recognition method. Under the catch-up method, the after-tax transition liability is charged to income as the cumulative effect of an accounting change; while under the other method, this amount is amortized against income over the average remaining service life of active plan participants. Except for the amortization of the transitional liability, the annual expense is equivalent under both methods. The only significant differences are the magnitude of the accrued PRB obligation up until the liability is fully accrued and the charge to earnings in the year of adoption. SFAS 106 was issued in December 1990 and became effective for fiscal years beginning after December 15, 1992; allowing most firms to chose 1991, 1992 or 1993 as the adoption year. Unlike the other cases, the adoption of SFAS 106 had a negative effect on earnings and the book value of equity. Amir and Livnat (1996) formulated the hypothesis that managers might have chosen early adoption if they perceived the market's assessments of their PRB liabilities to be higher than the actual obligations. This hypothesis is supported by their findings. An examination of the relation between adoption timing and the time series of earnings reveals that firms chose to adopt SFAS 106 when earnings were relatively low. Finally, early adopters were found to be less involved in PRB negotiations than late adopters. More recently, Amir and Ziv (1997) found that early adopters of SFAS 106 experienced more extreme earnings changes in the adoption year than late adopters and that their average liability was smaller than that of firms which postponed the adoption until it was mandatory. They also found that the market performance of early adopters during the five years ending December 1993 was significantly better than that of late adopters.
Trombley (1989) studied the adoption of SFAS 86 in the software industry. This standard was issued in November 1985 and mandatory for years beginning after December 31, 1985. It requires capitalization and amortization of certain costs of developing software for sale. Given that prior to that standard, these costs were generally expensed when incurred, SFAS 86 had a positive effect on income. Trombley discovered that early adopters were smaller and had auditors who expressed support for software capitalization. Despite the fact that the influence of size is consistent with the political costs hypothesis, the author suggests that this explanation is not satisfactory given the relatively small dimensions of all software companies.

A recent study by El-Gazzar and Jaggi (1997) has investigated the adoption timing of SFAS 13, which requires financial leases to be capitalized. For the retroactive capitalization of leases entered into prior to the standard, US companies have benefited from a transition period extending from 1976 to 1979. El-Gazzar and Jaggi examined the debt covenants and management compensation schemes of early (1976 or 1977) and late (1978 or 1979) adopters. They found that late adopters would have experienced significantly higher increases in closeness to violating the debt restrictions had they decided to adopt the new standard early. In contrast, the impact of management compensation was not significant.

It is difficult to derive generalizations from studies which involve different accounting standards because of the variety of possible effects on earnings and equity. Nevertheless, Balsam et al. (1995) have investigated the adoption timing of eleven out of the first 96 standards issued by the FASB between 1973 and 1989. Separating firms according to the effect that the new standard had on income, they found that when the change was income-increasing, companies with lower changes in ROA before adoption and higher adoption income effects accelerated implementation. This study confirms that the potential impact on earnings is a key factor in the adoption timing of a new standard.
3. THE EVOLUTION OF REGULATION ON GOODWILL

When an investor acquires a controlling interest in a company, the acquisition price is rarely equal to the fair value of the identifiable net assets acquired. The difference, generally positive, is called "goodwill". Two basic views of this item can be distinguished from the literature (Colley and Volkan, 1988). A first one considers goodwill as an above normal earnings capacity. According to this approach, the buyer accepts to pay a price in excess of the fair value of the identifiable net assets acquired because he expects profits superior to a normal return on these assets. Goodwill is then the present value of these anticipated excess earnings. For the other approach, goodwill represents various assets not currently disclosed on the balance sheet of the acquired company because they do not meet the necessary conditions for accounting recognition. These assets may be of various nature, depending on the firm's characteristics and environment. Examples of such assets are know-how, market shares, patents or trade marks created by the company.

The accounting treatment of goodwill has always been controversial. A first approach considers that goodwill should be recognized on the asset side of the balance sheet of the acquirer and systematically amortized over its expected useful life. This policy has been criticized on the ground that neither goodwill, nor any of its components, meet the required conditions for asset recognition. In particular, it is argued that it cannot be measured with sufficient reliability because of its residual nature. Furthermore, assessing the amortization period of goodwill is difficult given that this asset is itself a combination of various elements with diverse useful lives. These arguments provide the basis for writing off goodwill against reserves in the year of acquisition. This alternative is opposed by people who consider that shareholders might be misled by such a treatment which would result in an understatement of the cost of the investment on the balance sheet of the acquirer.

3 According to the IASC's conceptual framework, an asset should be recognized if:
"a) it is probable that future economic benefits associated with the item will flow to or from the enterprise; and
International accounting standards have, for a long time, admitted both treatments. According to former IAS 22 issued in 1983 and first implemented in 1985, firms could either adjust goodwill against shareholders' interests in the year of acquisition, or recognize it as an asset to be systematically amortized over its useful life. A first sign of change appeared in 1987, with the IASC's decision to reduce the number of existing alternative accounting treatments in order to give financial statements greater comparability. The resulting exposure-draft E 32 issued in 1989 identified 29 accounting issues which had to be reconsidered. One of them was goodwill arising from business combinations. E 32 stipulated that immediate write-off of goodwill should be eliminated. In 1993, revised IAS 22 was issued, which made of capitalization the only allowed treatment for goodwill. This statement became operative for financial statements covering periods beginning on or after 1 January 1995, but early adoption was encouraged.

The FER’s position followed a similar evolution. Prior to 1994, there was no provision on goodwill. The only requirement of ARR 2 – Consolidated Financial Statements (issued 1986) was to disclose the accounting treatment of goodwill. Things changed with the issuance of ARR 9 – Intangible assets according to which goodwill capitalization is the benchmark treatment. Immediate write off of goodwill is still allowed, provided that the resulting effects on the balance sheet and the income statement are disclosed in the notes to the accounts. This recommendation, adopted in 1994, is applicable to periods beginning on or after 1 January 1996.

From this evolution, it is clear that capitalization has progressively emerged as the best accounting practice for goodwill, both at an international and Swiss level. As early as 1993, firms knew they would have to adopt it by 1995 if they wanted to follow IASC’s prescriptions. Companies complying only with ARRs or legal requirements had more discretion. They can still use immediate write off but they cannot ignore that this treatment is not favored by the FER.

As in most countries where both treatments were allowed⁴, most Swiss firms have for a long time adjusted goodwill immediately against reserves. Nevertheless, the proportion of capitalizing firms increased dramatically in recent years (table 1), to such a point that capitalization is now the most commonly used treatment for goodwill. To the extent that compliance with IAS is optional

⁴ See for example Nobes (1992).
and ARR 9 does not preclude immediate write off, this evolution can be interpreted as reflecting a tendency to voluntarily conform to what appears as the best accounting practice. Incidentally, it shows that standards do not have to be mandatory to induce considerable changes in accounting practices.

Mandatory or not, the adoption of goodwill capitalization has, for firms engaged in business combinations, an effect both on equity and net income, which provides the basis for deriving hypotheses about the adoption timing.

4. HYPOTHESES

Hypotheses are drawn from political costs, agency relationships, profitability, international visibility and the impact that goodwill capitalization had or would have on consolidated financial statements.

Political costs

Since the pioneering work of Watts and Zimmerman (1978), the fear of political costs is a traditional explanation for accounting choices. Political costs are costs imposed by the political process on firms whose returns are perceived as excessive. They may consist of additional expenses (for example specific taxes), or opportunity costs such as limitations on tariffs for firms which operate in regulated industries. Large firms are traditionally considered as particularly sensitive to political costs because they are more visible to politicians and public opinion. They should thus have a tendency to select income-decreasing accounting policies, especially when these are considered as best practices. In as much as goodwill capitalization implies lower future earnings, the following hypothesis can be formulated:

H1 : Early adopters of goodwill capitalization are larger than late adopters.
Ownership diffusion

Managers’ compensation is dependent on firm’s performance because of bonus plans and/or stock options. If compensation contracts are not fully adjusted for the financial effects of accounting policy changes, the adoption of income-decreasing policies should result in a reduction of managers' wealth. Inferior earnings may also make stockholders unsatisfied with the firm's performance and consequently, increase managers' threat of being removed. Managers who do not hold a large part of capital should thus be particularly reluctant to adopt an income-decreasing policy. Accordingly:

H2 : Early adopters of goodwill capitalization have a proportion of capital held by managers higher than late adopters.

Leverage

Jensen and Meckling (1976) have pointed out that stockholders and creditors have opposite interests in the management of borrowed funds. Because they can be viewed as holders of a call option on the firm's value, owners have an incentive to invest these resources in projects riskier than the firm. In so doing, they increase the market value of equity at the expense of creditors. In order to limit these wealth transfers, creditors often impose debt covenants which restrict management’s actions. In Switzerland, debt covenants are not a common practice. Nevertheless, there is no doubt that creditors base their decision partly on performance and capital structure ratios. Swiss managers should thus be attentive to the effect of accounting choices on earnings and net assets.

With regard to the treatment of goodwill, the implications are ambiguous. On the one hand, goodwill capitalization increases net assets but reduces future earnings because of amortization. On the other hand, when goodwill is written off in the year of acquisition, future earnings are not affected but net assets may be greatly reduced. It is thus difficult to determine a priori which treatment managers will consider as more beneficial to borrowing capacity. If they believe that lenders are primarily concerned with debt ratios, they should favor goodwill capitalization and thus adopt it early. Inversely, if they believe that lenders are more concerned with profitability, they should prefer immediate write-off and defer the adoption of goodwill capitalization.
Accordingly, leverage could be expected to have an influence but its direction is impossible to predict. Two mutually exclusive hypotheses can thus be formulated:

H3a: Early adopters of goodwill capitalization are more leveraged than late adopters.

H3b: Early adopters of goodwill capitalization are less leveraged than late adopters.

**Profitability**

Companies must report profitability sufficient to satisfy stockholders and convince potential investors to subscribe for stocks or bond issues. To the extent that goodwill capitalization reduces future earnings, poorly performing firms should be inclined to defer its adoption. Stated differently:

H4: Early adopters of goodwill capitalization are more profitable than late adopters.

**International visibility**

The main characteristic of the Swiss accounting regulation is its permissiveness. Hidden reserves are tolerated practically without limitation, as well as discretionary accounting policy changes. That makes earnings management very easy, which is prejudicial to financial statements credibility, specially for foreign investors which are not familiar with such practices. This lack of credibility should be particularly harmful for firms which realize a large part of their activities outside Switzerland because they are probably more dependent on foreign financial markets than those which operate domestically. In this context, voluntary compliance with what is considered as best practice may increase confidence in financial statements. This confidence can even be increased by systematically adopting new international standards as soon as they are issued to the extent that early adoption shows the firm's concern for being in conformity with the most updated regulation. Accordingly, the following hypothesis can be formulated:

H5: Early adopters of goodwill capitalization are more internationally diversified than late adopters.
Acquisition activity

One cannot investigate the adoption timing of a new practice without considering the impact that this practice has or would have on the financial statements of adopting firms. The effects of goodwill capitalization are dependent on the firm's acquisition policy. Companies engaged in large acquisitions are faced with a difficult choice because each treatment may have a significant impact either on future earnings, or on equity. As noted before, it is not possible to predict which treatment they will prefer because their choice will depend on how they imagine investors are reasoning. For firms which are not very active on the market for corporate control, the problem is simpler. Since the potential impact on their performance and financial position is limited, these firms should not see a particular disadvantage in adopting a new treatment as soon as it appears as best practice. Accordingly:

H6: Early adopters of goodwill capitalization are less active on the market for corporate control than late adopters.

5. METHODOLOGY

The sample

At the end of 1997, 216 Swiss companies had their shares listed on the Swiss Exchange\(^5\). This number includes 28 banks and 10 insurance companies which have been excluded from the study because they are subject to specific legal requirements. Out of the remaining 178 companies, 41 were eliminated because of non-availability of their annual report\(^6\). 26 other firms were also excluded due to the absence of group accounts\(^7\) or because their financial statements were not

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\(^6\) Most of these firms are small family-hold enterprises whose stock is not actively traded and which provide financial statements to their stockholders only.

\(^7\) In Switzerland, as in most European countries, all companies are required to prepare individual financial statements. Those with subsidiaries must in addition disclose consolidated accounts.
informative enough to determine how they account (or would account) for goodwill\(^8\). Among the remaining 111 companies, 24 were still deducting goodwill from reserves. The sample is thus composed of 87 firms which adopted goodwill capitalization at the latest in 1997.

As shown in table 1, 1995 is the key-year in the evolution of Swiss accounting practices with regard to goodwill. Prior to that date, a majority of firms used to deduct goodwill from reserves in the year of acquisition. In 1995, the tendency reversed and goodwill capitalization became the most popular treatment. Since most of accounting changes occurred in 1995, this year was used as a threshold to distinguish between early and late adopters of goodwill capitalization. This study thus opposes firms which began goodwill capitalization in 1995 or later (43 companies) to those which adopted this treatment earlier (44 firms).

- Insert table 1 about here -

**The variables**

Variables are defined in table 2. The adoption timing is measured by a dummy variable AT, taking the value 1 in case of early adoption (adoption year 1994 or before), and 0 if the adoption of goodwill capitalization is considered as late (adoption year 1995, 1996 or 1997).

- Insert table 2 about here -

Size is measured by the natural logarithm of sales. The best variable reflecting managers’ reluctance to adopt income-decreasing accounting policies would probably be the proportion of capital held by directors. Unfortunately, no Swiss firm discloses such data. The only sometimes available information is the identity and proportion of stocks held by main stockholders, which provides an estimation of ownership diffusion. When not given in the annual report, this information can generally be found in the *Guide des actions suisses*\(^9\), a publication issued annually with the collaboration of the three major Swiss banks. Due to the lack of more appropriate information, ownership diffusion was used to proxy for agency costs between

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\(^8\) These firms did not describe the accounting treatment of goodwill and nothing in their financial statements provided an indication of how it (if any) had been accounted for. In most cases, this lack of information was probably a sign that these firms had never made acquisitions and that, accordingly, they did not feel the need to indicate how they would account for goodwill in the unlikely event they should have to do so.

managers and stockholders. The rationale is that firms whose ownership is highly concentrated are more likely to be managed by large stockholders than companies whose capital is diffused amongst numerous and unknown holders\textsuperscript{10}. Ownership diffusion is estimated by OD, defined as the percentage of stock not held by known stockholders, identified as mentioned above.

Leverage is measured by the long-term-debts-on-total-assets ratio (LEV). As mentioned above, this measure does not specifically proxy for proximity with debt covenant violation. It is rather an indicator of debt capacity or ability to raise borrowed funds at favorable conditions.

Because the adoption of goodwill capitalization has effects on future earnings, profitability measures should ideally be based on managers' expectations. Unfortunately, these forecasts (in so far as they exist) are never disclosed by Swiss firms. Consequently, an historical return-on-assets ratio (ROA) was employed. To compensate for annual variations, I used average values computed on years 1991 to 1994\textsuperscript{11}. Substituting historical rates to expectations should not result in considerable biases for two reasons. First the accounting treatment of goodwill has effects whose length largely exceeds managers' economic horizons. Secondly, due to the consistency principle, accounting policy choices are long-term decisions which cannot be easily reversed. Accordingly, managers are likely to take them, not on the basis of short-term expectations, but rather with an estimation of the firm's earnings capacity in mind, for which past performance is generally a good estimation. Given that the policy used for goodwill accounting has an impact on earnings, returns should be calculated before goodwill amortization. Unamortized goodwill was thus deducted from total assets. The adjustment of earnings was more difficult because only a small number of capitalizing firms disclose goodwill charged to income every year. When the information was available, the adjustment was made. A bias may result from correcting only some earnings but it is probably less than if no adjustment had been made.

Listing on a foreign stock exchange is likely to be the primary factor of international visibility. Multi-listed companies must provide foreign investors with financial statements prepared in conformity with local GAAP or well-established accounting standards. Dumontier and Raffournier (1998) have shown that Swiss companies listed on a foreign stock exchange are more

\textsuperscript{10} Several studies on accounting choices made a similar assumption, e.g. Dhaliwal et al. (1982) and Hunt (1985).

\textsuperscript{11} Given that the decision under study was taken in 1994 at the latest, data had to be measured on periods ending in 1994.
likely to comply with IAS than those listed on their domestic market only. Accordingly, international visibility was measured first with a dummy variable (LIST) taking the value 1 when the firm was listed on a foreign stock market and 0 otherwise. In fact, only a small number of Swiss companies are listed abroad. 13 firms are listed outside Switzerland: 7 in Europe only (mainly on the London Stock Exchange, the SEAQ and the Frankfurt Stock Exchange) and 6 both inside and outside Europe (NYSE, NASDAQ and Tokyo Stock Exchange).

Listing on a foreign stock exchange is not a necessary condition for international visibility. By nature, all internationally-diversified companies, irrespective of their listing status, are more exposed to international scrutiny than those which operate on their domestic market only. Their customers and suppliers are located in various countries with diverse accounting standards. Preparing financial statements in conformity with every national regulation would be too costly and probably impossible. Firms which operate internationally may thus have an interest in complying with IAS or with the only widely-used alternative, US GAAP; both of them being in favor of goodwill capitalization. To test for the influence of international activity, I used the percentage of sales realized outside Switzerland (INT1). Given that the adjustment of goodwill against reserves was, at the time of the study, accepted by several European countries (Germany and United Kingdom in particular\textsuperscript{12}), I also defined another variable (INT2) representing the percentage of sales realized outside Europe. Many companies do not disclose the proportion of sales realized within Switzerland, probably because they consider that their national market is too small to be a relevant geographical segment. As a consequence, INT1 exhibits a relatively large proportion of missing values.

To properly estimate the effect that goodwill capitalization has on accounting figures, it would be necessary to know the amount of goodwill included in the cost of acquisitions realized during the period. Unfortunately, disclosures are rarely so detailed. In most cases, the only source of information is the description of movements in intangible assets or equity. In as much as goodwill generated from the acquisitions of the year could be estimated from this source, acquisition intensity was measured by dividing this amount by equity (ACQ2) or the absolute value of net income (ACQ1). Given that acquisitions are extraordinary events, there could be

\textsuperscript{12} In the U.K., FRS 10 which requires goodwill capitalization is effective only for financial years ending 23 December 1998 onwards.
considerable variations in the amount of goodwill arising over years. Accordingly, I used the average value of these ratios for the years 1991 to 1994.

6. THE RESULTS

Univariate tests

The results of univariate analyses are shown in table 3. Given the relatively small size of the sample, a Kolmogorov-Smirnov test was conducted to check that observations were normally distributed. ACQ1 and ACQ2, for which the normality assumption was rejected, were treated with the non-parametric Mann-Whitney U test, while a Student t-test was performed for other continuous variables. A chi-square test was run for the categorical variable LIST.

Contrary to expectations, firms which adopted goodwill capitalization before 1995 are slightly smaller than those which deferred adoption until 1995 or later. The difference is significant at level 0.1. To the extent that LSAL is strongly and positively correlated with ACQ2 (see appendix), a variable which negatively influences the decision to early adopt goodwill capitalization, it is possible that the sign of LSAL reflects the impact of acquisition activity more than it expresses the influence of size per se. The multivariate analysis will make this point clearer.

As expected, ownership is more diffuse in early adopters than in companies which have postponed the adoption of goodwill capitalization. The difference is significant at level 0.1.

I emphasized above that the influence of leverage was difficult to predict because of the opposite effects of goodwill capitalization on equity and earnings. The evidence is that early adopters are significantly more leveraged than late adopters. Hypothesis H3a is thus validated. This result suggests that managers believe that a decrease of future earnings is less prejudicial to borrowing conditions than a fall in equity or, alternatively stated, that lenders are more concerned with debt-to-equity ratios than with profitability.
The influence of profitability is not supported by empirical evidence. The ROA variable is not significant and its direction is even opposite to what was expected. This finding must however be interpreted with prudence given the difficulty to adjust earnings fully for goodwill amortization on the basis of information contained in annual reports.

Internationally visible firms were expected to adopt goodwill capitalization early in order to conform to what is considered as best practice at the international level. This hypothesis is not supported by empirical evidence since no significant difference was found, neither for international diversification (INT1 and INT2) nor for foreign listing (LIST).

As expected, firms for which purchased goodwill is large relative to equity (ACQ2) or net income (ACQ1) have adopted goodwill capitalization later than companies with a smaller amount of acquired goodwill. The influence of acquisition intensity is thus clearly supported.

**Multivariate analysis**

A logistic regression was run to take into account the interactions between independent variables. The results are shown in table 4.

*Insert table 4 about here*

The logit analysis confirms the results of univariate tests. All variables have the same sign than when considered solely, but only two of them (ACQ2 and LEV) are statistically significant. As expected, firms which are the most active on the market for corporate control show a strong tendency to postpone goodwill capitalization. The second most influential variable is leverage: the more indebted a firm is, the higher its propensity to capitalize goodwill early. Overall, the model correctly classifies 61.5 % of observations and is statistically significant at the 1 % level.

The influence of size, which was strong in univariate analyses, disappears when LSAL is in conjunction with other variables. This finding confirms the assumption that size does not play a proper role in the adoption timing of goodwill capitalization but that its apparent negative influence is a consequence of its high correlation with acquisition intensity.
CONCLUSION

For many years, most Swiss companies used to deduct goodwill from reserves in the year of acquisition. This tendency reversed recently to the point that capitalization is currently the most popular accounting treatment for goodwill. This evolution coincides with the issuance of new accounting standards which express the clear preference of standard setters for goodwill capitalization. Since 1995, IAS 22 requires that goodwill resulting from business combinations be capitalized and systematically amortized over its useful life. This treatment is also recommended by the Swiss accounting recommendation on intangibles ARR 9. To the extent that none of these standards is mandatory, the move toward goodwill capitalization can be interpreted as a consequence of Swiss companies’ wish to comply with what can be considered as “best accounting practice”.

Compared to the alternative treatment which consists in adjusting goodwill against reserves in the year of acquisition, capitalization induces an increase of equity and a decrease of future earnings because of goodwill amortization. Some firms changed their policy as soon as revised IAS 22 and ARR 9 were issued, while others postponed goodwill capitalization until 1995, when revised IAS 22 was implemented, or even later. This study investigates factors associated with early adoption of goodwill capitalization by opposing firms which used this treatment prior to 1995 to those which postponed its adoption until 1995 or later.

The results show that early adopters of goodwill capitalization are significantly less active on the market for acquisitions and less leveraged than late adopters, suggesting that the likelihood of early application of a new standard depends primarily on the magnitude of the impact that the standard would have on accounting figures. The influence of internationality, profitability, firm’s size and ownership diffusion is not validated by empirical evidence.

This study expands prior work on the adoption timing of new standards by considering the influence of standards whose application is not enforced by the law, the accounting profession or the market authorities. The evidence is, for a large part, consistent with prior studies conducted in a highly regulated environment as the US. This suggests that economic pressures may be sufficient to induce application of best practice, even in the absence of legal or institutional
enforcement dispositions. This finding is of particular interest for the IASC as well as national standard setting bodies.
REFERENCES


**Table 1. The accounting treatment of goodwill**  
(firms in the sample)

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Table 2. The variables

Dependent variable:

\[ AT = \begin{cases} 
1 & \text{if the firm began goodwill capitalization prior to 1995} \\
0 & \text{if the firm began goodwill capitalization in 1995 or later} 
\end{cases} \]

Explanatory variables:

Size:

\[ LSAL = \text{Natural logarithm of sales} \]

Ownership diffusion:

\[ OD = \% \text{ of capital held by unknown shareholders} \]

Leverage:

\[ LEV = \frac{100 \times \text{long-term debts}}{\text{total assets}} \]

Profitability:

\[ ROA = 100 \times \text{mean of } \frac{\text{net income}^*}{\text{total assets}^{**}} \text{ computed on years 1991 to 1994} \]

International visibility:

\[ \text{INT1} = \% \text{ of sales outside Switzerland} \]
\[ \text{INT2} = \% \text{ of sales outside Europe} \]
\[ \text{LIST} = 1 \text{ if the firm is listed on a foreign stock exchange} \\
0 \text{ otherwise} \]

Acquisition intensity:

\[ \text{ACQ1} = \text{Mean of } \frac{\text{goodwill on acquisitions of the year}}{\text{net income}^*} \text{ computed on years 1991 to 1994} \]
\[ \text{ACQ2} = \text{Mean of } \frac{\text{goodwill on acquisitions of the year}}{\text{equity}^{**}} \text{ computed on years 1991 to 1994} \]

* Adjusted for goodwill amortization charge (when information is available)

** Adjusted for goodwill accounting treatment (when information is available)
Table 3. Determinants of the adoption timing of goodwill capitalization: Univariate tests

<table>
<thead>
<tr>
<th>Continuous variables (expected sign)</th>
<th>Beginning of goodwill capitalization</th>
<th>Number of observations</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Student t (signif.)</th>
<th>Mann-Whitney U (signif.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAL (+)</td>
<td>Prior to 1995</td>
<td>44</td>
<td>6.421</td>
<td>1.363</td>
<td>-1.698 (0.093)</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>43</td>
<td>6.979</td>
<td>1.682</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OD (-)</td>
<td>Prior to 1995</td>
<td>43</td>
<td>44.55</td>
<td>22.67</td>
<td>-1.750 (0.084)</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>43</td>
<td>54.00</td>
<td>27.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV (?)</td>
<td>Prior to 1995</td>
<td>43</td>
<td>34.09</td>
<td>16.75</td>
<td>2.341 (0.022)</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>43</td>
<td>26.77</td>
<td>12.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA (+)</td>
<td>Prior to 1995</td>
<td>44</td>
<td>3.776</td>
<td>2.958</td>
<td>-1.346 (0.182)</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>43</td>
<td>4.649</td>
<td>3.086</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT1 (+)</td>
<td>Prior to 1995</td>
<td>30</td>
<td>56.50</td>
<td>36.74</td>
<td>-1.163 (0.250)</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>30</td>
<td>66.50</td>
<td>29.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT2 (+)</td>
<td>Prior to 1995</td>
<td>42</td>
<td>23.77</td>
<td>23.81</td>
<td>-1.081 (0.283)</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>42</td>
<td>29.21</td>
<td>22.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACQ1 (-)</td>
<td>Prior to 1995</td>
<td>41</td>
<td>44.43</td>
<td>115.12</td>
<td>NA</td>
<td>594.0 (0.008)</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>43</td>
<td>57.03</td>
<td>88.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACQ2 (-)</td>
<td>Prior to 1995</td>
<td>41</td>
<td>1.521</td>
<td>3.201</td>
<td>NA</td>
<td>534.0 (0.001)</td>
</tr>
<tr>
<td></td>
<td>1995 or later</td>
<td>43</td>
<td>4.431</td>
<td>5.075</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Categorical variable</th>
<th>Beginning of goodwill capitalization</th>
<th>Chi-square test (signif.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prior to 1995</td>
<td>1995 or later</td>
</tr>
<tr>
<td>LIST = 1</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>LIST = 0</td>
<td>40</td>
<td>35</td>
</tr>
</tbody>
</table>

NA : Not appropriate
Table 4. Determinants of the adoption timing of goodwill capitalization: Multivariate logit analysis

\[ AT = \alpha_1 \text{LSAL} + \alpha_2 \text{OD} + \alpha_3 \text{LEV} + \alpha_4 \text{ROA} + \alpha_5 \text{INT2} + \alpha_6 \text{LIST} + \alpha_7 \text{ACQ2} + \text{Constant} \]

Total number of cases: 83

<table>
<thead>
<tr>
<th>Variables (expected sign)</th>
<th>Coefficient</th>
<th>Wald</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAL (+)</td>
<td>-0.190</td>
<td>0.764</td>
<td>0.382</td>
</tr>
<tr>
<td>OD (-)</td>
<td>-0.012</td>
<td>1.365</td>
<td>0.243</td>
</tr>
<tr>
<td>LEV (?)</td>
<td>0.048</td>
<td>5.834</td>
<td>0.016</td>
</tr>
<tr>
<td>ROA (+)</td>
<td>-0.045</td>
<td>0.218</td>
<td>0.640</td>
</tr>
<tr>
<td>INT2 (+)</td>
<td>0.010</td>
<td>0.608</td>
<td>0.436</td>
</tr>
<tr>
<td>LIST (+)</td>
<td>-1.130</td>
<td>1.227</td>
<td>0.268</td>
</tr>
<tr>
<td>ACQ2 (-)</td>
<td>-0.215</td>
<td>6.602</td>
<td>0.010</td>
</tr>
<tr>
<td>Constant</td>
<td>1.926</td>
<td>0.837</td>
<td>0.360</td>
</tr>
</tbody>
</table>

Model chi-square: \( \chi^2 = 19.36 \) (signif. = 0.007)

Cox-Snell \( R^2 = 0.208 \)

Classification table

<table>
<thead>
<tr>
<th></th>
<th>Predicted</th>
<th></th>
<th>% correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AT = 1</td>
<td>AT = 0</td>
<td></td>
</tr>
<tr>
<td>AT = 1</td>
<td>24</td>
<td>17</td>
<td>58.5</td>
</tr>
<tr>
<td>AT = 0</td>
<td>15</td>
<td>27</td>
<td>64.3</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td>61.5</td>
</tr>
</tbody>
</table>
**APPENDIX**

Matrix of correlations

<table>
<thead>
<tr>
<th></th>
<th>LSAL</th>
<th>OD</th>
<th>LEV</th>
<th>ROA</th>
<th>INT2</th>
<th>ACQ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSAL</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OD</td>
<td>0.271*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>-0.031</td>
<td>-0.028</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>-0.102</td>
<td>-0.001</td>
<td>-0.287**</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT2</td>
<td>0.330**</td>
<td>0.200</td>
<td>-0.268*</td>
<td>0.238*</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>ACQ2</td>
<td>0.450**</td>
<td>0.201</td>
<td>0.074</td>
<td>0.209</td>
<td>0.247*</td>
<td>1.000</td>
</tr>
</tbody>
</table>

** Correlation significant at level 0.01
* Correlation significant at level 0.05