DOCTOR OF PHILOSOPHY

The timeliness of income recognition by European companies : an analysis of institutional complexity

Raonic, Ivana

Award date:
2003

Awarding institution:
University of Wales, Bangor

THE TIMELINESS OF INCOME RECOGNITION BY EUROPEAN COMPANIES: AN ANALYSIS OF INSTITUTIONAL COMPLEXITY

By Ivana Raonic

A Thesis Submitted to the University of Wales

in Fulfilment of the Requirements

for the Degree of Doctor of Philosophy

School for Business and Regional Development

University of Wales, Bangor

United Kingdom

December 2003

Acknowledgements

I would like to thank my supervisor Prof. Stuart McLeay who guided my work from the very beginning, and who, with optimism, vision and generosity helped me to become a part of a great team of international researchers.

I would like to express my gratitude also to Prof. Giuseppe Catturi who invited me to come and work as a researcher in the University of Siena, and made it possible to do so, and to Prof. Angelo Riccaboni and Prof. Roberto di Pietra who gave me space and time to complete my Ph.D, and to everyone in the Dipartimento di Studi Aziendali e Sociali in Siena who welcomed me and accepted me from the beginning.

I thank all the faculty members of the 'Harmonia' project who followed my research for almost three years and who helped with valuable comments and suggestions.

Also, and equally important I thank my friends, the 'Harmonia' young researchers, for our unforgettable moments together, for humour, for moral support and for laughter, which have added another but vital dimension in entering the world of academic research.

Finally, I thank my family. To my parents, Dragana and Milan who have always encouraged my curiosity and my dreams with wisdom and optimism, and who let me fly which I could because I have known that, in case I stumble, they are there. To Aleksandra and Miloš, my sister and my brother who are the colours and the joy in my life.

Contents

List of Tables

LIST OF GRAPHS

1. Introduction

This thesis investigates differences in income recognition in Europe and the effects of the institutional complexity that surrounds European financial reporting. Empirical evidence documents significant international variations in the information contained in earnings (Pope & Rees (1992), Harris et al. (1994), Joos & Lang (1994)). Furthermore, other evidence suggests that a wide range of institutional frameworks and accounting practices continues to exist in Europe despite the processes of accounting regulation convergence and harmonization that have been under way over the past 25 years (McLeay (1999)). Given the above, this study attempts to explain asymmetric timeliness in income recognition by understanding the effects of various institutional environments on the properties of accounting earnings.

During the past decade the structure of European equity markets has changed dramatically, and an increasing number of firms raise capital beyond the borders of their domestic market. Accordingly, this study also takes into consideration the fact that many European companies operate across integrated capital markets rather than within single segmented markets

Research Questions

The thesis addresses several research questions. First, it assesses the degree of asymmetric timeliness of accounting earnings in reflecting negative relative to positive changes in equity market value in an international comparison across thirteen European countries.

In particular it addresses the case of European firms operating in several markets and listing their shares on different stock exchanges, which are therefore sensitive to different requirements in the various jurisdictions involved.

Next, the study emphasizes the importance of understanding the way that international differences in the timeliness and asymmetric timeliness of accounting earnings are linked through institutional variables. Recent work by Pope & Walker (1999) analyses the difference in conservatism between US and UK firms that operate in two regimes under separate sets of accounting standards. Ball, Kothari & Robin (2000) also address similar issues and document differences in the timeliness and conservatism of firms from a wider range of countries where the legal framework varies from common law to code law regimes. This study considers a more comprehensive set of European countries and a unique dataset of firms interlisted on European stock exchanges, some of which are also listed in New York.

The thesis emphasizes the importance of two major issues. First, it recognizes and accounts for the institutional complexity that extends beyond the usual one-dimensional approach in international comparison studies that employs criteria based on either a country's legal origin (e.g. common law versus code law) or its corporate governance characteristics (e.g. shareholder versus stakeholder regimes). Second, it focuses on firm-specific international exposure to different regulatory environments and capital markets in the European context and it develops the methodological approach accordingly. That is to say, previous research studies have tended, by design, to account only for the influences of firm domiciles, whereas the research presented in this thesis models the impact of the various jurisdictions in which firms operate.

Recent Research Design Developments

In the recent published work on earnings and stock prices, there have been developments in research design that are particularly relevant to the issues addressed in this study. Notably, Basu provides a modelling framework in which earnings conservatism is defined as the incremental sensitivity of contemporaneous accounting

earnings to current negative changes in the market value of equity relative to the positive changes.

This thesis builds on the recent advances in empirical studies that have applied Basu's methodology. As noted above, it contributes to the empirical literature by linking accounting conservatism to institutional frameworks in the countries involved, by focusing on firm-specific international exposure to different regulatory environments and adjusting the modelling approach accordingly.

In order to achieve this, the study draws on recent advances in the corporate governance literature (La Porta et al. (1997, 1998), Leuz et al. (2002)). In fact, by taking into consideration the results of recent surveys on how corporate governance practices are evolving among major European firms, a new set of contextual measures is constructed in order to capture the complexity of the environment in which European interlisted firms operate. Thus, in order to explain the observed variation in accounting earnings' timeliness and conservatism in Europe, this new set of contextual factors is introduced into the modelling framework, and their effect is then considered in the empirical analysis that provides strong support for the arguments put forward in this thesis..

Empirical Results

With respect to the properties of accounting earnings, the results show the existence of asymmetric timeliness of income recognition of European interlisted firms, both in terms of faster incorporation of current 'bad news' relative to 'good news' into current earnings, and in the delayed recognition of prior period 'good news' in current earnings. The empirical evidence shows a common growing trend in conservatism in Europe.

The results also provide evidence of similarity among European interlisted companies in terms of their degree of earnings conservatism, especially when compared to the earnings conservatism of firms that list their shares only within domestic markets. This finding supports the prediction of greater similarity in the conservative behavior of

accounting earnings for firms that are exposed to an international institutional environment.

At the same time, existing differences in earnings sensitivity to market news across countries can be explained by the interaction of institutional factors that drive the demand for accounting earnings recognition across different markets. Indeed, the empirical analysis in this thesis demonstrates not only how corporate governance practices and investor protection rules differ around Europe but also that earnings timeliness and asymmetric timeliness are strongly influenced by the quality of corporate governance and the level of investor protection. In particular, when the enforcement of legal rules is efficient, firms domiciled in countries with stronger investor protection and better quality of corporate governance exhibit greater earnings conservatism.

Structure

Chapter 2 provides a discussion of market research in accounting with particular attention first to financial accounting research on the association between the information in financial statements and the information expressed by share prices (Section 2.2), second to research on accounting timeliness and conservatism and the development of appropriate models (Sections 2.3 and 2.4), and finally to their empirical application in international studies (Section 2.5).

Chapter 3 discusses research on the regulatory environment with special attention to legal rules, the importance of financial markets (Section 3.2) and corporate governance (Section 3.3) and their implication for accounting earnings. Also in Chapter 3, a new institutional framework is developed (Section 3.4).

Chatper 4 discusses the empirical evidence in the research literature regarding the impact of international listing on share prices (Section 4.2) and sets out listing positions across European markets and domiciles (Section 4.3).

Chapter 5 presents the modelling framework. This comprises the development of a modified methodological approach in which the asymmetric timeliness of earnings is linked with the features of institutional frameworks that are brought down to the level of the single firm (Section 5.2), and the construction of a model in which new indexes of corporate governance and investor protection are considered together with the asymmetric timeliness of earnings (Section 5.3).

Chapter 6 describes the data selection, and presents and discusses the empirical findings. Finally, Chapter 7 provides an overview of the study and draws conclusions.

2. The Properties of Earnings

2.1 Introduction

Investors are the primary parties with an interest in reliable financial accounting information on which to base their investment decisions, as they use this information to estimate firm value. Investors therefore demand value relevance for accounting figures. In financial accounting research, this concept of value relevance has been explored extensively, with accounting figures being considered value-relevant if they display a high degree of correlation with the market value of a firm's equity.

Much of contemporary financial accounting research has been focused on evaluating the association between the information in financial statements and the information contained in share prices. The assumption has been that the higher the correlation between accounting figures and market values, the more value-relevant financial statements are and therefore the more useful they are to investors. More specifically, the concept of value relevance is strongly tied to the timeliness of accounting results, that is to say how timely the accounting earnings are in reflecting value-relevant events.

Timeliness is one of the properties of accounting earnings that has attracted much attention in the recent financial accounting research referred to above. These studies provide evidence that, in general, the information set reflected in share prices is richer than that expressed as accounting earnings over the same period. Compared to share prices, which reflect market revisions regarding the expectations of future earnings as well as the earnings attained over the period, contemporaneous earnings have limited ability to contemporaneously reflect the market's revised expectations of future cash flows. This limited ability is due to the tendency for accountants to require a higher degree of verification before recognizing revenues and gains as compared to expenses and losses, i.e. accounting conservatism (Kothari & Sloan, 1992). For example,

accounting earnings for a given period are not likely to reflect the firm's transactions that will generate cash flow in the future (e.g. research and development) whereas market share prices are. As, on average, market expectations are eventually captured by earnings, share prices lead accounting earnings.

The models that describe the relationship between market value and accounting earnings often use the current share price or the return over a given period as a variable that represents the market value of equity. If it is assumed that current earnings reflect all the information in current returns, and that the current share price is affected only by the information contained in current and past earnings, while also assuming that earnings follow a random walk, a simple association model in this respect is represented by the following equation (Kothari, 1992):

$$P_t = E_t(X_{t+1})/r \qquad (2.1)$$

where P_t refers to the share price at the end of period t, $E_t(X_{t+1})$ are the future earnings from period t+1 as expected in period t and r is the risk-adjusted discount rate that is assumed to be constant over time. Since earnings follow a random walk, the market uses only the information expressed by current earnings to anticipate earnings in future periods, therefore $E_t(X_{t+1})$ can be replaced by current earnings, X_t:

$$P_t = X_t/r \qquad (2.2)$$

In this simplified (and somewhat unrealistic) framework, the time-series behaviour of earnings as anticipated by the market is no different from that of attained earnings. A simple linear model that captures the association between contemporaneous prices and earnings in this respect would be:

$$P_t = \alpha + \beta X_t + \varepsilon_t \qquad (2.3)$$

where P_t is the ex-dividend share price at time t, Xt is earnings for period t, α and β are intercept and slope coefficients respectively and ε is the error term. The slope coefficient, or earnings response coefficient, has a theoretical value of 1/r, whereas the intercept coefficient is expected to be zero. In the literature, the above model is usually referred to

as the price earnings model. If regression equation (2.3) is deflated by share price at the beginning of period t, the is restated as:

$$R_t = \alpha + \beta X_t/P_{t-1} + \varepsilon_t \qquad (2.4)$$

where Rt is the return over the period t and equals P_t/P_{t-1}. Equation (3) is usually referred to as the returns earnings model in the financial accounting research literature.

2.2 Prices and Earnings

Prices Leading Earnings

Taking into consideration the key assumptions underlined above (the random walk in earnings and prices that are formed on the basis of information contained in current and past earnings), the slope coefficients in both price and return models are the same and equal to 1/r (Kothari and Zimmerman, 1995).

Using these models, much financial accounting research has been focused on investigating the properties of earnings and earnings response coefficients. However, in many cases, concern has been expressed that the strength of the contemporaneous price-earnings relationship is weak (the R-sq and the earnings response coefficient β from model (2) are used to measure the strength of this association and are generally of low significance). The general consensus in the literature is that this weakness of the price (return) association with earnings is due to the fact that investors use a richer information set when forming their expectations, resulting in an unbiased assessment of the present value of expected net cash flows. At the same time, objectivity, conservatism and the historical-cost accounting measurement process each limit the ability of accounting earnings to reflect shareholders' expectations of future cash flows. So, the information set impounded in earnings and in prices for a given period are not the same. That is, the market expectations of future earnings, conditioned by all the information that is

available, vary from the expectations of a random walk of earnings (Kothari and Zimmerman, 1995).

Using Alternative Price/Earnings Specifications

In an attempt to come up with a price (return)-earnings model with greater explanatory power, Kothari (1992) compares the alternative specifications of the price (return)-earnings regression when earnings as explanatory variables are specified as: (1) an earnings level deflated by price, (2) an earnings change deflated by price, (3) an earnings level deflated by the prior year's earnings, (4) an earnings change deflated by the prior year's earnings and (5) market-unexpected earnings, using two alternative assumptions: that (a) prices do not lead earnings and (b) that prices do lead earnings.

Under the assumption that only earnings affect stock prices and that the market's expectations of future earnings are based solely on the performance of past earnings, the relationship between prices and earnings is deterministic. Therefore the explanatory power (the R-sq) is one and it is irrelevant whether earnings levels or changes are used as a current earnings specification or whether the earnings for a period are deflated by prices or prior period earnings.

On the contrary, if it is assumed that the market possesses more information than that contained in past earnings, then the market is able to anticipate a portion of future earnings (prices lead earnings). In this framework, only the unanticipated, surprise component of contemporaneous earnings is relevant in explaining contemporaneous annual returns, whereas the rest is anticipated in earlier periods. Since contemporaneous earnings reflect information that is irrelevant for contemporaneous returns, the slope coefficient from the simple regression (2.4) will be biased toward zero and the explanatory power of the model will be relatively low.

In such cases, when prices lead earnings, it is relevant whether earnings levels or changes are used as a current earnings specification. If the earnings level deflated by prices is used as the explanatory variable, the anticipated component from the

explanatory variable (earnings) is eliminated in a relatively efficient manner, leaving only the surprise component to explain the price change which results in a better specification of the model, a less biased slope coefficient and greater explanatory power. On the other hand, the earnings change deflated by price is not as efficient in eliminating the irrelevant anticipated component from the explanatory (earnings change) variable, thus creating an errors-in-variable problem, biased slope coefficients and reduced explanatory power. Also, the choice of a correct deflator is important for model specification when prices lead earnings. Kothari finds that prior-period earnings underperform price as a deflator, resulting in biased slope coefficients and low R-sq. This is due to the fact that when prior-period earnings are used as an earnings deflator, the dependent and independent variables are deflated by variables that reflect different information sets (price is deflated by price and earnings are deflated by prior period earnings) which results in a biased slope coefficient as compared to the slope coefficient when prices are used as an earnings deflator.

Of course, the most powerful test would employ a model where price changes are regressed on earnings surprises, but the problem is that it is difficult to obtain an accurate proxy for the market's unexpected earnings. Eventually, in order to calculate unexpected earnings, one may use analysts' forecasts[2] and compare them to the earnings actually attained, but analysts' forecasting figures usually only refer to the large companies they monitor, which typically operate in large, developed markets.

In a 'lack of earnings timeliness' or 'prices lead earnings' framework, the return model (stock returns regressed on scaled earnings) is compared to the price model (stock prices regressed on earnings per share), beginning with the random walk in earnings model (Kothari & Zimmerman ,1995):

[2] This limited coverage of companies by analysts is particularly pronounced for the purposes of international comparison studies.

$$X_t = X_{t-1} + \Delta X_t \qquad (2.5)$$

where it is assumed that as only a portion of earnings change, ΔX_t is a surprise to the market whereas the remaining components are anticipated by the market. Therefore the above equation can be rewritten as:

$$X_t = X_{t-1} + S_t + A_{t,t-1} + A_{t,t-2} \qquad (2.6)$$

where S_t is the portion of current earnings that comes as a surprise to the market in period t, $A_{t,t-1}$ and $A_{t,t-2}$ are the components of current earnings that have been anticipated by the market one and two periods ahead, respectively.

In this framework, when prices incorporate information regarding the expectations of future earnings, they do not turn out to be constant multiples (1/r or earnings response coefficient) of current earnings. They are greater than X_t/r (from equation 2.2) if the market anticipates earnings growth and lower than X_t/r if the market anticipates an earnings decline. Furthermore, investors' earnings expectations decrease the strength of the relationship between prices or returns and earnings in price or return models. In price models, prices are assumed to reflect the cumulative effect of present and past earnings as well as the anticipation of future earnings. As current earnings contain information on current and past earnings, only a portion of the variation in prices related to current and past earnings is explained by current earnings, whereas the component of price variation related to anticipated future earnings remains unexplained by an independent variable. This results in lower explanatory power due to the omitted-variable problem; however, the earnings slope coefficient is not biased.

On the other hand, in return models, the slope coefficient (earnings response coefficient) is biased toward zero. The response variable - current returns - reflects information regarding current and future earnings, whereas the explanatory variable –

earnings - reflects information from current and prior periods. Therefore, the earnings related to prior period information were already anticipated in prior period returns, and therefore are irrelevant in explaining the variation in current period returns. The consequence is that current earnings contain an error and the slope coefficient is measured with an error.

Moreover, earnings may be subject to noise which is value-irrelevant to returns (in all periods) and creates a downward bias on the earnings response coefficient, whichever model specification, price or returns, is adopted (Kothari & Zimmerman, 1995).

Dealing with Noise

Taking into account the lead-lag structure of the returns/earnings relationship, it is important to distinguish noise in earnings from the component that is value relevant to lagged (but not current) market returns due to the earnings' lack of timeliness (Collins et al, 1994). The difference between noise and a lack of timeliness is that the former arises when accountants estimate a discounted present value of future cash flows in a manner that differs from the market's assessment of that cash flow. Such noise is uncorrelated with returns from all periods, whereas the lack of timeliness results in an earnings component that is value-irrelevant for current returns, but was value-relevant for the prior period returns in which it was impounded.

In an attempt to strengthen the weak relationship between contemporaneous returns and earnings, it is worth going beyond the commonly-calculated contemporaneous returns/earnings regression. One way is to introduce additional explanatory variables that capture the current market's revisions regarding expectations of earnings growth for years in the future $\Delta E_t(X_{t+k})$, and k = 1,2,3,... (Collins et al., 1994):

$$R_t = \beta_0 + \beta_1 UX_t + \Sigma \beta_{k+1} \Delta E_t(X_{t+k}) + \varepsilon_t \quad (2.7)$$

where UX_t is the unanticipated earnings growth rate

However, the errors-in-variables problem remains unresolved, as the market's expectations for the future are proxied by future earnings that are obviously attained in the future. So, if both current and future earnings are broken into the following components:

current earnings: $X_t = UX_t + E_{t-1}(X_t)$ (2.8)

future earnings: $X_{t+k} = \Delta E_t(X_{t+k}) + UX_{t+k} + E_{t-1}(X_{t+k})$ (2.9)

then the value-irrelevant (for current returns) components are identified as measurement errors with a downward bias on the following regression's explanatory power:

$$R_t = \beta_0 + \beta_1[UX_t + E_{t-1}(X_t)] + \Sigma \beta_{k+1} [\Delta E_t(X_{t+k}) + UX_{t+k} + E_{t-1}(X_{t+k})] + \varepsilon_t \quad (2.10)$$

where the measurement errors (irrelevant to the current period returns) are either:

relevant to prior period returns: Et-1(Xt) and Et-1 (Xt+k), or
relevant to future period returns: UXt+k

The innovative contribution to the lead-lag issue in earnings is that, by identifying and isolating measurement errors, it is possible to find a set of variables that is correlated with measurement error variables and to introduce them as measurement error proxies in the regression. If the signs of the measurement error proxies are opposite to those of the

correlation between these proxies and the measurement error they proxy, the measurement error is considered to be subtracted from the explanatory variable of interest (Collins et al., 1994). The limitation of this methodology is that, in practice, the variables that proxy for measurement errors are imperfect. For example, the E/P_{t-1} ratio is used to proxy for market expectations of future earnings growth $E_{t-1}(X_t)$ and $E_{t-1}(X_{t+k})$ (i.e. the measurement errors in the regression). Intuitively, a lower E/P_{t-1} ratio means higher expected earnings in the future, therefore the proxy and the error are negatively correlated, so the positive coefficient on E/P_{t-1} means that the errors are eliminated from explanatory variables X_t and X_{t+k}. Empirical evidence confirms that the inclusion of future attained earnings growth as an explanatory variable (corrected for measurement errors) results in an increase in the model's explanatory power as measured by adjusted R-sq, which contributes to the assumed lack of timeliness as a property of accounting earnings.

Using Alternative Returns Measurement Windows

The explanatory power of the price (returns)-earnings model can be improved by choosing a more appropriate return measurement window. Usually, in a return-earnings model, returns on a 12-month holding are regressed on earnings figures for that year. Collins and Kothari (1989) compared R-sqs of models with different return holding periods, varying the start of the return cumulating process (from e.g. January of fiscal year t-1 to June of fiscal year t, allowing the length of the return holding period to range from 12 to 18 months, and taking into consideration the size of a firm. Models in which returns are calculated over a 15-month period from August of year t-1 up to November of year t for large and medium firms, and from November of year t-1 to February of t+1 for small firms, are seen to have the best explanatory power. This finding suggests that relevant information for larger firms becomes publicly available to investors relatively sooner. Also, when there is a larger amount of information available, the market behaves in a more timely fashion, since the best-performing model is one with a return measurement period ending in November in year t for large and medium-sized companies, as compared with February in year t+1 for small companies.

An alternative methodology regarding the return measurement interval relates to the introduction of leading period returns (Kothari & Sloan, 1992). Here the aim is to reduce the downwards bias of the slope coefficient from the commonly-used returns on earnings regression. Instead of regressing (i) the returns on contemporaneous earnings or (ii) simply extending the measurement interval window for both returns and earnings so as to enable the earnings for the period to eventually incorporate the information anticipated by returns (longer-window earnings cover more information as compared to shorter-window earnings), or (iii) shifting the return-measurement interval by a certain number of months before or after the fiscal year end, leading period returns are used.

More precisely, earnings are measured for the current year, but returns are calculated over the period comprising the concurrent year plus one, two or more prior years. When one, two and three leading period returns are used as a response variable, the earnings response coefficient (the slope coefficient) increases substantially. Hence, leading period returns are seen to be as important as contemporaneous returns in terms of their sensitivity to annual earnings. Since by including more than four leading years' returns the bias in the slope coefficient is not incrementally reduced, generally share prices lead accounting earnings by up to four years.

The inclusion of leading period returns turns out to be more effective than extending the measurement window for both returns and earnings, which supports the assumption that prices do indeed lead earnings. That is, since by simply aggregating earnings and returns over many years a great deal of noise disappears, so there is less variation between returns and earnings to be explained, which results in a smaller proportion of non-explained variation and higher explanatory power.

Earnings Response Coefficients

The inference regarding the information content of earnings is based on the significance of the slope coefficient from the commonly estimated regression used to capture the association between market values (or changes in market value) for shares and earnings:

$$R_{it} = \alpha + \beta UX_t + \varepsilon_t \qquad (2.11)$$

where R_{it} is the return for firm i over fiscal period t, UX_{it} represents unexpected accounting earnings (proxied by annual earnings change) at the end of period t, α is the intercept, β is the earnings response coefficient and ε is the disturbance term.

Therefore, it is useful to identify the factors that determine the character of the earnings response coefficient (ERC). Variation in the earnings response coefficient can be explained as a function of temporal and cross-sectional determinants (Collins & Kothari, 1989). Earnings persistence, growth opportunities and a firm's systematic risk are seen as factors that cause cross-sectional variation and the risk-free interest rate is seen as a factor that causes temporal variation of the earnings response coefficient.

Earnings persistence is likely to have a positive effect on the earnings response coefficient. As the present value of future expected dividends determines the current share price and dividends are assumed to be a positive fraction of earnings, greater earnings persistence results in larger revisions in dividend expectations and therefore a larger earnings response coefficient.

Current growth opportunities are also likely to have a positive impact on the earnings response coefficient. However, in empirical analysis two problems occur. First, it is difficult to attain an estimate that accurately captures a firm's growth opportunities. Analysis of time series behavior for earnings cannot distinguish between a correlation in successive earnings figures caused by earnings expansion (e.g. increase in external financing) against real economic growth. Second, as the market-to-book ratio is used as a proxy for growth opportunities, which are also likely to be affected by earnings persistence, it is difficult to isolate the influence of growth and persistence on the earnings response coefficient. Empirical findings suggest that growth opportunities are positively correlated with the earnings response coefficient. Intuitively, the future

dividend expectation will be larger in the presence of growth opportunities as will be the present market value of the share.

Another hypothesis is that earnings response coefficients are negatively correlated with a systematic security risk. This is based on the intuition that, if the current market share price is defined as the present value of expected future dividends, the higher the systematic risk, the smaller the present value of a given increase in expected future dividends caused by unexpected earnings. In empirical analysis, the common stock betas estimated from monthly returns are used as a proxy for the risk factor.

Finally, a negative temporal relation between interest rates and the earnings response coefficient is hypothesized, assuming that the expected rate of return (a discount rate used for deriving the present value of expected dividends and earnings) varies over time and that it contains a risk-free component. So, the higher the risk-free rate, the higher the expected rate of return and the lower the present value of future expected dividends, i.e. the market value of a firm's shares.

2.3 Timeliness and Conservatism

Models that measure the association between accounting figures and the market value of a firm are used to capture an important feature of financial accounting information - its *timeliness* in terms of the ability to incorporate all value-relevant events in a timely manner. Closely related to timeliness is the concept of conservatism, or the asymmetric timeliness of financial accounting information in terms of its incremental sensitivity to negative as compared to positive changes in the market value of a firm's equity.

Accounting-Based Conservatism

In financial accounting, the accounting profession's standards and the legal rules that require accounts may lead to different aspects of accounting conservatism. For

example, the norms for income recognition and asset impairments require practices such as lower-of-cost-or-market accounting for inventories, the use of write-downs and write-offs for long-lived assets but not of write-ups, a greater degree of verification for recognizing profits, taking into account all potential losses and liabilities which result in relatively lower balance sheet values for assets and equity, and lower profits from income statements. This dimension of accounting conservatism, referred to as balance-sheet or income-statement conservatism respectively is usually explored by comparing the differences in employed accounting methods, in disclosure policies and in cross-country GAAP practices.

In this context, accounting conservatism occurs when, under a particular GAAP system, that is the accounting method applied results in lower reported earnings and lower equity. For example, the choice of accelerated depreciation of fixed assets will result in lower assets and higher depreciation costs, and therefore in lower earnings. In this case, the conservatism is reflected in both balance-sheet and income-statement figures. However, Giner and Rees (2001) argue that neither the law nor the accounting profession distinguish between these two types of conservatism. Moreover, as Basu (2001) points out, balance-sheet and income-statement conservatism might diverge. Studies that compare the properties of accounting earnings and equity under UK and US GAAP show that in general there is greater balance-sheet conservatism for UK firms, but greater income-statement conservatism for US firms. This phenomenon is due for instance to dirty-surplus transactions such as direct write-offs of purchased goodwill under UK GAAP. Another example is the choice between purchase and pooling of interest as accounting methods in the case of mergers and acquisitions. The use of pooling of interest results in greater balance-sheet but less income-statement conservatism, as the acquired firm's assets and liabilities are reported at their book values on the acquirer's balance sheet, and the depreciation rates remain the same, whereas under the purchase method the acquired firm's assets and liabilities are reported on the acquirer's balance sheet at market values and subsequently depreciated at rates that are higher than those previously used. Basu (2001) argues that balance-sheet and income-statement conservatism interact, given that an accounting method resulting in a lower

degree of balance-sheet conservatism (i.e. it results in balance sheet optimism[3]) is more likely to result in greater asset write-downs, since the difference between the market and book values is more likely to be negative.

Market-Based Conservatism

A different definition of conservatism refers to it as the difference in speed with which reported earnings capture new information about the changes in the current values of a firm's equity. Within this framework, reported earnings are considered to be timely when they fully reflect the information that has been incorporated by the market in its pricing of a firm's equity. Earnings are less timely if value changes that are recognized by the market in the present period are not incorporated into accounting computations until some time later. Basu (1997) was the first to study asymmetry in the timely recognition of new market information regarding downward and upward movements of share prices. Within this framework, earnings are considered to be conservative if they reflect information prompting negative changes in market value ('bad news') more quickly than information about positive changes in market value ('good news').

Basu examines the timeliness and asymmetric timeliness of earnings (earnings conservatism) using a methodology that is based on the 'reverse regression' explained in below, in Section 2.4.

2.4 The Reverse Regression

An overview of the literature presented in Section 2.1 concerning the association models that investigate the strength of the relationship between accounting earnings and market values shows that the usual regression of returns on contemporaneous earnings may result in a bias on the slope coefficient and the R-sq of the equation. This is due to a lack of timeliness, as market values reflect immediately all available information whereas

[3] Accounting choices that result in lower degrees of balance sheet conservatism include the straight-line depreciation of fixed assets versus accelerated depreciation, FIFO versus LIFO inventory accounting methods, etc.

accounting earnings will recognize the same information at a future point in time once the formal accounting income recognition rules have been fulfilled. Therefore, there is a difference between the information sets contained in reported earnings and the changes in market price over the same time period, whereby current earnings reflect information captured in prior returns.

This difference between the information contained in share prices and in reported earnings may be examined in a model where the percentage change in price is regressed on percentage change in earnings (Beaver, Lambert & Morse, 1980). In this model, the existence of the price-leading-earnings feature of the price/earnings relationship is emphasized for the first time. It is also the first reference to a component of earnings which is unrelated to prices from any time interval and which is economically irrelevant. This component is called the 'garbling of earnings' and it represents the effect of the error in the explanatory variable (percentage change in earnings), thus biasing the slope coefficient on earnings towards zero.

In order to solve this error-in-variables problem, a grouping procedure is employed in which the data is grouped by the response variable (percentage change in share price) so that the measurement error from the explanatory variable is diversified away (Beaver, Lambert & Morse, 1980). The drawback of this approach is that some potentially useful information is lost during the data aggregation, and the efficiency of estimation is to some extent sacrificed.

To solve this problem, another approach is proposed (Beaver, Lambert & Ryan, 1987): a reverse regression in which the independent and dependent variables are reversed so that accounting earnings are regressed on share prices. Reverse regression allows the error from earnings to be placed in the disturbance term instead of in the explanatory variable. This approach also allows for the inclusion of lagged returns as additional explanatory variables, since in an efficient market unexpected stock returns are assumed to be an unbiased measure of news concerning value-relevant information about a firm and, by definition, are uncorrelated over time. Consequently, the slope coefficient should not be affected by including past returns as additional explanatory variables,

whereas it is possible to perform a more powerful test of the incremental explanatory power of lagged returns. Such incremental explanatory power would indicate the extent to which the information is reflected in share prices on a more timely basis than it is in earnings. An additional advantage of reverse regression is that it examines the extent to which current and past values of prices can be used for forecasting earnings.

Returns Response Coefficient

The previous sub-section explained that the error-in-variables problem is addressed by reversing the returns/earnings regression and treating earnings as a dependent variable and returns as an explanatory variable (Collins & Kothari, 1989).

In the reverse regression, it is possible to vary the return measurement interval so that the returns are calculated over a period starting say 5 months earlier and covering 10 months of the current fiscal year for which the earnings are reported, with an attempt to increase the timely comparability of the information sets impounded in returns (recognizing their predictive power with respect to future earnings) and in current earnings (assuming their limited ability to contemporaneously reflect expectations of future earnings). The existence of a lead-lag structure in the returns/earnings relation is pointed out and empirical analysis provides evidence that the association between earnings and returns increases when returns are calculated over a 15-month period instead of a 12-month period.

In such a model that employs reverse regression, the returns response coefficient is introduced. The returns response coefficient is the reciprocal of the earnings response coefficient and it measures the extent to which earnings reflect changes in the market value of equity. It is determined by the same set of factors as the earnings response coefficient but in an inverted direction (Collins & Kothari, 1989). That is, it increases with an increase in interest rates and risk and with a decrease in earnings persistence and growth opportunities.

The properties of the returns response coefficient become particularly interesting in an analysis where it provides a measure of the timeliness of accounting earnings. Basu (1997) adopts the 'reverse regression' approach to examine the sensitivity of contemporaneous accounting earnings to 'good' and 'bad' news from the market, as discussed below.

Basu's Approach

Basu (1997) shows how 'bad news', which he proxies in the form of negative annual share returns, are fully and more quickly reflected in contemporaneous earnings then 'good news', proxied by positive annual returns. He explains this phenomenon as due to accountants' incentives to anticipate future losses but not future profits; in other words, by applying the conservatism principle in income recognition. The argument for this explanation is based on a contracting theory whereby there is an information asymmetry between firm management and outside shareholders and creditors as to the knowledge they possess of a firm's operations and asset values. A firm's controlling parties (management and majority shareholders) might have incentives not to disclose private information that may affect negatively their interests (e.g. the extent of management remuneration). In order to prevent expropriation of their rights, the shareholders and creditors require timely disclosure of any kind of 'bad news' in audited financial statements, which increases the demand for conservative accounting. Furthermore, the legal liability exposure of auditors and managers for tardy disclosure of 'bad news' has increased significantly over the last three decades (Kothari et al., 1989), bringing about an increase in the degree of conservatism, which is reflected in a greater degree of conservatism for those firms that are audited by the big six auditing companies (Basu et al., 1999).

Within Basu's framework, reported earnings may be considered to be timely when they fully reflect the information that has been incorporated by the market in its pricing of a firm's equity. Earnings are less timely if value changes that are recognized by the market in the present period are not incorporated in the accounting computations until

some time later. A simple model in this respect would express a firm's accounting earnings as a function of the change in the value of shareholders' equity over that period. Likewise, after taking into account the number of shares in issue, the timeliness of value-relevant information in earnings per share, EPS, may be expressed as a function of the change in share price, $P_t - P_{t-1}$. Deflating both variables by the opening share price, P_{t-1}, an estimating equation may be written as the relationship between the earnings yield for the period to t, $X_t = EPS_t / P_{t-1}$, and the market return over that period, $R_t = (P_t / P_{t-1}) - 1$; that is, for the i^{th} firm,

$$X_{i,t} = \alpha_0 + \beta_0 R_{i,t} + \varepsilon_{i,t} \qquad (2.12)$$

where $\varepsilon_{i,t}$ is the regression error for firm-year *i,t*.

The coefficient β_0 is an indicator of timeliness. If $\beta_0 = 1$, for example, and assuming that $\beta_1=0$, the firm is expected to report an earnings-per-share figure that is equivalent to the change in share price. In such circumstances, accounting computations of earnings could be described as unbiased and perfectly timely overall, even in the presence of random errors in the earnings computations by individual firms in particular periods. When $\beta_0 < 1$, the lack of timeliness can be interpreted as market returns leading earnings, and the flow of market information from prior periods into current earnings would be reflected in $\beta_0 > 0$.

Conservative accounting induces asymmetry in earnings timeliness, *i.e.* that 'bad news' proxied by negative stock returns is reflected in earnings more quickly than 'good news' proxied by positive stock returns. That is to say, earnings are expected to be more highly correlated with stock returns during periods of decreasing market values than in periods of increasing market values. In order to capture earnings conservatism, Basu (1997) adds another dimension by introducing a dummy variable, *D*, that takes a value of

one if R_t is negative and zero otherwise. The estimation of earnings yield may now be expressed as:

$$X_{i,t} = \alpha_0 + \beta_0 R_{i,t} + \alpha_1 D + \beta_1 R_{i,t} D + \varepsilon_{i,t} \quad (2.13)$$

The slope coefficients β_0 and β_1 can be interpreted as the responsiveness of earnings to contemporaneous 'good news' (*i.e.*, positive market returns) and 'bad news' (*i.e.*, negative market returns) respectively. In this context, conservative accounting implies that β_1 is expected to be positive and the ratio $(\beta_0 + \beta_1) / \beta_0$ is expected to be greater than one.

Moreover, the explanatory power of the model, as measured by the adjusted R^2, is expected to be higher in periods of 'bad news' than in periods of 'good news', with earnings reflecting more of the variation in returns contemporaneously when market returns are negative rather than being spread over time.

In Basu's seminal paper, this model is applied using a sample of US firms. The findings show that earnings are about four-and-a-half times as sensitive to bad news as to good news and that the R^2 is indeed higher for 'bad news' than for 'good news' periods.

In that paper, the timeliness and conservatism of earnings is also compared with that of cash flow. The model (2.13) is replicated by using two contemporaneous specifications of cash flow (cash flow from operations and cash flow from operating and investing activities), with earnings prior to the inclusion of extraordinary items acting as a dependent variable to predict and show that earnings are more conservative than cash flows and earnings prior to the inclusion of extraordinary items, given that unrealized future losses captured by the accruals contained in earnings reduce contemporaneous earnings but do not influence contemporaneous cash flows, while influencing contemporaneous earnings prior to the inclusion of extraordinary items to a smaller extent.

Another aspect of conservatism is also examined: earnings persistence. In this context, current earnings reflect a greater proportion of 'bad' value-relevant news, leaving less value-relevant 'bad news' to influence future earnings. Thus, 'bad news' create a transitory shock to earnings, and negative changes in earnings are likely to reverse in the future. On the contrary, value-relevant 'good news' must await compliance with formal accounting recognition criteria to be captured by earnings. So, 'good news' is more likely to have a permanent effect on earnings, and positive changes in earnings are not likely to reverse in the future. Therefore, greater earnings timeliness means smaller earnings persistence and *vice versa.* The model that captures the differences in earnings persistence for 'bad' as opposed to 'good' news shocks is as follows:

$$\Delta X_{it}/P_{it-1} = \alpha_0 + \alpha_1 + \beta_0 \Delta X_{it-1}/P_{it-2} + \beta_1 D^* \Delta X_{it-1}/P_{it-2} + \varepsilon_{it} \qquad (2.14)$$

where ΔX_{it} is the earnings change for firm i for fiscal year t, P_{it-j} is the share price at the end of fiscal year t - j, and D is the dummy that takes the value of 1 when the news is 'bad' and 0 otherwise. The β_0 slope coefficient measures the extent to which current earnings reverse with respect to prior-period earning changes.

If it is assumed that current-period earnings decrease as a response to prior-period increases in earnings and *vice versa*, the coefficient β_0 is expected to be negative, and shocks to earnings are said to be transitory. The differential slope coefficient β_1 captures the incremental ability of earnings to reverse in periods following 'bad news' shocks on earnings. That is, if prior-period earnings decreased or were negative or the share price dropped, the effect of those shocks on current earnings is such that they are likely to reverse in the future to a greater extent, and β_1 is expected to be negative[4]. Basu finds that negative changes in earnings reverse more than positive earnings changes in subsequent

[4] In other words, if β_0 is said to measure the 'reversibility' of current earnings with respect to prior-period 'good news' earnings shocks , and is expected to be negative, $(\beta_0 + \beta_1)$ indicating the 'reversibility' of current earnings with respect to 'bad news' earnings shocks is expected to 'more negative' than β_0.

periods, whereas he finds the opposite tendency for cash flows ('bad news' cash-flow changes reverse less than 'good news' cash-flow changes), indicating that conservative behavior in accounting to a large extent is captured by accruals that are components of earnings.

Finally, the capital market's reaction to earnings change announcements is examined within the context of conservatism. It is hypothesized that, under the assumption of earnings being more sensitive concurrently to 'bad news', a firm's abnormal returns will be more sensitive to the announcement of positive changes in earnings as compared to negative changes in earnings. In order words, the market recognizes earnings increases more persistently than earnings decreases (assuming conservatism), and therefore it capitalizes one unit of positive unexpected earnings at a higher value than the one unit of negative unexpected earnings. To test this hypothesis, an event study may be employed by regressing abnormal returns from the earnings announcement period (two months following the fiscal year-end) on earnings change deflated by opening share price:

$$u_{it} = \alpha_0 + \alpha_1 D + \beta_0 \Delta X_{it}/P_{it-1} + \beta_1 \Delta X_{it}/P_{it-1} * D + \varepsilon_{it} \qquad (2.15)$$

where u_{it} is the abnormal return of firm i over the earnings announcement period (over the first two months after the fiscal year-end, or over the first and the second month respectively), ΔX_{it} is the change in earnings for firm i in fiscal year t over fiscal year t - 1, P_{t-1} is the share price at the beginning of the fiscal year, D in this case is the dummy variable that takes the value of 1 if the change in earnings is positive, i.e. $\Delta X_{it}/P_{it-1} > 0$, or zero otherwise. The β_0 coefficient captures the responsiveness of abnormal returns to a negative earnings change announcement, whereas β_1 captures the incremental sensitivity of abnormal returns to positive annual earnings change announcements. β_0 and $(\beta_0 + \beta_1)$ actually represent earnings response coefficients that are reciprocals of the returns response coefficient, or the indicator of accounting earnings timeliness as to market news

from the 'reverse regression'. Observed empirical results support the prediction that market values increase more than decrease earnings, and taking into consideration conservative accounting offers as evidence that announcement-period abnormal returns are significantly more closely associated with positive annual accounting earnings changes.

2.5 International studies

Timeliness and Conservatism - A Comparison of Two Countries

Subsection 2.4 reviewed the development of the theoretical background on the asymmetric timeliness of accounting earnings in recognizing 'bad' versus 'good' news (Basu, 1997).

In order to capture the intuition behind this theoretical framework, the model (2.13) is extended in several aspects (Pope & Walker, 1999).

First, a detailed derivation of the model (2.13) is provided, assuming that permanent earnings are defined as price times the cost of equity:

$$p_t \equiv k_t x \tag{2.16}$$

where p_t is the share price at time t, k is the reciprocal of the cost of equity and x_t are permanent earnings. Further, it is assumed that dividends are equal to permanent earnings and that share prices vary randomly so that permanent earnings vary randomly as well:

$$x_t = x_{t-1} + e_t \tag{2.17}$$

where e_t represents the random shock to permanent earnings in period t. Two types of permanent earnings shocks that cause reported contemporaneous earnings to deviate from permanent earnings are distinguished:

$$X_t = x_t - \theta_0 e^+_t + \gamma_0 e^-_t + V_t \qquad (2.18)$$

where X_t represents reported earnings, e^+ is the positive shock of 'good news' on permanent earnings, θ_0 is the parameter that captures the under-recognition of 'good news' at time t by reported earnings X_t, e^- is the negative shock of 'bad news' on permanent earnings, γ_0 is the parameter that captures the over-recognition of 'bad news' at time t by contemporaneous earnings, and the last term V_t relates to the prior-period news on current-period income recognition.

If reported earnings were perfectly timely and earnings displayed no conservative behavior, both θ_0 and γ_0 would be zero, and reported earnings would equal permanent earnings. If there is asymmetric timeliness of earnings for 'bad news', i.e. $e^-_t < 0$ and $\gamma_0 > 0$, reported earnings are less than permanent earnings.

So, Basu's regression model (2.13) is interpreted as follows:

$$X_t/P_{t-1} = 1/k + (1- \theta_0)/k*R_t + (\gamma_0 + \theta_0)/k*RD + V_t/P_{t-1} \qquad (2.19)$$

where k is the reciprocal of the cost of capital, $(1- \theta_0)/k$ is predicted to be captured by the slope coefficient β_0 from Basu's model (2.13), and to refer to the timely recognition of 'good news' in current earnings, $(\gamma_0 + \theta_0)/k$ is expected to be captured by the differential slope coefficient β_1 from (2.13), whereas the intercept from (2.13) α_0 is assumed to capture both 1/k and V_t/P_{t-1}.

Second, the timeliness and conservatism of accounting earnings prior to and following the inclusion of extraordinary items are compared, and empirical results show that the estimated timeliness and conservatism coefficients vary depending on the earnings specification used.

In contrast to Basu, whose sample was restricted to US firms, Pope and Walker (1999) empirically examine the conservative properties of earnings under UK and US accounting regimes. They recognize that the institutional environments influencing the conservative behavior in accounting in the US and UK are similar, and they focus their analysis on institutional regimes and the treatment of extraordinary items under US and UK GAAP.

More specifically, it is shown that UK accounting standards were less precise and rather ambiguous in defining the company's activities that should be accounted for as extraordinary items in financial statements, especially prior to 1993, which resulted in their inconsistent treatment by accountants. This allowed UK firms to use extraordinary items to express 'bad news' transactions that were in line with conservative income recognition and maintain more permanent and smoother reported earnings prior to the inclusion of extraordinary items. Consequently, the sensitivity to 'bad news' for earnings following the inclusion of extraordinary items is expected to be higher compared to earnings prior to the inclusion of extraordinary items for UK firms. On the other hand, as the treatment of extraordinary items under US GAAP is more restrictive, the variation in sensitivity to 'bad news' between earnings prior to and following the inclusion of extraordinary items is not considered to be significant.

This difference between UK and US firms in treating extraordinary items is caused by the different levels of accounting standard development, directly affecting the degree of accounting conservatism exhibited by earnings (prior to the inclusion of extraordinary items) for firms in these two countries. In 1993 in the UK, Financial Reporting Standard No. 3 was enacted with an aim of restricting the definition of extraordinary items and preventing their possible abuse. As a consequence, the loose treatment of extraordinary items by accountants was limited, affecting earnings

conservatism in such a way that the sensitivity of earnings to 'bad news' prior to the inclusion of extraordinary items increased for UK firms.

Therefore, it is predicted that earnings prior to the inclusion of extraordinary items display greater conservatism for US firms than for UK firms. Indeed, the findings show that 'bad news' is recognized by earnings prior to the inclusion of extraordinary items faster for US firms than for UK firms.

This finding is consistent with Ball et al. (2000) who expect US firms to be more cautious in recognizing profits and faster in recognizing losses in order to avoid litigation costs, which are generally higher in the US than in Europe. However, once the extraordinary items are accounted for, the earnings of UK firms display greater sensitivity to 'bad news' than those of US firms.

In contrast to Ball et al. (2000), who examined differences in the timeliness and conservatism of accounting earnings across several countries and based much of their argument on whether a country belongs to a common law or a civil law legal system, Pope & Walker (1999) take into account the institutional environment with regard to one specific aspect of accounting practice, by contrasting the treatment of one specific item (extraordinary items) in two countries with a common law legal system. As they compare the properties of earnings in two countries with similar institutional characteristics, they reduce the likelihood of overlooking major institutional factors, and therefore need not examine institutional differences in greater depth (Basu, 1999).

In light of the changes in the institutional environment following 1993, the opportunities for capturing 'bad news' through extraordinary items decreased, and therefore one would expect a decrease in the conservatism of earnings following the inclusion of extraordinary items for UK firms. However, the results show that sensitivity to 'bad news' increased for earnings both prior to and following the inclusion of extraordinary items. This increase in conservatism over time is consitent with Ball et al.'s (2000) observation that the 1990 appointment of the Accounting Standards Board increased regulatory costs for UK firms, presumably also increasing the adoption of conservative accounting (Basu, 1999).

On the other hand, Pope & Walker (1999) report that the level of incremental earnings sensitivity to 'bad news' decreased for US firms after 1992, a result that on the one hand contradicts the general findings of Givoly & Hayn (2000) who report a trend toward greater conservatism for US firms, but is nevertheless in compliance with reduced auditor liability exposure in the US following 1992 (Basu et al., 1999).

These findings imply that it is important to take into account the complexity of the institutional, regulatory and legal environment when drawing inferences regarding the origins of earnings conservatism for firms. That is to say, it is not necessarily sufficient to make a cross-country comparison with respect to only one specific aspect, e.g. legal origin ('common' versus 'civil' law countries), type of auditor ('big eight' versus 'non big eight'), or corporate governance structure ('share holder' versus 'stake holder'), in a global environment where increasingly international firms operate and raise equity in different countries and are influenced by the complexity of various regulatory regimes.

Finally, relying on Beaver et al. (1987) who identify the advantage of the 'reverse' regression in making possibile the inclusion of prior-period returns as an additional independent variable and thus increasing the model's explanatory power, Pope and Walker (1999) use lagged share price changes (P_{t-1} - P_{t-2}) deflated by the opening share price (P_{t-2}) to proxy for the influence of past information on contemporaneous reported earnings V_t/P_{t-1} from (2.19). This approach allows them to measure the extent to which contemporaneous earnings reflect the information contained in prior-period returns. In other words, they account for the lead-lag structure of the earnings/returns relationship and measure the speed with which 'good' and 'bad' news influences earnings. In addition, the inclusion of prior-period returns helps to compensate for omitted variables. Their model extended for prior-period returns on the right-hand side is as follows:

$$X_t/P_{t-1} = \alpha_1 + \alpha_2 D_t + \beta_1 R_t + \beta_2 R_t D_t + \Sigma\lambda_\tau R_{t-\tau} + \Sigma\delta_\tau R_{t-\tau} D_{t-\tau} + u_t \qquad (2.20)$$

where, in addition to Basu's model (2.13), $R_{t-\tau}$ are returns that equal $(P_{t-\tau}-P_{t-\tau-1})/P_{t-\tau-1}$, for the previous three years (τ = 1,...3), λ_τ is the slope coefficient that captures contemporaneous earnings (X_t/P_{t-1}) sensitivity to prior 'good news', and δ_τ is the differential slope coefficient that captures the incremental sensitivity of contemporaneous earnings to prior-period 'bad news'.

Once prior-period 'good' and 'bad' news are incorporated into the model as additional explanatory variables, the difference in the sensitivity of contemporaneous earnings to contemporaneous 'good' and 'bad' news falls. Specifically, the coefficient for contemporaneous 'bad news' (β_2) decreases, implying that components of current earnings explained by the variation in negative returns ('bad news'), are actually related to prior-period negative return variation, as δ_τs (τ = 1,...3) are positive and statistically significant. This finding is confirmed by the results presented subsequently by Giner & Rees (2001), who report that the strength of the reaction of current earnings to current 'bad news' decays once the model is extended to include price changes from previous periods. Their results support the prediction of market information being captured by accounting earnings with a lag.

These results show that, following the inclusion of prior-period news, be it bad or good, the explanatory power of the model increases as predicted by Kothari (1992), Kothari & Sloan (1992) and Collins et al. (1994) with a price-leading-earnings phenomenon described in detail in Section 2.2.

Timeliness and Conservatism – A Multi Country Comparison

In an attempt to explain differences in accounting practices in different institutional regimes, Ball, Kothari & Robin (2000) investigate how economic income is incorporated into accounting income over time, i.e. by examining the timeliness and asymmetric timeliness of accounting earnings, the international analysis is extended to seven international GAAP regimes: Australia, Canada, the USA, the UK, France, Germany and Japan.

The underlying assumption is that the asymmetric timeliness of accounting earnings is a function of varying demands under different institutional arrangements, and that studying timeliness and conservatism is more advantageous than studying merely the international differences in accounting standards.

This is because practices are not necessarily identical to standards, being more detailed and innovative, whereas standards are not necessarily implemented in practice and the application of standards depends on the country's legal enforcement system. The extent of political influence on both standard-setting and enforcement is identified by Ball et al. (2000) as the most fundamental institutional factor distinguishing the properties of accounting earnings.

In order to proxy for the international differences in institutional systems, a country's legal origin is chosen as a proxy, focusing in particular on the difference between 'common' and 'civil' law countries. Specifically, it is assumed that in common law countries there is greater scope for disclosure to outside parties as they deal with the firm at "arm's length", that there is stricter regulation of the accounting profession and that there are higher litigation risks in comparison with civil law countries. However, Ball et al. (2000) state that their division of the world into 'common' and 'civil' law institutional environments fails to reflect legal practices completely, since many of the features of the two systems are likely to overlap.

On the other hand, it is generally believed that firms in 'common' law countries predominately have a 'shareholder' corporate governance structure in which shareholders alone elect the governing board, board members are less likely to hold large blocks of shares and be linked to executive positions, and the management is closely monitored and controlled by the supervisory bodies. In addition, the management possesses information that is costly for shareholders and creditors to obtain themselves and enjoys asymmetric incentives to disclose 'good' and 'bad' news, but is likely to undertake the cost of timely disclosure of 'bad news' since it is closely monitored by boards, investors and analysts. Therefore the 'bad news' incorporated into accounting income is considered to be more

credible and the accountants are more likely to disclose it on a more timely basis as compared to the recognition of 'good news'.

The underlying intuition is that, were it not for conservative accounting practices, other monitoring and contracting costs would have been incurred. These costs would be dealt with by the management in terms of reduced remuneration, so they prefer to conduct conservative accounting. On the other hand, shareholders prefer accounting conservatism if the costs are lower than alternative monitoring solutions (Giner & Rees, 2001). Greater demand for the timely recognition of economic losses in 'common' law countries may be explained in terms of expected higher litigation costs for the untimely incorporation of 'bad news'. Thus, according to Ball et al. (2000) this results in a greater level of accounting earnings conservatism in 'common' law countries.

In countries with a civil law legal system, firms usually display a 'stakeholder' corporate governance structure, where members of the governing boards are more likely to be linked to management, or even to be bank representatives, and managers have close relationships with banks, labor unions, the government, major customers and suppliers. The information asymmetry is lower, as interested parties (stakeholders, creditors, etc.) tend to be informed through private 'inside' access to information, as inter-stakeholder communications are relatively well developed, so there is less need for reliable external monitoring of management activity.

In these 'civil' law countries, the regulation of bank leverage ratios penalizes volatility in bank income, and therefore indirectly the volatility of accounting income and dividends on their equity investments. In addition, it is assumed that there is a more direct relationship between current-year accounting income and short-term payouts such as dividends and bonuses and a subsequent reluctance to cut them, which results in adopting accounting methods that enable the gradual incorporation of economic losses or 'bad news' in accounting earnings over time. Thus, it is predicted that current earnings are less sensitive to contemporaneous 'bad news' in 'civil' law countries with respect to 'common' law countries (Ball et al., 2000).

The empirical results show substantially greater accounting earnings conservatism for US companies as compared to European countries and Japan. The findings (Table 2.1, Figure 2.1) show extremely high conservatism, as measured by the differential slope coefficient that captures the incremental sensitivity of current accounting earnings to contemporaneous 'bad' as compared to 'good' news from Basu's (1997) regression model for Australian, Canadian and US firms and extremely low conservatism for Japanese firms. In contrast, UK, German and French firms display earnings with a moderate level of conservatism.

However, contrary to the expectations regarding two groups of countries whose level of accounting earnings conservatism is homogeneous within each group but substantially different between the two groups, the results reveal a similarity in earnings for firms from the UK, France and Germany, even though these nations operate under different legal systems (see Figure 2.1)

This finding implies that, even though the distinction between common law and civil law countries is a useful starting point for analysing international institutional differences and their implication on accounting earnings, the features that characterize the institutional and working environment of a firm and influence the properties of its accounting earnings are more complex and go beyond the generalizations merely related to legal origin. This is especially true as capital markets become more integrated and an attempt is made to attain accounting standards harmonization.

Table 2.1

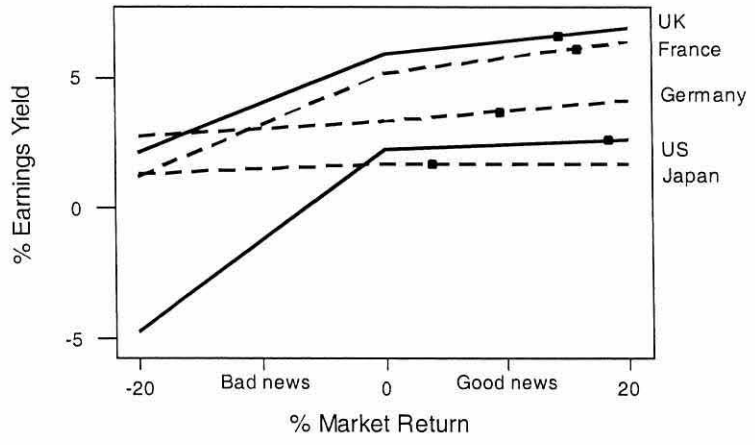
Timeliness and Conservatism of Earnings - Results by Ball et al. (2000)

	β_2		β_3		R^2 (adj.) %
Australia	-0.01		0.37	***	9.10
Canada	0.00		0.40	***	17.00
USA	0.03	***	0.29	***	14.70
UK	0.04	***	0.15	***	13.80
France	0.08	***	0.07	***	12.60
Germany	0.05	***	0.10	***	5.40
Japan	0.01	***	0.01	***	4.20

The model estimated is as follows: $NI = \beta_0 + \beta_1 D + \beta_2 R + \beta_3 R*D$, where NI is net income (earnings) and R is annual returns, D is the dummy for 'bad news' as in Basu's (1997) model. *** Significant at 1% level of significance

Figure 2.1

Timeliness and Conservatism of Earnings - Results by Ball et al. (2000)



This figure plots five linear predictors reported by Ball, Kothari and Robin (2000). The graph is constructed from parameter estimates given by the authors (Table 2, p.18), standardised with respect to median market returns and earnings yields (Table 1, p.10). These results reveal the existence of international differences in asymmetric accounting for good and bad news. However, the general conclusion reached by the authors - that conservative accounting is *not* evident in civil law countries - is based on a

two-way sample partition between companies that are domiciled in common law countries (such as the US and the UK) and civil law countries (France, Germany and Japan).

Nevertheless, Ball et al.(2000) point out that the two groups are not homogenous, and that their research concerns two important institutional features that vary among civil law countries: accounting regulation and litigation costs, which create further incentives for the timely disclosure of 'bad news'. For example, the UK is considered to be the least-regulated and the US the most-regulated system, as the central role in mandating accounting standards and supervising their application is entrusted to the Securities Act Commission founded in 1934.

Also, firms in countries with a high probability of lawsuits for failing to disclose 'bad news' in a timely manner and with high legal fees (US, Canada and Australia) are expected to be more likely to have conservative accounting earnings.

Overall, the illustration of the relevant institutional features of the countries examined is useful but rather generalized. The aim was to proxy for an underlying institutional context - the extent to which the demand for timely and conservative income recognition is determined by political forces relative to market forces. Even though the empirical results reveal similarities in the timely recognition of 'bad news' by firms in countries grouped together according to the common law versus civil law criterion, the similarity between the earning properties of French and UK firms, for example, implies that analysing a richer set of contextual factors in order to explain variations in conservatism from country to country merits further research.

Timeliness, Conservatism and the European Context

When defining a criterion for country grouping, it is important to take into account whether the accounting regulations are established by a public (government) or private (professional) system and whether they develop gradually through auditor

practice and reporting or they are designed by the government in order to balance the needs of the stakeholders and managers.

Furthermore, in certain countries it is not possible to make a clear distinction between common law and code law, such as in Scotland where certain aspects of the legal system resemble the code law system in continental Europe, even though the English legal system is based on common law (Giner & Rees, 2001).

In addition, La Porta et al. (1997) distinguish between common law and civil law, and divide the civil law countries into three groups: those of French, German or Scandinavian origin, with the level of legal enforcement varying substantially from group to group.

Within a European context, when analysing accounting conservatism across countries governed by the code law system (France and Germany) and the common law system (UK), (Giner & Rees, 2001), it is relevant to point out that the level of enforcement is lower in France than in Germany (La Porta et al., 1997). Therefore it may be predicted that, if there are expected differences in timeliness and conservatism between common law and civil law regimes, these should be greater for France than for Germany as compared to the UK.

However, as far as differences in accounting practice are concerned, Germany and the UK represent the most extreme examples of two accounting models (Joos & Lang, 1994). The British model focuses on the 'true and fair view' approach in the preparation of financial statements, thus addressing the needs and protection of equity holders. The Continental model is characterized by codified reporting rules, a strong link between tax and financial reporting and a focus on the protection of debt holders.

This has led to strong balance-sheet conservatism in terms of undervaluing assets and revenues and overvaluing liabilities (often through latent reserves). Tax law is more influential and firms have to prepare a special balance sheet for tax purposes and are required to apply tax rules to their financial balance sheet as well. Joos & Lang (1994)

argue that France, although philosophically closer to Germany in terms of accounting practice, has shifted nevertheless towards the British model.

Of these three countries, only Germany until recently lacked a standard-setting body (the German Accounting Standards Board was established in 1998), so the listed firms were allowed to opt between using International or US GAAP for consolidated accounts as long as they were in compliance with EU directives.

As in German accounting practice, French listed companies are allowed to use either IAS or US GAAP rules for consolidated accounts, but in contrast with Germany, French law allows for a relaxation in the application of certain accounting rules if necessary to achieve a 'true and fair view'.

Another characteristic of the French model is the strong influence of the State, although professional influence is also exerted by the Conseil Nationale de la Comptabilité, and the existence of the General Accounting Plan with its strict and uniform rules is in stark contrast with UK practice.

In the UK, however, accounting standards have been dominated by the accounting profession, with its 'true and fair view' philosophy being especially important for companies listed on the stock exchange. The influence of tax rules on financial reporting is much less important than in Continental countries, and listing requirements for the London Stock Exchange are more stringent as compared to the Frankfurt or Paris exchanges. Moreover, the use of UK GAAP is obligatory for both individual and consolidated annual accounts.

It is obvious from the comparative descriptive analysis above that there are significant qualitative differences among countries in accounting practices and that only a partial distinction may be drawn if considering merely the characteristics of the legal system as suggested by Ball et al. (2000).

Moreover, countries can be ranked differently on the basis of conservatism, i.e. by measuring balance sheet (news-unrelated) versus market (news-related) conservatism (Basu, 2001). For example, by adopting the quality of accounting practice (or balance

sheet conservatism) as the criterion, Germany would be ranked as highest and UK the lowest. However, the UK is considered to be the most conservative and Germany the least conservative if the sensitivity of accounting earnings to market news is used as the measurement criterion. Giner & Rees (2001) observe both aspects simultaneously. Prior to conducting their innovative research, Giner & Rees (2001) replicate Basu's model (2.13) comparing the timeliness and asymmetric timeliness of accounting earnings following the inclusion of extraordinary items for the period between 1990 and 1998. Their results reveal earnings conservatism for all three countries, both measured as a positive difference in R^2 s between 'bad' (negative annual returns) and 'good news' (positive returns) sub-samples, and as a positive and statistically significant differential slope coefficient on negative returns, implying the greater speed with which 'bad news' is incorporated into current earnings. They find UK firms to be most conservative, German firms the least conservative and the French somewhere in between. However, the evidence of differences in the timeliness of earnings for 'bad' and 'good' news among these countries is statistically weak. The differences among the countries are especially small for the results based on the averages of annual regressions for the years following the enactment of the EU harmonization directives in these three countries.

These results imply that the harmonization of accounting practices in Europe is diminishing differences in income recognition and in the properties of accounting earnings even among European countries that belong to different legal systems, i.e. common law or civil law countries (see Figure 2.2).

Table 2.2

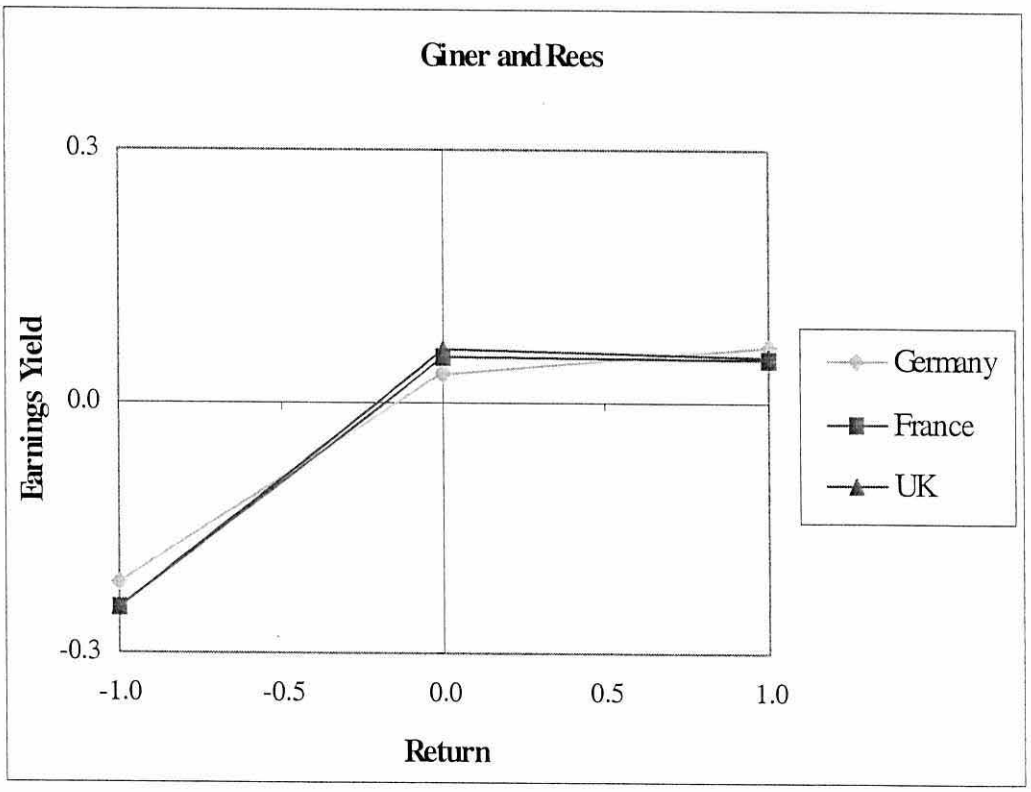
Timeliness and Conservatism of Earnings - Results by Giner & Rees (2001)

	α_0		α_1	α_2		α_3		R^2 (adj.) %
Germany	0.032	***	0.002	0.063	***	0.186	***	12.2
France	0.052	***	0.001	0.050	***	0.249	***	13.4
UK	0.062		0.001	0.051	***	0.257	***	14.4

The model estimated is as follows: $E_t/P_{t-1} = \alpha_0 + \alpha_1 D_t + \alpha_2(P_t-P_{t-1})/P_{t-1} + \alpha_3 D_t (P_t-P_{t-1})/P_{t-1} + \varepsilon_t$where E_t is earnings after extraordinary items, P_t is the price per share at year end t and D_t is a dummy variable for 'bad news' as in Basu's (1997) model. *** Significant at 1% level of significance.

Figure 2.2

Timeliness and Conservatism of Earnings – Results by Giner & Rees (2001)



Giner and Rees (2001) examine France, Germany and the UK from 1990 to 1998. There is no longer a clear difference between countries in asymmetric recognition despite their very different legal traditions. Smaller firms are more conservative than larger firms.

In an attempt to capture a different aspect of conservatism reflected by the impact of prior-period asymmetric recognition of news on current earnings, Basu's (1997) model (2.13) is modified to measure the extent to which prior-period earnings change reverses (when the earnings change is negative) or persists (when the earnings change is positive) in current-period earnings.

In particular, Basu's regression (2.13) is extended and prior-period earnings E_{t-1} scaled by the opening share price P_{t-1}, are incorporated as an additional explanatory variable. A new dummy variable L_t to identify losses is also introduced and compared with prior earnings to capture the differential persistence (or reversibility) on current earnings of the previous year's negative and positive earnings:

$$E_t/P_{t-1} = \beta_0 + \beta_1 D_t + \beta_2 R_t + \beta_3 R_t * D_t + \beta_4 L_t + \beta_5 E_{t-1}/P_{t-1} + \beta_6 L_t * E_{t-1}/P_{t-1} + \varepsilon_t \quad (2.21)$$

where L_t takes the value of 1, if prior-period earnings are negative, and 0 otherwise, and R_t is the current period return: $(P_t - P_{t-1})/P_{t-1}$. Slope coefficient β_5 captures the time-series behavior of earnings, whereas the differential slope coefficient β_6 captures the differential speed with which prior-period losses are reverted into current period returns. β_2 and β_3 are identical to their counterparts in Basu's model (2.13), i.e. β_2 captures the responsiveness of current earnings to current period 'good news', whereas β_3 reflects the incremental sensitivity of current earnings to contemporaneous 'bad news'.

By using the approach, the model is expected to capture the impact of the prior-period asymmetric recognition of news (incorporated into prior-period earnings) on current earnings. Thus, Pope & Walker's (1999) variable V_t that reflects the effects of prior-period news on current-period earnings is implicitly proxied. The combined impact

of previous years' earnings with the impact of concurrent news captured in current returns on contemporaneous earnings is examined. An additional benefit is that at least in part the problem of omitted variables is corrected.

The persistence in current earnings of prior-period profits is expected to be greater than that of prior-period losses, so β_5 is expected to be positive as this reflects the more permanent impact of prior-period 'good news' captured in previous earnings on current earnings, and β_6 is expected to be negative as the impact of prior 'bad news' through prior earnings is expected to revert in current-period earnings.

Additional interesting results are obtained by comparing restricted versions of the model (2.21) in which some of the coefficients were set at zero. First, β_4, β_5 and β_6 are set at zero, which reduces the model to Basu's original model (2.13) . Next, β_1, β_2 and β_3 are set to zero which reduces the model to one of the earnings time series.

When these two restricted models are contrasted, it can be inferred that the model based on prior earnings (separated by the use of the dummy L_t into profits and losses) generally has higher explanatory power for German and French firms and that the differences between countries are much stronger than in the case of Basu's model, which is based on market news influences.

This is a signal that cross-country differences in asymmetric income recognition noted simply by observing the market news variable (firms' annual returns), are diminishing, and that the timelineness and conservatism of accounting earnings are converging across Europe as firms now operate in integrated rather than segmented markets. On the other hand, the converging trend in timeliness and conservatism is less obvious when income recognition is examined by exclusively observing the impact of market news through prior-period accounting earnings rather than directly through the market (returns). This finding suggests that the institutional frameworks for accounting practices, regulation, laws, standards, etc. are not so harmonized or integrated on a country-specific basis, and are thus driving even greater cross-country differences.

In addition, all the coefficients in the model are allowed to be different from zero, and the results suggest that there are no statistically-significant differences between these three European countries as to their incremental sensitivity of earnings to bad news. The only significant difference was between Germany and two other countries (the UK and France respectively) as to coefficients β_5 and β_6, the sensitivity of current earnings to prior-period profits and losses.

The results from Pope & Walker's (1999) replicated model (although the returns from two lagged periods are used as explanatory variables, whereas Pope & Walker (1999) use three) show that 'good news' is more strongly incorporated into earnings in France and Germany than in the UK, although it may influence with a lag in France and Germany. The 'bad news' is more strongly captured by current earnings in the UK and may influence the earnings of subsequent periods. The reaction of earnings to 'bad news' decays over time but there is evidence that it reverses only in France.

Overall, the empirical evidence shows smaller cross-country differences as compared to Ball et al. (2000) regarding the relationship between contemporaneous earnings and contemporaneous 'bad' and 'good' news. However, once the lagged news is included, the cross-country differences are more pronounced. German companies are characterized by pervasive conservatism independent of news, relatively small differences between the permanence of profits and losses and relatively weak asymmetric recognition of 'bad news'. French companies have persistent profits and transitory losses and asymmetric recognition of 'bad news'. British firms have highly persistent profits and transitory losses and the strongest indication of asymmetric recognition of 'bad news'.

To conclude, Germany, France and the UK are seen to have statistically similar levels of conservatism. Taking into account that in the last decade there has been an attempt to harmonize countries' domestic standards with the EU directives, this result should not be surprising.

A similar result, although for a larger group of European countries is found by Grambovas & Giner (2001). The asymmetric timeliness of earnings for firms domiciled

in countries belonging to the Euro zone are examined and the results obtained are compared with those for UK firms.

By focusing on the Euro zone context, the impact of possible macro-economic differential factors that might influence the returns-earnings ratio is avoided. This group of countries is also important in itself, as it aspires to form the future European Stock Exchange. The results show that earnings for firms from all Euro-zone countries except Austria capture 'bad news' more quickly than 'good news' but that such conservatism is weaker for the Euro zone as a whole than it is for UK firms. On the other hand, traditional accounting choice conservatism, which is measured by the intercept coefficient from Basu's (1997) model (2.13) is more pronounced for the continental accounting model than for its UK counterpart. This result is in line with findings by Giner & Rees (2001) regarding pervasive conservatism unrelated to news observed for Germany which is usually seen as a typical example of the continental accounting model.

Furthermore, the implicit effects of the 1992 implementation of European Directives on earnings conservatism are taken into account. The implementation of the 4th and 7th Directives, the enactment of the Maastricht Treaty followed by the convergence of the macroeconomic variables and the integration of capital markets are expected to have an impact on the earnings-returns relationship. The observation period (from 1988 to 2000) is divided into two sub-periods - before and after 1992 - and increased timeliness for 'bad news' is found for all countries with the exception of the Netherlands after 1992.

Timeliness, Conservatism and the Characteristics of the Firm

An important feature of the European financial markets is that they are becoming increasingly integrated, and a growing number of firms across Europe is raising its equity beyond the domicile country's boundaries. In order to improve their ability to raise equity in global financial markets, firms have to comply with listing requirements and accounting standards on stock exchanges in countries where they wish to list their stock. Often, the targeted stock exchanges with the highest liquidity and turn-over have the most stringent listing requirements and require heavily-regulated financial reports. Therefore,

firms that intend to list internationally or are already cross-listed are likely to report conservative earnings in order to meet the requirements of foreign stock exchanges.

Similar conclusions are reached by Huijgen & Lubberink (2001), who compared the degree of conservatism between Dutch interlisted and only domestically-listed firms and found that in general, Dutch firms that are listed abroad have earnings that are more conservative compared to the earnings of firms listed only domestically.

Assuming that within the European context, firms that are interlisted are likely to be audited by Big Eight companies and that the globalization of auditing has resulted in Big Eight auditors acquiring local auditing firms in other countries to better serve multinational clients, increasingly conservative accounting and auditing practices have been introduced. The integration of financial markets in Europe and the growing number of companies operating and listing shares on multiple stock exchanges may result in a general increase and similarity of the level of conservative accounting.

Similarly, the argument that firms audited by Big Eight auditing companies have incentives to report more conservative earnings than firms audited by non-Big Eight auditors is presented by Basu et. al. (2001) who using the sample of US firms and the 'reverse regression' methodological approach introduced in Basu (1997) examine the link between the level of a company's accounting conservatism and the liability exposure of auditors. As lawsuits against auditors usually allege that assets and revenues are overstated and that liabilities and expenses are understated, and as courts are more likely to award damages for accruals that overstate earnings and assets, auditors have incentives to ensure that earnings are reported conservatively to reduce their exposure to such lawsuits. Since Big Eight auditors have greater incentives to be conservative, Basu et al. (2001) expect them to require impairment tests more frequently and to require more evidence of recoverability than non-Big Eight auditors. They show that Big Eight audited firms' earnings display greater asymmetric timeliness than non-Big Eight auditees. In addition, they show that the difference in accounting conservatism between Big Eight and non-Big Eight auditees is greater in periods of high auditor legal-liability exposure,

implying that Big Eight auditors and indirectly, also audited firms respond rationally and punctually to changes in the institutional environment.

In line with Basu (1997) they predict that the effects of conservative accounting are primarily captured by accounting accruals, as conservatism is reflected through write-offs and write-downs that usually have little impact on concurrent cash flows. Thus, cash flow is predicted to be less asymmetrically timely than earnings, and the differences in the asymmetric timeliness of earnings and cash flows is greater for Big Eight auditees than for non-Big Eight auditees.

Another aspect of conservative accounting is the differences in persistence of 'bad' and 'good' news shocks on earnings. Basu et al. (2001) find that the negative earnings changes reverse more in the following period for Big Eight auditees than for non-Big Eight auditees. This implies greater conservatism for the former since conservatism implies that 'bad news' is almost completely reflected in current earnings and appears as a transitory shock to the earnings process that reverses in the future.

Accounting Measurement Practices and the Features of the Institutional Environment

In order to verify the extent to which accounting harmonization in Europe has contributed to increasing similarity in the asymmetric timeliness of earnings, it is necessary to examine how much domestic accounting standards were changed in response to these directives.

The principle factors that have historically led to differences across European countries are: the relative importance of the law, providers of capital and the link between tax and financial reporting (Joos & Lang, 1994). The UK and Germany are seen as two extreme cases of legal influences on accounting and financial reporting. In the UK, accounting has been governed by the requirement that financial statements present a 'true and fair view', with the law providing only general principles. On the other hand, in Germany there is a Roman law tradition of highly codified and prescriptive regulations,

while France is considered to be somewhere in between but close to Germany. Joos & Lang (1994) examine the differences in accounting measurement practices in France, Germany and the UK.

This approach is similar to the own adopted by Ball et al. (2000), except that Joos & Lang (1994) focus on the influences of law on accounting and financial reporting process in terms of the employment of a 'true and fair view', whereas Ball et al. (2000) group countries according to their legal tradition into common law and code law structures, assuming that this distinction is also able to capture the difference between 'shareholder' and 'stakeholder' corporate governance models and the different ways of resolving information asymmetry through public disclosure and private communication, leading to variations in the timely recognition of income in accounting earnings between two systems.

Within this institutional framework the needs of capital providers are emphasized. In the UK, capital is provided by diverse investors who require greater value relevance in financial reports and accurate reporting of profits. However, in Germany firms heavily rely on debt financing by a smaller number of banks that typically have direct access to a firm's business-relevant information. Joos & Lange (1994) describe France as a rather bank-orientated country but with a strong government influence that requires accounting practices to comply with government plans for the economy. It is predicted that in Germany and France, where banks are predominant source of capital, balance sheet accounting is more conservative and value-relevance is lower, thus reducing the association between accounting figures and share prices and shifting the emphasis to balance sheet data rather than the income statement.

Moreover, in Germany and France the tax law impact on financial statements is particularly strong, providing further incentives to report lower profits in order to reduce taxes. On the other hand, in the UK the alignment between taxes and financial reporting is much weaker and financial statement income is merely a starting point for calculating taxes.

The last two factors identified by Joos & Lang (1994) correspond to some of the institutional environment features analyzed by Ali & Hwang (2000). Namely, Ali & Hwang (2000) differentiate between bank and market-oriented systems and between countries where tax rules significantly influence financial accounting measurements.

In order to evaluate the diversity in measurement practice across three European countries, they employ three types of analysis: univariate ratio analysis, returns and price regressions. In the ratio analysis they examine the return on equity (ROE) - the ratio between net income prior to the inclusion of extraordinary items and book value of equity, the earnings price ratio (E/P) - net income prior to the inclusion of extraordinary items divided by the market value of firms' sharez at the end of year and the book-to-market ratio (B/M) – the book value of equity relative to the market value of equity at year-end.

ROE and E/P are expected to be highest for UK firms, lowest for German firms and somewhere in between for French firms. The B/M ratio is expected to be highest for French firms, in between for UK firms and lowest for German firms. These predictions are explained by the fact that traditional differences in accounting practices in Europe mean that German accounting reports the lowest shareholder equity, French the highest and the UK somewhere in between. They also predict that net income is lowest for Germany, highest for the UK and in between for France. This is explained by the option available in UK GAAP of directly taking goodwill to reserve whereas it is amortized in France and Germany, thus reducing income. These findings support the prediction for ROE and E/P being highest for the UK and lowest for Germany, and for B/M being highest for France and lowest for Germany. However, the results do not support expectations regarding the convergence in ratios following the implementation of the EU directives specifying minimum reporting requirements and allowable options.

Another method employed in order to evaluate diversity in measurement practices across Europe is the returns and price regression which examines the value relevance of reported accounting earnings. The strength of the association between returns (prices) and

earnings as measured by model's explanatory power, the R-sq, is considered to be an indicator of the value relevance of accounting data:

In the returns regression:

$$(P_{jt} + d_{jt} - P_{jt})/P_{jt-1} = \alpha_{0t} + \alpha_{1t}A_{jt}/P_{jt-1} + \alpha_{2t}(A_{jt} - A_{jt-1})/A_{jt-1} + \varepsilon_{jt} \quad (2.22)$$

where Pjt is the price per share of a firm j at time t, djt is dividends for firm j at time t, and Ajt is net income prior to the inclusion of extraordinary items for firm j at time t

and in the price regression:

$$P_{jt} = \beta_{0t} + \beta_{jt}A_{jt} + \beta_{2t}B_{jt} + u_{jt} \quad (2.23)$$

where Bjt is book value of equity per share for firm j at time t.

Such value relevance for accounting information is expected to be greater (higher R-sq) for the UK than for France and particularly Germany.

The results from the returns regression suggest that earnings changes are more strongly associated with returns for the UK than for French and German companies, whereas earnings levels are more strongly associated with returns for German and French firms than for UK firms. However, the explanatory power is highest for France, followed by Germany and finally the UK, providing no evidence that the net income reported in the UK was more relevant than the net income reported in France and Germany. No evidence was found of a correlation between prices and earnings being stronger for the UK than for French and German firms. The results are robust after controlling for cross-country differences in macroeconomic factors, tax policies and for industrial and capital

structure differences. In addition, no evidence was found as to the convergence in value relevance levels across countries following the implementation of EU directives.

Therefore, differences in accounting measurement practices do exist in Europe, and the need to reduce them is particularly clear within the context of capital market integration and increasing efforts to develop integrated standards as a basis for global cross-listing and attainment of optimal accounting harmonization.

However, past research has analyzed the link between earnings and stock prices around the world, only implicitly accounting for international differences in institutional factors. For example, Ali & Hwang (2000) explore the relationship between the measures of the value relevance for financial accounting data and several country-specific factors. In their sample of firms from 16 countries they examine the link between measures of value relevance and 5 country-specific factors.

They distinguish two types of financial systems: one in which banks supply most of the capital needed (bank-oriented system), and a second one in which numerous, diverse investors provide financing (market-oriented). In bank-orientated systems the relationship between banks and firms are close, allowing banks to have direct access to company information, whereas in market-oriented systems, numerous diverse investors without direct access to relevant company information have to rely heavily on financial accounting disclosure. Therefore, they argue that the value relevance of financial statement information is greater in market-oriented countries.

In order to estimate the extent of market and bank orientation, Ali & Hwang (2000) use two measures: the first is the debt-to-asset ratio and the second is the number of publicly-traded domestic firms relative to the population. The higher the median debt-to-asset ratio, after controlling for the year, industry and firm size, the greater the importance of banks in a specific country. Moreover, as the number of publicly-traded domestic companies relative to a country's population increases, so does the breadth of equity finance, as the country's financial system becomes more market-oriented.

Secondly, they consider standard-setting processes within each country in terms of whether the accounting rules are predominantly set by governmental or private bodies. They argue that in countries where accounting standards are set by government bodies, the purpose of financial accounting rules is to address the needs of the government, such as tax purposes and compliance with macroeconomic policies. On the other hand, if accounting standards are mostly set by the accounting profession and private-sector bodies, accounting standards are more likely to satisfy the needs of investors, and therefore financial accounts are expected to provide information that is relatively more value-relevant.

Third, they consider each country's accounting practices as being in line with either the British-American or Continental model. They argue that the British-American model is more oriented towards the needs of capital providers, investors and creditors and therefore financial accounts are expected to be more relevant.

Fourth, they distinguish countries on the basis of whether their tax rules exert a significant influence on the financial reporting process. They assume that if this is the case, financial reporting reflects political, economic and social objectives such as promoting or discouraging certain types of economic activities, promoting employment and controlling inflation. In such cases firms are also more likely to systematically report understated profits in order to reduce taxes. Therefore, the resulting financial reports do not fully address the needs of capital providers and the value relevance of financial accounting information is expected to be relatively lower.

Fifth, they consider the level of spending on external auditing services as measured by the total fees of the country's ten largest accounting firms relative to the country's gross domestic product. They argue that the amount spent on external auditing services indicates the extent of demand for financial accounting, and consequently the level of value relevance in the financial reports.

In order to measure this level of value relevance, they estimate the regression of contemporaneous annual returns on the contemporaneous change and level of earnings deflated by the prior-period share price:

$$Rt_{it} = \alpha_0 + \alpha_1 \Delta E_{it}/P_{it-1} + \alpha_2 E_{it}/P_{it-1} + u_{it} \quad (2.24)$$

where Rt_{it} is a 15-month market-adjusted return for firm i, $\Delta E_{it}/P_{it-1}$ is the contemporaneous earnings change and E_{it}/P_{it-1} is the contemporaneous earnings level both deflated by the opening share price.

Similarly, Ali & Hwang (2000) examine the value relevance of accruals, pointing out that accounting practices primarily influence accruals rather than cash, so they re-estimate the model (2.24) by: (a) adding a cash flow term:

$$Rt_{it} = \alpha_0 + \alpha_1 \Delta E_{it}/P_{it-1} + \alpha_2 E_{it}/P_{it-1} + \alpha_3 \Delta CFO_{it}/P_{it-1} + \alpha_4 CFO_{it}/P_{it-1} + u_{it} \quad (2.25)$$

and (b) replacing earnings with cash flows:

$$Rt_{it} = \alpha_0 + \alpha_2 \Delta CFO_{it}/P_{it-1} + \alpha_3 CFO_{it}/P_{it-1} + u_{it} \quad (2.26)$$

Ali & Hwang (2000) construct one value-relevance measure that equals the difference between the R-sqs of the equations (2.24), (2.25) and (2.26) estimated for each sample country and the median R-sqs of the 100 US sample, used as a benchmark, matched by firms size, year and industry.

They also obtain the differences between the R-sqs of equations (2.25) and (2.26) in order to estimate the value relevance of accruals which they further compare with those of the matched 100 US samples. Further, they calculate Spearman correlations

between the value-relevance measures obtained and country specific institutional factors. Their findings suggest that value-relevance is greater in market-oriented systems, in countries where private bodies are involved in the standard-setting process, where tax rules exert minimal influence on financial accounting measurements, where spending on auditing services is relatively high and where accounting practices follow the British-American model. They also find that the lead-lag structure of earnings is more pronounced in bank-oriented countries, as the earnings information is reflected more in leading-period rather than in contemporaneous-period returns.

The properties and the quality of accounting information is observed across countries in an attempt to explain cross-country differences by examining the influences of the institutional frameworks in the countries involved. In contrast to Ball et al. (2000) who divide countries into two groups on the basis of a single criterion (their legal tradition): code law and common law countries, Ali & Hwang (2000) consider five country factors. However, using these five factors, they also basically divide countries into two groups: the first one includes countries that have high values of the composite measure of the five country-specific factors and the second includes the remaining countries.

2.6 Conclusion

The research studies reviewed in this chapter focus on the association between the information in financial statements and the information contained in share prices with particular attention to variations among countries. First the institutional framework that characterizes each country is analysed in terms of its effects on the earnings conservatism of firms, as in Ball et al. (2000). Secondly, it is analysed in terms of the value relevance of accounting information for firms, as in Ali & Hwang (2000).

Most of the studies cited adopt the legal framework of single countries as the main criterium for distinguishing the characteristics of the institutional environments among countries. Even though the distinction between common law and code law regimes is useful, the set of features that defines the institutional and operating

environment of a firm and influences the properties of accounting earnings is more complex than a generalized grouping based on legal origin.

Furthermore, characteristics such as certain institutions, accounting standards, the structure of the legal system and the extent of regulatory enforcement are very likely to overlap for different country groups or clusters. For example, Ball et al. (2000) assume that all common law countries have a shareholder corporate governance structure and that all civil law countries have stakeholder structure. In reality, however, the type and quality of corporate governance is much more complex and extemely diversified among countries belonging to the same legal tradition, and thus the analysis should extend beyond the two-tier classification of 'stake' versus 'share' holder models.

Moreover, empirical evidence underlines the similarity of earnings conservatism between firms in the UK, France and Germany - countries belonging to different legal systems. The converging trend in timeliness and accounting earnings conservatism across Europe is particularly pronounced when differences in earnings timeliness are examined expressly by observing earnings sensitivity to contemporaneous market news.

However, the converging trend in timeliness and conservatism is less obvious when income recognition is examined by observing the impact of market news through prior-period accounting earnings rather than through market (returns) directly. This finding suggests that the institutional frameworks for accounting practices, regulation, laws, standards, etc., are not as harmonized or integrated on a country-specific basis and are consequently widening these differences to a greater extent. These inferences are supported by Joos & Lang (1994). who provide evidence regarding the differences in accounting-based performance measures across three European countries that are characterized by different accounting philosophies and practices. Similarly to Ball et al. (2000) who use underlying institutional factors as a criteria for country groupings and then observe the differences in the properties of accounting earnings among country groups, Joos & Lang (1994) implicitly link differences in the reported accounting measures of firms with variations among countries in the factors that determine the institutional frameworks in which firms operate.

However, these recent studies investigate cross-country differences in accounting measurement practices using a descriptive analysis of background factors that might accentuate those differences, but they do not establish a more explicit link between institutional factors and the accounting earnings performance of firms.

Another issue of interest is the growing number of firms seeking capital outside the domestic capital market. In these cases financial reporting requirements are likely to be applied by cross listed firms in addition to domestic standards. For example, domestic financial reporting requirements in bank-oriented countries might not serve as an appropriate set of standards when the firms from those countries raise equity in countries that are market-oriented.

Furthermore, the research reviewed fails to take this phenomenon into consideration and assumes that the accounting earnings of firms are influenced solely by institutional factors of the domicile country, regardless of whether the firm is operating internationally or whether it intends to list or is listed on international stock exchanges and is therefore sensitive to the different requirements in the various jurisdictions involved.

The inferences made above suggest that an in-depth analysis of the differences in the properties of accounting earnings (such as the asymmetric timeliness of income recognition) among firms in different countries and in particular among those that are exposed to the influences of different regulatory jurisdictions requires consideration of the international exposure of an individual firm to the set of institutional factors in the regulatory environments where that firm operates and raises its equity.

3. Accounting Regulation and Corporate Governance

3.1 Introduction

The previous section reviewed prior studies on international differences in the properties of accounting earnings and the value relevance of accounting information in general. In much of this work, an attempt has been made to explain these differences by examining sets of chosen institutional factors that shape the environment in which firms operate and that to a certain extent determine the properties of accounting earnings.

In Europe a wide variety of institutional frameworks still exists despite the process of accounting regulation convergence and harmonization that has taken place over the past 25 years. Some authors argue that such diversity in Europe remains mainly due to differing legal traditions. However, as pointed out by McLeay (1999), some aspects of the institutional structures for accounting regulation are distinct and unique to each country in Europe, and involve more than simply introducing harmonized European law. In some countries, self-regulating institutions and private bodies representing the accounting profession issue their own rules in the form of standards or opinions whereas in other countries the law is the only source of binding rules or regulation or it is delegated to government ministries or regulatory agencies. The nature of the legal system is not necessarily a good proxy for these different structure, nor for the breadth of the various constraints on corporate discretion, whether legal or otherwise. Thus, this diversity in accounting-related regulation should be analyzed by taking into account other dimensions that are unique to the regulatory framework within which companies operate, such as systems of corporate governance, investor protection and wider capital market influences.

In this section, I review the empirical research literature on the institutional framework of accounting regulation in Europe, including the legal background to shareholder and creditor protection, the effectiveness of enforcement, and the broader codification of corporate governance, together with those empirical studies that attempt to

explain how these matters influence financial reporting practices. Finally, a new set of contextual variables that captures this regulatory diversity is constructed for the purpose of empirical application further on in this study.

3.2 Understanding the Regulatory Environment

Corporate governance research findings literature suggests that the conflict of interest between a firm's management and outside investors may be observed around the world (e.g. La Porta et al 1997, 1998). The essence of the agency problem is the separation of management and ownership or control, and arises when the interests of managers and outside shareholders diverge. The firm's controlling parties (management and majority shareholders) might have incentives to exclusively enjoy gains and not share them with non-controlling outsiders, or to embark upon opportunistic projects that will benefit themselves at the expense of outsider shareholders, or even to expropriate the firm's assets directly. Therefore, investors need to be assured that their rights will not be abused and that they will receive the appropriate return on their investment. It is the aim of corporate governance mechanisms and investor protection measures to provide this assurance (Shleifer and Vishny, 1997).

Legal protection for outside investors has been identified as a key determinant of financial market development, capital and ownership structures, dividend policies and private control benefits the world over (Shleifer & Vishy, 1997, La Porta et al., 2000) .In order to protect their interests, outside shareholders sign contracts with managers that specify what managers do with funds and how the returns are divided between them and shareholders. In order to enforce these contracts, outside shareholders have to rely on the existence of a legal system that upholds company, bankruptcy and securities laws, and also on the effectiveness of their enforcement .

When investor rights are well enforced by regulators and courts, corporate governance works well, the rights of creditors and shareholders are protected, and outside investors are willing to finance firms. The law and the quality of its enforcement are potentially important determinants of the rights that shareholders enjoy and how well

these rights are protected. Indeed, variations in law enforcement from country to country explains why firms raise more funds in some countries than in others. Moreover, understanding the differences in the legal protection afforded to investors might help explain why firms in certain countries such as in the US and UK have widely dispersed ownership structures, whereas in countries such as Italy they rarely go public.

Legal Families

The initial premise of La Porta et al.'s (1998) analysis is a historical distinction between legal families. These authors rely on a traditional approach to legal research, maintaining that national legal systems are sufficiently similar in certain critical respects to permit classification of national legal systems into major families of law. According to this approach, two broad legal traditions are identified: civil law and common law.

Civil law, which originates from Roman law, is considered to be the oldest legal tradition, the most influential and the most widely adopted around the world. Under the civil law tradition, three families of law are identified: French, German and Scandinavian. The French Commercial Code was established under Napoleon and spread to Belgium, the Netherlands, Italy, the Western parts of Germany, parts of Poland, Spain, Portugal, some Swiss cantons and Luxembourg. Outside Europe, as a result of French, Spanish and Portuguese colonization, it is influential in the Near East, North and sub-Saharan Africa, Indochina, Oceania and Latin America. The German Commercial Code was written following the unification of Germany and became influential in Austria, Czechoslovakia, Greece, Hungary, Italy, Switzerland, Yugoslavia, and outside Europe in Japan, Korea, Taiwan and China. La Porta et al. (1998) treat Scandinavia as a separate legal grouping, on the grounds that its laws are derived from Roman law to a lesser extent than is the case for the French and German families.

The common law family includes the law of England and laws based on English law, which spread to the British colonies such as the US, Canada, Australia, India and other such countries around the world.

Table 3.1 below presents four groups of European countries based on their legal origin (restricting the countries involved to those covered by the research discussed in Chapter 5):

Table 3.1

Legal Families

Common law family	French legal family	German legal family	Scandinavian legal family
Ireland	Belgium	Germany	Denmark
United	France	Switzerland	Finland
	Italy		Norway
	Netherlands		Sweden
	Spain		

The objective of the analysis by La Porta et al. (1998) is to focus on the laws governing investor protection, more specifically company, bankruptcy and reorganization laws. They examine the differences in these laws from country to country and whether these differences have an impact on corporate governance. Their study examines empirically how the laws protecting investor rights differ among 49 countries and the extent to which the quality of their enforcement varies.

Shareholder and Creditor Rights

The issue of legal regulations and their consequences for corporate governance is multifold. The first dimension concerns the very nature of the legal regulation, or its quality in terms of the extent to which investors' rights are covered by the law. The second dimension is related to the quality of the enforcement of these laws. Usually the task of enforcing legal regulation is entrusted to courts, but as La Porta et. (2000) point out in a further paper, in many countries such enforcement cannot be taken for granted. In

some cases, courts are not efficient, they are subject to political pressures or they may simply be slow.

La Porta et al. (1998) examine both the content of regulation as well as the quality of its enforcement in the context of finance. The content of regulation is investigated by considering shareholder and creditor rights. Shareholder rights are analyzed on the basis of their regulation in a country's company law, and appropriate measures are defined to measure the extent to which shareholders' rights are protected in each country.

First, with respect to the differences in shareholder voting procedures from country to country are noted. It may be argued that shareholders are better protected when dividends are tied to voting rights that impede company insiders from having substantial control of the company without having substantial ownership of shares. In this context, investors are better protected when a country's legislation requires that ordinary shares carry one vote per share, or equivalently, as this legal requirement is differently expressed in different countries' laws, when law prohibits the existence of multiple-voting and non-voting shares and prevents firms from setting a maximum number of votes per shareholder irrespective of the number of shares owned.

The next consideration is the legal protection of minority shareholders. First a distinction is made between countries where the law requires shareholders to be present in person or send an authorized representative to the general meeting in order to vote by proxy, and countries where votes may be cast by mail, thus facilitating fuller shareholder involvement in the voting procedure. Second, in some countries shareholders are required by law to deposit their shares for a certain period prior to the general meeting, thus preventing them from changing hands, whilst the law may prohibit this practice elsewhere. Third, in some countries the law provides minority shareholders with a mechanism of proportional representation on the board through which minority interests may nominate a proportional number of directors, or equivalently allow shareholders to cast all their votes for the same candidate up for election to the board. Fourth, the law might provide minority shareholders with the right to challenge the directors' decisions in courts or the right to force the company to repurchase shares held by minority

shareholders who disagree with important decisions taken by management, such as mergers, asset dispositions and changes in the articles of incorporation. Fifth, in some countries company law protects shareholders from the dilution of shares whereby shares are issued to favored investors at below-market prices, by granting shareholders the first opportunity to buy new issues of shares, a right that can be waived only through a shareholder vote. Sixth, given that the percentage of share capital necessary to call an extraordinary general meeting varies from country to country, the higher the percentage is, the harder it is for minority shareholders to organize such a meeting. Finally, the law in some countries may oblige companies to pay a certain fraction of their earnings as dividends. However, as La Porta et al. (1998) point out, this measure is not as restrictive as it may seem, as earnings can be misrepresented within the limits allowed by the accounting rules. In fact, this provision is often used as a legal means to make up for the weakness of other investor protection measures.

The next set of measures examined are the legal rights of creditors. Creditor rights are different from shareholders rights as there may exist different kinds of creditors, and greater legal protection of one type of creditor might mean a reduction of the rights of other types of creditors. La Porta et al. (1998) distinguish between senior secured and junior unsecured creditors and focus on analyzing the legal rights of senior secured creditors, arguing that they are more concrete and that the majority of debt around the world is of this type. There are two main procedures that take place when a firm defaults on its debt: either liquidation or reorganization, and both require different rights to be exercised. When a loan is in default, the creditors usually have the right to repossess the assets, and then it is decided whether the firm will be liquidated or not. In some countries, the law does not favour repossession by creditors because this typically leads to liquidation which is considered to be socially undesirable. In fact, there has been an extensive debate in literature as to whether both procedures for creditor protection should be required or alternatively just one measure (Aghion et al. 1992).

In creating a creditor rights index, La Porta et al. (1998) take into consideration both types of procedure, arguing that in most countries both types are present at least to some extent. They begin by considering bankruptcy and reorganization laws. First, they

examine whether managers must obtain the consent of creditors in order to file for reorganization or not. Where this is so, the rights of secured senior creditors are considered to be better protected. Second, in some countries, the law requires an automatic stay on assets, and where this is so, secured creditors are prevented from gaining possession of their security, which protects managers and unsecured creditors. For example, in Greece, secured creditors can repossess their property when loans mature but not when borrowers default, whereas in other countries, creditors can exercise the right to repossess their assets prior to the completion of the reorganization. Third, in each country secured creditors are ranked differently in distributing the proceeds that result from the firm's liquidation. For example, the government and the workers may have priority over senior creditors. Fourth, during the reorganization process the court or the creditors may appoint a party to replace the management, whereas in other countries the management is maintained, pending the resolution of the reorganization procedure, with the rights of creditors being better protected in the former case. Finally, the requirement for a minimum percentage of share capita to serve as a legal reserve prevents the automatic liquidation of the firm and is often used as an instrument to protect creditors when they have few other powers.

In order to quantify the level of shareholder and creditor protection for each country in their sample, La Porta et al. (1998) give a score of 1 for each measure if it protects the rights of minority shareholders and creditors or zero otherwise. They find that only a few countries have laws that protect minority shareholders adequately. They also find that the differences among countries reflect their grouping by legal tradition. Generally, countries that belong to the common law group have laws that provide better shareholder protection, as compared to the civil law countries. Moreover, amongst the civil law group of countries, countries of French legal origin provide the worst legal protection to shareholders.

These findings suggest that the protection of creditor rights is more widespread than the protection of shareholder rights. Common law countries have the best creditor protection. On the other hand, countries of French legal origin have the weakest creditor protection, whereas German and Scandinavian civil law countries fall somewhere in-

between. When comparing the country scores regarding shareholder and creditor rights, the ranking is roughly the same, i.e. countries that protect shareholders protect creditors as well, with the exception of the Germanic civil law countries which offer strong protection of secured senior creditors but are not generally protective of minority shareholders. Therefore, the set of rights that shareholders and creditors are entitled to are determined by law, thus depending on the legal system. Differences of legal origin are best described by the proposition that some countries protect all types of shareholders better than others, and not by the proposition that some countries protect shareholders while other countries protect creditors. By using more detailed measures of the kind described above, the study reported in this thesis is able to take into account such subtle distinctions in the European context.

Legal Enforcement

For shareholder and creditor rights to be implemented, a strong system of legal enforcement is imperative. Indeed, it should also be recognized that strong enforcement can make up for weak rules since active and well-functioning courts can step.In order to examine the strength of legal enforcement, La Porta et al. (1998) use five measures: the efficiency of the judicial system, the rule of law, corruption, the risk of expropriation and the likelihood of contract repudiation by the government. These variables are used as proxies for the quality of legal enforcement and are based on data collected by private credit risk agencies for the needs of investors interested in conducting business in the countries in question. Each country is given an index value for each of the five variables and it is these measures that will be used later in this thesis. In the La Porta et al study, the mean index value is calculated for each legal origin group. When a statistical test of equality of means among country groups is performed, the results show that Scandinavian countries score best on efficiency of the judicial system, the rule of law, corruption, risk of expropriation and risk of contract repudiation by the government. The Scandinavian group is followed by the German legal origin countries, the common law group and, finally, the French legal origin countries.

Keeping in mind the results that have been obtained when examining the levels of shareholder and creditor protection, the quality of law enforcement is not found to substitute or compensate for the quality of investor protection laws. For example, investors in French civil law countries are only minimally protected by the law, while the system that enforces the laws is also weak. On every single measure, the wealthier countries (which in general have broader capital markets) appear to enjoy better-quality legal enforcement.

The Concentration of Ownership

In countries with poor investor protection and weak legal enforcement, shareholders who monitor the behaviour of management need to own more capital in order to gain control and thus be able to exercise their rights. Furthermore, potential small investors are loth to buying shares at relatively high prices, knowing that they will be poorly protected. Low demand for shares by minority investors makes it unattractive for firms to issue new shares to the public at the low prices required. The consequence is increased ownership concentration, which, as La Porta et al. (1998) hypothesize, compensates for poor legal shareholder protection.

Such increased ownership concentration of large blocks of shares can be held indirectly through other companies and families, and complex patters of ownership involving pyramids, as Franks & Mayer (2000) find for a sample of German firms. Also, they find that there is a substantial market in sales of large block of shares and that sellers of large blocks of shares obtain private benefits that are not shared with minority stock-holders. However, they show those large block of shares are only used for control purposes in about one third od cases. They also argue and find that banks exercise significant control in more widely held firms.

Using a large sample of 45 countries, La Porta et al. (1998) construct an index of ownership concentration by computing the average and median ownership stake for the three largest shareholders in the 10 largest non-financial, domestic, private and publicly traded firms (by market capitalization) for each country. However they do not make

allowance for the possibility that some of the large shareholders might be affiliated with each other or with management, which would eventually raise effective ownership concentration. Also, they do not examine the complete ownership structure of firms, i.e. by taking into account the fact that corporate shareholders themselves might have a number of owners, which would reduce ownership concentration.

They moreover compute the average ownership concentration for each legal family and compare these results. In general, dispersed firm ownership is more an exception than the rule worldwide, as the world-average ownership of the three largest shareholders was found to be 46 percent. As expected, the highest ownership concentration is found in the French civil law countries, with the average ownership of the three largest shareholders measured at 54 percent, followed by common law countries with 43 percent, Scandinavia with 37 percent, and the German civil law countries having the lowest concentration with 34 percent. These results suggest that indeed high ownership concentration is associated with weak legal protection for investors.

Additional tests were performed to empirically check whether the type of legal origin influences the level of ownership concentration by regressing country mean ownership percentages on legal-origin dummies. They control for several factors such as the logarithm of GNP per capita, total GNP, the Gini coefficient[5], the level of accounting standards, the degree of legal enforcement, and shareholder and creditor rights. Their results suggest that larger economies (as measured by GNP) have lower ownership concentration and that countries with more unequal societies (as measured by the Gini coefficient) have higher ownership concentration. Furthermore, countries with higher accounting standards and with better protection against director abuse have a lower concentration of ownership. Of course, some of the independent variables could be determined endogenously; for example, countries that have heavily-concentrated ownership and small stock markets might have little use for good accounting standards, and thus do not have incentives to develop them.

[5] Gini coefficient measures the distribution of wealth.

There is clearly a link between the quality of shareholder and creditor protection and the level of development in capital markets. The ability of firms to raise capital across various regulatory regimes and jurisdictions differs substantially. In countries where laws provide better protection of investors and where there is an efficient law-enforcement system, it is easier for firms to access capital markets and raise equity on better terms.

The Importance of Financial Markets

In order to asses the opportunities in different countries to raise external funds on stock exchanges, differences in the size and breadth of equity markets were examined. La Porta et al. (1997) construct an index for the importance of equity markets by examining three variables for each country, and these measures are used in the empirical analysis reported in this thesis.

The first variable is the ratio of stock-market capitalization held by minorities with respect to the gross national product. The market capitalization held by minorities is computed as the product of (a) market capitalization in 1994 of the ten largest non-financial, privately-owned domestic firms in each country and (b) the average percentage of common shares in these firms not owned by the top three shareholders. The second and third variables focus more specifically on the breadth of the capital market and they reflect the number and the flow of new companies obtaining equity finance. The second is the ratio of domestic firms listed in a given country with respect to its population, and the third is the ratio of the number of initial public equity offerings in a given country with respect to its population.

Another source of external financing that La Porta et al. (1997) investigate is debt. They collect data on the total debt in the private sector and the total face value of corporate bonds in each country and construct the Debt/GNP ratio which relates the sum of bank debt in the private sector and outstanding non-financial bonds to GNP.

The best access to equity finance is found in common law countries, where the average ratio of shares held by minorities to GNP is 60 per cent, followed by 46 per cent in German civil law countries, 30 per cent in Scandinavian countries and only 21 per cent in French civil law countries. Shareholder protection is highest in common law countries, intermediate in Scandinavian and German civil law countries and the lowest in French civil law countries. The ratio of aggregate debt to GNP is highest in German civil law countries, with an average of 97 per cent which is to be expected, as those countries are predominantly bank-oriented. Common law countries have an average debt-to-GNP ratio of 68 percent, Scandinavian countries score 57 per cent, and French civil law countries 45 per cent. It can be concluded that common law countries have better access to both equity and debt financing than Scandinavian and French-origin civil law countries.

Countries with broader and vaster equity markets also enjoy stronger shareholder rights. On the other hand, the relationship between indebtedness and creditor rights is less clear-cut. As shown above, the creditor-right index is the highest for common law countries, intermediate in German and civil law countries and lowest in French civil law countries. These results are in line with average indebtedness in common law and French civil law countries, suggesting that small (large) debt markets are associated with low (high) creditor rights. However, the German civil law countries that have the highest ratio of debt to GNP (97 per cent) have a proportionally low creditor rights index, possibly because German companies may have high liabilities overall but not necessarily high debt per se.

In La Porta et al. (1997, 1998), the association between each of the indexes for equity market importance and the rule of law and shareholder rights is examined, in this case measuring (i) GDP growth, as such growth is likely to influence both valuations and market breadth; (ii) the log of GNP that proxies for the size of the economy (assuming that larger economies have larger capital markets) and (iii) legal origin. Similarly, the association between debt importance (as measured by the ratio of aggregate debt to GNP) and the rule of law and creditor rights is also investigated.

The first set of regressions adopts the ratio of market capitalization held by minorities to GNP as the dependent variable. The regression results show that, as independent variables, shareholder rights as well as the rule of law independently exert a relatively large positive effect on the importance of equity markets, but that legal family effects are also significant in the sense that civil law countries have much smaller stock markets. The results also suggest that faster-growing economies (as measured by GDP growth) have stock markets with higher capitalization, and that country size is not a determinant of the importance of equity markets.

The next set of regressions adopts the ratio of listed domestic firms to population as the dependent variable. The results show that the number of domestically-listed firms per capita rises with the increase in the shareholder rights index and with the increase in the rule of law index, respectively. The country's legal origin is determinant and shows that stock markets are much narrower, as measured by the number of domestic listings per capita, in civil law countries with respect to their common law counterparts. The growth of GDP is not associated with the size of stock markets, whereas countries with larger economies as measured by the log of GNP have fewer listed firms per capita, all else being equal.

The third set of regressions adopts the number of IPOs per capita as a dependent variable, and provides the following evidence. Shareholder-rights and rule-of-law indices have a large, positive impact on the number of IPOs per capita. However, the impact of shareholder rights on the number of IPOs per capita decreases but is still significantly positive if legal origin is considered, thus suggesting that a variation of shareholder rights may explain the variation in the average number of IPOs among countries. Nevertheless, not only legal-origin effects are expressed by the shareholders-rights index. The French and German civil law countries have fewer IPOs per capita whereas Scandinavian countries have the same number of IPOs as common law countries. The GDP growth rate has a significant positive effect on the number of IPOs when legal origin is considered, whereas the size of the economy is not determinant.

The final set of regressions examines the association between the ratio of debt to GNP as a dependent variable and the rule of law, creditor rights and legal origins as independent variables, again taking GDP growth and the size of the economy (log of GNP) into consideration. When legal origin is disregarded, the results suggest that both the level of the country's GNP and the growth of GDP are associated with higher total debt relative to GNP, and that countries with better creditor rights and a higher rule-of-law index have a higher level of indebtedness. However, once legal origin is considered, the influences of creditor rights, GDP growth and the size of the economy on the level of a country's indebtedness are no longer significant, whereas the influence of the rule of law remains so.

French and Scandinavian civil law countries have smaller debt markets than common law countries, whereas German legal-origin countries do not have significantly larger indebtedness compared with common law countries. These results are somewhat in contradiction with the categorization of countries in recent literature on market versus bank-orientated systems (see Ali & Hwang, 2001) according to which, for example, Germany is a typical example of a country in which firms rely on debt financing. Also, similaraly to the results of Ali & Hwang (2001), Franks & Mayer (1998), although from a different point of view, find significant banks' influence in Germany, which derives predominantly from their chairmanships of supervisory boards rather than from firms' reliance on debt financing. On the other hand, Volpin (2001a) argues that in countries with lower investor protection, firms have more bank relations and greater ownership concentration. Therefore, the need to construct a new set of measures to account for such diverse structures emerges once again.

The Regulatory Environment and Accounting Earnings

The measures constructed by La Porta et al. (1997, 1998) are used in a number of subsequent papers that examined the differences in institutional regimes and their influences on international differences in the properties of accounting earnings.

For example, the link between the quality of earnings management and differences in institutional and legal characteristics among countries is examined, (Leuz et al., 2002). Strong legal protection is the key factor that affects the quality of accounting earnings. Leuz et al. (2002) focus their hypothesis on the agency problem, i.e. the conflict of interests between a firm's outsiders (minority shareholders and creditors) and the insiders (management and majority shareholders) who may have some interest in misrepresenting firm performance, acquiring private control benefits and expropriating outsiders wealth. Insiders may achieve the ultimate benefit of acquiring control in a firm by enjoying gains exclusively and not sharing them with non-controlling outsiders. The examples of private control benefits can be wide-ranging. For example, they range from the satisfaction of being in control and some minor forms of profit diversion to outright theft or transfer of a firm's assets to other firms owned by insiders or their family members.

In order to protect themselves against insiders' incentives to use private control benefits, outside investors sign contracts that allow them to take disciplinary action against controlling insiders should these private control benefits be detected. In order to avoid such action, managers and controlling owners may attempt to hide their private control benefits and the firm's true performance from outsiders. One of the ways to do that is to manage accounting earnings.

When legal protection of investors is poor, earnings management is more pervasive because insiders enjoy greater private control benefits and therefore have stronger incentives to conceal the firm's actual performance. Quality regulation protecting outsider investors together with a strong legal enforcement system ensuring the efficient enactment and application of regulation are crucial factors that affect a country's accounting earnings quality.

Other factors also influence the institutional environment in which a firm operates. These may be exogenous factors such as industry composition or endogenous factors such as accounting standards and ownership structure. In the empirical analysis, Leuz et al. (2002) analyze exogenous factors, namely industry composition and

macroeconomic stability, but they argue that even though accounting standards and ownership structure are important factors correlated with accounting earnings, it is unclear if they are key determinants. So, it is assumed that strong investor protection ensures dispersed ownership structures and the existence, enactment and enforcement of accounting laws that limit the manipulation of accounting information, well-functioning capital markets and low-earnings management.

In their empirical analysis, countries are grouped into three clusters based on institutional characteristics including legal investor protection, stock-market development and ownership concentration. Institutional variables drawn from data used by La Porta et al. (1997, 1998) are employed in order to identify clusters. Membership in a particular institutional cluster is based on an analysis of the following five institutional features: 1) outsider investor rights are proxied by La Porta et al. 's (1998) "anti-director rights" index that expresses the aggregate rights of minority shareholders; 2) the degree of legal enforcement for each country is a mean score involving three variables - (a) an index of the legal system's efficiency, (b) an index of the rule of law and (c) an index of the country's corruption level; 3) the importance of equity markets as measured by a mean rank involving three variables - (a) the ratio of the aggregate stock market held by minorities to the gross national product, (b) the number of listed domestic stocks relative to population, and (c) the number of IPOs relative to population; (4) ownership concentration measured as the median percentage of common shares owned by the largest three shareholders in the ten largest privately-owned non-financial firms; and (5) the disclosure index that measures the inclusion or omission of ninety accounting items in firms' 1990 annual reports and should thus adequately reflect firms' disclosure policies.

First, two groups of countries are identified: "insider" and "outsider" economies. The "insider" economies are characterized by small stock markets, higher ownership concentration, weaker investor protection, lower disclosure levels and weaker enforcement. The "outsider" or "arm's length" economies have large stock markets, low ownership concentration, extensive investor rights, high disclosure and strong legal enforcement. In addition, the "insider" economies are ranked according to the quality of their legal enforcement. Finally, three groups of countries are formed: the "outsider

(arm's length)" economies with a high degree of legal enforcement, the "insider" economies with a high degree of legal enforcement and the "insider" economies with a low degree of legal enforcement.

These country groupings are in line with the 'common' and 'code' law distinctions used in prior research by Ball et al. (2000), as most of the countries belonging to the "outsider" economies have a common law tradition and most of the countries with "insider" economies have a code law tradition.

These country clusters are compared on the basis of the earnings management score that is computed as an average rank across four earnings management measures for each country. The results show that "outsider" economies exhibit lower levels of earnings management than "insider" economies, and that "insider" economies with a higher degree of legal enforcement display a significantly lower level of earnings management than "insider" economies with a lower level of legal enforcement.

Moreover, in order to isolate the influences of individual institutional factors on earnings management level and to distinguish the institutional factors that are key determinants of earnings management from those that are merely correlated outcomes, a multiple regression analysis of the aggregate earnings index as a dependent variable and on outside investor rights and legal enforcement as independent variables is conducted, assuming that investor rights and legal enforcement are both exogenous variables.

The results display a significant negative correlation between earnings management and both outside investor rights and legal enforcement, supporting the prediction that earnings management is lower when investor are better legally protected and when the degree of legal enforcement is high. In order to check for a possible endogenous bias in results that might occur if outside investor rights and earnings management are simultaneously determined, a two-stage multiple regression analysis is conducted in which countries' legal origins and wealth as instruments for the investor protection variables are incorporated.

The relationship between investor protection and earnings management does not appear to be affected by the endogenous nature of investor protection. Moreover, the findings support the prediction that the pervasiveness of earnings management decreases in the level of investor protection.

Similarly, they estimate the correlation between the aggregate earnings management index and private control benefits proxy in a two-stage regression analysis with the level of outsider rights and legal protection as instrumental variables. The findings show that earnings management is greater when insiders enjoy more private control benefits.

Overall, empirical evidence proves that outside investor protection is a key determinant of earnings management activity around the world and that earnings management decreases when investor protection is strong, given that insiders enjoy fewer private control benefits and consequently have little incentive to conceal firm performance.

3.3 Understanding Corporate Governance

Understanding corporate governance stimulates major institutional changes, development of the financial market and makes it easier for firms to raise equity internationally. It is of great practical importance to how good or bad the existence of corporate governance mechanisms is.

Corporate Governance – The Main Theoretical Approaches

There are two major approaches to corporate governance (Shleifer & Vishny, 1997). The first approach is to give investors power against managerial self-dealing through legal protection of their rights. In order to protect their rights, outside investors sign contracts with a firm's management. If managers violate the terms of the contract, investors have the right to appeal to the courts to enforce their rights. Shleifer & Vishny

(1997) point out that much of the difference in corporate governance systems around the world stems from differences in the nature of legal obligations that managers bear toward investors, as well as from differences in how courts interpret and enforce these obligations. For example, the most important right granted to investors is the right to vote on corporate matters as well as in elections of boards of directors. However, voting rights can be expensive to exercise and to enforce. As elaborated in a paper by La Porta et al. (1998), voting mechanisms vary from country to country, and courts should be relied upon to ensure that voting takes place as prescribed. However, both the legal extent of investor protection and the court enforcement of voting rights differ greatly among countries. Even if shareholders have the right to elect the board, the elected directors might not necessarily represent their interests. The structure of the board of directors varies from country to country, ranging from a two-tier supervisory and management board to an insider-dominated one, and in some countries the role of the board is quite limited except in extreme circumstances. In most developed countries, the law protects shareholders by requiring managers to be loyal to them. This duty of loyalty from management is necessary in order for the shareholders to be legally protected against managerial self-dealing, outright theft from the firm, excessive compensation, issues of additional securities, etc.

Another matter is how strictly courts enforce this legal requirement. For example, Shleifer & Vishny (1997) argue that in the United States, courts are likely to interfere in cases of management theft of assets or the dilution of existing shareholders through an issue of equity to themselves, but are not so likely to interfere in cases of excessive pay or second-guessing of managers' business decisions, even if these decisions might damage shareholders.

Overall, the quality and level of legal protection for investors varies extensively around the world. Shleifer & Vishny (1997) show that in a small number of developed countries such as the United States, the United Kingdom, Japan and Germany the law adequately protects the rights of at least some investors and the courts enforce these laws, whereas in the majority of other countries the laws are less protective of investors and the courts are less efficient in enforcing these laws.

The second aspect of corporate governance that Shleifer & Vishny examine is concentrated ownership or ownership by large investors, which becomes the predominant form of corporate governance when legal protection does not give enough control rights to small investors. When a small number of investors posseses a large stock of shares, the control rights are concentrated in their hands and their concerted action is much easier than when control rights are split among many. Practically, the concentration of shareholding occurs when one or several investors in the firm have substantial minority ownership stakes such as ten or twenty per cent, and in an extreme case fifty-one per cent or more. Concentrated ownership provides enough voting control to put pressure on management, to have control over the firm's assets and to assure that the owners' interests are respected. The extent of legal protection for large shareholders' votes is important since majority ownership only works if the voting mechanism works, because large shareholders govern and dictate company decisions by exercising their voting rights. However, fairly little enforcement by courts is required if large shareholders own 51 per cent of equity which is easy to demonstrate and they clearly express their preferences. In such cases no vote count is required. Moreover, empirically it has been shown that the stage on which large shareholders play their role is often a board of directors, that is, their power works through their position on the board or their control of some number of directors (Hermalin & Weisbach, 2001).

On the contrary, in the case of minority shareholders, the extent of legal enforcement and the efficiency of the court system are vital, as minority shareholders need to form alliances that could be disrupted by managers in order to exercise their control rights. Therefore the responsibility of courts to protect minority shareholders is much greater. For this reason, large minority shareholdings may be effective only in countries with relatively sophisticated legal systems, whereas countries where the court system is poor are more likely to have majority ownership.

In some countries such as United States, there are legal restrictions on high ownership and control by banks, mutual funds, insurance companies, etc. so large share holding is relatively uncommon, even though there exist many cases of over fifty-one per

cent ownership. The situation is similar in the United Kingdom, where ownership is broadly spread among diversified shareholders.

As for the most other European countries, companies typically have controlling owners who are often founders or their offspring. In Germany, for example, large commercial banks often control over a quarter of the votes in major companies and also have smaller cash flow stakes as direct shareholders or creditors. But significant costs may be generated by large investors (Shleifer & Vishny, 1997). The interests of the large investors might not coincide with those of the minority investors, employees or managers. Within this framework, the majority (large) investors might try to impose their will at the expense of other interest groups and, having gained extensive control over a company they might prefer to generate private control benefits. The costs of such practices might include the straightforward expropriation of other investors, managers and employees; inefficient expropriation through the pursuit of personal objectives, etc.

However, the positive side of concentrated ownership and the existence of large shareholders is that they are essential in forcing managers to distribute profits. They require no more than some basic legal rights in order to exercise their power over management. On the other hand, minority (small) investors require legal protection against expropriation from both management and large investors. Successful corporate governance systems combine legal protection for investors and some form of concentrated ownership. In the most countries worldwide this is not the case, as corporate governance systems tend to be weak, and where there is limited legal investor protection the firms are mostly family-controlled or insider-dominated, leading to difficulties in raising outside funds and with most investment thus financed internally.

This is the case, also, in Italy, a country that features all the characteristics of the most most common governance structures around the world, as described above. Using the Italian sample of traded firms, Volpin (2001b) examines the efficiency of a governance structure and evaluates the impact of ownerships structure on the sensitivity of the firm's executive turnover to performance. His findings suggest that the turnover of top executives is significantly lower and not sensitive to firm's performance when

controlling shareholders are amongs top executives. Also, the larger the fraction of cash flow rights owned by controlling sharedholder, the more sensitive turnover is to performance, which suggests that the governance improves when controlling shareholder's objectives are more aligned with those of minority shareholders.

In any case, the proper functioning of good corporate governance mechanisms depends on legal protection and the efficiency of the legal system. Regulation of investor protection is good if the country's legal system can enforce it within the existing legal enforcement structure.

Corporate Governance and Accounting Earnings

Empirical evidence concerning the impact that a firm's corporate governance structure has on the financial reporting process suggests that there may be a link between the effectiveness of a corporate governance system and properties of accounting earnings.

For example, Beeks et al. (2002) investigate the link between the structure of the board of directors and the timeliness and asymmetric timeliness of earnings. Specifically, they examine the influence of outside directors on the financial reporting process. They rely on Fama & Jensen's (1983) definition of a board of directors as the apex of the control system in large corporations whose major duty is to monitor and evaluate management.

Similarly to Leuz et al. (2002) who focus their analysis on the agency problem (i.e. the conflict of interests between a firm's outsiders and insiders who have incentives to acquire private control benefits and expropriate outsiders), and how this conflict of interest is reflected in the financial reporting process and particularly in earnings management, Beeks et al. (2002) examine the link between corporate governance and another aspect of the quality of accounting earnings, their timeliness and conservatism. They examine whether the timeliness and conservatism of accounting in income recognition is linked to the composition of the board of directors.

As do Leuz et al. (2002), they likewise point out that managers can manipulate reported earnings in published financial statements for opportunistic reasons. This creates a demand for costly monitoring and control mechanisms designed to prevent opportunistic earnings management. The board of directors is supposed to monitor, check and prevent opportunistic behaviour by senior mangers. However, in order for boards to be effective in monitoring the production of financial statements by management, monitoring must be worth their while and they must possess expert knowledge of the financial reporting system.

The board of directors consists of inside and outside directors. Even though no precise distinction exists between the responsibilities of inside and outside directors, governance literature recognizes the distinct contribution that outside directors make in helping to ensure that managers act in the interest of investors. This is particularly obvious when considering that insider director's careers are usually greatly determined by the chief executive officers, so that the task of monitoring management rests with the outside board members.

Recent empirical literature on corporate governance focus on the role of directors on board. For example, Wysocki et al. (2003) using a sample of 885 US firms, examine how much of the variation of firm's corporate policies can be attributed to the presence of individual board members that sit on at least two boards of directors at the same time. Their findings show that director effects are economically and statistically important determinants of a broad range of governance, disclosure, financial and strategic policy choices, after controlling for industry and firm characteristics. Moreover, they document that the magnitude of director effects are decreasing in firm size, the fraction of outside board directors and the number of outside board appointments held by a director. This finding is consistent with the notion that an individual director's influence is mitigated when there exists monitoring by independent or outside board members.

Also, Denis & Sarin (1999) show for a sample of 692 US publicaly traded firms, that the dynamics of ownership structure and board structure are related in an important way: the change in the fraction of outsiders is negatively related to the change in CEO

owership. This finding suggests that when CEO ownership increases their objectives are more aligned with those of shareholders and there is no particualr need for shareholders to require increased monitoring of management by outside directors. However, the same finding can be explained alternatively: acquiring more ownership CEO gets more power and more control over the board-selection process, and tends to appoint more insiders on board, decreasing board's independence.

In general, recent empirical studies (see Hermalin & Weisbach, 2001) that interact board composition, firm performance and CEO turnover indicate that when boards are dominated by outside directors, CEO turnover is more sensitive to firm performance than it is in firms with insider-dominated boards. These results hold when firm perfomance is measured either with market-adjusted stock returns or with accounting measure of performance. The interpretation of these findings is that boards controlled by outside directors are better in monitoring managers than are boards controlled by inside directors.

Within this framework, the outside directors are crucial for the resolution of agency problems between managers and shareholders in the sense that they play a significant role in protecting shareholder wealth in situations where the interests of managers and shareholders diverge.

Therefore, Beeks et al. (2002) expect firms with a higher proportion of outside board members to have better-quality earnings accounting as measured in terms of timeliness and asymmetric timeliness, i.e. conservatism.

They examine the timeliness and conservatism of accounting earnings within Basu's (1997) 'good' and 'bad' news framework, where news is proxied by positive ('good news') and negative ('bad news') changes in the market value of stock. Beeks et al. (2002) assume that outside directors help to prevent management's tendency to be overly optimistic and to accelerate the recognition of 'good news' and to delay the recognition of 'bad news' in accounting earnings.

The hypothesis is that the proportion of outside members on a firm's board of directors is positively related to timely recognition of contemporaneous 'bad news' and

negatively related to timely recognition of contemporaneous 'good news' in accounting earnings. It is tested using a sample of UK non-financial firms from 1992 to 1995. The sample is divided into two groups based on whether a firm's proportion of outside board members is above or below the sample median proportion. Next, they compare the timeliness of earnings in capturing 'good' and 'bad' news between two sub-samples that are separated using the dummy variable approach and following Basu's reverse regression of annual accounting earnings on annual returns.

The results confirm the hypothesis that the quality of corporate governance is linked to the proportion of outside board members and is associated with accounting earnings timeliness and asymmetric timeliness. Namely, their results are in line with the view that boards with a higher proportion of outside directors have better accounting quality as measured by the speed with which contemporaneous earnings capture contemporaneous 'bad news' from the markets. As far as the timeliness of earnings in recognizing contemporaneous 'good news' is concerned, their results suggest that firms with a lower proportion of outside directors tend to aggressively report 'good news' whereas firms with a higher proportion of outside directors delay the recognition of 'good news'.

In a broader context, the evidence provided by Beeks et al. (2002) contributes to the main premise of my study that when examining the properties of accounting earnings and their association with the institutional framework in which a firm operates or/and raises equity, consideration should be given to factors that extend beyond the characteristics of the legal system, the accounting regulation regime, disclosure standards and financial market characteristics.

It is useful to construct a richer set of contextual variables by examining factors such as the predominant features of corporate governance system in a country, in addition to regulation and legal enforcement regimes that are necessary to back up and ensure the application of accounting standards, rules that protect minority investor and corporate governance codes.

3.4 Developing a New Institutional Framework

Over recent years, interest in the role that corporate governance plays in capital markets has increased. In the European Union in particular, the adoption of a common European currency; the freer flow of capital, goods, services and people across EU member states; the privatization of state owned companies; the growth and spread of shareholding and increased merger activity among large European corporations and Europe's largest stock exchanges have all generated growing interest in understanding the similarities and differences between national corporate governance practices as possible barriers to the development of a single integrated European capital market.

Corporate Governance Codes in Europe

The growing interest in corporate governance codes among European countries may reflect an understanding that equity investors, both foreign and domestic, weigh the quality of corporate governance along with financial performance and other factors when deciding whether to invest in a company. Potential investors are often willing to pay more for a company that is well-governed, all else being equal.

The volume of literature concerning corporate governance is vast and growing exponentially in most European countries. Articles on business, economics, legal and policy literature, legislation, regulation and stock exchange listing requirements all address corporate governance issues. In the midst of this vast outlay, a unique group of corporate governance recommendations has arisen in the past decade, known as governance "codes" or "principles".

Most European countries and all the countries analyzed in this study have issued at least one corporate governance code. A corporate governance code is generally defined as a non-binding set of principles, standards or best practices issued by a broad array of groups: governmental or quasi-governmental entities; committees and/or commissions organized by governments or by stock exchanges, business, industry and academic associations; directors associations and investor-related groups.

A "corporate governance code" may generally be defined as a systematically arranged set of principles, standards, best practices and recommendations that are neither legally nor contractually binding and that stipulate aspects of the internal governance of corporations such as treatment of shareholders, organization and practices of supervisory boards, etc.

However, not many conclusions may be drawn from "codes" as to the status of corporate governance or any reform efforts in the countries in question, given the variety of contexts in which the codes have arisen. For example, governance "codes" in one nation may address principles and practices of corporate governance that other countries establish more fully through company law and securities regulation. Furthermore, some European countries are currently engaging in a review and reform of company law or have already done so, and in some cases this has been related to a code reform effort, whereas in other cases it may actually have had the effect of delaying or replacing code reform.

Table 3.2 below summarizes a total of thirty-five documents that qualify as corporate governance codes. They are listed according to country of origin, the issuing body, their nature (whether they are voluntary or not) and their main objectives.

The data collected and summarized with reference to countries' corporate governance codes and the recommendations made are applied to a further analysis of national differences in institutional environments in Europe, within a context of more integrated capital markets.

These data are employed to construct a richer set of contextual variables which are then adopted in my modelling framework in order to explain the variation in properties of accounting earnings among European internationally listed companies.

Table 3.2

Summary of Corporate Government Codes and Recommendations in European Countries

Country	Code	Language	Issuing body type	Type	Objectives
Belgium	Recommendations of the Federation of Belgium Companies (January 1998)	Dutch French English	Business association	Voluntary	Improve companies' performance, competitiveness and/or access to capital
Belgium	Recommendations of the Belgium Banking & Finance Commission (January 1998)	Dutch, French, English	Government / quasi governmental entity	Voluntary	Improve quality of governance-related information available to equity markets
Belgium	Cordon Report (Dec. 1998)	Dutch, French, English	Stock exchange committee	Voluntary	Improve companies' performance, competitiveness and/or access to capital
	The Directors Charter (Jan. 2000)	French, English	Directors' association	Voluntary	Improve quality of board (supervisory) governance
Denmark	Danish Shareholders Association Guidelines (Feb. 2000)	Danish, English	Investors' association	Voluntary	Improve accountability to shareholders and/or maximize shareholders value
Denmark	Norby Report & Reccommendations	Danish, English	Government committee	Voluntary[1]	Improve companies' performance, competitiveness and/or access to capital
Finland	Chamber of Commerce/Confederation of Finish Industry & Employers Code (Feb. 1997)	Finish, English	Business association	Voluntary	Improve quality of board governance

Finland	Ministry of Trade & Industry Guidelines (Nov. 2000)	Finish, English	Governmental entity	Voluntary	Improve companies' performance, competitiveness and/or access to capital
France	Viénot Report No.1 (July 1995)	French, English	Business association	Voluntary[2]	Improve quality of board governance
France	Hellebuyck Commission Recommendations (June 1998, Updated Oct. 2001)	French, English	Investors' association	Voluntary[3]	Improve accountability to shareholders and/or maximize shareholder value
France	Viénot Report No.2 (July 1999)	French, English	Business association	Voluntary[2,4]	Improve quality of board governance
Germany	Berlin Initiative Code (June 2000)	German, English	Business association	Voluntary[2,4]	Improve quality of board governance
Germany	German Panel Rules (July 2000)	German, English	Business association	Voluntary[2]	Improve accountability to shareholders and/or maximize shareholder value, improve board governance
Germany	Cromme Commission Code (Dec. 2001)	German, English	Organized by government	Anticipates application of mandatory disclosure on a "comply or explain"	Improve companies' performance, competitiveness and/or access to capital
Ireland	IAIM Guidelines (March 1999)	English	Investor association	Voluntary[3,5,6,]	Improve quality of board governance
Italy	Preda Report (Oct. 1999)	Italian, English	Stock exchange committee	Creates mandatory disclosure framework in connection with listing	Improve companies' performance, competitiveness and/or access to capital, improve quality of governance-related information available to equity markets

				rules to encourage improved practice, [2]	
Netherlands	Peters Report (June 1997)	Dutch, English	Stock exchange committee	Voluntary[2]	Improve quality of board governance
Netherlands	VEB Recommendations (1997)	Dutch, English	Investor association	Voluntary[2]	Improve accountability to shareholders and/or maximize shareholder value
Netherlands	SCGOP Handbook & Guidelines (August 2001)	Dutch, English	Investor association	Voluntary[3,7]	Improve accountability to shareholders and/or maximize shareholder value
Spain	Olivencia Report (Feb. 1998)	Spanish, English	Governmental entity	Voluntary[2]	Improve companies' performance, competitiveness and/or access to capital
Sweden	Swedish Shareholders Association Policy (Nov. 1999)	Swedish, English	Investor association	Voluntary[3]	Improve accountability to shareholders and/or maximize shareholder value
United Kingdom	Institute of Chartered Secretaries and Administrators Code (Feb. 1991)	English	Business committee	Voluntary[2]	Improve quality of board governance
United Kingdom	Institutional Shareholders Committee Statement of Best Practice (April 1991)	English	Investor association	Voluntary[2]	Improve quality of board governance
United Kingdom	Cadbury Report (Dec. 1992)	English	Stock exchange and professional association	Voluntary[2,5]	Improve quality of board governance, improve quality of governance-related information available to equity markets
	PIRC Shareholder Voting Guidelines (April 1994, March	English	Investor advisor	Voluntary[3]	Improve accountability to shareholders and/or maximize shareholders value

	2001)				
United Kingdom	Greenbury Report (July 1995)	English	Industry association	Voluntary[2,6,7]	Improve quality of board governance, improve quality of governance-related information available to equity markets
United Kingdom	Hermes Statement (March 1997, Jan. 2001)	English	Investor	Voluntary[3]	Improve accountability to shareholders and/or maximize shareholders value
United Kingdom	Hampel Report (Jan. 1998)	English	Stock exchange and industry association	Voluntary[2,7]	Improve quality of board governance, improve quality of governance-related information available to equity markets
United Kingdom	Combined Code (July 1998)	English	Derived from Cadbury and Greenbury report	Voluntary[5,7]	Improve quality of board governance, improve quality of governance-related information available to equity markets
United Kingdom	Turnbull Report (Sept. 1999)	English	Professional association	Voluntary[5,7]	Improve quality of board governance
United Kingdom	NAPF Corporate Governance Code (June 2000)	English	Investors	Voluntary[3]	
United Kingdom	AUTIF Code (Jan. 2001)	English	Investors	Voluntary[3]	Improve accountability to shareholders and/or maximize shareholders value

Notes

1. Copenhagen Stock Exchange recommends that listed companies disclose on a 'comply or explain' basis
2. Encourages voluntary adoption of best practice standards
3. Creates voluntary criteria for investment selection and shareholder voting by association members
4. Recommends legal reforms
5. Recommends mandatory disclosure framework, in connection with listing rules
6. Recommends guidelines for director remuneration
7. Recommends that portfolio companies disclose whether they comply with the Code or explain non-compliance

Corporate Governance and Investor Protection Indexes

The purpose of this Section is to analyze an additional set of institutional variables, namely corporate governance and investor protection factors. First, the information provided by each specific country's corporate governance codes and recommendations is summarized. The codes across European countries provide evidence of a trend towards general convergence on views about governance best practices. Moreover they reflect an intention to harmonize rules from many sources including company law, security law and stock exchange regulations.

Considerations are also made on the results published in a recent survey on how quickly corporate governance practice is evolving among major European firms.

The aim is to collect a richer set of contextual variables that builds on the analysis conducted by La Porta et al. (1997, 1998) and to construct a new institutional framework that captures the complexity of the environment in which European interlisted firms operate and raise equity.

Corporate Governance, Investor Protection and Properties of Accounting Earnings

Corporate governance literature suggests that the conflict of interest between a firm's management and outside investors is commonplace the world over. The essence of the agency problem is one of separating management and financing from ownership and control. A manager raises funds from the investors either to put them to productive use or to cash in his holdings in the firm. In this context, the agency problem arises when the interests of managers and outside shareholders diverge. A firm's controlling parties (management and majority shareholders) might be tempted to exclusively enjoy earnings and not share them with non-controlling outsiders, to embark upon opportunistic projects benefiting themselves at the expense of outsider shareholders or to steal or expropriate the firm's assets outright. Therefore, investors need to be assured that their rights will not

be expropriated and that they will get back a return on their investment. The corporate governance mechanism and investor protection should provide this assurance (Shleifer & Vishny, 1997).

In order to protect their interests, outside shareholders sign contracts with managers that specify what managers do with funds and how returns are divided between them and shareholders. In order to enforce these contracts, outside shareholders have to rely on the legal system in general, company, bankruptcy and securities laws in particular and the quality of their enforcement.

La Porta et al. (2000) show that when investor rights are well enforced by regulators and courts, corporate governance works efficiently and outside investors are willing to finance firms. To a large extent, potential shareholders and creditors finance firms because their rights are protected by the law and the laws are enforced. Variations in law enforcement among countries are important in understanding why firms raise more funds in some countries than in others.

The conflict of interests between managers and shareholders is reflected in the financial reporting process, since published financial statements represent an important source of information for shareholders. For example, controlling insiders might use their financial reporting discretion to conceal practices that might prompt outside shareholder interference, ranging from changes in their investment decisions to taking disciplinary actions against controlling insiders. In addition, managers might have an interest in understating (overstating) the anticipated decreases (increases) in firm's market value in concurrently reported earnings, therefore influencing the timeliness of earnings and the level of accounting conservatism.

I predict that when the quality of legal enforcement is high, ensuring the enactment and enforcement of accounting and securities laws, strong investor protection and good corporate governance prevent opportunistic behaviour by managers in the financial reporting process.

Therefore, as key determinants of the institutional framework in which a firm operates, the quality of corporate governance, the extent of investor protection and the enforcement of legal rules influence the timeliness and accounting conservatism of earnings.

In an international context, these factors are important in explaining differences in the properties of accounting earnings among European countries.

In this section a set of indexes is developed to measure investor protection rules and the quality of corporate governance in different countries and is subsequently used to explain the variation in earnings timeliness and accounting conservatism across Europe.

Investor Protection Measures

For each of the thirteen European countries in the sample, twelve factors are considered that either (a) relate to shareholders' rights as upheld by a country's company law (one share - one vote, proxy by mail, oppressed minority mechanisms and preemptive rights to buy new shares), (b) represent recommendations by a country's corporate governance and/or commercial code (the blocking of shares prior to a general meeting, requiring registration, a percentage of share capital necessary to place an item on agenda and the right to elect members of supervisory body) or (c) are results of typical corporate practices involving shareholders in a specific country (shareholders' representatives in a supervisory body, employees' representatives in a supervisory body and the percentage of non-national shareholders).

All these variables are defined so that 1 represents better investor protection and 0 otherwise.

The first four variables that are taken from La Porta et al. (1998) concern the protection of the investors' rights as provided by law. For example, if the law prohibits the existence of multiple-voting, non-voting shares and requires one ordinary share to carry one vote, if it allows voting by mail, if it gives minority shareholders the right to

challenge the decisions of the management and if it grants shareholders a pre-emptive right to buy new issues of shares, investor protection is considered to be stronger.

The next four variables relate to general meeting mechanisms. The legal requirements related to mechanisms for participating in the general meeting vary considerably among European countries, which poses impediments to cross-border investment. The ability of shareholders to participate in general meetings may be limited by practical difficulties associated with legal requirements. For example, laws in some countries require blocking or/and registration of shares with the aim of suspending the trading rights of shares for a certain period of time prior to the general meeting. In addition, the percentage of share capital required to place an item on the agenda or to call a meeting varies from country to country (from 1% to 20%) and, as explained by La Porta et al. (1998), the higher this percentage is, the harder it is for minority shareholders to challenge the decisions of management. Similarly, the number of days for minimum notice of the annual general meeting during which shareholders may organize and prepare for the assembly varies across Europe (from 8 to 30 days).

Investor protection is considered to be stronger and a score of 1 is therefore assigned for each of these measures wherever there is no legal requirement for share blocking or/and registration, the percentage of share capital needed to place an item on the agenda is at or below the sample medium of 5%, and the number of days' notice prior to the annual general meeting is at or above the sample medium of 17 days.

The next three measures relate to the role of shareholders in the supervisory body. First, in almost every European country, shareholders have the authority to elect the supervisory body. However, in certain countries, this right (from the shareholders' perspective) may be subject to employee rights, as provided either by law (e.g. in Denmark, Germany and Sweden), or by company articles (e.g. in Finland and France). Second, the percentage of shareholder representatives in supervisory bodies varies across countries (from 3% in the UK to 47% in Belgium), reflecting their influence in corporate decision making. On the other hand, as the direct interests of shareholders and employees may diverge, the influence of shareholders is limited by the role assigned to employees

and their representatives on supervisory boards. Therefore the percentage of employee representatives in supervisory bodies is included (ranging from 0% for the UK to 49% for Germany) in order to measure the extent to which the influence of shareholders may be limited.

A score of 1 is assigned for each measure only if shareholders have the authority to elect the supervisory body, if the percentage of shareholder representatives in the supervisory body is at or above the sample medium of 21%, and if the percentage of employee representatives is at or below the sample medium of 7%.

The last variable in this section is the average percentage of companies' non-national shareholders for each country, ranging from 18% for Italy to 57% for the Netherlands. A high percentage of non-national shareholders is presumed to indicate that the country's institutional system provides better-quality investor protection, therefore attracting more foreign investors. Each country receives a score of 1 if it is at or above the sample medium of 34%.

Table 3.3 presents the data on investor protection. Table 3.4 presents the values of all the variables are listed by country. The columns in Table 3.3 correspond to particular investor protection variables and the values in the table are dummies equal to one if the country enacts investor protection in that particular area. The last column in the table reports the investor protection score by country that is constructed by adding the values of the dummy variables for each country. The score ranges from 10 (for the United Kingdom) to 2 (for Belgium and Denmark). Figure 3.1 displays ratings for 13 countries as to their corporate governance scores computed in Table 3.4.

Table 3.3

Investor Protection Measures

Variable	One share - one vote	Proxy by mail	Oppressed minority mechanism	Preemptive right to new issues	Blocking shares before the meeting	Registration Requirement	Perct. of share capital to place an item on agenda	Minimum notice of the General Meeting	Election of supervisory body	Percentage of shareholders' representatives in supervisory body	Percentage of employees' representatives in supervisory body	Non-natonal shareholders
Source	La Porta et al.	La Porta et al.	La Porta et al.	La Porta et al.	Code Report[1)]	Code Report	Code Report	Code Report	Code Report	H&S Survey[2)]	H&S Survey	H&S Survey
Belgium	no	No	no	No	Yes	Yes	0.20	16	yes	0.47	0.07	0.27
Denmark	no	No	no	No	No	Yes	any	8	no	0.04	0.34	0.32
Finland	no	No	no	Yes	No	Yes	any	17	no	0.32	0.06	0.34
France	no	yes	no	Yes	Yes	Yes	0.005 to 0.05	30	no	0.40	0.07	0.34
Germany	no	no	no	No	No	Yes	0.05	28	no	0.13	0.49	0.36
Ireland	no	no	yes	Yes	No	No	0.10	21	yes			
Italy	no	no	no	Yes	Yes	yes	0.10	15	yes	0.35	0.00	0.18
Netherlands	no	no	no	Yes	No	No	0.01	15	yes	0.05	0.02	0.57
Norway	no	yes	no	Yes	No	No	0.10		no	0.12	0.28	0.39
Spain	no	no	yes	Yes	No	No	0.05	15	yes	0.39	0.06	0.22
Sweden	no	no	no	Yes	No	yes	any	28	no	0.28	0.20	0.32
Switzerland	no	no	no	Yes	Yes	No	0.10		no			
United Kingdom	no	yes	yes	Yes	No	No	0.05	21	yes	0.03	0.00	0.35

[1)]Corporate Governance Codes, Principles and Recommendations, European Corporate Governance Institute, www.ecgi.de/codes

[2)]Heidreck & Struggles 2001, Survey, European Corporate Governance Institute, www.ecg.org

Table 3.4

Country Scores for Investor Protection Measures

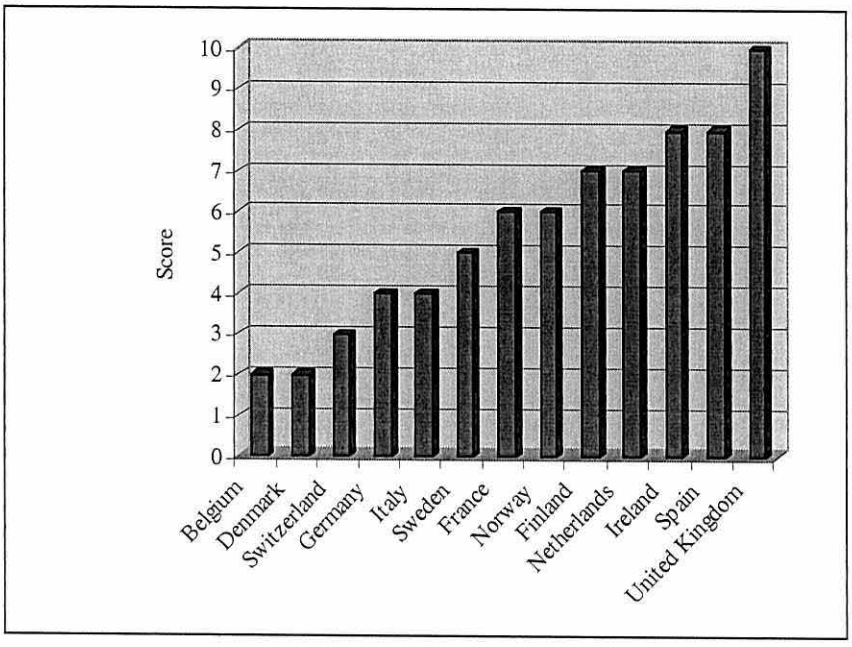
Variable	One share - one vote	Proxy by mail	Oppressed minority mechanism	Preemptive right to new issues	Blocking shares before the meeting	Registration Requirement	Perct. of share capital to place an item on agenda	Minimum notice of the General Meeting	Election of supervisory body	Percentage of shareholders' representatives in supervisory body	Percentage of employees' representatives in supervisory body	Non-natonal shareholders	Score
Source	La Porta et al.	La Porta et al.	La Porta et al.	La Porta et al.	Code Report[1)]	Code Report	Code Report	Code Report	Code Report	H&S Survey[2)]	H&S Survey	H&S Survey	
Belgium	0	0	0	0	0	0	0	0	1	1	0	0	**2**
Denmark	0	0	0	0	1	0	1	0	0	0	0	0	**2**
Finland	0	0	0	1	1	0	1	1	0	1	1	1	**7**
France	0	1	0	1	0	0	1	1	0	1	0	1	**6**
Germany	0	0	0	0	1	0	1	1	0	0	0	1	**4**
Ireland	0	0	1	1	1	1	0	1	1	0	1	1	**8**
Italy	0	0	0	1	0	0	0	0	1	1	1	0	**4**
Netherlands	0	0	0	1	1	1	1	0	1	0	1	1	**7**
Norway	0	1	0	1	1	1	0	1	0	0	0	1	**6**
Spain	0	0	1	1	1	1	1	0	1	1	1	0	**8**
Sweden	0	0	0	1	1	0	1	1	0	1	0	0	**5**
Switzerland	0	0	0	1	0	1	0	1	0	0	0	0	**3**
United Kingdom	0	1	1	1	1	1	1	1	1	0	1	1	**10**

[1)]Corporate Governance Codes, Principles and Recommendations, European Corporate Governance Institute, www.ecgi.de/codes

[2)]Heidreck & Struggles 2001, Survey, European Corporate Governance Institute, www.ecg.org

Figure 3.1

Investor Protection Ratings by Country



Corporate Governance Measures

Section 3.3 stated that good corporate governance should prevent opportunistic behavior by a firm's management and controlling shareholders and provide assurance that investors' rights will be protected. A central role in corporate governance is played by boards of directors who monitor, control and evaluate the behavior of management (Fama and Jensen, 1983).

Members of the board must exercise care and prudence and avoid conflicts of interest in taking decisions to benefit the company and shareholders. However, the structure of the board of directors varies considerably across firms and across countries.

It is first necessary to consider the structure of European boards of directors by observing seven categories (variables) that illustrate the composition of boards. All variables may be set so that 1 represents better corporate governance and 0 otherwise.

An initial fundamental distinction among European countries that is established by law relates to the use of a unitary versus a two-tier board. For example, in most countries the unitary board structure is predominant, although in Belgium, Finland and France the two-tier structure is also available. In Germany, the Netherlands and Denmark the two-tier structure is predominant. Generally, both the unitary board of directors and the supervisory body (in the two-tier structure) are elected by shareholders. Under both types of systems, there is usually a supervisory function and a managerial function, although this distinction is more formalized in the two-tier structure. The unitary board and supervisory body (in a two-tier system) usually appoint the members of the managerial body (either the management board in the two-tier system or a group of managers to whom the unitary board delegates authority in the unitary system) and have the responsibility for ensuring that financial reporting and control systems function properly. However, in two-tier systems the law provides a greater and more formal distinction between the role of the supervisory body and the role of the managerial body. As I anticipate that monitoring and controlling manager behaviour in the financial reporting of earnings will be more effective when there is a clearer distinction between

the 'supervisors' and those being 'supervised', a score of 1 is assigned to countries with a predominant two-tier board structure.

Furthermore, in Denmark, Finland, Germany, the Netherlands and Sweden, law requires companies of a certain size and type to appoint a general manager. In such instances, there is distinct separation between supervisory and managerial leadership even in a unitary board (e.g. in Finland and Sweden) which should facilitate the monitoring of management by the supervisory body. A country gets a score of 1 if there is such a legal requirement.

The next five variables relate to types of directors on boards. They are (a) non-national directors, (b) non-executives, (c) executive directors, (d) former executives, and (e) directors linked to the group.

The average percentage of non-national directors on boards ranges from 57% for the Netherlands to 5% for Denmark and Germany. In terms of the quality of corporate governance and independence, the benefits of having non-national directors on board are considerable. They can bring an alternative perspective, a unique insight into other markets and represent the views and interests of international investors.

The average percentage of non-executive directors on board varies from 91% for the UK to 24% for Belgium. As non-executive directors are considered to be independent of management, they have a central role in assuring effective decision control, in monitoring management practices and resolving the agency problems between managers and shareholders (Fama, 1980, Fama and Jensen, 1983). Also, the empirical literature on board cmposition suggests that there is a positive relationship between the firm value and the fraction of outside directors on the board. Specifically, Rosenstein & Wyatt (1990) find that the there is a significant 0.2% increase in stock price as a reaction to the announcement that outside directors will be added to the board. Complementary to this finding, Cotter et al. (1997) who analyse the role of board during the takover process, find that when a target firm's board contains a majority of outside directors, the target receives about 20 percentage point higher return than a similar firm without a majority of

outside directors on their board. This result suggests that, outside directors are better in negotiating on behalf of shareholders than insiders.

In general, recent empirical studies document that boards dominated by outside directors do a better job of monitoring the management and protecting the interest of owners than do boards controlled by inside directors (Hermalin & Weisbach, 2001).So a score of 1 is assigned if the country's average percentage of non-national (non-executive) directors is at or above the European average of 13% (41%).

I consider executives, former executives and directors linked to the group as inside board members, even though the notion[6] of an 'independent' director varies across Europe. For example, in France, unlike most other European countries, a non-executive director who had previously been an executive on the board may be considered independent even if he or she has been an executive member of board within the past three years. Moreover, in practice it is rather difficult to classify independent directors as truly independent from management. Perhaps, some nominally independent directors may serve as paid advisors or consultants to a company, or may be employed by a university or foundation that receives financial support from the company, or some directors may have personal relationships with the CEO that affect their independence, or those independent directors that who have served for too long become, over time, less vigourous monitors. Also, some types of independent directors may be valuable, while others are not, or they can add value only if they are embedded in an appropriate committee structure where they perform monitoring function that they are best suited for while inside directors perform the informing and advising function in which they bring more firm-specific expertise (Bhagat & Black, 2001). Unfortunatelly, the data needed to capture these relationships is usually not available.

Nevertheless, this analysis relies on the conventional wisdom adopted by a majority of investors that a 'monitoring board' composed almost entirely of independent directors is an important element of good corporate governance, so the good quality of corporate governance in terms of effective control and monitoring is predicted to be a

[6] as defined by the Corporate Governance Code of a respective country

positive (negative) function of the proportion of outside (inside) board members, and a score of 1 is assigned if the country's average proportion of executives, former executives and directors linked to the group is at or below the European median of 11%, 2% and 1% respectively. In our European sample, generally, the proportion of executives, former executives and directors linked to the group is relatively low as compared to the proportion of outsiders (non-executive and non-national directors).

Tables 3.5 and 3.6 present the data on corporate governance. Table 3.5 presents the data on average percentages of director types on boards in different countries. Table 3.6 reports the values of all corporate governance variables listed by country. The columns in Table 3.6 correspond to particular corporate governance variables, and the values in the table are dummies equal to one if the country scores high in that particular area of corporate governance The last column in the table reports the corporate governance scores by country achieved by adding the values of dummy variables for each country. The score ranges from 6 (for Denmark and the Netherlands) to 1 (for Belgium).

Figure 3.2 displays ratings for 11 countries as to their corporate governance scores computed in Table 3.6.

Table 3.5

Corporate Governance Measures

Variable	Board Structure (two tier vs. unitary)	Separate Supervisory & Managerial Leadership	Percentage of non-national directors on board	Percentage of non-executive directors on board	Percentage of directors linked to the group	Percentage of former executive directors on board	Percentage of executive directors on board
Source	Code Report	Code Report[1)]	H&S Survey[2)]	H&S Survey	H&S Survey	H&S Survey	H&S Survey
Belgium	unitary	not required	0.11	0.24	0.08	0.01	0.20
Denmark	two-tier	Required	0.05	0.60	0.00	0.00	0.02
Finland	unitary	Required	0.14	0.39	0.00	0.04	0.19
France	unitary	not required	0.16	0.36	0.01	0.05	0.11
Germany	two-tier	Required	0.05	0.28	0.06	0.04	0.00
Ireland	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Italy	unitary	not required	0.09	0.54	0.01	0.00	0.10
Netherlands	two-tier	Required	0.57	0.82	0.01	0.05	0.05
Norway	unitary	not required	0.15	0.49	0.00	0.00	0.11
Spain	unitary	not required	0.11	0.35	0.00	0.03	0.17
Sweden	unitary	Required	0.10	0.41	0.00	0.00	0.11
Switzerland	n/a	n/a	0.30	n/a	n/a	n/a	n/a
United Kingdom	unitary	not required	0.24	0.91	0.02	0.04	0.00

[1)]Corporate Governance Codes, Principles and Recommendations, European Corporate Governance Institute, www.ecgi.de/codes

[2)]Heidreck & Struggles 2001, Survey, European Corporate Governance Institute, www.ecg.org

Table 3.6

Country Scores for Corporate Governance Measures

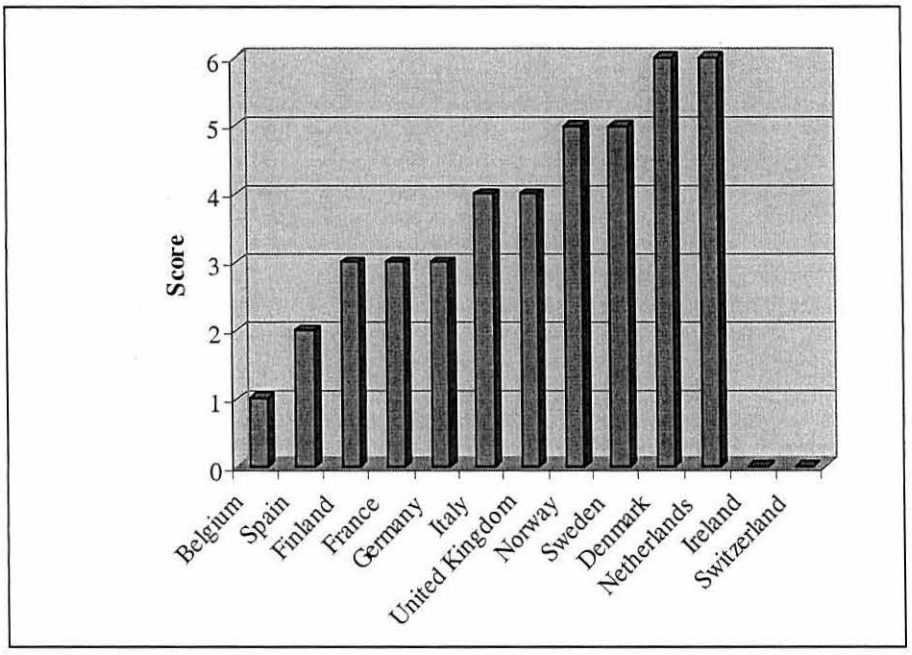
Variable	Board Structure (two tier vs. unitary)	Separate Supervisory & Managerial Leadership	Percentage of non-national directors on board	Percentage of non-executive directors on board	Percentage of directors linked to the group	Percentage of former executive directors on board	Percentage of executive directors on board	Score
Source	Country's Code Report[1)]	Country's Code Report	H&S Survey[2)]	H&S Survey	H&S Survey	H&S Survey	H&S Survey	
Belgium	0	0	0	0	0	1	0	**1**
Denmark	1	1	0	1	1	1	1	**6**
Finland	0	1	1	0	1	0	0	**3**
France	0	0	1	0	1	0	1	**3**
Germany	1	1	0	0	0	0	1	**3**
Ireland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**
Italy	0	0	0	1	1	1	1	**4**
Netherlands	1	1	1	1	1	0	1	**6**
Norway	0	0	1	1	1	1	1	**5**
Spain	0	0	0	0	1	1	0	**2**
Sweden	0	1	0	1	1	1	1	**5**
Switzerland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**
United Kingdom	0	0	1	1	1	0	1	**4**

[1)]Corporate Governance Codes, Principles and Recommendations, European Corporate Governance Institute, www.ecgi.de/codes

[2)]Heidreck & Struggles 2001, Survey, European Corporate Governance Institute, www.ecg.org

Figure 3.2

Corporate Governance Ratings by Country



3.5 Conclusion

The empirical evidence found in literature and reviewed in this Chapter shows that the legal environment influences the size and the breadth of a country's capital markets. Generally, in countries with better shareholder and creditor protection and legal systems that protect potential financiers from expropriation by managers and insiders, investors are more willing to finance firms and capital markets are more developed.(La Porta et al. 1997).

However, the shareholder and creditor rights indexes constructed by La Porta et al. (1998), capture some but not all of the institutional differences in legal regimes in different countries. The emphasis is on the fact that a shareholder or a creditor in a different legal jurisdictions is entitled to a different set of rights. This is determined by laws, and the application of these laws is determined by degree of a country's legal enforcement. Whether other important institutional factors shape the complexity of the regulatory environment is left open for further research.

Another strand of literature reviewed in this Chapter concerns corporate governance studies. The extensive research deals with the agency problem and the separation of management and finance. This analysis is based on two rather general approaches: the legal protection of small shareholders and the important role of large investors. Within this framework, such research studies describe evidence mostly from the United States and point out that successful corporate governance systems combine significant legal protection for investors with an important role for large investors. Furthermore, empirical evidence regarding corporate governance practices among European countries remains rather limited.

Finally, the third strand of literature reviewed in this Chapter concerns studies linking differences in properties of accounting earnings with corporate governance. Although international differences in accounting earnings management have been linked with the concept of a conflict of interest between firms' insiders and outsiders by Leuz et al. (2002), the quality of firms' corporate governance practices, how they differ among firms and countries and the influence of theses differences on the properties of accounting

earnings have not been examined in detail. Research studies that do examine a more explicit link between the quality of corporate governance practices and properties of accounting earnings focus primarily on one aspect of corporate governance practice (i.e. the structure of the board of directors) within one country (Beeks et al. 2002). Existing research in this respect does not provide empirical evidence in an international context nor does it take into account recent changes in corporate governance practices that have occurred in major European firms.

Moreover, recent attempts to harmonize accounting regulation among countries, growth in number of firms operating internationally and a trend towards the integration of capital markets, suggest that more profound influences of contextual factors, such as the legal protection of investors, as well as the impact of corporate governance codes on firms' practices may be identified and examined if these factors are analyzed at the level of the single firm

Therefore, in Section 3.4 of this Chapter I developed a new set of corporate governance and investor protection indexes in order to construct a new institutional framework that captures the complexity of the environment in which European interlisted firms operate and raise equity.

4. European Markets and Interlistings

4.1 Introduction

In the last decade, the structure of European equity markets has changed dramatically. An increasing number of European companies has chosen to raise capital through equity issues beyond the borders of domestic markets. Hence, equity financing is effectively displacing bank loans, bonds and foreign direct investment as the primary form of external global financing.

This growth in international listing is blurring the distinction between domestic and international capital markets and decreasing the effects of market segmentation.

This study focuses particularly on European companies that have chosen to list their shares internationally and operate across a number of markets. They are therefore assumed to be vulnerable to a variety of institutional environments. Their international exposure requires them to comply with multiple regulatory regimes.

The direct listing of shares on major world stock exchanges is the most efficient means of international equity financing even though it is costly, involving extensive legal and accounting fees, requirements to reconcile financial statements with international standards and compliance with what are likely to be more stringent stock exchange listing rules.

Literature has presented a number of studies (see for example Baker, 1992) examining the motives underlying the corporate move to international share listing. In the following sub-section these are briefly summarized.

Motives for International Share Listing

(1) Obtaining less costly sources of funds

International listing can enable a company to raise funds by tapping into foreign money and capital markets more efficiently. If a firm operates in a small, illiquid domestic capital market it is likely to face an inelastic supply curve and a capital market that saturates whenever new equity is issued. This leads to a high cost of capital. The absence of foreign participation in such markets means that securities listed on them are priced according to domestic rather international data, so that companies listed only domestically have higher cost of capital than their foreign competitors.

One of the ways to effectively reduce the adverse effects of illiquid and/or segmented capital markets is to raise capital globally by listing securities on the international capital market. From the investors' point of view, diversifying portfolios by combining domestic and foreign securities results in lower systematic portfolio risk (beta), therefore reducing the required rate of return on securities and companies' cost of capital.

(2) Expanding the potential investor base

Listing abroad enables potential foreign investors to overcome information barriers resulting from differences in language, currency, financial reporting and auditing practices and a lack of interest in the company on the part of local security analysts and the financial press. The distribution of periodic financial reports in the form local investors are used to, as is required by foreign stock exchanges and closer monitoring of the company by the financial media and analysts makes it easier and less expensive for local investors to obtain timely and relevant information on the firm's stock. Furthermore, local investors can trade in their own currency with lower transaction costs.

(3) Improving liquidity

Sometimes firms tap into foreign capital markets that are larger than their own. Larger companies' financial needs sometimes cannot be met by a single market and they have to make an effort to expand their investor base and increase the demand for their securities. Narrower bid and ask spreads, greater capital market depth and the price stability of selected foreign capital markets are factors that enhance a stock's

marketability. Overseas markets often have trading hours that vary from those on the home market, so interlinking major international stock exchanges and global 24-hour trading is a means for major companies to create continuous markets for their shares and increase trading volume, thus enhancing their stock's liquidity.

(4) Better flexibility in raising capital

Foreign listings provide corporations with financial credibility and thus greater access to foreign money markets, making it easier to sell debt. Also, Chief Financial Officers are given the opportunity to be more flexible and creative in issuing instruments such as convertible bonds, bonds with equity warrants and equity notes that often can be more advantageous in terms of cost and their impact on a firm's balance sheet.

(5) Improving opportunities for mergers and acquisitions

Some countries allow only firms that are listed on the local exchange to make tender offers. On the other hand, by listing globally a company may improve its position for foreign acquisitions through stock swaps. Foreign listing can serve as a defensive mechanism against hostile takeovers by making it more difficult for a predator to accumulate a large block of stocks in the target company when they are dispersed around the world.

(6) Improving marketing relations

Cross-listing improves the visibility and international awareness of a company and may also affirm the importance of the host country on a market for the company's products and services. During the application procedure and negotiations with authorities, the company is scrutinized and exposed to the financial community through the distribution of prospectuses, meetings with the press, etc. Hence, if the outcome of the application procedure is favorable, the company's product identification in the host country is broadened following the listing announcement and its recognition and reputation increase, which is especially beneficial for companies which place great importance on foreign sales.

(7) Overcoming political restrictions

Listing abroad may reduce the risk of the imposed capital control and host country requirements such as sharing technology with local partners. It also helps companies to meet local ownership requirements and improves relations with the local government and financial community, subsequently reducing political risk and capital costs.

Selling shares on the foreign stock exchange can be a strategic move for a multinational company in building an image as a partner rather than an exploiting foreigner and thus avoiding possible nationalistic backlashes against foreign subsidiaries that are wholly owned. Finally, listing abroad may enhance an attempt to balance multinational ownership with the geography of its operations.

(8) Enforcement

A company may choose to list in a country with stricter shareholder protection standards. The extent of shareholder protection is determined by national law and its interpretation and enforcement by courts. This may result in an improved company reputation, more abundant equity financing and lower cost of capital. A company may also opt to list in a country with better contract enforceability and more efficient bureaucracy.

(9) Disclosure level

Listing in a country with better accounting standards allows companies to enhance their transparency and therefore reduce monitoring costs for shareholders and their required rate of return. However, empirical evidence presented by Biddle & Saudagaran (1989) has treated this aspect as a disadvantage of cross-listing, with firms more likely to list their shares on foreign stock exchanges with less stringent reporting requirements.

(10) Labor relations

Corporations that have a large number of employees in their subsidiaries abroad may find listing on the local stock exchange beneficial in improving relations with local management and employees. Some firms offer stock ownership plans to their employees

in order to increase their loyalty and concern for company performance. Cross-listing may make these efforts more effective.

Difficulties Associated with Cross-Listing

Listing and supporting the listing on a foreign stock exchange may be a very costly and time-consuming processes. It potentially involves various difficulties and barriers to be overcome. According to Biddle & Saudagaran (1991), the major costs arising from foreign listing include:

(1) Adjusting accounting and auditing practices to meet local requirements;

(2) Meeting more exacting foreign financial disclosure standards;

(3) Dealing with the foreign regulatory agency's jurisdiction over worldwide business practices.

Additional costs may be attributed to research, marketing, legal costs, the costs related with satisfying government-imposed controls on capital and foreign exchange, transaction and trading costs, the cost of maintaining an integrated computerized distribution network and costs resulting from cultural and linguistic barriers. Differences in disclosure, filing and listing requirements are vital criteria to consider prior to taking exchange listing decisions.

The barriers facing companies that wish to cross-list as well as increasing competitive pressure from other stock exchanges have caused the major stock exchanges to undertake steps towards liberalizing some of the stringent listing requirements for foreign companies. Demand is also growing for international harmonization in accounting practices.

During last two decades attempts have been made to harmonize listing and filing requirements among European stock exchanges in the aim to encourage European firms to list more frequently within the EU capital market.

The creation and implementation of three EEC directives has narrowed the differences in the listing and filing requirements among major European Stock Exchanges. The directives in question are the follows:

The Admission Directive, March, 1979, providing the minimum conditions for the admission of securities onto the stock exchange;

The Listing Directive, March, 1980, concerning the content, checking and publication of prospectus;

The Interim Reporting Directive, February, 1982, concerning interim reporting.

However, the importance of outside parties (shareholders, the government and creditors) as providers of capital varies among countries and influences the level of disclosure. For example, in Germany banks play a major role in providing capital to the corporate sector; in France, the government has a controlling interest in many large corporations; in the UK and the Netherlands, a myriad of small shareholders supplies a majority of capital. As individual shareholders usually have little access to private information (unlike representatives of banks that are often member of the board of directors of large public companies), they have to rely on the published reports and therefore demand greater public disclosure and reporting by corporations. Therefore, higher levels of accounting disclosure with better shareholder protection and more stringent listing requirements are expected to be found on stock exchanges in places such as London, New York and Amsterdam relative to stock exchanges in countries where other providers of capital are more important, such as in Germany, France, Italy or Spain.

4.2 The Consequences of International Listing

Introduction

Over the last two decades, research has examined the impact of the corporate decision to list shares. This section summarizes the empirical evidence provided by a number of studies using different samples groups, time frames and research methods. The main issues investigated in these studies are the behavior of market share price around the moment of listing, liquidity effects, risk fluctuations and variations in the cost of capital.

Interlisting and the Cost of Capital

One of the earliest studies on the implications of cross-listing on the market value of shares was carried out by Stapleton and Subrahmanyam (1977). They base their observations on a hypothetical numerical analysis of 2 countries, 20 investors and 8 stocks. Various investment restrictions are imposed, making the market completely and partially segmented. It is demonstrated that the effect of a completely segmented capital market is to depress the security price, deprive investors from diversified investment opportunities, and therefore increase the required rate of return on their investments and subsequently the cost of capital for companies. Three possible solutions for reducing the negative consequences of complete segmentation are suggested: direct investment in foreign companies, mergers and acquisitions with foreign companies and the dual listing of securities on foreign capital markets.

In their simplified model, following the dual listing of the shares, the demand for shares becomes the sum of domestic and foreign demands, causing the share price to rise and the required rate of return to fall, subsequently decreasing the cost of capital. Depending on the level and the correlation sign of the other domestic and foreign shares in the model the share that has become dually listed with, their prices will be indirectly affected, too.

The underlying intuition is that international listing lessens the degree of capital market segmentation, providing investors with diversification opportunities resulting in an effect on the listing firm's share price.

Karolyi (1998) examines whether cross-listings affect stock risk and cost of capital. He argues that cross-listing of a share may change its systematic, non-diversifiable risk, and therefore affect a firm's cost of capital. If markets are segmented, the compensation for market risk will be different across markets and, in turn, for individual shares in those markets. This may yield important differences in required returns among shares. For firms in markets with high investment barriers, the higher price of market risk will necessarily translate into a higher cost of capital. These firms then have incentives to adopt policies to mitigate the negative effects of investment barriers and promote the positive effects of international diversification by dually listing shares on foreign stock exchanges. Once a firm is dually listed, its value incurs greater systematic exposure to fluctuations in foreign markets, and the cost of capital is affected.

Karolyi (1998) quantifies the impact of cross-listing on the cost of equity capital using the multi-factor risk model and a sample of non-US firms listed in the US for the first time. He defines the required return on a stock as a function of the risk premium on local home and foreign market risk and also of the share's sensitivity or betas relative to those factors. In order to determine how cross-listing translates into an overall shift in the cost of capital, he assesses the change in firms' home and foreign market betas before and after cross-listing.

He finds that following cross-listing, home betas generally decline (decreasing the cost of capital), implying that the influence of the home market on the value of an individual firm's stock lessens, whereas foreign betas typically increase (increasing the cost of capital), implying that following cross-listing the influence of foreign-market factors on share value rises. Since the home-market risk premium is typically higher than the foreign-market risk premium, the net change in the cost of capital is typically negative. These results provide empirical evidence that cross-listing of a share causes a

decrease in the required rate of return and therefore lowers the cost of a firm's equity capital.

Interlisting and Share Prices

Several studies in prior empirical research have addressed the issue of capital market integration/segmentation by examining the effect of international listing on share prices and observing whether the cross-listing effect varies among host countries.

For example, Howe & Kelm (1987) explore the impact of a firm's first, second and third cross-listing using the sample of US shares interlisted on the Basel, Frankfurt and Paris stock exchanges, but without regard to the exchange on which the listing occurred. Their objective is to discover whether or not listings on different exchanges have different price effects. They apply the standard event-time methodology with the actual listing date as the event of interest, using the market model:

$$r_{jt} = \alpha_j + \beta_j r_{mt} + e_{jt} \qquad (4.1)$$

where

r_{jt} is the return on security j for period t

α_j is the intercept term

β_j is the covariance of the returns on the security j with returns of the market portfolio divided by the variance of the market portfolio's returns

r_{mt} is the return on the market portfolio for period t, and

e_{jt} is the residual error term on security j for period t

They compute the abnormal returns over the period of t = - 90 to t = + 40 relative to the listing day t = 0, assuming that a period of 90 days prior to the listing day captures all the dates (application, approval and actual listing) relevant to the new listing on a foreign stock exchange. They found negative abnormal returns throughout the event period, which is not consistent with the usual prediction of foreign listings being associated with positive abnormal returns during the application and approval periods. They conclude that managers who are concerned with the financial well-being of their shareholders should avoid foreign listing, pointing out that meeting foreign listing requirements bears significant costs.

Lee (1991) performed a study comparable to that by Howe & Kelm (1987) covering the same 131 day (from t = -90 to t = +40) event period, using the sample of 141 US firms listed on the London and Tokyo stock exchanges. He found no evidence of overseas listing causing any significant or permanent change in shareholder wealth. These results are in contrast with those by Howe & Kelm (1987) regarding the impact of four other stock exchange listings on share prices.

This suggests that the effects of international listing on shareholder wealth are not universal for all foreign stock exchanges, rather the effects of cross-listings differ among stock exchanges.

Alexander et al. (1988) predict that in a mildly or completely segmented market, the effect of cross-listing will be a decline in the expected rate of return. They observe abnormal returns for a sample of 34 foreign firms listed on the US stock exchange markets covering the period from t = -36 months to t = +36 months relative to the listing month t = 0.

They apply the Capital asset pricing model on the monthly return data from the estimation period (from t = -72 to t = -36) in order to calculate the CAPM regression estimates and then the rate of return expected for the observed event period.

Alexander et al. (1988) found positive and significant abnormal returns in the pre-listing period from t = -24 to t = -2 months, which may reflect selection bias, as the firms

seeking cross-listing previously had strong performance. Second, they found no abnormal returns in the listing period from t = -1 to t = 0; and third, they found negative and significant abnormal returns in the post-listing period from t = +1 to t = +36. In addition, they found no significant difference between pre-listing (from t = -72 to t = -37 months) and post-listing (from t = +1 to t = +36 months) mean return.

This evidence supports their hypothesis that international listing causes a decline in expected returns in the case of either completely or mildly segmented capital markets and that equity markets become integrated as a result of international listings.

Lau et al. (1994) take a different approach by examining the behavior of 346 US firms' share prices cross-listed on ten different stock exchanges. They also use the event-time methodology, with an 11-day window surrounding three separate event dates, applying the standard market model regression to calculate the model parameters over the estimation period from t = -130 to t = -6 days relative to the event date t = 0.

However, compared to prior similar studies, they go one step further by incorporating, where available, the firm's application date for listing and acceptance date for listing in addition to the actual listing date as the event study. Furthermore, they examine stock return variance as well as abnormal returns.

During three event periods (from t = -5 to t = +5 days relative to the event day t = 0), they find that abnormal returns are not significant around the application day, that they are positive around the approval day and are negative on the first trading day as well as throughout the entire post-listing period through day t = +125 for the pooled sample and for the stock listed on two international stock exchanges. As they find significant positive abnormal returns surrounding approval day, they suggest that the announcement of an approval for listing may be taken as a positive signal by investors. On the other hand, they find no evidence of inequality of variances (volatility) in returns between the estimation period and event window. This finding suggests that any abnormal returns found are likely not to be caused by changes in the firm's systematic risk, since the increased variance would mean increased systematic risk and hence positive abnormal

returns. Thus they conclude that the presence of positive/negative abnormal returns is probably not the compensation/payment for risk bearing/reduction.

Interlisting and Risk

Torabzadeh et al. (1992) examine the risk/return performance of 92 US firms which for the first time had their stocks dually listed on the London and Tokyo stock exchanges. They observe the behavior of the shares' abnormal returns over a period from t = -60 days to t = +60 days relative to the listing day t = 0. During the period prior to listing they find an upward movement of abnormal returns. The only significant negative abnormal returns are found during the 4-day period immediately following the listing. Shortly thereafter, the abnormal returns resume their positive trend throughout the entire observed post-listing period. Torabzadeh et al. (1992) suggest that one of the explanations of the negative return performance in the period immediately after the listing is that market makers might have inflated the asking prices prior to listing as a defense mechanism until the equilibrium trading price is determined.

They conclude that the positive return performance reflects a change in the asset-pricing structure once the security is dually listed, resulting from the removal of some of the barriers to international portfolio investment and reducing the negative effects of international capital market segmentation. Torabzadeh et al. (1992) also measure risk shifts in response to cross-listing using a variety of alternative risk measurement methodologies. They find no evidence of shifts in either systematic or total risk following the listing. The systematic risk tends to decline but the reduction is not significant.

A study by Howe & Madura (1990) explores whether the risk characteristics of the cross-listing firms' shares change as a result of the listing in a manner consistent with a greater degree of market integration. Using the sample of 32 quarterly returns (16 prior to and 16 following the cross-listing) of 68 US stocks dually listed in Germany, France, Switzerland and Japan, they estimate different risk indexes to test for intertemporal shifts in risk. Specifically, they search for evidence of a change in: (1) the beta of the stock measured with respect to the domestic market index ("domestic" beta), (2) the stock's

beta measured with respect to the market index of the country where the listing occurred ("foreign" beta), (3) the standard deviation (the total risk), and (4) the residual variance (the non-systematic risk) as a proxy for information asymmetry.

They hypothesize that as the cross-listing reduces capital market segmentation, the sensitivity of the firm's stock returns to movements in the foreign capital market should be more pronounced relative to the movements in the domestic capital market. Hence, the "foreign" beta should rise and the "domestic" beta should decline following the share's interlisting. Moreover, the standard deviation should decrease as risk decreases due to the diversification effect of cross-listing, and the information asymmetry as proxied by residual variance should decline due to the better reporting standards that the firm must apply.

They find no significant evidence regarding shifts in risk following the cross-listing, regardless of the methodology used. Howe & Madura (1990) conclude that cross-listing is an ineffective mechanism for reducing market segmentation, or that markets are already well integrated, or that the degree of market segmentation is a function of the type and size of the firm. For example, firms that raise equity internationally are usually large, well-established companies that mitigate the effects of segmentation through other mechanisms, such as direct foreign investments and/or mergers with foreign firms. On the other hand, the effects of international listings would be greater for small firms with low levels of foreign investment.

4.3 Interlisted Companies

The research studies summarized in Section 4.3 examine the effects of cross-listing on the market value of firms' shares, firms' exposure to risk and firms' cost of capital. The samples used for empirical analysis typically consist of US firms that are listed outside their home country. Only one research study (Karolyi, 1998) analyses a number of European cross-listed firms but makes no distinction as to their country of origin.

However, the focus of the empirical research in this thesis is on European companies that operate across integrated markets rather than within a single, segmented market. They list their shares on European stock exchanges, and some of them are also listed in New York.

Table 4.1 below displays the interlistings of the 365 firms that form the sample used in the empirical study. The firms are cross-tabulated by their domicile and the market where they list their shares. Additional information is provided regarding quotations on the Viena and the New York Stock Exchange. The diagonal in the Table 4.1 gives the numbers of interlisted companies by domicile that are included in the sample. Cross-listings can be interpreted either by row (the number of companies domiciled in a given country traded on each exchange) or by column (the domicile of companies traded on a given exchange). The listings indicated for the Frankfurt and Zurich stock exchanges also include those traded in Dusseldorf and Geneva, respectively.

Table 4.1

Distribution of Listings by Domicile and Market

	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.		Vie.	Eur. Lis.	N.Y.	Tot. Lis.
Belgium	**18**	0	0	5	18	0	0	4	0	0	0	1	3		0	**49**	0	**49**
Denmark	0	**10**	1	0	8	0	0	0	0	0	0	1	4		0	**24**	2	**26**
Finland	0	0	**18**	1	17	0	0	0	0	0	4	0	4		1	**45**	3	**48**
France	15	0	0	**56**	55	0	1	8	0	3	2	5	6		0	**151**	11	**162**
Germany	8	0	0	12	**26**	0	3	10	2	2	2	14	12		10	**101**	9	**110**
Ireland	0	0	0	0	3	**12**	0	0	0	0	0	0	12		0	**27**	4	**31**
Italy	3	0	0	10	29	0	**29**	5	0	1	0	2	5		1	**85**	7	**92**
Netherlands	14	0	0	7	37	0	0	**39**	0	0	1	11	10		1	**120**	11	**131**
Norway	0	0	0	1	8	0	0	1	**11**	0	2	1	3		0	**27**	5	**32**
Spain	0	0	0	2	30	0	0	1	0	**30**	0	0	4		0	**67**	4	**71**
Sweden	2	2	1	5	19	0	1	1	4	0	**21**	4	10		0	**70**	3	**73**
Switzerland	2	0	0	5	23	0	1	2	0	0	0	**23**	3		0	**59**	5	**64**
UK	13	1	1	19	66	2	0	11	2	2	0	10	**72**		0	**199**	40	**239**
Total Foreign Listings	**57**	**3**	**3**	**67**	**313**	**2**	**6**	**43**	**8**	**8**	**11**	**49**	**76**					
Total Listings	**75**	**13**	**21**	**123**	**339**	**14**	**35**	**82**	**19**	**38**	**32**	**72**	**148**	**365**	**13**	**1024**	**104**	**1128**

4.4 Conclusion

The focus of the analysis presented in this Chapter is on European firms that list their shares throughout various international markets. The motives and difficulties associated with the decision to list internationally are briefly reviewed, but the primary intent is to highlight the influence of cross-listing on share prices and determine whether cross-listing effects vary across countries.

The findings in the research studies reviewed confirm that international listing reduces the negative effects of capital market segmentation and removes certain barriers to international portfolio investment resulting in positive return performance. As a consequence, equity markets become more integrated and empirical evidence shows that this brings about a decrease in the required rate of return, therefore lowering the cost of a firm's equity capital. However, the effects of international listing on shareholder wealth are not universal for all markets; rather, the effects of cross-listings differ from market to market.

5. MODELLING FRAMEWORK

5.1 Introduction

Chapter two reviewed financial accounting research investigating the properties of accounting earnings, namely the asymmetric timeliness of income recognition with respect to contemporaneous changes in market value. The empirical evidence presented documents a significant international variation in the information expressed by earnings (e.g. Pope & Rees (1992), Ball et al. (2000), Giner & Rees (2001)).

These findings suggest that cross-country differences in timeliness and asymmetric timeliness in income recognition are associated with differences in the institutional contexts firms operate in. However, only a limited number of institutional factors and their impact on cross-country differences in the asymmetric timeliness of earnings is examined. For example, a country's legal origin is assumed to capture the major features of the institutional environment a firm operates in.

Chapter three presented an overview of research studies on the association between quality in accounting information and the nature of the institutional environment. It emphasized the impact of the legal environment, in particular the degree of legal enforcement that extends to the financial reporting process. It also reviewed recent studies underlining the growing importance of quality in corporate governance and its influence on the environment in which a firm operates.

However, the matter of additional important institutional factors that shape the regulatory environment, with particular emphasis on their link to the nature of accounting earnings, is left open for further research.

Chapter four focused on the particularities of firms that raise their equity beyond the borders of their home country. It has been shown that cross-listing affects share prices and returns. It would consequently be expected to affect the link between the accounting

figures in financial statements, i.e. the accounting earnings and the market value of firm's equity, i.e. the share price.

In light of the growing number of firms operating internationally, the trend toward capital market integration and recent attempts to harmonize accounting regulation across countries, I have attempted to identify a richer set of contextual factors. If these factors are analyzed at the specific firm level, I anticipate that their more profound influences on the financial reporting process and specifically on the income recognition of earnings may be recognized.

In this study, however, differences in accounting conservatism are assessed in light of integrated rather than segmented capital markets. A more comprehensive set of European countries in which the sample firms operate is considered. The importance of understanding the way that international differences in income recognition timeliness are linked through institutional variables is emphasized.

Moreover, the nature of accounting earnings for international firms operating in several markets with shares on multiple stock exchanges is studied. The hypothesis is presented that these international firms are sensitive to the different requirements in the various jurisdictions involved.

This viewpoint and its underlying assumptions require an alternative methodological approach. Section 5.2 of this Chapter presents this modified methodological approach, linking conservative accounting to the features of the institutional framework that are brought down to the level of the individual firm.

Section 3.4 of Chapter three presented a new set of institutional factors, namely those related to legal protection for shareholders and those shaping the features of corporate governance systems in Europe. In Section 5.3 of this Chapter these newly constructed factors are considered together with measures of timeliness and asymmetric timeliness in order to explain the cross-country variation in accounting conservatism while taking into account a richer set of contextual variables.

5.2 Regression Analysis - Timeliness, Asymmetric Timeliness and Institutional Factors

Following previous work in this area, notably by Basu (1997), Pope and Walker (1999), Givoly and Hayn (2000) and Ball et. al. (2000), I have conducted an association study in order to assess the timeliness and the conservatism of earnings.[7] Reported earnings may be considered to be timely when they fully reflect the information that has been incorporated by the market in its pricing of a firm's equity. Earnings are less timely if value changes that are recognized by the market in the present period are not incorporated in the accounting computations until some time in the future. A simple model in this respect would express a firm's accounting earnings as a function of the change in the value of shareholder equity over that period. Likewise, after taking into account the number of shares on issue, the timeliness of value-relevant information in earnings per share – EPS - may be expressed as a function of the change in share price, $P_t - P_{t-1}$. Deflating both variables by the opening share price, P_{t-1}, an estimating equation may be written as the relationship between the earnings yield for the period to t, $EY_t = EPS_t / P_{t-1}$, and the market return over that period, $R_t = (P_t / P_{t-1}) - 1$; that is, for the i^{th} firm,

$$EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \varepsilon_{i,t} \qquad (5.1)$$

where $e_{i,t}$ is the regression error for firm-year *i,t*.

The coefficient β_2 is an indicator of timeliness. If $\beta_2 = 1$, for example, and assuming that $\beta_1=0$, we would expect the firm to report an earnings-per-share figure that

[7] In this study the timeliness and conservatism of earnings are assessed using a 'reverse' regression of annual earnings on annual returns. The usual regression of returns on contemporaneous earnings, as shown in previous studies by Kothari and Sloan (1992) and Easton, Harris and Ohlson (1992), may result in a bias to the slope coefficient and the R^2 of the equation due to a lack of timeliness, whereby current earnings reflect information expressed in prior returns. Basu (1997) suggests that 'reverse' regression is less likely to provide biased estimates, arguing that in an efficient market, unexpected stock returns are an unbiased measure of news concerning value-relevant information about a firm and, by definition, are uncorrelated to time. Consequently, the slope coefficient should not be affected by including past returns as additional explanatory variables. Empirical evidence by Basu (1997), Pope and Walker (1999) and Ball et. al. (2000) suggests that controlling for the lead-lag relation does not change inferences regarding conservative news recognition in earnings.

is equivalent to the change in share price. In these circumstances, accounting computations of earnings could be described as unbiased and perfectly timely overall, even in the presence of random error in the earnings computation by individual firms in particular periods. When $\beta_2 < 1$, the lack of timeliness can be interpreted as market returns leading earnings, whereupon the flow of market information from prior periods into current earnings would be reflected in $\beta_1 > 0$.

Basu (1997) adds another dimension by assuming that conservative accounting induces asymmetry in earnings timeliness, *i.e.* that 'bad news' proxied by negative stock returns is reflected in earnings more quickly than 'good news' proxied by positive stock returns. That is to say, earnings are expected to be more highly correlated with stock returns in periods with decreasing market values than in periods with increasing market values. By introducing a dummy variable, D, that takes a value of one if R_t is negative and zero otherwise, the estimation of earnings yield may now be expressed as

$$EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + \varepsilon_{i,t} \qquad (5.2)$$

The slope coefficients β_2 and β_4 can be interpreted as the responsiveness of earnings to contemporaneous 'good news' (*i.e.*, positive market returns) and 'bad news' (*i.e.*, negative market returns) respectively. In this context, conservative accounting implies that β_4 is expected to be positive and the ratio $(\beta_2 + \beta_4)/\beta_2$ is expected to be greater than one. Moreover, the explanatory power of the model as measured by the adjusted R^2 is expected to be higher in periods of 'bad news' relative to periods of 'good news', with earnings reflecting more of the variation in returns contemporaneously rather than being spread over time when market returns are negative.

As to the intercept β_1, while 'bad news' is more likely to be realized immediately and be evident as a transitory shock to the earnings process, the recognition of 'good news' in earnings is more likely to be delayed and spread over future periods, with this

lagged effect appearing as a persistent shock and resulting in a positive intercept as discussed above. On the other hand, if conservatism adds a downward bias to earnings, the intercept could be negative. The differential intercept β_3 may be interpreted as a reversal of prior-year market information in light of current value decreases. When $\beta_3 > 0$, over-provisioning is reversed as a prior-year adjustment. When $\beta_3 < 0$, we infer that deferred income recognition is scaled down.

Although published evidence shows that the proposed model captures conservatism as the asymmetrical timeliness effect, added variables may be required to model the variety of institutional effects in situations where international comparisons are attempted. As Ball et. al. (2000) argue, the properties of accounting income are a function of the varying demands to be satisfied under different institutional arrangements. This complements the argument advanced by Givoly & Hayn (2000) that the evidence on conservatism is primarily 'circumstantial' and it is possible that other factors may contribute to the results. In this context, relying on LaPorta (1997, 1998) and Leuz et. al. (2001), I extend Basu's (1997) model by adding variables that take into account institutional factors as well. The new model is as follows:

$$EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + \beta_5 DISCLOSURE_{i,} + \beta_6 MARKET_i + \beta_7 ENFORCEMENT_i + \varepsilon_{i,t} \quad (5.3)$$

where DISCLOSURE is an index that measures the inclusion or omission of items in the annual reports, as used in La Porta et. al. (1998). MARKET quantifies the importance of equity markets and is measured by the mean rank across three descriptive variables, (1) the ratio of aggregate stock market capitalization to the gross national product, (2) the number of listed domestic firms relative to a country's population, and (3) the number of IPOs relative to the population. ENFORCEMENT is measured as a mean score across three legal variables: (1) the efficiency of the judicial system, (2) an assessment of the rule of law, and (3) a corruption index.

A summary of these institutional variables is presented in the Table 5.1 below:

Table 5.1

Institutional Factors - Indexes by La Porta et al. (1997)

COUNTRY	Enforcement	Disclosure	Market
Belgium	9.4	61.0	11.3
Denmark	10.0	62.0	20.0
Finland	10.0	77.0	13.7
France	8.7	69.0	9.3
Germany	9.1	62.0	5.0
Ireland	8.4	N/A	17.3
Italy	7.1	62.0	6.5
Netherlands	10.0	64.0	19.3
Norway	10.0	74.0	20.3
Spain	7.1	64.0	7.2
Sweden	10.0	83.0	16.7
Switzerland	10.0	68.0	24.8
United Kingdom	9.2	78.0	25.0

For the specific sample, given that interlisting is a mechanism through which companies are exposed to differing jurisdictions, each of these institutional factors is computed for an individual firm as a linear combination of the indexed values accorded to each of the countries in which the firm's equity is quoted.[8]

This approach makes it possible to weigh the influence of institutional factors on accounting earnings' timeliness and asymmetric timeliness at the individual firm level.

[8] The disclosure index is not available for Ireland, but since all Irish companies are interlisted in the UK (and therefore the individual firms' indeces account for the UK disclosure value), we do not use the UK index to proxy for Ireland - even though it would be the best proxy - in order not to double the UK effect on the disclosure coefficient for Irish firms.

5.3 Modelling the Institutional Frameworks in Europe

In this section, I illustrate how investor protection, the effectiveness of corporate governance and legal enforcement extend to the financial reporting process in an international context. The importance of understanding the way timeliness and conservatism are linked through institutional variables is emphasized. Whether timeliness and conservatism in reported earnings vary from country to country in accordance with differences in investor protection, corporate government and the level of legal enforcement is investigated.

Basu's (1997) model is modified by incorporating a new set of investor protection and corporate governance variables that analyze differences in investor protection and corporate governance for 13 European countries, as is illustrated in Chapter 3. These variables are then correlated with measures of timeliness and asymmetric timeliness of earnings in a reverse regression analysis in order to explain the cross-country variation in accounting conservatism.

Initially, the impact of investor protection on timeliness and asymmetric timeliness of earnings is evaluated. The first model is an extension of Basu's model in which the investor protection measure constructed in Chapter 3, Section 3.4 is introduced as a continuous variable. These variables are interacted with coefficients for good and bad news as follows:

Model one

$$EY_{i,t} = \beta_1 + \beta_2 D + \beta_3 INPR_j + \beta_4 INPR_j\ D + \beta_5 R_{i,t} + \beta_6 R_{i,t}\ D + \beta_7 R_{i,t}\ INPR_j + \beta_8 R_{i,t}\ INPR_j\ D + \varepsilon_{i,t} \quad (5.4)$$

where EY is the earnings yield for the period t, $EY_t = EPS_t/P_{t-1}$, R stands for the market return over that period, $R_t = (P_t/P_{t-1}) - 1$, D is the dummy variable that takes the value of one if the return is negative and zero otherwise, INPR quantifies the level of investor protection for a firm's domicile country j, INPR D is the interaction intercept term and R D, R INPR and R INPR D are interaction slope terms.

Similarly, the second model estimates the influence of corporate governance cross-country measures on accounting earnings:

Model two

$$EY_{i,t} = \beta_1 + \beta_2 D + \beta_3 CG_j + \beta_4 CG_j\ D + \beta_5 R_{i,t} + \beta_6 R_{i,t}\ D + \beta_7 R_{i,t}\ CG_j + \beta_8 R_{i,t}\ CG_j\ D + \varepsilon_{i,t} \quad (5.5)$$

where CG is the continuous variable that quantifies the quality of corporate governance in a firm's domicile country j, as computed in Chapter 3, Section 3.4.

In both models, the slope coefficients β_5 and β_6 can be interpreted as the responsiveness of earnings to contemporaneous 'good news' (*i.e.*, positive market returns) and 'bad news' (*i.e.*, negative market returns) respectively. In this context, the level of conservative accounting is expressed by β_6 which is expected to be positive.

As to the intercept β_1, while 'bad news' is more likely to be realized immediately and be evident as a transitory shock to the earnings process, the recognition of 'good news' in earnings is more likely to be delayed and spread over future periods, and this lagged effect will appear as a persistent shock resulting in a positive intercept.

It was argued earlier in this analysis that managers and company insiders might be encouraged to understate (overstate) the anticipated decreases (increases) in a firm's market value in concurrently reported earnings, therefore influencing the timeliness of earnings and the level of accounting conservatism. Better investor protection and a higher quality of corporate governance can prevent such opportunistic behavior by managers in the financial reporting process. Therefore, we predict that in countries with higher levels of investor protection and/or corporate governance, aggressive accounting in terms of greater timeliness of 'good news' will be less likely, whereas the asymmetric timeliness of 'bad news' (accounting conservatism) is expected to be higher. This hypothesis ties in closely with the findings by Leuz et al. (2002) who suggest that better investor protection results in reduced earnings management and with the findings by Beekes et al. (2002)

who show that UK firms whose boards comprise a relatively high proportion of outsiders display greater accounting conservatism.

In the first model, β_7 and β_8 express the responsiveness of earnings to contemporaneous 'good news' and 'bad news' respectively, inclusive of investor protection effects. As it may be anticipated that in countries with relatively better investor protection 'good news' ('bad news') will be incorporated into earnings on a less (more) timely basis, β_7 is expected to be negative and β_8 is expected to be positive. Similarly, in the second model, the timeliness of 'good news' for countries with relatively better corporate governance is captured by slope coefficient β_7 which is expected to be negative. The incremental sensitivity of earnings to 'bad news', inclusive of the effect of corporate governance is captured by coefficient β_8 which is expected to be positive.

The countries are then grouped on the basis of similarities in their institutional characteristics such as investor protection, corporate governance and legal enforcement levels. The differences in earnings timeliness and conservatism are then observed among different groups of countries.

An additional criterion - the level of legal enforcement – is included, as a strong system of legal enforcement is necessary for proper functioning of both corporate governance systems and legal rules related to investor protection.

5.4 Data and Definitions of Variables

The sample used for the tests includes all European firms that traded their equity on exchanges in more than one European country between 1987 and 1999. The listings were provided directly by the national stock exchanges in Europe and the initial sample included 709 firms. However, a lack of accounting data for some firms and the absence of stock prices for others narrowed the sample down to 492 firms. This sample is trimmed further for two reasons. First, at least two consecutive years of information are required for each firm. Second, observations falling within the top or bottom 1% of opening price-deflated earnings per share or stock price returns are excluded in order to reduce the

effects of outliers on the regression results. On the other hand, a fiscal year-end restriction is not applied, and therefore companies are included that have reporting periods other than for the calendar year, togethere with those companies, especially in the UK and Ireland, that changed the reporting-year end one or more times during the period. Also, to mitigate the problem of survivorship bias, companies that had been delisted are included using the relevant information prior to the delisting date. Furthermore, as the results are no different after the exclusion of financial firms within the sample, financial firms are included in the dataset, which increases the number of observations and the statistical power of the results. Lastly, domicile effects cannot be estimated reliably for Austrian, Greek and Portuguese firms due to the small size of these three sub-samples, and the interlisted firms registered in these three countries are omitted for the purposes of the analysis reported below. The final sample consists of 365 firms and 3689 firm-year observations. The interlistings of the 365 firms are cross-tabulated by domicile and market in Table 4.1, and additional information is provided regarding quotations on the New York Stock Exchange.

All relevant data have been collected at accounting year-end dates from Datastream. The observed stock price dates have been matched with corresponding accounting year-ends and the return figures annualized to a standard 52-week-year accordingly. As negative values of earnings per share are recorded as zero in Datastream, the earnings-per-share values used in the study have been derived as follows: earnings (after extraordinary items and before taxes: Datastream item 625) were annualized and then divided by the number of shares outstanding at the fiscal year-end (Datastream item NS, which is updated to account for capitalisation chages). Finally, earnings per share were deflated by the opening stock price to control for heteroschedasticity.[9]

An overview of the variables in the dataset is provided in Table 5.2. Earnings yield varies between –49% and 124%, with an average value of 7.7% and a standard deviation of 10.4%. The average earnings yield and its standard deviation are noticeably different for Sweden and Switzerland compared with the other countries, a pattern which

[9] The analysis reported here is restricted to earnings after extraordinary items. This is because there is insufficient information for many of the European countries covered by the Datastream with regard to exceptional / extraordinary charges and revenues.

is reflected in the substantially higher maximum values for these sub-samples. No similar pattern is observed in their stock returns, however.

Table 5.2

Descriptive Statistics

	Firm Years	Earnings Yield					Stock Return				
		Mean	Median	St.Dev	Min.	Max.	Mean	Median	St.Dev	Min.	Max.
Pooled Sample	**3689**	**0.077**	**0.076**	**0.104**	**-0.049**	**1.244**	**0.211**	**0.124**	**0.526**	**-0.891**	**8.016**
By Domicile											
Belgium	187	0.093	0.090	0.117	-0.304	1.188	0.178	0.133	0.344	-0.672	1.155
Denmark	119	0.065	0.082	0.090	-0.292	0.298	0.171	0.082	0.451	-0.503	3.027
Finland	146	0.110	0.093	0.149	-0.252	0.888	0.298	0.097	0.704	-0.626	3.692
France	555	0.057	0.059	0.077	-0.426	0.463	0.206	0.115	0.471	-0.853	3.555
Germany	287	0.059	0.057	0.064	-0.436	0.649	0.157	0.066	0.542	-0.619	7.257
Ireland	136	0.078	0.089	0.091	-0.486	0.320	0.161	0.094	0.427	-0.623	1.909
Italy	269	0.059	0.066	0.129	-0.486	1.092	0.207	0.072	0.610	-0.603	5.132
Netherlands	397	0.085	0.084	0.076	-0.372	0.757	0.211	0.175	0.425	-0.712	2.174
Norway	114	0.058	0.061	0.136	-0.465	0.419	0.408	0.278	0.858	-0.795	3.573
Spain	275	0.076	0.072	0.067	-0.261	0.458	0.268	0.186	0.614	-0.626	4.491
Sweden	175	0.150	0.116	0.162	-0.174	0.916	0.283	0.213	0.510	-0.520	1.955
Switzerland	229	0.123	0.081	0.186	-0.451	1.244	0.253	0.148	0.700	-0.613	8.016
UK	800	0.073	0.071	0.064	-0.431	0.449	0.168	0.117	0.428	-0.891	5.719

Note : The earnings yield is defined as earnings per share deflated by the opening share price. Both earnings yield and stock return have been annualized to account for reporting periods not equal to one year. Observations falling in the top or bottom 1% of earnings yield or stock return have been excluded.

6. Empirical Results

6.1 Introduction

This Chapter presents the results of an empirical investigation on earnings timeliness and conservatism among European countries and European financial markets for firms with international operations and share listings.

The objective of the research presented in this Chapter is to find empirical support for the hypothesis that firm exposed to various institutional environments are sensitive to a variety of regulatory regimes and report earnings whose timeliness and/or asymmetric timeliness is influenced by a complex set of institutional characteristics that accounts for their international market and regulatory exposure. Also, this Chapter presents results concerning the timeliness and asymmetric timeliness of accounting earnings for firms that are listed only domestically on their local stock exchanges. The aim of this additional analysis is to compare the results for companies exposed to international conditions with those for firms that do not raise equity beyond the borders of their home country and therefore are not obliged to comply with requirements from other institutional regimes.

And finally, the empirical research presented in this Chapter investigates potential common trends in conservatism and timeliness over time in Europe.

6.2 Timeliness and Conservatism

This section illustrates results concerning cross-country differences in timeliness and asymmetric timeliness prior to the inclusion of institutional factors and employing Basu's (1997) reverse regression methodology as explained in Chapter five, Section 5.2.

Table 6.1 sets out the results from regressions (5.1) and (5.2) over the period from 1987 to 1999 for the pooled sample and sub-samples constructed according to corporate

domicile. The slope coefficient β_2 from regression (5.1), as shown in the first line for each sub-sample, is always positive and is significant for all cases with the exception of the coefficient that measures the relationship between earnings and returns for firms domiciled in Sweden.

The addition of dummy variables in the second regression in Table 6.1 divides the sample into two categories depending on whether the change in market value is positive or negative over the period. The incremental response to 'bad news' relative to 'good news', as measured by β_4, is positive and significant for the pooled sample at the 1% level of significance, and also positive and sigificant for ten out of thirteen domiciles. This conservatism coefficient (0.133 for the pooled sample) ranges from 0.439 for Danish firms, followed closely by Swedish and Irish firms, to 0.031 for French firms. Asymmetric timeliness seems not to be an important feature of financial reporting by interlisted firms domiciled in France, Norway and Switzerland. Moreover, the coefficients for interlisted firms domiciled in Belgium, Finland, Germany and Spain are significant only at the 10% level of significance.

A second measure, $(\beta_4+\beta_2)/\beta_2$, which assesses the sensitivity of earnings to 'bad news' relative to 'good news', shows greater variation compared to the ranking based on the β_4 coefficients. For the pooled sample, earnings are about six times more sensitive to 'bad news' than 'good news'. On the face of it, an international comparison ranks Irish firms as the most sensitive to 'bad news' relative to 'good news', followed by German, Norwegian and Dutch firms. However, in each of these cases, the results are driven by the fact that the β_2 coefficient is not statistically significant. For the firms domiciled in countries were the β_2 coefficient is statistically significant, the sensitivity coefficient ranges between three and nine.

Adjusted R^2's from separate regressions on positive and negative return sub-samples indicate that earnings are more concurrently sensitive to the reporting of publicly available 'bad news' than 'good news'[10]. Noticeably different, however, are the results

[10] F-statistics: positive returns pooled sample vs negative returns pooled sample $F = 47.663$, $p<0.010$

for French, Spanish and Swiss firms, where adjusted R^2 is higher for good compared to bad news, which is consistent with their low and mainly insignificant estimates of β_4.

Finally, the β_1 intercepts are positive and statistically significant for all cases, whilst the incremental constant β_3 is insignificant for the pooled sample and generally insignificant across domiciles. This confirms that the lack of timeliness in European financial reporting is manifested primarily in a tendency to delay the recognition of good news. Indeed, as Figure 6.1 shows, conservative accounting is generally the rule in Europe, in all but three countries in terms of the measure of asymmetric timeliness (β_4) and in all countries with regard to the measure of delayed recognition of good news arising in previous periods (β_1).

In the analysis discussed above, corporate domicile is treated as the determining factor in inter-country comparison. However, our sample reflects the multinational nature of many European firms, specifically those that raise capital internationally and list their shares across national capital markets. Therefore, the model is re-estimated taking into account the earnings behaviour of all firms listed in each of the major internationalised markets in Europe. The degree of integration of these markets is reflected in the number of foreign equities that are quoted, the proportion of non-domestic European interlistings as follows: Frankfurt 92%, Brussels 76%, Zurich 68%, Paris 55%, Amsterdam 52%, and London 51%. In addition to these markets, we include in the following analysis the New York Stock Exchange, where 104 out of the 365 European interlisted equities are also traded.

The results are reported in Table 6.2. The differential slope coefficient β_4 is positive and significant at the 1% level for firms listed on all markets except Zurich. The behavior of the β_4 coefficient is relatively homogenous across markets, ranging from 0.146 in Amsterdam to 0.085 in New York. This similarity is especially noticeable by comparison with the analysis by domicile, which includes the less integrated markets, and ranges in this case from 0.091 to 0.439.

Differences between the adjusted R^2 from separate regressions on positive and negative return sub-samples support the previous finding that earnings are concurrently more sensitive in reporting 'bad news'. This is the case for all markets with the exception of the Zurich stock exchange, which is also the only market with insignificant β_4. The β_1 intercepts are positive and statistically significant at the 1% level, which is again consistent with Basu's (1997) hypothesis that unrecognized gains in previous periods are uncorrelated with current news and are recognized in the current period.

Table 6.1

Timeliness and Conservatism Results[a] by Domicile

	Obs.	β_1		β_2		β_3		β_4		$(\beta_2+\beta_4)/\beta_2$[b]	Adj. R^2 (%)	Adj. R^2 Positive Sample[c]	Adj. R^2 Negative Sample[c]
				(R)		(D)		(R D)					
Pooled Sample	3689	0.070	***	0.043	**						5.1	1.6	7.4
		0.082	***	0.026	**	0.002		0.133	***	6.280	6.1	(2395)	(1294)
Belgium	187	0.074	***	0.104	***						8.8	2.4	18.3
		0.083	***	0.078	**	0.025		0.216	*	3.769	9.9	(127)	(60)
Denmark	119	0.047	***	0.101	***						25.7	9.8	41.0
		0.076	***	0.051	***	0.032	*	0.439	***	9.608	42.6	(76)	(43)
Finland	146	0.096	***	0.042	**						3.9	0.0	3.3
		0.126	***	0.018		-0.023		0.135	*	8.500	5.1	(87)	(59)
France	555	0.049	***	0.037	***						5.0	1.1	0.3
		0.061	***	0.019	**	-0.020	*	0.031		2.632	6.3	(363)	(192)
Germany	287	0.055	***	0.014	**						1.1	0.0	8.0
		0.061	***	0.006		0.018		0.166	*	28.667	5.6	(172)	(115)
Ireland	136	0.066	***	0.074	***						11.7	0.0	27.4
		0.106	***	-0.003		0.017		0.382	***	126.333	27.7	(83)	(53)
Italy	269	0.050	***	0.043	***						3.9	1.0	8.6
		0.064	***	0.026		0.015		0.213	***	9.192	6.1	(152)	(117)
Netherlands	397	0.075	***	0.045	***						6.3	0.0	10.8
		0.093	***	0.011		0.002		0.153	**	14.909	10.3	(268)	(129)
Norway	114	0.041	***	0.040	**						5.6	0.0	3.5
		0.081	***	0.009		-0.034		0.141		16.667	10.7	(80)	(34)
Spain	275	0.063	***	0.044	***						15.8	13.8	10.9
		0.065	***	0.041	***	0.018	*	0.091	*	3.220	16.7	(183)	(92)
Sweden	175	0.143	***	0.026							0.1	0.6	14.6
		0.194	***	-0.044	*	0.013		0.409	***	8.295	6.6	(123)	(52)
Switzerland	229	0.105	***	0.066	***						5.9	6.5	1.6
		0.105	***	0.065	***	0.033		0.145		3.231	5.5	(152)	(77)
United Kingdom	800	0.067	***	0.029	***						3.9	0.0	9.3
		0.079	***	0.010		-0.004		0.111	***	12.100	7.4	(529)	(271)

a. The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + \varepsilon_{t,t}$ where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, D is a dummy variable that takes the value of 1 when $R_{I,t}$ is negative and the value of 0 otherwise, and $\varepsilon_{i,t}$ is the error term.

b. $(\beta_2+\beta_4)/\beta_2$ measures the difference in sensitivity of earnings to negative and positive returns.

c. Adjusted R^2 from separate regressions on positive and negative returns samples. The number of observations for each sub-sample is given in parenthesis.

***, ** ,* Significant at 1%, 5% and 10% level of significance, with robust heteroscedasticity-consistent t-statistics.

Table 6.2

Timeliness and Conservatism Results[a] by Market

	Obs.	β_1	β_2 (R)	β_3 (D)	β_4 (R D)	$(\beta_2+\beta_4)/\beta_2$[b]	Adj. R^2 (%)	Adj. R^2 Positive Sample[c]	Adj. R^2 Negative Sample[c]
Brussels	834	0.085 ***	0.016	-0.010	0.133 ***	9.313	5.79	0.10 (552)	5.20 (282)
Paris	1312	0.077 ***	0.012 *	-0.011	0.103 ***	9.583	5.28	0.20 (866)	3.20 (446)
Frankfurt	3425	0.081 ***	0.029 ***	0.005	0.136 ***	5.690	6.50	2.00 (2226)	5.70 (1199)
Amsterdam	885	0.087 ***	0.004	-0.008	0.146 ***	37.500	8.56	0.00 (594)	7.20 (291)
Zurich	827	0.083 ***	0.050 ***	0.006	0.075	2.500	5.89	3.90 (534)	2.20 (293)
London	1699	0.088 ***	0.017 *	-0.009	0.109 ***	7.412	5.07	0.40 (1115)	3.60 (584)
New York	1094	0.086 ***	0.010	-0.018	0.085 **	9.500	4.87	0.00 (736)	2.80 (358)

a. The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + \varepsilon_{t,t}$ where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, D is a dummy variable that takes the value of 1 when $R_{I,t}$ is negative and the value of 0 otherwise, and $\varepsilon_{i,t}$ is the error term.

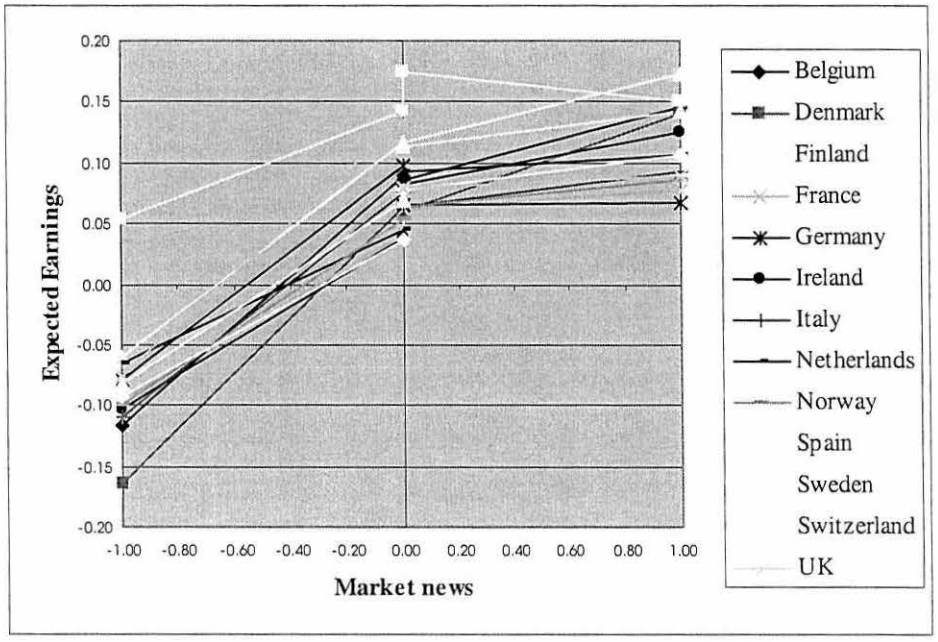
b. $(\beta_2+\beta_4)/\beta_2$ measures the difference in sensitivity of earnings to negative and positive returns.

c. Adjusted R^2 from separate regressions on positive and negative returns samples. The number of observations for each sub-sample is given in parenthesis.

***, ** ,* Significant at 1%, 5% and 10% level of significance, with robust heteroscedasticity-consistent t-statistics.

Figure 6.1

Timeliness and Conservatism of Earnings
Interlisted Companies
By Domicile



A Comparison with Domestically Listed Companies

This section extends my empirical analysis on accounting earnings timeliness and asymmetric timeliness to a new set of firms. This time 2725 new European companies are included that are listed only on their domestic stock exchanges.

This additional analysis was carried out in order to compare the variation in timeliness and asymmetric timeliness of accounting earnings for domestically-listed companies in thirteen European countries with the variation in timeliness and conservatism of earnings for interlisted firms using the same set of courtiers.

Contrary to companies that list their shares internationally, those firms that raise equity only on their respective home markets need not comply with requirements from other institutional regimes. Domestically-listed firms are less influenced by the consequences of market integration. Furthermore, the ongoing process of accounting regulation harmonization in Europe has less-pronounced effects on domestically-listed companies with respect to cross-listed firms.

Within the theoretical framework of this empirical analysis, the asymmetric timeliness of earnings is viewed as a property of accounting practice associated with, and to a certain level caused by, a complex international institutional setting where there is a growing interest in preventing opportunism by managers in the financial reporting process to ensure stronger legal protection of shareholders through strict listing and filing requirements and accounting regulation.

From this perspective, the asymmetric timeliness of earnings may be expected to express contemporaneous 'bad' as compared to 'good' news from the market in terms of its incremental sensitivity and to be more pronounced for firms that are internationally exposed than for those firms with shares listed only within their home countries.

In addition, a smaller similarity in timeliness and conservatism of accounting earnings may be expected among European countries for domestically as compared to internationally-listed companies. The explanation is twofold. First, interlisted companies operate and raise equity across capital markets that are more integrated, so they are

influenced by a similar set of market factors that drive the demand for asymmetric timeliness in accounting.

Second, in considering the accounting harmonization process, internationally-listed firms are obliged to comply with a rather homogenous set of accounting standards and rules required by the biggest stock exchanges, whereas for domestically-listed companies usually it is sufficient to meet the requirements of their home countries' GAAP, which vary more widely from country to country.

My empirical analysis employs Basu's (1997) reverse regression (5.1).

The comparative results for domestically versus cross-listed firms are reported in Table 6.3. For the pooled sample and for 9 out of 13 courtiers the differential slope coefficient β_4 that expresses the incremental sensitivity of current earnings to contemporaneous 'bad news' from the market is higher for interlisted than it is for domestically-listed companies. This finding is in line with my prediction of cross-listed companies having accounting earnings that are more conservative.

Coefficient β_4 ranges from -0.015 (and not statistically significant from zero) for Belgium to 0.294 for Irish firms. Only Finish, French, Norwegian and Swiss domestically-listed companies have earnings that exhibit greater conservatism than interlisted companies. Note that France, Norway and Switzerland are the only countries from my sample whose interlisted firms' earnings are not conservative at all. However, the earnings of domestically-listed companies domiciled in the same group of countries are significantly conservative as the β_4 coefficient is 0.127 for France, 0.277 for Norway and 0.276 for Switzerland, with all being statistically significant at the 1% level.

Figure 6.2 shows that in general, European domestically-listed companies report earnings that exhibit conservatism in all but three countries with respect to the "bad news" slope (β_4).

If Figure 6.2 is compared to Figure 6.1 which displays the variation in timeliness and conservatism for European interlisted firms among countries, it emerges that there is

indeed a greater diversity in the 'bad news' slopes (from the right side of the diagram) among countries for domestically-listed companies than for internationally-listed companies in the sample. This finding supports the prediction of more homogeneous conservatism in accounting earnings for firms exposed to an international institutional environment.

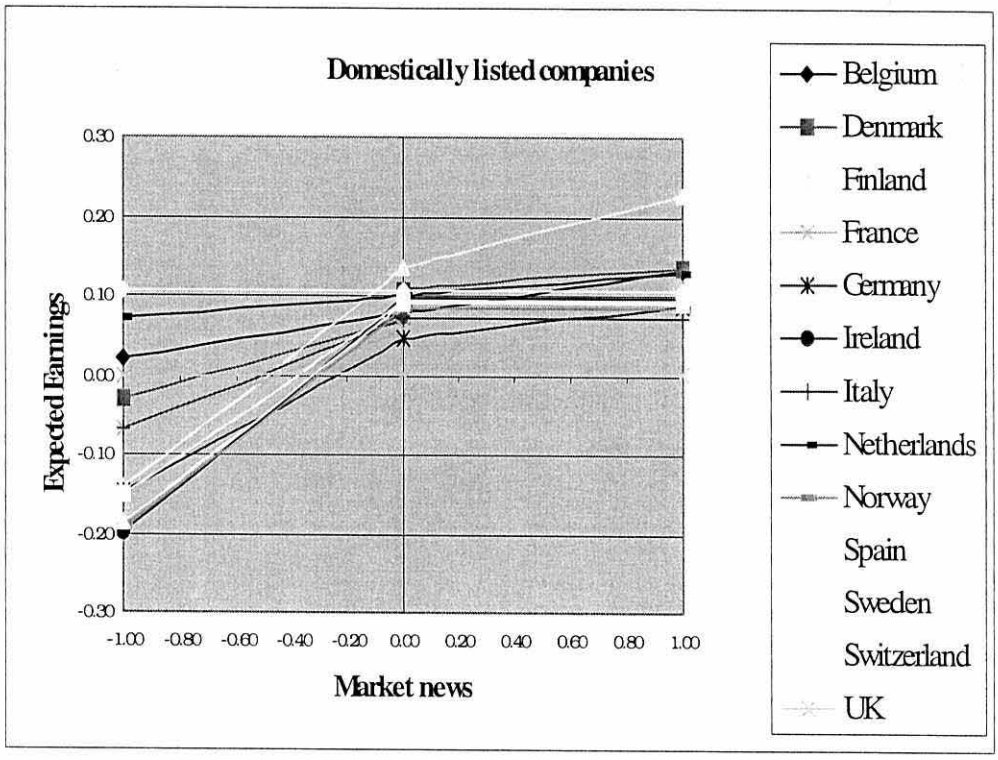
Table 6.3

Timeliness and Conservatism
Interlisted versus Domestically Listed Companies
Results by Domicile

		Obs.	β_1 (R)		β_2 (D)		β_3 (R D)		β_4		Adj R^2(%)
Pooled	**Domestic**	20130	0.066	***	0.016	***	-0.004		0.083	***	2.8
	Interlisted	3689	0.082	***	0.026	**	0.002		0.133	***	6.1
Belgium	**Domestic**	166	0.077	***	0.055	***	0.000		-0.015		5.3
	Interlisted	187	0.083	***	0.078	**	0.025		0.216	*	9.9
Denmark	**Domestic**	691	0.105	***	0.031	**	-0.029	***	0.076	***	13.4
	Interlisted	119	0.076	***	0.051	***	0.032	*	0.439	***	42.6
Finland	**Domestic**	377	0.134	***	0.093	*	-0.883		0.181	***	14.2
	Interlisted	146	0.126	***	0.018		-0.023		0.135	*	5.1
France	**Domestic**	1884	0.089	***	0.013		-0.031	***	0.127	***	8.4
	Interlisted	555	0.061	**	0.019	**	-0.020	*	0.031		6.3
Germany	**Domestic**	4181	0.045	***	0.042	***	0.008		0.151	***	4.4
	Interlisted	287	0.061	**	0.006		0.018		0.166	*	5.6
Ireland	**Domestic**	51	0.097	***	-0.043		-0.013		0.294	***	23.5
	Interlisted	136	0.106	***	-0.003		0.017		0.382	***	27.7
Italy	**Domestic**	431	0.072	***	0.012		-0.011		0.141	***	5.5
	Interlisted	269	0.064	***	0.026		0.015		0.213	***	6.1
Netherlands	**Domestic**	297	0.100	***	0.027	*	-0.250		0.049		9.9
	Interlisted	397	0.093	***	0.011		0.002		0.153	**	10.3
Norway	**Domestic**	638	0.084	***	0.012		-0.012		0.277	***	9.7
	Interlisted	114	0.081	***	0.009		-0.034		0.141		10.7
Spain	**Domestic**	402	0.108	***	-0.036		-0.026		0.029		0.6
	Interlisted	275	0.065	***	0.041	***	0.018	*	0.091	*	16.7
Sweden	**Domestic**	703	0.093	***	0.021		0.021		0.242	***	3.1
	Interlisted	175	0.194	***	-0.044		0.013		0.409	***	6.6
Switzerland	**Domestic**	1054	0.090	***	0.001		0.004		0.276	***	3.8
	Interlisted	229	0.105	***	0.065	***	0.033		0.145		5.5
United Kingdom	**Domestic**	8870	0.001	***	0.001	***	0.000		0.002	***	11.8
	Interlisted	800	0.079	***	0.010		-0.004		0.111	***	7.4

Figure 6.2

Timeliness and Conservatism of Earnings
Domestically Listed Companies



6.3 Timeliness, Conservatism and Institutional Factors

Although the properties of earnings appear to differ among countries, the results presented thus far indicate that the demand for conservative accounting may be driven by common factors in Europe. I support Ball et. al. (2000) and Leuz et. al. (2002) in maintaining that the institutional environment may be important in explaining the demand for accounting income and the properties studied here, namely timeliness and conservatism.

In order to address this question and re-check the reliability of results, the regression (5.2) was re-estimated, this time controlling for the effects of three institutional factors: 'the importance of equity markets', 'the level of disclosure', and 'the degree of enforcement'. These institutional factors adopted in La Porta et al. (1997, 1998) and Leuz et. al. (2002) were adapted to my sample as follows. Assuming that interlisted firms operate across integrated markets rather than within single segmented markets, values for the importance of equity markets, the level of disclosure and the degree of enforcement were averaged and assigned to individual firms according to domicile and the markets where its shares are listed. That is to say, a German firm interlisted in Paris and London will be sensitive not only to the institutional framework in Germany but also to that in France and the United Kingdom. This approach also attempts to address and correct the issue of correlated institutional variables in multiple regressions, as reported in Leuz et. al.(2002). In fact, after adjusting the institutional factors for the interlisting effect, the correlation between them is no longer of major concern.

The results are reported in Table 6.4. For the pooled sample, there is an increase in the adjusted R^2 from 6.10% to 7.40%[11], confirming that the additional variables have significant explanatory power. The significance of β_4 verifies the results presented in the previous section. Although a negative β_1 intercept is observed, this is in line with Basu's (1997) hypothesis that conservatism may add a downward bias to earnings, which is now revealed after accounting for differences in the institutional environments. Similar

[11] For the pooled sample, the F-ratio (=17.230, p<0.010) confirms that the additional variables have significant explanatory power.

comments apply to the results by domicile and by market, with firms in most countries still exhibiting significant degrees of conservative accounting, confirming the conclusions drawn above.

The introduction into the model of composite measures of the extent of financial disclosure (DISCLOSURE), the importance of equity markets (MARKET) and the degree to which regulations are enforced (ENFORCEMENT) is reflected in the parameters β_5, β_6 and β_7. In general, it appears that the extent of financial disclosure and the degree of regulatory enforcement have a similar effect on earnings which is opposite to the relevance of equity markets. Figure 6.3 contrasts the impact of jurisdictions and markets in this respect on firms originating in each of the European countries shown. (6.3).

For firms domiciled in Switzerlad and Norway, exposure to active equity markets has a significantly positive effect on earnings, but on the other hand firms based in these countries respond negatively to greater enforcement. Firms domiciled in these countries do not practice conservative accounting to any great extent, as shown in Figure 6.4. Notably, these countries are the only ones in the sample that do not belong to the European Union. On the contrary, for firms domiciled in the UK, Germany, Ireland and the Netherlands, which appear to be timely mainly in capturing 'bad news' from the market (β_2 is insignificant and β_4 significant), exposure to active equity markets has a significantly negative effect on earnings, whereas they respond positively to enforcement. In this respect, it is worth noting that the UK, Ireland and the Netherlands are countries with a high reliance on equity markets together with relatively low earnings yields. Moreover, although Germany has had traditionally a relatively low dependence on equity markets, German firms are predominantly interlisted in those countries where equity markets are important. Hence, German firms are sensitive to those countries' regulatory environments, e.g. they adopt respective stock exchange listings, filing requirements and disclosure policies. As a consequence, the impact of the importance of equity markets on the timeliness and conservatism of German firms' accounting earnings is similar to that of accounting earnings for firms domiciled in the U.K, Ireland and the Netherlands.

As noted above, the extent of financial disclosure and the degree of regulatory enforcement have the opposite effect of the relevance of equity markets. The earnings of firms domiciled in Switzerland, Italy and Norway (where accounting is less conservative) respond negatively to enforcement (see Figure 6.5) and the earnings of all of these except Italian firms respond positively to market importance Conversely, the earnings of firms domiciled in Germany, Ireland and the UK (where accounting is more conservative) respond positively to enforcement but negatively to market importance.

These results implicitly support the underlying assumption that analyzing the impact of institutional factors on interlisted firms' earnings is more precise and better able to express the complexity of the combined influence of a specific country's market together with other markets on a firm's reported accounting figures when these influences (proxied by contextual factors) are computed and reduced to the level of the individual firm.

The regression (5.3) was also newly estimated to measure the influence of institutional factors on earnings timeliness and conservatism for firms grouped according to the stock exchanges listing their shares. The results are reported in Table 6.5.

The firms listing on markets other than New York and Zurich are more conservative in their accounting and respond more significantly and positively to enforcement and negatively to market importance. In fact, firms that list on the New York Stock Exchange and the Zurich Stock Exchange seem to be insensitive to each of the institutional factors. One reason might be that companies that list in New York and Zurich (the only non-EU markets) are less sensitive to varying levels of disclosure, of market importance and varying degrees of enforcement in the different European environments.

Those listing in Amsterdam, London and New York appear to be timely capturing only 'bad news' from the market (β_2 is insignificant and β_4 significant). One reason for this might be that the New York and London Stock Exchanges have the highest disclosure standards and listing requirements, which tend to be followed by Dutch companies, especially those listed in the US, that actually had started to apply in practice

higher listing and filing standards and requirements much earlier than actually required by Dutch law and Amsterdam Stock Exchange Rules (see Tondkar et al., 1989, 1990), so companies that list in New York, London and Amsterdam are less concerned in capturing 'good news' and more concerned in recognizing 'bad news' from the market.

Interestingly, the firms in our sample that list on the New York Stock Exchange have the smallest β_4 coefficient in magnitude (0.089) together with a low R^2 (5.47%). Table 4.1 shows that these firms are predominantly domiciled in the U.K., the Netherlands, France and Germany - countries that otherwise exhibit both higher R^2 and, in the case of the U.K., the Netherlands and Germany, higher β_4. This is consistent with previous finding that firms complying with the higher disclosure standards in the highly-regulated US market appear to be less conservative than other European firms. This is also in line with the hypothesis that in integrated markets, firms that cross-list are less sensitive to requirements in their country of domicile.

Table 6.4

Timeliness, Conservatism and Institutional Factors[a]
Results by Domicile

	Obs.	β_1		β_2 (R)		β_3 (D)		β_4 (R D)		β_5 (DISCLOSURE)		β_6 (MARKET)		β_7 (ENFORCEMENT)		$(\beta_2+\beta_4)/\beta_2$[b]	Adj. R^2 (%)
Pooled	3689	-0.368	***	0.025	***	0.003		0.136	***	0.004	***	-0.003	***	0.026	***	6.440	7.40
Belgium	187	-16.539		0.082	**	0.025		0.202		0.103		-0.096		1.199		3.456	9.10
Denmark	119	1.103		0.052	***	0.034	*	0.447	***	0.005		-0.005		-0.132		9.643	42.49
Finland	146	2.599		0.012		-0.029		0.165	**	0.021		-0.017		-0.395		14.992	5.50
France	555	-0.489		0.020	**	-0.020	*	0.028		0.006		-0.002		0.022		2.386	6.24
Germany	287	-0.570	*	0.006		0.017		0.165	***	0.005	**	-0.008	***	0.045	*	27.279	7.93
Ireland	136	-9.685	**	-0.005		0.007		0.333	***	0.042	**	-0.039	**	0.832	***	64.444	29.85
Italy	269	0.763		0.031	*	0.015		0.172	**	0.004		0.007		-0.122	**	6.501	7.98
Netherlands	397	-1.553		0.011		0.002		0.158	**	0.010		-0.009	*	0.121		15.774	10.39
Norway	114	1.601	***	0.023		-0.023		0.113		-0.005		0.017	***	-0.152	***	5.939	20.16
Spain	275	-1.414	**	0.045	***	0.021	*	0.074		0.026	***	-0.013	**	-0.008		2.650	20.83
Sweden	175	0.350		-0.026		-0.011		0.368	***	0.010		0.003		-0.101		13.134	7.88
Switzerland	229	7.213	***	0.062	***	0.038		0.149		-0.060	***	0.043	***	-0.404	***	3.383	11.29
UK	800	-0.432		0.009		-0.006		0.112	***	0.002		-0.002	*	0.041	*	13.581	7.66

a. The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + \beta_5 DISCLOSURE_{i,} + \beta_6 MARKET_i + \beta_7 ENFORCEMENT_i + \varepsilon_{i,t}$
where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, and D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise. The indexed values of Market, Disclosure and Enforcement are reported in Leuz et al. (2001). The disclosure index measures the inclusion of items in annual reports (this index is not available for Ireland, but since all Irish companies are interlisted in the UK and the value for UK is the best proxy for Ireland, we do not use the value for UK to proxy for Ireland in order not to double the UK effect on disclosure coefficient). $Market_i$ is 'the importance of the equity market and is measured by the mean rank across three variables: the ratio of the aggregate stock market capitalization to gross national product, the number of listed domestic firms relative to the population, and the number of IPOs relative to the population. Enforcement is measured as the mean score across three legal variables: the efficiency of the judicial system, an assessment of the rule of law, and a corruption index. For the specific sample, average values were assigned to individual firms according to the countries in which they are interlisted. b. $(\beta_2+\beta_4)/\beta_2$ measures the difference in sensitivity of earnings to negative and positive returns.
***,**,* Significant at 1%, 5% and 10% level of significance, with robust heteroscedasticity-consistent t-statistics.

Table 6.5

Timeliness, Conservatism and Institutional Factors[a]
Results by Market

	Obs.	β_1		β_2 (R)		β_3 (D)		β_4 (R D)		β_5 (DISCLOSURE)		β_6 (MARKET)		β_7 (ENFORCEMENT)		$(\beta_2+\beta_4)/\beta_2$[b]	Adj. R^2 (%)
Brussels	835	-2.397	***	0.020	***	-0.008		0.117	***	0.013	***	-0.014	***	0.192	***	6.850	10.65
Paris	1312	-0.704	**	0.012	*	-0.010		0.104	***	0.008	***	-0.003	*	0.032	*	9.667	7.44
Frankurt	3425	-0.315	***	0.029	***	0.006	***	0.139	***	0.003	***	-0.002	***	0.025	***	5.793	7.60
Amsterdam	885	-0.951	***	0.005		-0.006		0.148	***	0.005	*	-0.006	**	0.088	***	33.859	11.12
Zurich	827	-0.891		0.049	***	0.002		0.078	*	0.004		-0.007		0.085		2.592	6.45
London	1699	-1.023	***	0.012		-0.007		0.133	***	0.010	***	-0.008	***	0.061	***	12.083	9.99
New York	1094	-0.197		0.091		-0.017	**	0.089	**	0.004		0.001		0.002		1.978	5.47

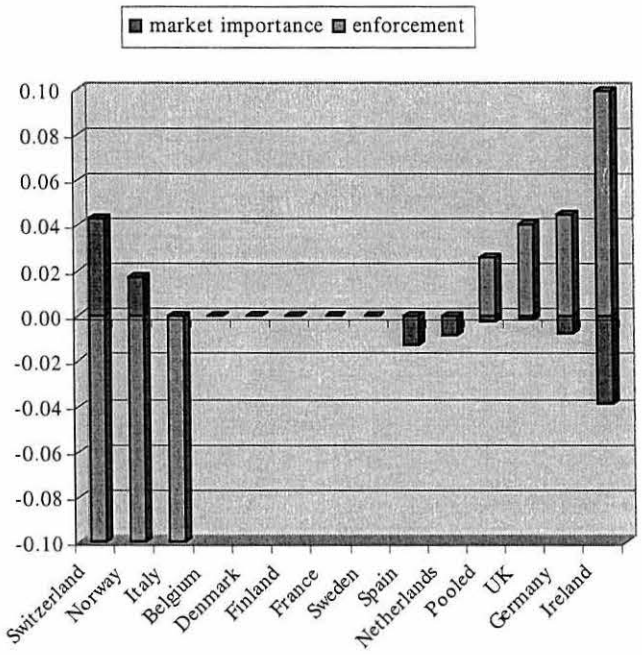
a. The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + \beta_5 DISCLOSURE_i + \beta_6 MARKET_i + \beta_7 ENFORCEMENT_i + \varepsilon_{i,t}$
where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, and D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise. The indexed values of Market, Disclosure and Enforcement are reported in Leuz et al. (2001). The disclosure index measures the inclusion of items in annual reports (this index is not available for Ireland, but since all Irish companies are interlisted in the UK and the value for UK is the best proxy for Ireland, we do not use the value for UK to proxy for Ireland in order not to double the UK effect on disclosure coefficient). $Market_i$ is 'the importance of the equity market and is measured by the mean rank across three variables: the ratio of the aggregate stock market capitalization to gross national product, the number of listed domestic firms relative to the population, and the number of IPOs relative to the population. Enforcement is measured as the mean score across three legal variables: the efficiency of the judicial system, an assessment of the rule of law, and a corruption index. For the specific sample, average values were assigned to individual firms according to the countries in which they are interlisted.

b. $(\beta_2+\beta_4)/\beta_2$ measures the difference in sensitivity of earnings to negative and positive returns.

*** ,**,* Significant at 1%, 5% and 10% level of significance, with robust heteroscedasticity-consistent t-statistics.

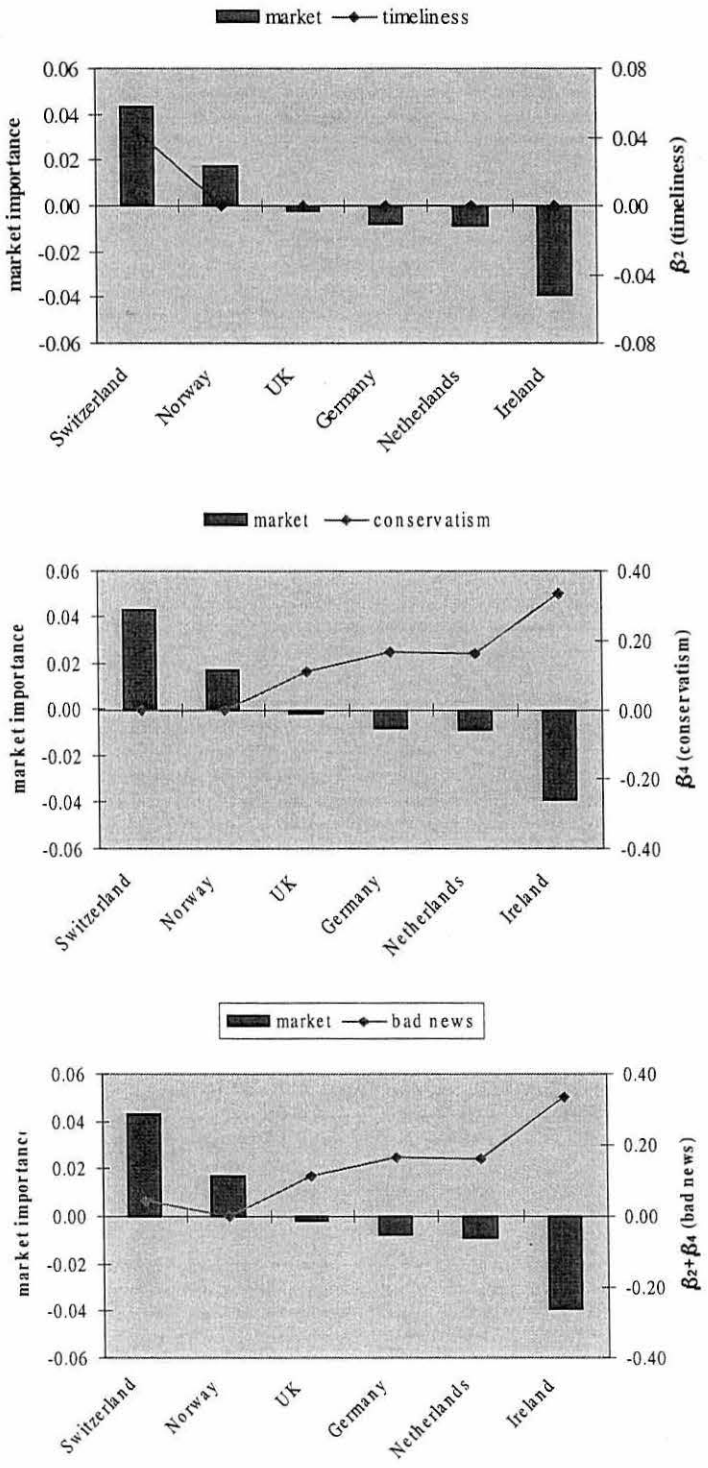
Figure 6.3

The Importance of Equity Markets and the Degree of Regulatory Enforcement
The Interaction Effects on Earnings



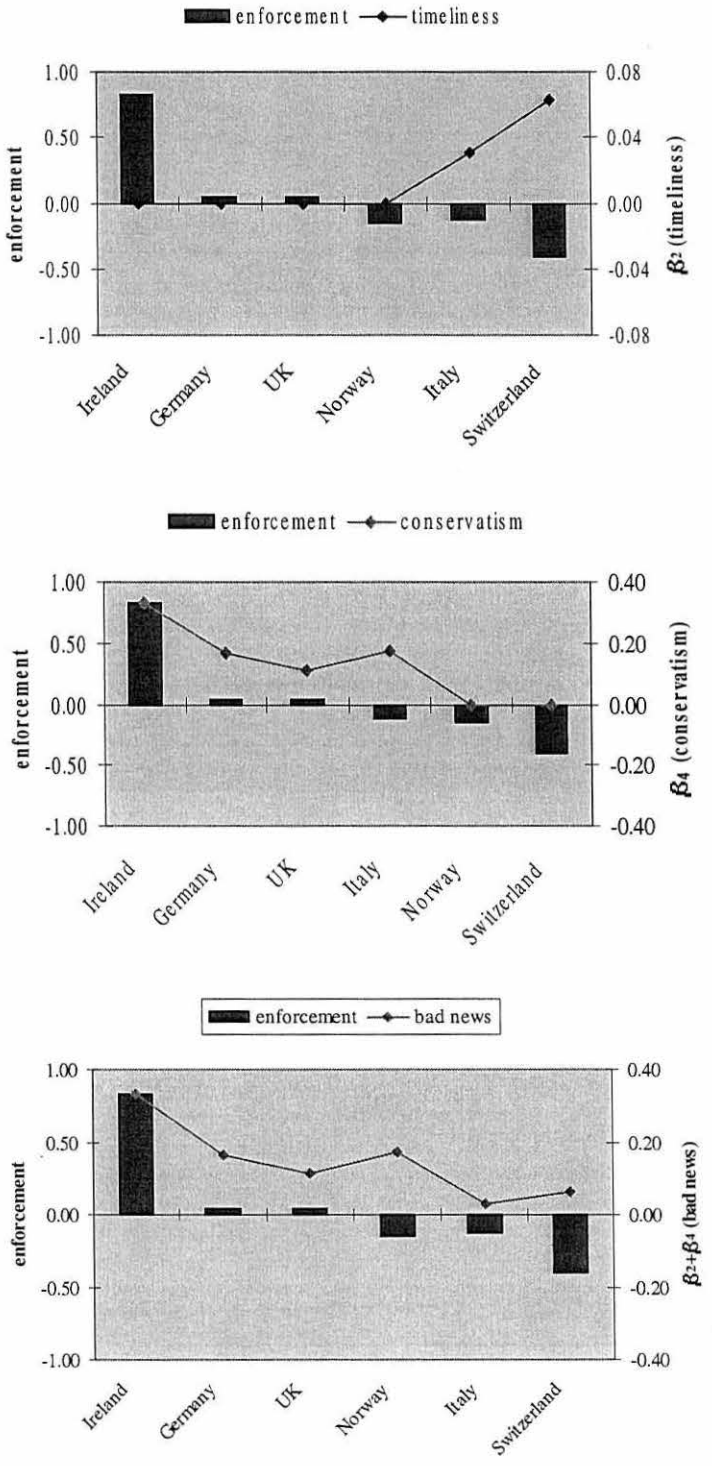
Note: The figure depicts the opposing effects of the importance of equity markets and the degree of regulatory enforcement on earnings yield, captured by coefficients β_6 and β_7 for each country and for the pooled sample. Estimates that are not significant at the 10% level are set at zero. The earnings of firms domiciled in Ireland, Germany and the UK, where accounting is more conservative, respond negatively to 'market importance' and positively to 'enforcement', whereas the earnings of firms domiciled in Italy, Norway and Switzerland, where accounting is less conservative, respond positively to 'market importance' and negatively to 'enforcement'.

Figure 6.4
Market Effects on Earnings



Note: The effect of the importance of the equity market on earnings (β_6) is given in by country. Firms domiciled in countries where 'market importance' has a positive effect on corporate earnings seem not to practice conservative accounting but reflect good news in a timely manner, whereas firms domiciled in countries where 'market importance' has a negative effect on corporate earnings appear to be timely only in capturing bad news as proxied by negative returns.

Figure 6.5
Enforcement Effects on Earnings



Note: The effect of the degree of regulatory enforcement on earnings (β_7) is given by country. Firms domiciled in countries where 'enforcement' has positive effect on corporate earnings seem to be timely only in capturing bad news from the market, whereas firms domiciled in countries where earnings respond negatively to 'enforcement' appear not to practice conservative accounting but reflect good news in a timely manner.

Market Effects on Timeliness and Conservatism

In this sub-section an attempt is made to isolate the individual influence of equity market importance on the timely and asymmetrically-timely recognition of news in earnings.

Basu's (1997) reverse regression (5.2) is modified by adding a new dummy variable Dm that takes the value of 1 if individual interlisted firms' 'market importance' index is above the sample average or 0 otherwise. The function of the additional dummy variable Dm is to capture the interaction between a firm's international exposure to various markets and its earnings timeliness and conservatism, respectively. So the modified regression equation is as follows:

$$EY = \beta_1 + \beta_2*D + \beta_3*Dm + \beta_4*Dm*D + \beta_5 R_{i,t} + \beta_6 R_{i,t}*Dm +$$

$$+ \beta_7 R_{i,t}*D + \beta_8 R_{i,}t*Dm*D + \varepsilon_{i,t} \qquad (7.1)$$

β_5 and β_7 are slope coefficients that respectively capture the timeliness and the asymmetric timeliness of a firm's earnings and their interpretation is identical to that of β_2 and β_4 from (5.2). Coefficient β_7 captures the incremental timeliness of earnings exhibited by firms listing their shares in countries with relatively higher market importance, whereas β_8 captures the incremental conservatism of these firms' earnings.

The 'market importance' index as constructed by La Porta et al. (1998) expresses the extent to which a share issue is an important means for financing a firm, therefore implicitly taking into account the quality of investor protection by legal rules, stock exchange requirements and accounting regulation in a particular country. The asymmetric timeliness of income recognition is viewed as a property of accounting earnings that demonstrates accountants' incentives to be cautious in optimistic recognition of 'good news' and to recognize 'bad news' more quickly. Such behavior is considered to be in line with the protection of shareholder interests.

Within such a theoretical framework built on the financial research literature elaborated in Chapters 2 and 3, it is likely for firms domiciled and cross-listed in countries attributing relatively greater importance to equity markets to have earnings that are more conservative. Current "good news" is likely to be reflected more slowly by contemporaneous earnings for firms that are assigned a higher market importance index as compared to firms assigned with smaller market importance values, which results in negative β_6. It is also likely for firms with contemporaneous earnings to be more incrementally sensitive to current "bad news" with respect to firms with lower market importance values, and therefore I expect a positive β_8.

The regression (6.1) is calculated for the pooled sample and for the firms domiciled in the UK and Germany. These two countries were chosen because of the distinctive characteristics of their financial systems and subsequently the importance of their equity markets. Namely, the UK has a market-oriented system, with numerous diverse investors that rely heavily on financial accounting disclosure. On the other hand, Germany is a typically bank-oriented country where businesses generally have very close ties to their banks, which in turn have direct access to accounting information, thus reducing the demand for published financial statements. This distinction between the UK and Germany is implicitly expressed by the 'market importance' index as calculated by La Porta et al. (1997) which assigns a value of 25 to the UK and a value of 5 to Germany.

The results are set out in Table 6.4. The coefficients β_5 and β_7 that capture earnings' timely and asymmetrically timely recognition of news from the markets remain positive and statistically significant for the pooled sample and for UK and German firms (except where β_5 for German firms that is not significantly different from zero) after controlling for the level of market importance.

Coefficient β_6 is negative for the pooled sample and for firms domiciled in both countries and takes the value of -0.021 for the pooled sample (significant at the 10% level), of -0.025 (significant at the 10% level) for UK firms and of -0.011 (not significantly different from zero) for German firms. This finding is as predicted and implies that firms domiciled and cross-listed in countries with more important equity markets tend to recognize contemporaneous 'good news' from the market more slowly. If

the result concerning the 'good news' coefficient, β_6 for UK firms is observed in conjecture with the results concerning the 'good news' coefficient for stock exchanges on which UK firms are predominantly listed (Table 6.7), it emerges that the 'good news' coefficient is indeed lower for those firms listed on London and New York stock exchanges that have highest values of market importance indices.

Coefficient β_8 illustrates the incremental conservatism of accounting earnings (as measured by the speed with which they capture contemporaneous 'bad news') for firms domiciled and cross-listed in countries with above-sample-average market-importance values. It is not significantly different from zero for the pooled sample and for UK firms, and it is negative and significant at the 5% level (-0.206 in magnitude) for German firms. This result does not support my prediction of increased sensitivity of current earnings to the 'bad news' associated with high market importance and positive β_8.. Moreover, the case of German firms implies that German firms cross-listed in countries with high equity-market importance have earnings that are less conservative. This may be explained by the fact that German firms are predominantly listed (except in their home stock exchange - Frankfurt) in Zurich which is the only stock exchange in my sample that exhibits zero conservatism and at the same time is ranked very high as to its market importance value, and also in Paris and in London which both have lower levels of earnings conservatism (as measured by β_4 from the equation (5.1)) and are both ranked higher in terms of equity-market importance than the Frankfurt stock exchange (see Table 6.8). This explains the drop in conservatism for German firms associated with highly important markets as measured by β_8.

Another important aspect of the results presented and explained above, especially when country results are observed together with stock exchange results, is that they show that cross-listed companies are indeed sensitive to the market importance assigned to the countries where they list their shares as well as to their domicile.

Table 6.6

Market Effects on Timeliness and Conservatism (Pooled, UK and German sample)

	Pooled (13 countries)		UK		Germany	
obs.	3689		800		287	
β_1	0.075	***	0.068	***	0.062	***
β_2	0.013	*	0.008		0.034	***
β_3	0.022	***	0.020	***	0.002	
β_4	-0.031	***	-0.022		-0.058	**
β_5	0.031	***	0.022	**	0.006	
β_6	-0.021	*	**-0.025**	*	-0.011	
β_7	0.145	***	0.085	**	0.226	***
β_8	-0.035		0.048		**-0.206**	**
Adj R^2(%)	6.4		8.1		6.9	

a. The model estimated is as follows: $EY = \beta_1 + \beta_2*D + \beta_3*Dm + \beta_4*Dm*D + \beta_5 R_{i,t} + \beta_6 R_{i,t}*Dm + \beta_7 R_{i,t}*D + \beta_8 R_{i,t}*Dm*D + \varepsilon_{t,t}$, where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise, Dm is a dummy variable that takes the value of 1 when individual interlisted firm's 'market importance' index is above sample average or 0, otherwise, and $e_{i,t}$ is the error term.

***, ** ,* Significant at 1%, 5% and 10% level of significance. White (1980) heteroscedasticity-consistent t-statistics are reported.

Table 6.7

Market Importance and Timeliness of 'Good News'
(UK firms listed in London, New York and Frankfurt)

UK cross listed firms	Market importance index	'Good news' coefficient (β_2)
London (72 firms)	**25**	**0.017**
New York (40 firms)	**23.3**	**0.000**
Frankfurt (66 firms)	5	0.029

Table 6.8

Market Importance and Asymmetric Timeliness of 'Bad News'
(German firms listed in Frankfurt, Zurich, London and Paris)

German cross listed firms	Market importance index	'Bad news' coefficient (β_4)
Frankfurt (26 firms)	5	0.136
Zurich (14 firms)	**24.8**	**0.000**
London (12 firms)	**25**	**0.109**
Paris (12 firms)	**9.3**	**0.103**

6.4 The Evolution of Timeliness and Conservatism

To further assess the comparability of earnings across domiciles and identify potential common trends in conservatism and timeliness over time, annual cross-section results are also reported, fitting a generalized model that allows for a trend whilst jointly estimating domicile effects. In accordance with Pope and Walker (1999), and due to the use of non-overlapping data, the estimated parameters are independent for the years from 1987 to 1999, so inferences based on annual regressions are likely to have a higher degree of statistical integrity than inferences based on pooled results. However, due to the nature of this sample, the cross-sectional approach is mainly used for potential trend identification since the small number of observations per year weakens the statistical significance of the estimates.

Requiring a reasonable minimum of twenty observations per year per domicile decreases the number of countries that may be compared over time. The sample that satisfies this criterion includes firms domiciled in United Kingdom, France and Germany for the whole period from 1987 to 1999, and Italy, the Netherlands, Switzerland and Spain from 1989 to 1999.[12] Since institutional factors were found to have an effect on both conservatism and timeliness, the annual estimates were obtained using regression (5.3).

Evidence of a common trend across domiciles can be seen in Figure 6.6 where the β_2, β_4 coefficients and the R^2s for the pooled sample and for each domicile are plotted over time. Adjusted R^2 varies considerably with time. For the pooled sample, which statistically provides the most reliable results due to its larger number of observations, a relatively high degree of conservatism can be observed on average, starting from 1987. Following 1991, a sharp decline in β_4 and a gradual increase in β_2 is observed until 1994, when the trend is reversed and conservatism increases. A similar pattern to that of the

[12] Note here that we were unable to estimate a β_4 coefficient for Spain in 1993 and for Italy and Spain in 1993 and 1997 because the share price returns for all firms domiciled in these two countries were positive.

pooled sample can be observed for firms domiciled in the United Kingdom. For the remaining countries, two aspects are worth mentioning. First, the β_4 coefficients are considerably more volatile compared to β_2, especially after 1995. Second, a significantly high level of conservatism is recorded for the year 1996 in most countries.

In order to account for the evolution of conservatism, a generalized model was also created that includes the trend as common components across time of each of the coefficients. As shown in Table 6.9, the results are similar both before and after the inclusion of domicile effects. With respect to β_1, the incremental effect is equal to -0.0041 per annum. If it is assumed that the β_1 intercept captures the variation in current earnings relating to the prior year's good news, the significant decrease in the estimate over time implies a growing tendency between 1987 and 1999 for good news to be spread more thinly over earnings in successive accounting periods, and it may therefore be concluded that such shocks to earnings have been more persistent in recent years. There is also evidence of a common increasing trend towards greater conservatism, given the increase in β_4 (0.0087 per annum) and the decrease in β_2 (-0.0035 per annum). Figure 6.7 shows the linear earnings predictors at the beginning and end of the research period, showing the tendency towards greater asymmetry in earnings timeliness between 1987 and 1999.

Figure 6.6

Evolution of Timeliness and Conservatism per Domicile

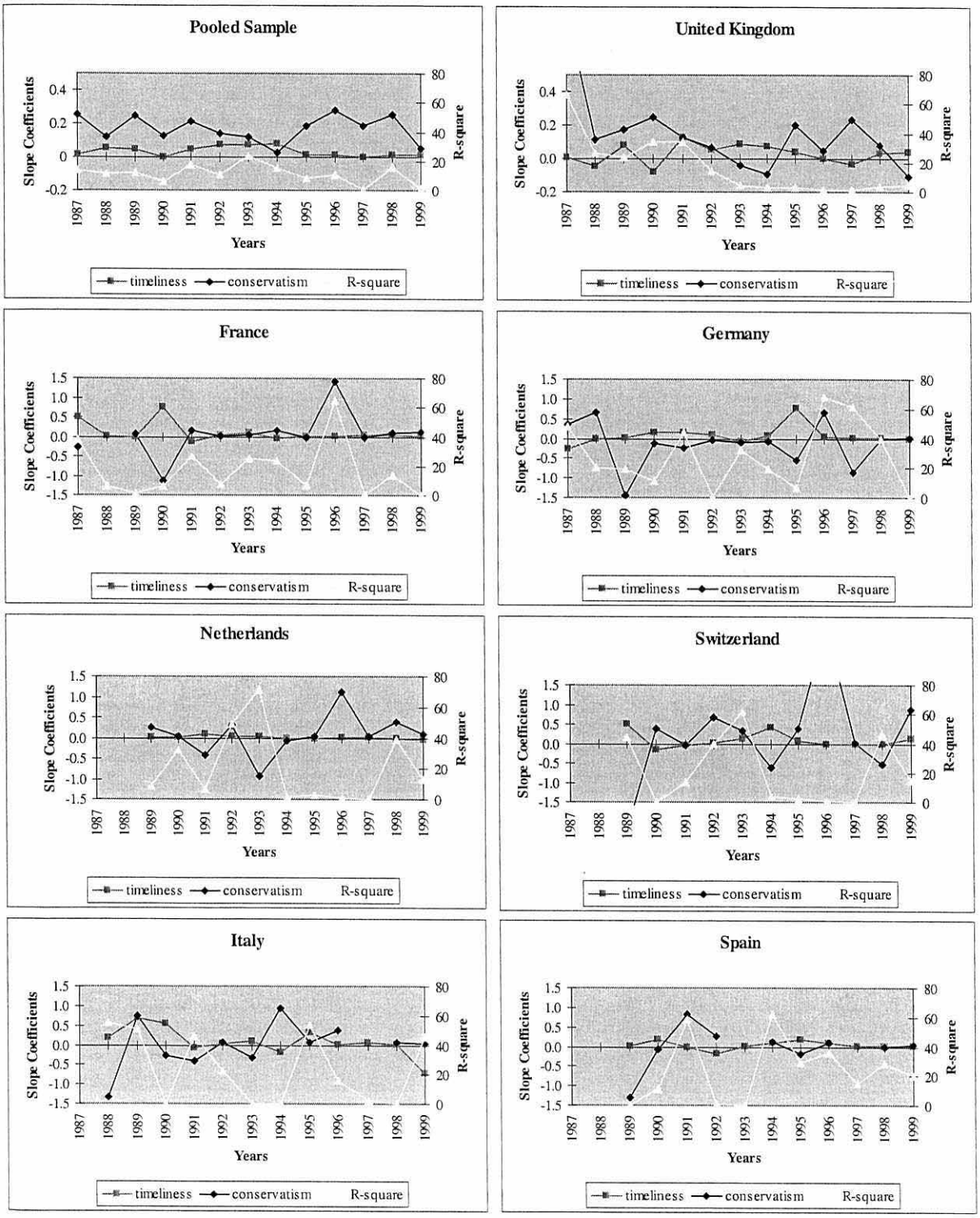


Table 6.9

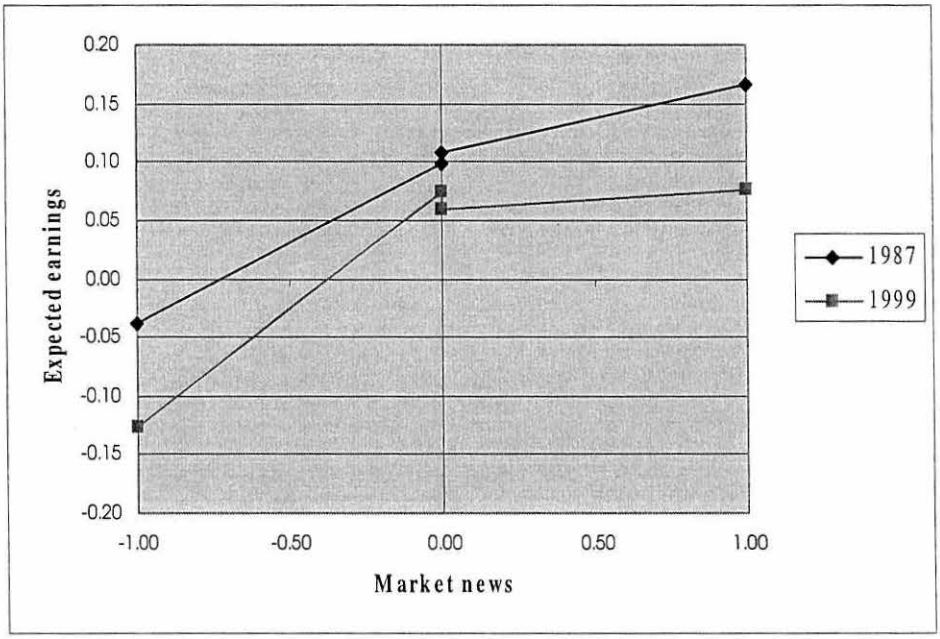
The Change in Timeliness and Conservatism

	Pooled Sample	Including Domicile Effects
	Coefficient	Coefficient
$\Delta\beta_1$ per year	-0.0041 ***	-0.0043 ***
$\Delta\beta_2$ per year	-0.0035 ***	-0.0038 ***
$\Delta\beta_3$ per year	0.0019	0.0017
$\Delta\beta_4$ per year	0.0087 *	0.0090 *

Note: Table 6.9 reports the results for a generalized model that includes the trend as common components of the coefficients $\beta_1, \beta_2, \beta_3$ and β_4 across time. The re-estimation of the coefficients given previously in Table 6.1 is not repeated: the similarity in the yearly interactions before and after the inclusion of domicile effects indicates the robustness of the model after introducing a time trend. ***, **, * significant at the 1%, 5% and 10% level of significance.

Figure 6.7

The Change in Timeliness and Conservatism



Note: The figure plots linear predictors for the pooled sample of European firms. The trend effects are reported in Table 6.9 as annual changes, and the fitted values that are plotted above are estimated for 1987 and 1999. The figure shows the increase in accounting conservatism over the period, which is reflected in the greater asymmetry in the response to positive and negative news. The figure also shows the impact of the falling intercept at zero, which would reflect a growing persistance in earnings shocks.

6.5 The New Institutional Framework

This Section describes the results of an investigation regarding the influence of investor protection rules and the quality of corporate governance on variations in corporate earnings timeliness and conservatism in various European countries.

The results reported were obtained using the methodological framework developed and explained in Section 5.3 of Chapter five.

This alternative methodological approach adopts the set of institutional variables constructed and described in detail in Section 3.4 of Chapter 3.

The Role of Investor Protection

Table 6.10 sets out the results from Basu's reverse regression of earnings on returns and from regression (5.4). The slope coefficients in Basu's model, β_5 (0.025) and β_6 (0.132) are positive and statistically significant at the 1% level. The incremental responsiveness of earnings to 'bad news' relative to 'good news' as measured by the differential slope coefficient β_6 is in compliance with the prediction that 'bad news' is reflected in earnings on a more timely basis. The timeliness of 'bad news' is 6.28 ((0.025 + 0.132)/0.025) times greater than that of 'good news'.

The intercept coefficient is positive and significant, indicating the delayed recognition of previous period 'good news' in current period earnings.

In models 1 and 1a[13], evidence of investor protection effects on cross-country differences in timeliness and asymmetric timeliness emerges. The coefficients on β_5 ('good news' coefficient) are positive and statistically significant at the 1% level in both models, whereas the coefficients on β_7 ('good news' combined with investor protection)

[13] The only difference between Models 1 and 1a is that the latter includes the interaction term for the 'bad news' dummy and the investor protection variable. However, the results in Model 1a remain the same.

are negative and significant at the 5% level. These results suggest that firms domiciled in countries with relatively higher scores of investor protection have earnings that reflect contemporaneous 'good news' more slowly, being in line with a more conservative approach of income recognition, as was predicted. The differential slope coefficients for 'bad news', β_6, are positive and significant at 1% , suggesting an incremental sensitivity of earnings to 'bad news' relative to 'good news' overall. However, β_8 ('bad news' combined with investor protection) is negative and not significantly different from 0, providing no support for our prediction of a greater asymmetric timeliness of 'bad news' in countries with better investor protection.

Table 6.10

Timeliness, Conservatism and Investor Protection

	Obs.	β_1		β_2	β_3	β_4	β_5		β_6		β_7		β_8	Adj. R^2(%)
	3689													
Basu's Model		0.081	***	0.002			0.025	***	0.132	***				6.1
Model 1		0.091	***	0.001	-0.001		0.046	***	0.167	***	-0.003	**	-0.005	6.4
Model 1a		0.088	***	0.016	-0.001	-0.002	0.049	***	0.198	***	-0.004	**	-0.010	6.4

The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 D + \beta_3 INPR_j + \beta_4 INPR_j\ D + \beta_5 R_{i,t} + \beta_6 R_{i,t}\ D + \beta_7 R_{i,t} \cdot INPR_j + \beta_8 R_{i,t}\ INPR_j\ D + \varepsilon_{i,t}$
where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise and INPR is the investor protection score for firm's domicile country j.

*** ,**,* Significant at 1%, 5% and 10% level of significance.

The Role of Corporate Governance

Results from the regression incorporating the influence of corporate governance on differences in timeliness and accounting conservatism (Model 2) for the sample of countries are set out in Table 6.11. The first row reports the results from Basu's regression. The results suggest that overall there is a delayed recognition of previous period 'good news' (positive and significant intercept coefficient, β_1) in current earnings, timely recognition of contemporaneous 'good news' (positive and significant β_5) and asymmetric timeliness of 'bad news' (positive and significant differential slope coefficient β_6). In Models 2 and 2a[14], I consider these coefficients in concert with the variable measuring the quality of corporate governance across European countries. As a result, the explanatory power the a model increases from 5.9% to 6.1%. In both models (2 and 2a), the 'good news' slope coefficient, β_5 is positive (0.041 and 0.043 respectively) and significant at the 1% level. After being combined with the corporate governance variable, it becomes negative (β_7 = -0.006 in both models) and significant at 10%. These results suggest that firms from countries with better-quality corporate governance seem to delay the release of 'good news' in their financial reports. The coefficient that captures the incremental timeliness of 'bad news' - β6 is positive but statistically insignificant. However, the β_8 coefficient which reflects the combined effect of 'bad news' timeliness and the quality of corporate governance is positive and statistically significant at 10% in both models (0.020 and 0.016, respectively). These results provide evidence for the hypothesis that firms domiciled in countries with better corporate governance tend to be more conservative, which is reflected in the greater sensitivity of their earnings to 'bad news'.

[14] In addition to Model 2, Model 2a includes the interaction term between the 'bad news' dummy and the corporate governance variable.

Table 6.11

Timeliness, Conservatism and Corporate Governance

	Obs	β_1		β_2	β_3		β_4	β_5		β_6		β_7		β_8		Adj. R^2(%)
	3338															
Basu's Model		0.081	***	-0.001				0.020	***	0.127	***					5.9
Model 2		0.058	***	-0.001	0.006	***		0.041	***	0.054		-0.006	*	0.020	*	6.1
Model 2a		0.056	***	0.005	0.007	***	-0.002	0.043	***	0.066		-0.006	*	0.016	*	6.1

The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 D + \beta_3 CG_j + \beta_4 CG_j\ D + \beta_5 R_{i,t} + \beta_6 R_{i,t}\ D + \beta_7 R_{i,t}\ CG_j + \beta_8 R_{i,t}\ CG_j\ D + \varepsilon_{i,t}$
where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise and CG is the corporate governance score for firm's domicile country j.

*** ,**,* Significant at 1%, 5% and 10% level of significance.

Legal Enforcement, Investor Protection and Corporate Governance

This sub-section presents an analysis that captures the interaction of legal enforcement with investor protection and corporate governance, respectively.

The underlying assumption is that laws and the quality of their enforcement are essential for the proper functioning of corporate governance and investor protection. Hence, in the following analysis I continue to examine the relationship between institutional variables and accounting conservatism by adding a new dimension: the effectiveness of a country's legal enforcement. The aim is to determine whether the impact of investor protection or the quality of corporate governance on earnings conservatism changes relative to the effectiveness of legal enforcement. The enforcement variable is taken from La Porta et al. (1997 and 1998) and is measured as the mean score of three legal variables: (1) the efficiency of the judicial system, (2) an assessment of the rule of law, and (3) a corruption index.

First, groups of countries with similar levels of investor protection and legal enforcement are created. The sample is subdivided as follows: countries ranked above (below) the median score of the relevant institutional variable (investor protection and legal enforcement) belong to the high (low) group. Then, as Figure 6.8 illustrates, the 'high' and 'low' countries for each institutional variable are compared in order to end up with four distinct country groups. Group 1 is characterized by both low enforcement and investor protection, Group 2 by high investor protection but low enforcement, Group 3 by both high investor protection and enforcement and Group 4 by low investor protection and high enforcement. Table 6.12 reports the means of investor protection and enforcement variables for each group (Panel A) and the group membership of sample countries (Panel B).

Each group undergoes simple reverse-regression based on the original Basu model. The results are reported in Figure 6.8. First, timeliness and conservatism are compared for the two groups with a low level of legal enforcement (Group 1 and Group

2)[15]. The 'good news' coefficient for Group 2 is 0.020 and significant at the 1% level, being higher than the 'good news' coefficient for Group 1 (0.018 and significant at the 10% level). On the contrary, the 'bad news' coefficient for Group 2 is lower (0.103 and significant at the 1% level) than that for Group 1 (0.207 and significant at the 1% level).

These results indicate that there is a greater timeliness of 'good news' and lower accounting conservatism when investor protection is at a relatively higher level, in contrast with my hypothesis. However, the results also indicate that in an environment with inefficient enforcement of legal rules and laws, investor protection does not have a predictable impact on timeliness and accounting conservatism. This conclusion is supported by the following findings. A comparison of the 'good news' and 'bad news' coefficients for the two groups with a high level of legal enforcement (Group 3 and Group 4)[16], shows that the timeliness of 'good news' is lower for Group 3 (0.014 and not significant) than for Group 4 (0.041 and significant at 1% level), whereas the 'bad news' coefficient is higher for Group 3 (0.172 and significant at 1%) than for Group 4 (0.160 and significant at 10%). This suggests that countries with a higher level of investor protection are more conservative in incorporating news in earnings, as I had predicted. Furthermore, the overall results suggest that the differences in timeliness and earnings conservatism among countries can be explained by differences in the levels of investor protection only when legal enforcement is high.

Moreover, the comparison of 'good news' and 'bad news' coefficients for Group 2 and Group 3 (which both display high levels of investor protection)[17] shows that when the level of legal of enforcement is higher (Group 3), the 'good news' coefficient is lower (0.014 and not significantly different from zero for Group 3 as compared to 0.020 and significant at 1% for Group 2). The level of earnings conservatism also increases directly with the level of legal enforcement, as the 'bad news' coefficient is higher for Group 3 (0.172 and significant at the 1% level) than for Group 2 (0.103 and significant at 1%), which has a lower legal enforcement index.

[15] F-statistics: Group 1 vs Group 2, $F = 1.940$, $p<0.100$.
[16] F-statistics: Group 3 vs Group 4, $F = 5.681$, $p<0.010$.
[17] F-statistics: Group 2 vs Group 3, $F = 7.440$, $p<0.010$.

This indicates that when the level of investor protection is high, differences in the quality of legal enforcement matter in explaining the variation in levels of earnings timeliness and conservatism among countries.

Figure 6.9 graphically illustrates the differences in timeliness and conservatism of accounting earnings for firms domiciled in two distinctive groups of countries with a relatively high degree of legal enforcement. What distinguishes them is their level of investor protection, so that Finnish, Dutch and Norwegian firms are grouped together, being domiciled in countries with relatively good protection of minority shareholders, whereas Danish, Swedish and Swiss firms form another group of companies from countries with lower indices of investor protection. From Figure 6.9 it is rather obvious that the slope that captures the responsiveness of earnings to positive market returns (the 'good news' slope) is much flatter for Finish, Dutch and Norwegian firms as compared to that for Danish, Swedish and Swiss companies.

This finding is in line with my prediction that firms from countries with strong rules for the protection of minority shareholders, providing that the legal system enforcing those rules is efficient, tend to be more cautious and conservative in recognizing concurrent 'good news' from financial markets in contemporaneous accounting earnings.

Figure 6.10 shows the variation in earnings responsiveness to 'bad' and 'good' news from markets among countries that are characterized by high levels of shareholder protection but have varying quality of legal enforcement. French, Irish, Spanish and UK companies are domiciled in countries with a below-sample-average enforcement index and they exhibit a 'bad news' slope that is much flatter than that for Finish, Dutch and Norwegian firms.

This result supports the prediction that even when there is a strong set of rules to protect the rights of minority shareholders, the quality and efficiency of their legal enforcement matters and is determinant for the conservative nature of firms' accounting earnings.

Next, 3 groups of countries with similar quality of corporate governance and level of legal enforcement are created. Group A displays low-quality corporate governance and a low level of legal enforcement, whereas Groups B and C display high-quality corporate governance. The difference between Groups B and C is their level of legal enforcement. A country is considered to have high-(low)quality corporate governance if its corporate governance score is above (below) the sample median score. Table 6.15 reports the means of corporate governance and enforcement variables by groups (Panel A) and the group membership of sample countries (Panel B).

The results of the simple reverse-regression are reported in Figure 6.11. The 'good news' coefficient for Group B is lower (0.014 and significant at the 1% level) than that for Group A (0.039 and significant at 1%) and the differential 'bad news' coefficient is lower for Group B (0.118 and significant at 1%) than for Group A (0.145 and significant at 1%)[18].

These results indicate that when the level of legal enforcement is low (as it is for both Group A and B), a relatively higher level of corporate governance (as for the countries from Group B), is associated with relatively lower timeliness of contemporaneous 'good news', as predicted. On the contrary, there is no evidence that the asymmetric timeliness of 'bad news' increases with higher country scores for corporate governance quality, since the "bad news' incremental slope coefficient is higher for Group A (0.145 and significant at the 1% level) which displays a lower corporate governance score than the incremental slope coefficient for Group B (0.118 and significant at the 1% level) which has an above-sample-median corporate governance score.

On the other hand, Group C which includes countries with higher-quality corporate governance and efficient legal enforcement, shows greater sensitivity in earnings to 'bad news' (the 'bad news' incremental slope coefficient is 0.182 and significant at the 1% level) as well as delayed recognition of contemporaneous 'good news' (the 'good news' coefficient is not significantly different from zero).

[18] F-statistics: Group A vs Group B, $F = 6.769$, $p<0.010$.

Figure 6.13 graphically represents the results for two extreme cases. It compares the "good" and "bad" news slopes for the Group A countries that scored low for both corporate governance quality and legal system efficiency (Belgium and Spain) and the Group C countries with high-quality corporate governance and effective legal enforcement (Denmark, Finland, the Netherlands, Norway and Sweden)[19]. Firms domiciled in Group C countries have reason to delay the recognition of current "good" news, as the intercept is greater than that for the firms from Group A. Moreover, the responsiveness of current earnings to current "good news" from the market is slower for Group C than it is for Group A as the "good news" slope coefficient is much flatter for Group C as compared to Group A. The incremental sensitivity of contemporaneous earnings to current "bad news" exists for both groups of countries but is higher for Group C, as its differential "bad news" slope is steeper than that of Group A.

Figure 6.14 graphically displays the variation in earnings sensitivity to "good" and "bad" news from the market for two groups of countries with similar scores for corporate governance measures but different levels of efficiency in their legal enforcement systems. Group C (Denmark, Finland, the Netherlands, Norway and Sweden) scores high on the enforcement index whereas Group B (France, Germany, Italy and the UK) scores low. The information from the graph indicates that those firms domiciled in countries with a higher degree of legal enforcement (Group C) exhibit greater earnings conservatism. As compared to Group B, Group C[20] firms have a higher intercept which implies a greater tendency to delay recognition of current 'good news". They also display a flatter "good news" slope, indicating less current-earnings sensitivity to current "good news" and finally, an evidently steeper differential "bad news" slope, proving greater incremental sensitivity of current earnings to contemporaneous "bad news" from the market.

Finally, Figure 6.12 depicts slopes for all three groups of countries together and shows that indeed, firms domiciled in countries with both high-quality corporate governance systems and legal enforcement have earnings that are more conservative, as

[19] F-statistics: Group A vs Group C, $F = 3.011$, $p<0.050$.
[20] F-statistics: Group B vs Group C, $F = 22.464$, $p<0.010$.

seen by their greater intercept, flatter "good news" slope and steeper differential "bad news" slope.

Overall, these results support the hypothesis that better corporate governance mechanisms accompanied by efficient legal systems are associated with greater accounting conservatism as measured by delayed recognition of concurrent "good news" in current earnings and by a greater current-earnings tendency to immediately capture "bad news" from the market.

Moreover, the results are generally in line with my prediction that cross-country differences in accounting conservatism can be explained by differences in the quality of corporate governance and legal systems.

Figure 6.8

Timeliness and Conservatism
Country Groups Based on Investor Protection and Legal Enforcement Levels

Enforcement		Investor Protection: Low		Investor Protection: High	
		Group 1		**Group 2**	
Low	Good News	0.018	(0.033)	Good News	0.020 (0.000)
	Bad News	0.207	(0.000)	Bad News	0.103 (0.000)
		Group 4		**Group 3**	
High	Good News	0.041	(0.007)	Good News	0.014 (0.110)
	Bad News	0.160	(0.081)	Bad News	0.172 (0.000)

The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + e_{i,t}$ where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, and D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise. The 'Good News' relates to slope coefficient β_2 from (5.2) that captures the responsiveness of earnings to contemporaneous 'good news' from the market. The 'Bad News' relates to the differential slope coefficient β_4 from (5.2) that captures the incremental sensitivity of earnings in recognizing 'bad news' from the market. The p-values are in parentheses.

Table 6.12

Investor Protection and Legal Enforcement
Country Groups

Panel A: Variable Mean Values	**Group**	**1**	**2**	**3**	**4**
Investor Protection		3.333	8.000	6.667	3.333
Enforcement		8.533	8.350	10.000	10.000
Panel B: Countries		Belgium	France	Finland	Denmark
		Germany	Ireland	Netherlands	Sweden
		Italy	Spain	Norway	Switzerland
			UK		

Note: Panel A reports the means of investor protection and enforcement variables by group. Panel B reports the group membership for 13 sample countries.

Figure 6.9

Timeliness and Conservatism
Countries with High Degree of Enforcement

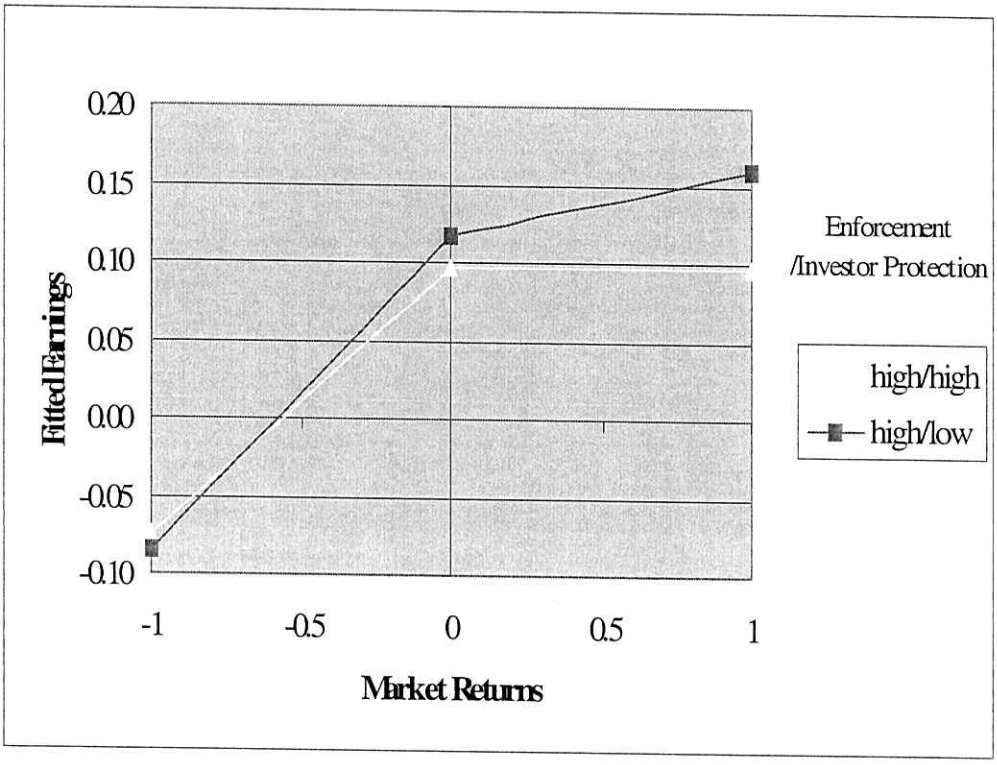


Table 6.13

Countries with High Degree of Regulatory Enforcement

	Enforcement/Investor protection	
Countries	**high/high**	**high/low**
	Finland	Denmark
	Netherlands	Sweden
	Norway	Switzerland

Figure 6.10

Timeliness and Conservatism
Countries with Strong Investor Protection

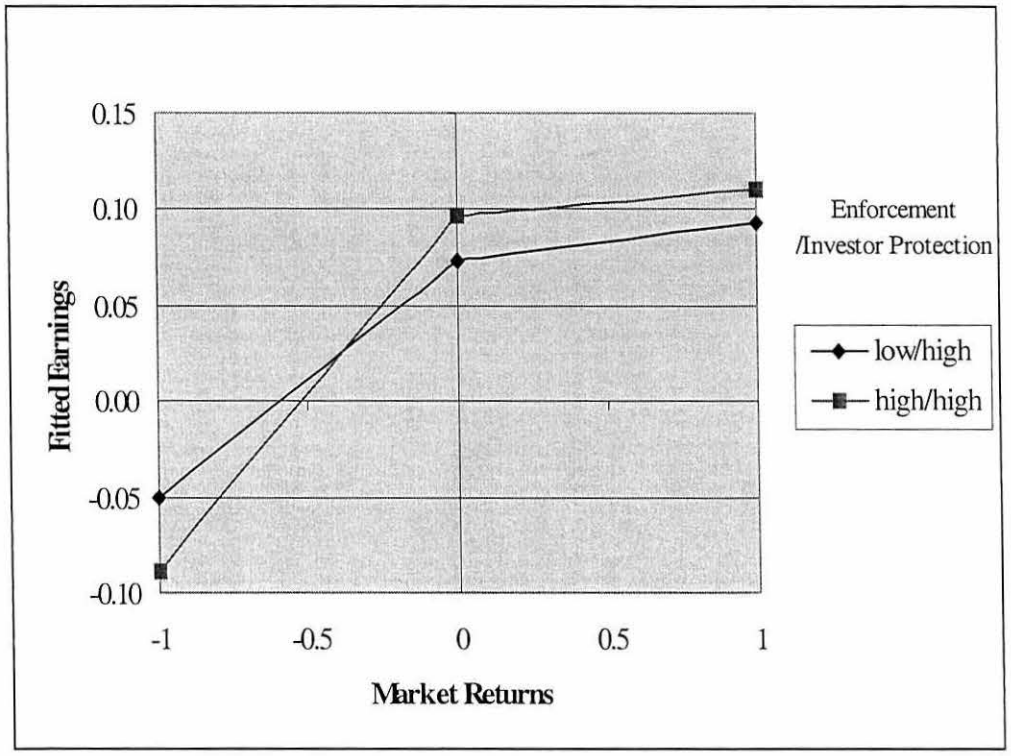


Table 6.14

Countries with Strong Investor Protection

	Enforcement/Investor protection	
Countries	**low/high**	**high/high**
	France	Finland
	Ireland	Netherlands
	Spain	Norway
	UK	

Figure 6.11

Timeliness and Conservatism
Country Groups Based on Corporate Governance and Legal Enforcement Levels

		Corporate Governance: Low		Corporate Governance: High	
Enforcement: Low		Group A		Group B	
	Good News	0.039	(0.000)	0.014	(0.002)
	Bad News	0.145	(0.001)	0.118	(0.000)
Enforcement: High		Group C			
	Good News	0.010	(0.305)		
	Bad News	0.182	(0.000)		

The model estimated is as follows: $EY_{i,t} = \beta_1 + \beta_2 R_{i,t} + \beta_3 D + \beta_4 R_{i,t} D + e_{i,t}$, where $EY_{i,t}$ is the earnings yield for firm i at time t, $R_{i,t}$ is the share price return for firm i at time t, and D is a dummy variable that takes the value of 1 when $R_{i,t}$ is negative and the value of 0 otherwise. The 'Good News' relates to slope coefficient β_2 from (5.2) that captures the responsiveness of earnings to contemporaneous 'good news' from the market. The 'Bad News' relates to the differential slope coefficient β_4 from (5.2) that captures the incremental sensitivity of earnings in recognizing 'bad news' from the market. The p-values are in parentheses.

Table 6.15

Corporate Governance and Legal Enforcement Country Groups

Panel A: Variable Mean Values	**Group**	**A**	**B**	**C**
Corporate Governance		1.500	3.500	5.000
Enforcement		8.250	8.525	10.000
Panel B: Countries		Spain	France	Denmark
		Belgium	Germany	Finland
			Italy	Netherlands
			UK	Norway
				Sweden

Note: Panel A reports the means of corporate governance and enforcement variables by group. Panel B reports the group membership for 13 sample countries.

Figure 6.12

Timeliness and Conservatism, Corporate Governance and Legal Enforcement

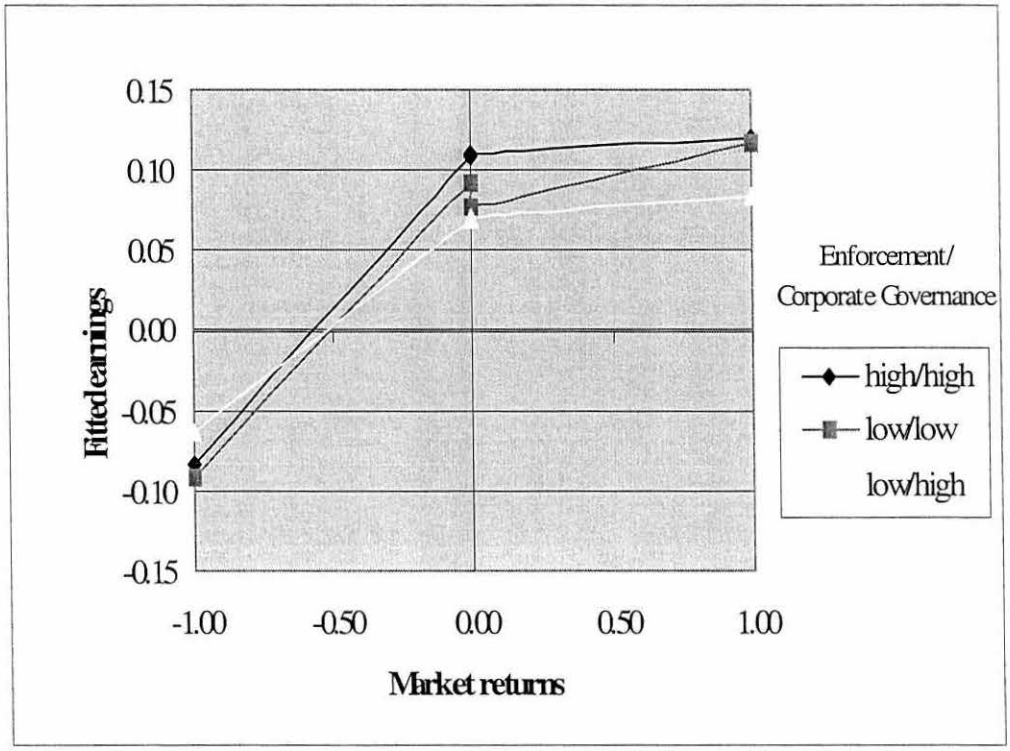


Figure 6.13

Timeliness and Conservatism, Corporate Governance and Legal Enforcement
Extreme Cases

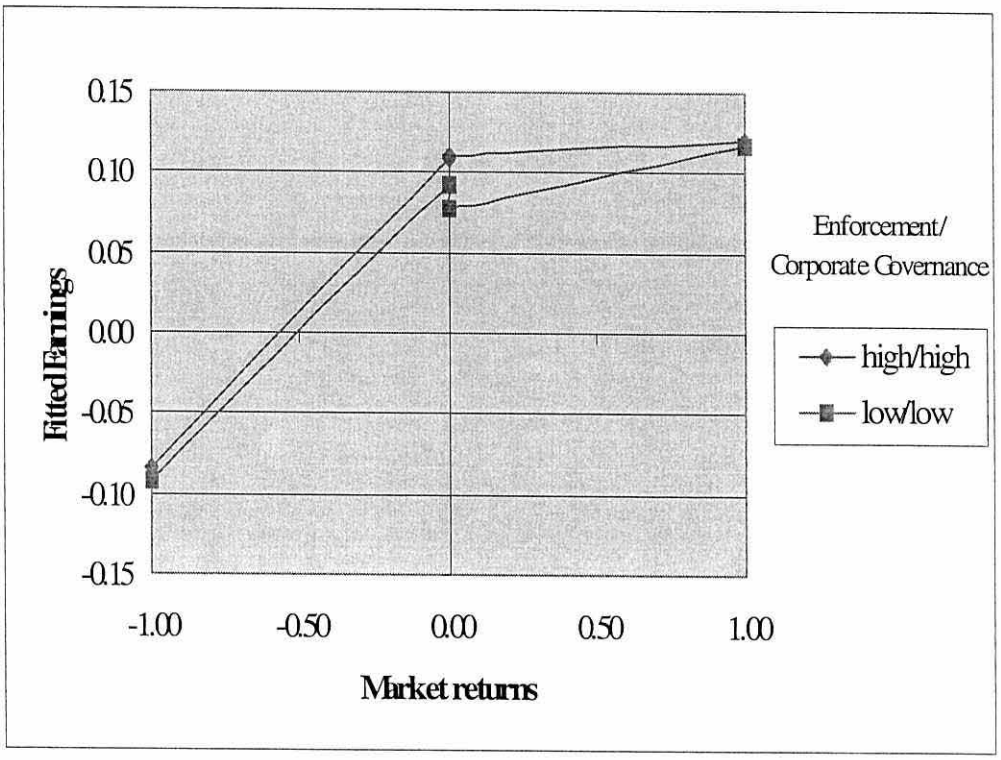


Table 6.16

Corporate Governance and Legal Enforcement
Countries from Extreme Groups

	Enforcement/Corporate Governance	
	low/low	**high/high**
Countries	Spain	Denmark
	Belgium	Finland
		Netherlands
		Norway
		Sweden

Figure 6.14

Timeliness and Conservatism
Countries with High Quality of Corporate Governance

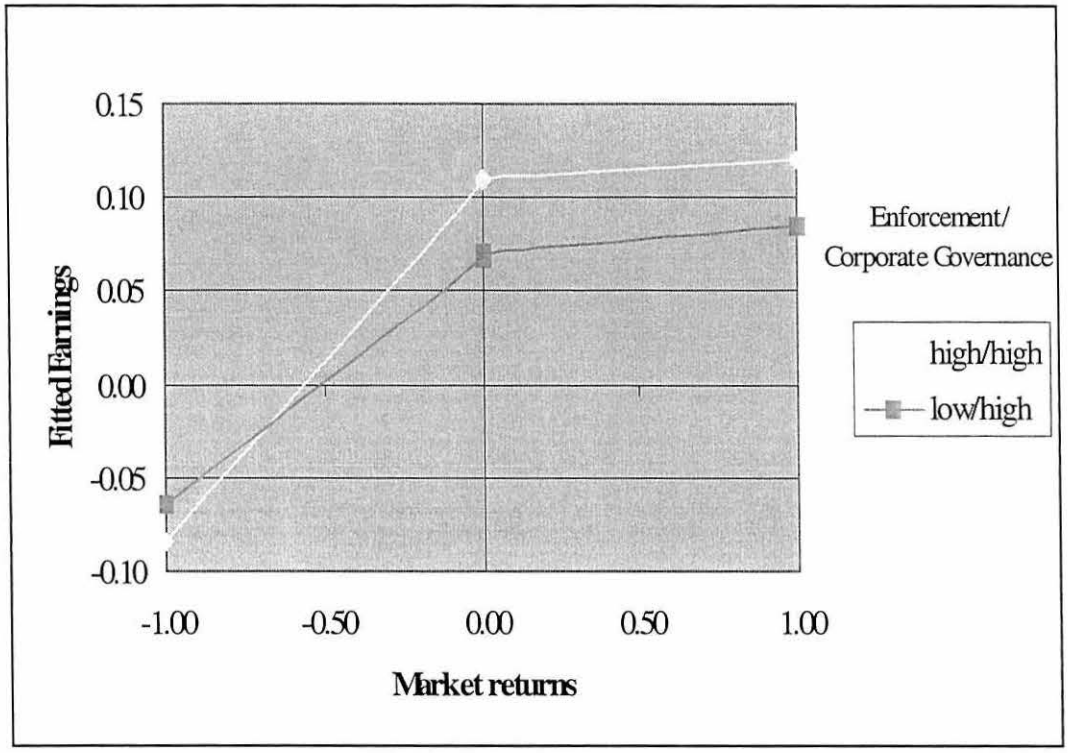


Table 6.17

Countries with High Quality of Corporate Governance

	Enforcement/Corporate Governance	
	high/high	**low/high**
Countries	Denmark	France
	Finland	Germany
	Netherlands	Italy
	Norway	UK
	Sweden	

6.6 Conclusion

The purpose of the empirical study presented in this chapter is to analyse the asymmetric timeliness of earnings in different countries in Europe, taking into consideration the impact of possible differential institutional aspects that might influence the relationship between earnings and returns. At the same time, it is suggested that the ongoing process of integration in European capital markets and accounting and institutional harmonisation are responsible for similarities and a certain convergence in earnings timeliness and conservatism.

The relationship between accounting earnings and market returns that proxy for 'good' and 'bad' market news is analysed for the period 1987 – 1999, using a sample of internationally-listed European firms. Moreover, firms that are listed only domestically are also considered for comparative purposes. Accounting earnings conservatism is first examined using Basu's (1997) research design focusing on the values of the differential slope coefficient obtained through regression that reflect the incremental sensitivity of contemporaneous earnings to 'bad news' and highlight the regression intercept that captures the delayed recognition of 'good news' in earnings.

In all cases (with the exception of France) our results support the initial hypothesis that 'bad news' is recognised in earnings on a more timely basis than 'good news' within the EU. Furthermore, the only non-EU domiciled interlisted firms in the analysis (Norwegian and Swiss) do not seem to display a conservative expression of earnings. Asymmetric timeliness as measured by the tendency to delay the recognition of 'good news' is observed for all firms domiciled in all countries.

More importantly, there is evidence of similarity in timeliness and conservatism across different regulatory environments, and this similarity is more pronounced for interlisted firms than for firms that are only domestically listed. This similarity is particularly obvious when the interlisted firms examined are sampled from major stock exchanges on which they raise their equity. These stock exchanges represent capital

markets at a greater level of integration, thus leading to even more harmonized findings for these European interlisted firms.

When analysing the influence of regulatory environment, the evidence obtained by employing a modified version of Basu's institutional factor (1997) model suggests that the degree of regulatory enforcement, the extent of financial disclosure and the importance of equity markets all noticeably affect earnings conservatism.

While theory (e.g. Ball et al, 2000) suggests that the legal framework of the domicile country plays a key role in determining the level of the asymmetric timeliness of earnings, it is argued in this empirical study that a greater and a more complex set of contextual factors affects the differences and similarities in earnings conservatism amongst countries. In order to empirically verify this argument, the hypothesis that an individual firm's earnings are sensitive to institutional factors for the various regulatory regimes in which the firm operates and lists its shares is tested. The results indicate that in eight out of thirteen countries, the interactions between the institutional factors affect the varying degree of earnings timeliness and conservatism.

Furthermore, the empirical findings show that there is evidence of growing conservatism over time in European countries both in terms of a tendency to delay the recognition of 'good news' in earnings and in the more timely capturing of 'bad news' on the market.

Finally, when conservatism measures are considered together with corporate governance and investor protection indexes constructed using an alternative institutional framework, evidence confirms the hypothesis that the varying degree in earnings conservatism in Europe is linked to differences in the institutional environments of the countries involved.

7. Summary and Conclusion

Summary

This thesis investigates the properties of accounting earnings, notably the asymmetric timeliness of income recognition. The analysis shows that, although accounting conservatism varies internationally, this variation is explained in part by differences in institutional contexts.

In the past decade these differences in institutional environments have come to the centre of attention during the ongoing attempt to harmonise accounting standards, reconcile corporate governance practices and create an integrated capital market within Europe. One of the objectives of European accounting and institutional harmonisation is to launch an integrated European financial market able to compete credibly with the US and other financial markets. This market integration and institutional harmonisation is also responsible for convergence in the properties of accounting earnings. This should be especially pronounced therefore for firms that are exposed to regulatory environments beyond their country of domicile. This thesis focuses on such companies that operate across integrated markets and list their shares on European stock exchanges, and shows that international market exposure is associated with accounting conservatism.

The notion of asymmetric timeliness of earnings or earnings conservatism implies that accounting income recognizes economic losses more quickly than economic gains. The work by Basu (1997), who defined accounting earnings conservatism as the difference in sensitivity that contemporaneous earnings display with regard to negative ("bad news") and positive ("good news") share price changes, has triggered further international comparative research. Pope & Walker (1999) assess differences in conservatism between the US and the UK, two regimes with separate sets of accounting standards, and find that the accounting regime is more conservative in the US than in the UK before prior to the inclusion of extraordinary items and less conservative afterwards. Ball, Kothari & Robin (2000) compare the level of earnings conservatism for firms in a

wider range of countries and argue that firms domiciled in common law jurisdictions exhibit greater asymmetric timeliness than those governed by code law. However, Giner & Rees (2001) show how international differences in the asymmetric contemporaneous recognition between countries with very different legal traditions are becoming less marked. At the same time, they present new evidence that substantial differences remain, specifically with respect to the persistence of profits and the more transient nature of losses.

In this thesis it is argued that the differences in the asymmetric timeliness of earnings for firms in European countries can best be explained by examining the variety of institutional environments in which a single firm operates and which extends beyond the one-dimensional division of regulatory regimes into civil law versus common law countries, shareholder versus stakeholder corporate governance systems or stock-exchange-based versus bank-based financial markets.

In this respect, this study extensively analyses the features of regulatory frameworks with special attention to the legal background and enforcement of shareholder and creditor rights, the concentration of ownership and the importance of financial markets (Section 3.2). The role of corporate governance is also emphasised, both theoretically (Section 3.3) and with respect to corporate governance practices by companies in Europe (Section 3.4). The ultimate outcome is the construction of a new set of institutional indexes which are then evaluated empirically in the thesis.

In order to formulate a research framework capable of capturing the complexity of the international regulatory environment in which European firms operate, three important institutional factors are introduced into the model through which the asymmetric timeliness of earnings is empirically examined. These factors are (1) the importance of equity markets in which European firms raise capital, (2) the levels of financial disclosure and (3) the degree of regulatory enforcement in the jurisdictions involved. These are incorporated into the model to account for the multi-faceted institutional exposure of the firm, with interlisting taken as the mechanism through which companies are exposed to different jurisdictions (Section 5.2).

Moreover, in order to account for the complexity of the contextual influences on firms' reported earnings, the models are developed in order to incorporate the interactive relationship between institutional factors.

Findings and Conclusions

The findings of this thesis confirm the conservative nature of accounting earnings in Europe for the sample examined. Moreover, evidence of similarity in timeliness and conservatism may be discerned for different regulatory environments. Furthermore, results show that there is a trend of growing conservatism over time both measured in terms of the delayed recognition of prior-periods 'good news' and in terms of the incremental sensitivity of earnings to current-period 'bad news'.

The analysis of institutional environments in European countries indicates that despite the ongoing process of institutional harmonization, national differences still exist. Understanding these differences in terms of the institutional factors and the interactions underlying the growing demand for accounting earnings recognition across different markets can partly explain the varying degree of earnings sensitivity to market news.

Furthermore, a major contribution of this study is that unlike most existing studies regarding institutional effects at the domicile level, it focuses on the level of individual firms, showing that institutional factors are not likely to produce the same effects on all firms in a market and that these factors are likely to have synergetic effects as well.

Timeliness and Conservatism

In terms of earnings conservatism, the results indicate that 'bad news' is reported on a more timely basis than 'good news' in all countries except France, Norway and Switzerland. This result also confirms the hypothesis that 'good news' tends to be reflected in earnings with some delay, i.e. in the years following its market recognition, for all countries except the UK.

Similar inferences may be made concerning the homogeneous results attained for most integrated equity markets in Europe and the New York Stock Exchange. Indeed, the lack of timeliness in European financial reporting is manifested primarily in a tendency to delay the recognition of 'good news', as it is the case for firms listed in all major stock exchanges in the sample. Moreover, conservative accounting in terms of the incremental sensitivity of earnings to 'bad news' was generally witnessed for European markets, including firms that are cross-listed in New York but excluding those listed on Zurich Stock Exchange.

The results concerning the timeliness and conservatism of earnings in Europe are robust after controlling for composite measures such as the importance of equity markets, the extent of financial disclosure and the degree to which regulations are enforced. In general, empirical evidence shows that the extent of financial disclosure and the degree of regulatory enforcement have a similar effect on earnings that is opposite to the relevance of equity markets. It may ultimately be argued that in integrated markets, firms that are internationally listed are indeed sensitive to the requirements of the countries where they cross-list.

Investor Protection, Corporate Governance and Enforcement

The results of the study indicate the national differences in the quality of corporate governance practices and investor protection rules in thirteen European countries.

The study draws on the recent advances in the corporate governance and finance literature concerning the influences of institutional mechanisms on capital markets and accounting information. A detailed analysis of institutional frameworks in Europe ultimately results in the construction of a new set of contextual measures

An important contribution of the study lies in the findings that show how national differences in accounting earnings timeliness and conservatism are linked to differences in corporate governance systems and levels of investor protection in respective regulatory

environments. Specifically, firms operating in countries with better-quality corporate governance and stronger investor protection exhibit greater earnings conservatism.

Moreover, the results document how stronger legal enforcement mechanisms are likely to magnify the effect of corporate governance and/or investor protection standards, with efficient legal systems being essential for their proper functioning.

Overall, the results contribute to a new interpretation of the existing empirical literature, particularly with regard to modelling the harmonisation of complex institutional arrangements in increasingly-integrated financial markets.

References

Alexander, G.J., C.S. Eun & S. Janakiramanan (1988), 'International Listings and Stock Returns: Some Empirical Evidence', *Journal of Financial and Quantitative Analysis*, Vol. 23, No. 2, pp. 135-151.

Ali, A. & L. Hwang (2000), 'Country-Specific Factors Related to Financial Reporting and the Value Relevance of Accounting Data', *Journal of Accounting Research*, Vol. 38, No. 1, pp. 1-23.

Baghat, S. & B. Black. (2001), 'The Non-Correlation Between Board Independence and Long Term Firm Performance', *Journal of Corporation Law*, Vol. 27, pp. 231-274.

Baker, H.K. (1992), 'Why US Companies list on the London, Frankfurt and Tokyo Stock Exchages', *Journal of International Securities Markets*, Vol. 6, pp. 219-227.

Ball, R., S.P. Kothari & A. Robin (2000), 'The Effect of International Institutional Factors on Properties of Accounting Earnings', *Journal of Accounting and Economics,* Vol. 29, No. 1, pp. 1-51.

Basu, S. (1997), 'The Conservatism Principle and the Asymmetric Timeliness of Earnings', *Journal of Accounting and Economics,* Vol. 24, No. 1, pp. 3-37.

Basu, S., L.S. Hwang & C.L.Jan (2001), 'Differences in Conservatism between Big Eight and non-Big Eight Auditors', *New York Stern University Working paper* .

Beaver, W.H., R. A. Lambert & D. Morse (1980), 'The Information Content of Security Prices', *Journal of Accounting and Economics,* Vol. 2, pp. 3-28.

Beaver, W.H., R.A. Lambert & S. G. Ryan (1987), 'The Information Content of Security Prices: A Second Look', *Journal of Accounting and Economics,* Vol. 9, pp. 139-157.

Beeks, W., P.F. Pope & S. Young (2002), 'The Link Between Earnings Conservatism and Board Composition. Evidence from the UK', *Lancaster University Working Paper.*

References

Collins, D.W. & S.P. Kothari (1989), 'An Analysis of Intertemporal and Cross-Sectional Determinants of Earnings Response Coefficients', *Journal of Accounting and Economics,* Vol. 11, pp. 143-181.

Collins, D.W., S.P. Kothari, J. Shanken & R.G. Sloan (1994), 'Lack of Timeliness and Noise as Explanations for the Low Contemporaneous Return-Earnings Association', *Journal of Accounting and Economics*, Vol. 18, pp. 289-324.

Cotter, J., A. Shivdasani & M. Zenner (1997), 'Do Independent Directors Enhance Target Shareholder Wealth during Tender Offers?', *Journal of Financial Economics*, Vol. 43, pp. 195-218.

European Corporate Governance Institute: Corporate Governance Codes, Principles and Recommendations, http://www.ecgi.de/codes/.

Giner, B. & W.P. Rees (2001), 'On the Asymmetric Recognition of Good and Bad News in France, Germany and the United Kingdom', *Journal of Business Finance and Accounting*, Vol. 28, No. 9/10, pp. 1285-1332.

Grambovas, A.C. & B. Giner (2001), 'Asymmetric Timeliness of Earnings and Conservatism in a Euro-Zone Context', *Working pape presented at the 2002 Conference in Copenhage.*

Heidreck & Struggles (2001), Survey, *European Corporate Governance Institute*, www.ecg.org

Hermalin, B. & M. Weisbach (2001), 'Boards of Directors as an Endogenously Determined Institution: A Survey of the economic literature, *NBER Working paper.*

Howe, J.S. & K. Kelm (1987), 'The Stock Price Impacts of Overseas Listings', Financial Management Vol. 16, pp. 51-56.

Howe, J.S. & J. Madura (1990), 'The Impact of International Listings on Risk, Implication for Capital Market Integration', *Journal of Banking and Finance,* Vol. 14, pp. 1133-1142.

Huijgen C. & M. Lubberink (2001), 'Liability Exposure Effects on Earnings Conservatism: the Case of Cross-Listed Firms', *Working paper presented at EIASM Conference on Accounting and Capital Markets in Valencia..*

Joos, P. & M. Lang (1994), 'The Effects of Accounting Diversity: Evidence from the European Union', *Journal of Accounting Research*, Vol. 32 (Supp.), pp. 141-168.

Karolyi G.A. (1998), 'Why Do Companies List Shares Abroad?: A Survey of the Evidence and Its Managerial Implications', *New York University Salomon Center*, Vol. 7, No. 1, pp.1-59.

Kothari, S.P. (1992), 'Price-Earnings Regressions in the Presence of Prices Leading Earnings: Earnings Level Versus Change Specifications and Alternative Deflators', *Journal of Accounting and Economics*, Vol. 15, pp. 173-202.

Kothari, S.P. & R.G. Sloan (1992), 'Information in Prices about Future Earnings: Implication for Earnings Response Coefficients', *Journal of Accounting and Economics*, Vol. 15, No. 2/3, pp. 143-171.

Kothari, S.P. & J.L. Zimmerman (1995), 'Price and Return Models', *Journal of Accounting and Economics* Vol. 20, pp. 155-192.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer & R. Vishny (1998), 'Law and Finance', *Journal of Political Economy*, Vol. 106, No. 6, pp. 1113-1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer & R.W. Vishny (1997), 'Legal Determinants of External Finance', *Journal of Finance*, Vol. 52, No. 3, pp. 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer & R. Vishny (2000), 'Investor Protection and Corporate Governance', *Harvard University and University of Chicago Working paper.*

Lau, S.T., J.D. Diltz & V.P. Apilado (1994), 'Valuation Effects of International Stock Exchange Listings', *Journal of Banking and Finance*, Vol. 18, pp. 743-755.

Lee, I. (1991), 'The Impact of Overseas Listings on Shareholder Wealth: The Case of the London and Toronto Stock Exchanges', *Journal of Business Finance and Accounting,* Vol. 18, No. 4, pp. 583-592.

Leuz, C., D. Nanda & P.D. Wysocki (2003), 'Earnings Management and Investor Protection: An International Comparison', *Journal of Financial Economics*, forthcoming.

Pope, P.F. & M. Walker (1999), 'International Differences in the Timeliness, Conservatism and Classification of Earnings', *Journal of Accounting Research*, Vol. 37 (Supp.), pp. 53-87.

Pope, P.F. & W.P. Rees (1992), 'International Differences in GAAP and the Pricing of Earnings', *Journal of International Financial Management and Accounting*, Autumn, pp. 190-219.

Rosenstein, S. & J. Wyatt (1990), 'Outside Directors, Board Independence, and Shareholder Wealth', *Journal of Financial Economics*, Vol. 26, pp. 175-184.

Shleifer, A. & R.W. Vishny (1997), 'A Survery of Corporate Governance', *Journal of Finance,* Vol. 52, No. 2, pp. 737-783.

Stapleton R.C. & M.G. Subrahmanyam (1977), 'Market Imperfections, Capital Market Equilibrium and Corporation Finance', *Journal of Finance*, Vol. 32, No. 2, pp. 307-319.

Torabzadeh, K.M., W.J. Bertin & T. L. Zivney (1992), 'Valuation Effects of International Listings', *Global Finance Journal*, Vol. 3, No. 2, pp. 159-170.

Wysocki, P.D., A. I. Tuna & S. Richardson (2003), 'Accounting for Taste: Board Member Preferences and Corporate Policy Choices', *Working paper presented at the 2003 EAA Conference in Seville.*

APPENDIX A

Interlistings

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
1	ALMANIJ	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
2	BEKAERT	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
3	COBEPA	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
4	COLRUYT	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
5	DEXIA GROUP	BELGIUM	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3
6	ELECTRABEL	BELGIUM	1	0	0	0	1	0	0	1	0	0	0	0	1	0	4	0	4
7	ELECTRAFINA	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
8	FORTIS B	BELGIUM	1	0	0	1	1	0	0	0	0	0	0	0	1	0	4	0	4
9	GEVAERT	BELGIUM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	4	0	4
10	GIB GROUP	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
11	KBC BANK	BELGIUM	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	3
12	PETROFINA	BELGIUM	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3
13	RECTICEL	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
14	SOLVAY	BELGIUM	1	0	0	1	1	0	0	1	0	0	0	1	1	0	6	0	6
15	TELINFO	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
16	TRACTEBEL	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
17	UCB NED	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
18	UNION MINIERE	BELGIUM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
19	BANG & OLUF.	DENMARK	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
20	CARLSBERG	DENMARK	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
21	DANISCO	DENMARK	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3	0	3
22	DEN DANSKE	DENMARK	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
23	GN GREAT NORD	DENMARK	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2	0	2
24	ISS INTL.	DENMARK	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2	0	2
25	NEUROSEARCH	DENMARK	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
26	NOVO NORDISK	DENMARK	0	1	0	0	1	0	0	0	0	0	0	0	1	0	3	1	4
27	OSTASIATISKE	DENMARK	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2
28	TOPDANMARK	DENMARK	0	1	0	0	1	0	0	0	0	0	0	1	1	0	4	1	5
29	AMER GROUP	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	1	0	3	0	3
30	BENEFON	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
31	FINNAIR	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
32	HARTWALL	FINLAND	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	2
33	HUHTAMAKI	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
34	KEMIRA	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
35	KESKO	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
36	METSA SERLA	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
37	METSO	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	3
38	NOKIA	FINLAND	0	0	1	1	1	0	0	0	0	0	1	0	1	0	5	1	6
39	OUTOKUMPU	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
40	RAISIO GROUP	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
41	SAMPO	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
42	SAUNATEC	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
43	STORA ENSO	FINLAND	0	0	1	0	1	0	0	0	0	0	1	0	1	1	5	0	5
44	TALENTUM	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2
45	TIETOENATOR	FINLAND	0	0	1	0	1	0	0	0	0	0	1	0	0	0	3	0	3
46	UPM-KYMMENE	FINLAND	0	0	1	0	1	0	0	0	0	0	0	0	1	0	3	1	4
47	ACCOR	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
48	ALCATEL	FRANCE	1	0	0	1	1	0	0	1	0	0	1	1	0	0	6	1	7
49	ALTRAN TECH.	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
50	ASSYSTEM	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
51	ATOS	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
52	AVENTIS	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	1	4
53	BIC NED	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
54	BNP PARIBAS	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
55	BULL NED	FRANCE	0	0	0	1	1	0	0	0	0	1	0	1	0	0	4	0	4
56	CANAL +	FRANCE	1	0	0	1	1	0	0	1	0	0	0	0	0	0	4	0	4
57	CAP GEMINI	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
58	CARREFOUR	FRANCE	1	0	0	1	1	0	0	1	0	1	0	0	0	0	5	0	5
59	CASINO GUICH.	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
60	CHRISTIAN DIOR	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
61	CLARINS	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
62	CLUB MED.	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	1	4
63	CPR PARIS	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
64	DANONE	FRANCE	1	0	0	1	1	0	0	0	0	0	0	1	1	0	5	1	6
65	DMC	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
66	ELF AQUITAINE	FRANCE	1	0	0	1	1	0	0	0	0	0	0	1	0	0	4	1	5
67	ESSILOR	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
68	EURO DISNEY	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	1	0	4	0	4
69	EUROTUNNEL	FRANCE	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	2
70	FRANCE TEL.	FRANCE	1	0	0	1	1	0	0	1	0	0	0	0	0	0	4	1	5
71	GENSET	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
72	GFI INDUSTRIE	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
73	GROUPE SEB	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
74	LAFARGE	FRANCE	0	0	0	1	1	0	0	0	0	1	0	0	1	0	4	1	5
75	LAGARDERE	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
76	L'AIR LIQUIDE	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
77	LEGRAND	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
78	L'OREAL	FRANCE	0	0	0	1	1	0	0	1	0	0	0	0	1	0	4	0	4
79	LVMH	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3
80	MICHELIN	FRANCE	0	0	0	1	1	0	0	1	0	0	0	0	0	0	3	0	3
81	MONTUPET	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
82	MOULINEX	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
83	NATEXIS	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
84	PECHINEY	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	1	3
85	PERNOD RICARD	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
86	PEUGEOT S.A.	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3
87	PINAULT-PRIN.	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
88	REMY COINTR.	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
89	RENAULT	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
90	RHODIA	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	1	3

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
91	SAGEM	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
92	SAINT GOBAIN	FRANCE	1	0	0	1	1	0	0	1	0	0	1	1	1	0	7	0	7
93	SANOFI-SYNT.	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	3
94	SCOR	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
95	SIDEL	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
96	SOCIETE GEN.	FRANCE	0	0	0	1	1	0	0	1	0	0	0	0	0	0	3	0	3
97	ST MICROEL.	FRANCE	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3	1	4
98	TELEVISION FR.	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
99	TOTAL FINA	FRANCE	1	0	0	1	1	0	0	0	0	0	0	0	1	0	4	1	5
100	USINOR	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
101	VALEO	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
102	ZODIAC	FRANCE	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
103	ALLIANZ	GERMANY	0	0	0	1	1	0	0	0	0	0	0	1	1	1	5	1	6
104	AXA COLONIA	GERMANY	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
105	BABCOCK	GERMANY	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
106	BASF	GERMANY	1	0	0	1	1	0	0	0	0	0	0	1	1	0	5	1	6
107	BAYER	GERMANY	1	0	0	1	1	0	1	1	0	1	1	1	1	1	10	1	11
108	BAYER. HYPO.	GERMANY	0	0	0	1	1	0	0	0	0	0	0	0	0	1	3	0	3
109	BEWAG	GERMANY	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
110	BHF BANK	GERMANY	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
111	BMW	GERMANY	0	0	0	0	1	0	0	0	0	0	0	1	0	1	3	0	3
112	DEUTSCHE BANK	GERMANY	1	0	0	1	1	0	0	1	0	0	0	1	1	1	7	0	7
113	DEUTSCHE TEL	GERMANY	1	0	0	1	1	0	0	1	0	0	0	0	0	0	4	1	5
114	DRESDNER BANK	GERMANY	1	0	0	1	1	0	0	1	0	0	0	1	0	1	6	0	6
115	FRESEN MED.	GERMANY	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
116	HOECHST	GERMANY	1	0	0	1	1	0	0	1	0	0	0	0	1	1	6	1	7
117	IWKA	GERMANY	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
118	LINDE	GERMANY	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
119	MAN	GERMANY	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
120	MANNESMANN	GERMANY	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
121	MERCK	GERMANY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	2
122	MOBILCOM	GERMANY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
123	NORD.STEINGUT	GERMANY	0	0	0	1	1	0	0	1	1	0	1	1	1	0	7	1	8
124	RWE	GERMANY	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3	0	3
125	SCHERING	GERMANY	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	1	4
126	SIEMENS	GERMANY	1	0	0	1	1	0	0	1	0	0	0	1	1	1	7	1	8
127	VOLKSWAGEN	GERMANY	1	0	0	1	1	0	1	1	0	1	0	1	1	1	9	0	9
128	WELLA	GERMANY	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	2
129	ABBEY	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
130	ALLIED IRISH	IRELAND	0	0	0	0	1	1	0	0	0	0	0	0	1	0	3	1	4
131	ANGLO IRISH	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	1	3
132	BANK OF IREL.	IRELAND	0	0	0	0	1	1	0	0	0	0	0	0	1	0	3	1	4
133	GLABIA	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
134	GREEN PROP.	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
135	GREENCORE	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
136	IFG GROUP	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
137	JAMES CREAN	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
138	KERRY GROUP	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
139	SMURFITT JEFF.	IRELAND	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	1	3
140	WATERFORD W.	IRELAND	0	0	0	0	1	1	0	0	0	0	0	0	1	0	3	0	3

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
141	ALITALIA	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
142	ALLEANZA	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
143	BANDA DI ROMA	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
144	BANCA FID.	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
145	BANCA INTESA	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
146	BENETTON	ITALY	0	0	0	0	1	0	1	0	0	1	0	0	1	0	4	1	5
147	BIPOP-CARIRE	ITALY	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3	0	3
148	BULGARI	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
149	CIRCIE. IND.	ITALY	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3	0	3
150	COMPART MONT.	ITALY	1	0	0	1	1	0	1	1	0	0	0	0	1	0	6	1	7
151	DANIELI & C.	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
152	EDISON	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
153	ENI	ITALY	0	0	0	1	1	0	1	1	0	0	0	0	0	0	4	1	5
154	FIAT	ITALY	0	0	0	1	1	0	1	0	0	0	0	0	1	0	4	1	5
155	I.N.A.	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	1	3
156	IFIL -FINANZ.	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
157	ITALCEMENTI	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
158	ITALGAS	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
159	MONDADORI	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
160	OLIVETTI	ITALY	1	0	0	1	1	0	1	1	0	0	0	1	0	0	6	0	6
161	PARMALAT	ITALY	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	0	3
162	PIRELLI	ITALY	1	0	0	1	1	0	1	1	0	0	0	1	1	0	7	0	7
163	ROLO BANCA	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2
164	SAIPEM	ITALY	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3	0	3
165	SAN PAOLO	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	1	3

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
166	SIRTI	ITALY	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3	0	3
167	STEFANEL	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	0	1	3	0	3
168	TELECOM ITAL.	ITALY	0	0	0	0	1	0	1	0	0	0	0	0	1	0	3	1	4
169	UNICREDITO	ITALY	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3	0	3
170	ABN AMRO	NETHERLANDS	1	0	0	1	1	0	0	1	0	0	0	1	1	0	6	1	7
171	AEGON	NETHERLANDS	1	0	0	1	1	0	0	1	0	0	0	1	1	0	6	1	7
172	AHOLD	NETHERLANDS	1	0	0	1	1	0	0	1	0	0	0	1	0	0	5	1	6
173	AHREND GROEP	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
174	AKZO NOBEL	NETHERLANDS	1	0	0	1	1	0	0	1	0	0	1	1	1	1	8	0	8
175	ASR VERSEKER	NETHERLANDS	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	3
176	ATHLON GROEP	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
177	BAAN COMPANY	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1	3
178	BUHRMANN	NETHERLANDS	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	3
179	DRAKA	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
180	DSM	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3	0	3
181	ELSEVIER	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	1	1	0	4	1	5
182	EVC INTERNAT.	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
183	FORTIS NL	NETHERLANDS	0	0	0	1	1	0	0	1	0	0	0	0	1	0	4	0	4
184	GETRONICS	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
185	GEVEKE	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
186	GROLSCH	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
187	HAGEMEYER	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
188	HEINEKEN	NETHERLANDS	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	3
189	HUNTER DOUGLAS	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	1	0	3	0	3
190	IHC CALAND	NETHERLANDS	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
191	INTERNATIO-MU	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
192	KLM	NETHERLANDS	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	1	4
193	KPN	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	1	0	3	1	4
194	L C I TECHN.	NETHERLANDS	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	2
195	LAURUS	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
196	NEDLLOYD	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
197	NUMICO	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
198	NUTRECO	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
199	OCE-VAN DER	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3	0	3
200	PHILIPS	NETHERLANDS	1	0	0	1	1	0	0	1	0	0	0	0	1	0	5	1	6
201	RANDSTAD	NETHERLANDS	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	3
202	ROYAL DUTCH PET	NETHERLANDS	1	0	0	1	1	0	0	1	0	0	0	1	1	0	6	1	7
203	STORK	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3	0	3
204	TULIP COMPUTE	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
205	VENDEX KBB	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
206	VNU	NETHERLANDS	1	0	0	0	1	0	0	1	0	0	0	0	0	0	3	1	4
207	WESSANEN	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	1	1	0	4	0	4
208	WOLTERS KLUWER	NETHERLANDS	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3	1	4
209	ELKEM	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	1	0	3	0	3
210	KVAERNER	NORWAY	0	0	0	0	0	0	0	0	1	0	1	0	1	0	3	1	4
211	MERKANTILDATA	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	2
212	NCL	NORWAY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	2
213	NERA	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	7	0	7
214	NORSK HYDRO	NORWAY	0	0	0	1	1	0	0	1	1	0	1	1	1	0	5	1	6
215	PTL. GEO	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	1	3

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
216	SCHIBSTED	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	2
217	SMEDVIG	NORWAY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	2
218	TANDBERG	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	2
219	TOMRA	NORWAY	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	2
220	ACCIONA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
221	ACERINOX	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
222	ACESA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
223	AGUAS BARC.	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
224	ALTADIS	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
225	AMPER	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
226	BANCO POPULAR	SPAIN	0	0	0	1	1	0	0	0	0	1	0	0	0	0	3	0	3
227	BANESTO	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
228	BBV ARGENTARI	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	1	0	3	1	4
229	CORP. FIN.	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
230	CORTEFIEL	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
231	EBRO AGRICOLA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
232	ENDESA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	1	0	3	1	4
233	GAS NATURAL	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
234	GRUPO DRAGADO	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
235	GRUPO EMPRESA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
236	IBERDROLA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
237	INDRA SISTEMA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
238	METROVACESA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
239	NH HOTELES	SPAIN	0	0	0	0	1	0	0	1	0	1	0	0	0	0	3	0	3
240	PULEVA UNION	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
241	REPSOL	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	1	0	3	1	4
242	SOL MELIA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
243	TELEFONICA	SPAIN	0	0	0	1	1	0	0	0	0	1	0	0	1	0	4	1	5
244	TELEPIZZA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
245	TUBACEX	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
246	URALITA	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
247	VALLEHERMOSO	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
248	VISCOFAN	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
249	ZARDOYA OTIS	SPAIN	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	2
250	ASSIDOMAN	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
251	ATLAS COPCO	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	1	0	3	0	3
252	DUROC	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
253	ELECTROLUX	SWEDEN	0	0	0	1	1	0	0	0	1	0	1	1	1	0	6	0	6
254	ENEA DATA	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
255	ERICSSON	SWEDEN	1	0	0	1	1	0	1	1	0	0	1	1	1	0	8	0	8
256	ESSELTE	SWEDEN	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
257	FRONTEC	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
258	GAMBRO	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
259	GETINGE	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
260	HEN.& MTZ.	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
261	LINDAB	SWEDEN	0	1	0	1	0	0	0	0	0	0	1	0	0	0	3	0	3
262	PERSTORP	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	1	0	3	0	3
263	SANDVIK	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	1	0	3	0	3
264	SCA	SWEDEN	0	0	1	0	1	0	0	0	1	0	1	0	1	0	5	0	5
265	SCANIA	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	1	3

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
266	SKANDIA	SWEDEN	0	1	0	0	1	0	0	0	1	0	1	0	1	0	5	0	5
267	SKF	SWEDEN	0	0	0	1	1	0	0	0	0	0	1	1	1	0	5	1	6
268	SWEDISH MATCH	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	1	3
269	VOLVO	SWEDEN	1	0	0	1	1	0	0	0	1	0	1	1	1	0	7	0	7
270	WM-DATA	SWEDEN	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	2
271	ADECCO	SWITZERLAND	0	0	0	1	1	0	0	0	0	0	0	1	0	0	3	1	4
272	ALLGON	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
273	ALUSUISSE	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
274	ASEA BROWN BOV.	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	0	3
275	BB BIOTECH	SWITZERLAND	0	0	0	0	1	0	1	0	0	0	0	1	0	0	3	0	3
276	CLARIANT	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
277	DISETRONIC	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
278	GEORG FISCHER	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
279	JULIUS BAER	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
280	KUDELSKI SA	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
281	LOGITECH	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
282	NESTLE	SWITZERLAND	1	0	0	1	1	0	0	1	0	0	0	1	1	0	6	0	6
283	NOVARTIS	SWITZERLAND	1	0	0	1	1	0	0	1	0	0	0	1	0	0	5	1	6
284	OZ GRUPPE	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
285	PELIKAN	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
286	ROCHE	SWITZERLAND	0	0	0	1	1	0	0	0	0	0	0	1	0	0	3	0	3
287	SERONO	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	1	3
288	SULZER	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	1	3
289	SWISSLOG GROUP	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2
290	THE SAIRGROUP	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
291	THE SWATCH	SWITZERLAND	0	0	0	1	1	0	0	0	0	0	0	1	0	0	3	0	3
292	UBS GROUP	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	1	3
293	ZURICH ALLIED	SWITZERLAND	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	0	3
294	ABBEY NAT.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
295	ALBERT FISHER	UNITED KINGDOM	1	0	0	0	1	0	0	1	0	0	0	0	1	0	4	1	5
296	ALLIED DOMECQ	UNITED KINGDOM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3	0	3
297	ASTRA ZENECA	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	1	0	0	1	0	3	1	4
298	AXIS-SHIELDS	UNITED KINGDOM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	2
299	BARCLAYS	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
300	BASS	UNITED KINGDOM	0	0	0	0	1	0	0	1	0	0	0	0	1	0	3	1	4
301	BG GROUP	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
302	BODY SHOP	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
303	BOOTS	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
304	BOXMORE	UNITED KINGDOM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	0	2
305	BP AMOCO	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	1	1	0	4	1	5
306	BRITISH AIR.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
307	BRITISH AMER.	UNITED KINGDOM	1	0	0	1	1	0	0	1	0	0	0	0	1	0	5	0	5
308	BRITISH SKY	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
309	BRITISH TEL.	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3	1	4
310	BUNZL	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
311	CABLE & WIREL.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	1	4
312	CADBURY SHW.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
313	CARLTON COMM.	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3	1	4
314	CELLTECH	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
315	COBHAM	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
316	CORDIANT	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3	1	4
317	CORUS	UNITED KINGDOM	0	0	0	1	1	0	0	1	0	0	0	0	1	0	4	0	4
318	COURTAULDS	UNITED KINGDOM	1	0	0	1	1	0	0	0	0	0	0	1	1	0	5	0	5
319	DIAGEO	UNITED KINGDOM	0	0	0	1	1	1	0	0	0	0	0	0	1	0	4	1	5
320	EMI	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3	0	3
321	ENODIS	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
322	ENT. OIL	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
323	GKN	UNITED KINGDOM	1	0	0	0	1	0	0	1	0	0	0	0	1	0	4	0	4
324	GLAXOSMITH.	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3	1	4
325	GREAT UNIV.	UNITED KINGDOM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2
326	HANSON	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	1	1	0	4	1	5
327	HAYS	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
328	HILTON	UNITED KINGDOM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3	0	3
329	HSBC	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
330	ICELAND	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
331	IMPERIAL CHEM.	UNITED KINGDOM	1	0	0	1	1	0	0	0	0	0	0	1	1	0	5	1	6
332	JJB SPORTS	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
333	LLOYDS TSB	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
334	LOGICA	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
335	MANCHESTER UN.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
336	MARCONI	UNITED KINGDOM	1	0	0	1	1	0	0	1	0	0	0	0	1	0	5	0	5
337	MARKS & SPENC.	UNITED KINGDOM	1	0	0	1	1	0	0	0	0	0	0	0	1	0	4	1	5
338	MAXWELL TECH.	UNITED KINGDOM	1	0	0	1	1	0	0	0	0	0	0	0	1	0	4	1	5
339	NYCOMED AM.	UNITED KINGDOM	0	1	0	0	1	0	0	0	1	0	0	0	1	0	4	1	5
340	PEARSON	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3

Num.	Company	Domicile	Bru.	Cop.	Hel.	Par.	Fra.	Dub.	Mil.	Ams.	Osl.	Mad.	Sto.	Zur.	Lon.	Vie.	Eur. Lis.	N.Y.	Tot. Lis.
341	PERKINS FOODS	UNITED KINGDOM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0	2
342	POWERGEN	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
343	PREMIER FARNEL	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
344	PRUDENTIAL	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
345	REED INT.	UNITED KINGDOM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	1	3
346	RENTOKIL	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	1	0	0	1	0	3	1	4
347	REUTERS	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	0	3
348	REXAM	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3	0	3
349	RIO TINTO	UNITED KINGDOM	1	0	0	1	1	0	0	1	0	0	0	1	1	0	6	1	7
350	ROLLS ROYCE	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
351	ROYAL & SUN AL.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
352	ROY. BANK OF SC.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
353	SAINSBURY	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
354	SCOTT. & NEWC.	UNITED KINGDOM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0	2
355	SCOTTISH POW.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
356	SEMA	UNITED KINGDOM	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3	0	3
357	SMITH & NEPH.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
358	SMITHKLINE BEA.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	1	3
359	STAN. CHART.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
360	TESCO	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
361	THAMES WATER	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
362	UNILEVER	UNITED KINGDOM	1	0	1	1	1	0	0	1	0	0	0	1	1	0	7	1	8
363	UNIT. BUSS.	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
364	VEGA	UNITED KINGDOM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	2
365	VODAFONE	UNITED KINGDOM	1	0	0	1	1	0	0	0	0	0	0	0	1	0	4	1	5

APPENDIX B

Empirical Studies

Asymmetric timeliness of earnings and international comparative research			
Research Study	**Topic**	**Sample and Data**	**Major Findings**
Basu (1997)	Asymmetric timeliness of earnings with respect to 'bad' and 'good news' from the market	US firms, annual returns and earnings from 1963 to 1990	Earnings are two to six times as sensitive to current 'bad' relative to 'good news'' 'Good news' are persistent and 'bad news' are transitory shocks on earnings. Increasing trend in conservatism.
Pope & Walker (1999)	Comparison of earnings conservatism before and after extraordinary items. Prior period returns added as explanatory variables	Annual returns and two measures of earnings for non financial listed US and UK firms from 1976 to 1996	Earnings before extraordinary items are more conservative for US than for UK firms Earnings after extraordinary items are more conservative for UK than for US firms
Ball et al. (2000)	Variation in timeliness and conservatism of earnings across "common" and "code" law regimes	Annual returns and earnings for Australian, Canadian, UK, US, French, German and Japanese firms from 1985 to 1995	Earnings of firms from "common' law countries are more conservative
Giner & Rees (2001)	Comparison of earnings timeliness and conservatism across three	Annual returns and earnings for French, German and UK companies from	No longer clear differences across countries in asymmetric income

	countries. Combining the impact of previous years earnings interacted with losses and current returns on current earnings	1990 to 1998	recognition despite very different legal traditions
Grambovas & Giner (2001)	Asymmetric timeliness of earnings for countries within the Euro zone and the UK	Annual returns and earnings for firms from 10 European countries between 1988 and 2000	Increased asymmetric timeliness of earnings after the implementation of European directives Greater earnings' conservatism for UK firms than for the firms from Euro zone as a whole
Joos & Lang (1994)	Differences in accounting measurement practices across countries and evaluation of the value relevance of reported earnings	Annual financial statement data, monthly prices and dividends for German, French and UK firms from 1982 to 1990	Measurement practices are more conservative in Germany than those in UK and France. No evidence that accounting data is more associated with share prices in UK No evidence as to convergence in value relevance across countries after the implementation of EU directives
Basu et al.(2001)	Link between earnings conservatism and liability exposure of auditors	Annual earnings, accruals and share prices for US firms from 1975 to 1998	Operating accruals increase (decrease) the timeliness of 'bad' ('good') news recognition in earnings for Big Eight auditees relative to non-Big

			Eight auditees, in particular in periods of high auditor legal liability exposure
Ali & Hwang (2000)	Relation between the measures of value relevance of financial accounting data and five country specific factors	Accounting data and share prices for firms from 16 countries around the world between 1986 and 1995	Value relevance is greater in countries: (a) with market orientated systems, (b) where private bodies are involved in standard setting process, (c) where tax rules do not have great influence on financial accounting measurement, (d) where spending on auditing services is relatively high and (e) where the accounting practices follow the British American model.
Corporate governance			
Research Study	**Topic**	**Sample and Data**	**Major Findings**
La Porta et al. (1998)	Legal rules on the protection of shareholders and creditors, and the quality of their enforcement	Data on company, bankruptcy and reorganization laws, accounting standards and trends data, macroeconomic data, and data from risk rating agencies from 49 countries	Common law countries generally have the strongest and French civil law countries weakest legal protection of shareholders Concentration of ownership of shares in largest public companies is negatively related to investor protection
La Porta et al. (1997)	Link between cross-country differences	Macroeconomic data and data on	Countries with poorer investor

	in legal environments with the differences in size and breadth of equity markets	institutional variables constructed by La Porta et al. (1998) from 49 countries	protection measured by the character of legal rules and the quality of law enforcement have smaller equity markets
Shleifer & Vishny (1997)	Corporate governance, investor protection and ownership concentration around the world	Data on corporate governance and legal systems from various countries around the world	Corporate governance systems and legal protection of investors is weak in most of the countries with insider dominated firms
Franks & Mayer (2000)	Ownership patterns, ownership concentration and private benefits	Corporate governance and accounting data for listed German companies between 1989 and 1994	Active market in share blocks, gains from sales of shareblocks enjoyed by large shareholders and not shared with minority shareholders
Franks & Mayer (1998)	Bank control and corporate governance	Data on three cases of hostile takeovers in Germany	Significant banks' influence derived from chairmanships on supervisory boards
Volpin (2001a)	Investor protection, banks and private benefits of control	Corporate governance, investor protection and financial data for 16 European countries	In countries with lower investor protection, firms have more bank relations and greater ownership concentration
Volpin (2001b)	Efficiency of governance structure and its impact on firm's performance	Data on ownership structure, boards of directors and financial accounts for Italian non-financial companies listed on Milan Stock Exchange between 1986 and	Turnover of top executives is not sensitive to firm's performance when controlling shareholds are amongst top executives

		1997	
Wysocki et al. (2003)	Board structure and corporate policy choices	Corporate governance and financial data for 885 US firms	The magnitude of director effects on firm's policies decreases in firm size, the fraction of independent directors on board, and the number of outside board appointments held by a director
Denis & Sarin (1999)	Dynamics of ownership and board structure	Corporate governance and financial data for 692 listed US firms between 1983 and 1992	The change in the fraction of outside board members is negatively related to the change in CEO owership
Cotter et al. (1997)	Board of directors and takeover process	Data on 229 tender offers of US firms between 1989 and 1992	Outside directors are better in negotiating on behalf of shareholders in the takeover process
Hermalin & Weisbach (2001)	Survery of economic literature on boards of directors		Board composition and size are correlated with firm performance, CEO turnover and changes in ownership structure
Leuz et al. (2002)	Link between investor protection and earnings management	Accounting data from 31 countries between 1990 and 1999	Important link between legal institutions, private control benefits and the quality of reported accounting earnings
Beeks et al. (2002)	Link between the proportion of non-executive directors in supervisory boards and earnings conservatism	Annual earnings and returns for UK non-financial firms from 1992 to 1995	Firms with higher proportion of non-executive directors on board have more conservative earnings

International listing			
Research Study	**Topic**	**Sample and Data**	**Major Findings**
Stapleton & Subrahmanyam (1977)	Impact of firm's dual listing on the market value of share	Hypothetical numerical analysis of 2 countries, 20 investors and 8 shares	Share price increases and cost of capital decreases after cross-listing
Howe & Kelm (1987)	Impact of firm's first, second and third cross-listing on the share price	Daily share price data for 112 US firms listed in Canada and Europe between 1962 and 1985	Negative abnormal returns during 40 days after cross-listing
Lee (1991)	Impact of firm's cross-listing on the share price	Daily share price data for 141 US firms listed in London and Tokyo	No evidence that cross-listing has an impact on the share price
Alexander et al. (1988)	Behavior of stock returns surrounding international listings date	Monthly share price data for 34 firms from Canada, Japan, Australia, South Africa, Denmark and UK listed in US between 1969 and 1982	Abnormal returns are positive in the pre-listing period, and negative in the post-listing period
Lau et al. (1994)	Behavior of firm's share price around three separate dates: (1) application for listing, (2) acceptance of application and (3) actual listing	Daily share price data for 123 US firms cross-listed on 23 foreign exchanges between 1962 and 1990	Abnormal returns are positive around approval day, and negative on the first trading day and through post-listing period
Torabzadeh et al. (1992)	Impact of firms' first cross-listing on risk and return performance around listing date	Daily share price data for 92 US firms cross-listed on London and Tokyo stock exchange	Abnormal returns are positive prior to and following the cross-listing No evidence of shifts in either

			systematic or total risk after the cross-listing
Howe & Madura (1990)	Impact of firms' international listing on share's systematic risk (beta)	Quarterly share price data for 68 US firms cross-listed in Germany, France, Switzerland and Japan and market indices of respective countries	No significant shifts in risk following cross-listing
Karolyi (1998)	Impact of firm's first cross-listing on share's risk (beta) and the cost of capital	Daily, weekly, and monthly returns for non-US firms cross-listed in US and respective market indices	Following the cross-listing firm's home beta (firm's risk exposure on home market) declines, foreign beta increases and firm's cost of capital decreases