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Chapter 9

Value Relevance of Accounting Data in an Emerging Market: Did Accounting Reforms Make a Difference?

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Additional information is available at the end of the chapter

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Abstract

This study investigates the association of accounting earnings (NI) and book value of equity (BV) with stock prices in Istanbul Stock Exchange (ISE), currently Borsa Istanbul (BIST), during the 1992–2006 period. We also explore the effect of accounting reforms on value relevance that is measured as the strength of the association between a firm's NI and BV and its market value. We specifically investigate the impact of the Turkish Uniform Chart of Accounts (1994), mandatory inflation accounting, consolidations and voluntary (2003–2004), and the mandatory (2005) adoption of International Financial Reporting Standards (IFRS). We hypothesize that these reforms have reduced information asymmetry and thus are expected to enhance the value relevance of accounting information. We find strong evidence that the Ohlson model is a valid model, and BV is more value relevant than NI in BIST. We also find that inflation accounting and consolidations have enhanced the value relevance of BV, while IFRS has increased the value relevance of NI, but reduced that of BV. We contribute to the debate by exploiting the unique sequence of reforms, to come up with comparative value relevance testing designs and interesting results for all major reforms, which we believe will be instructive for researchers and for all emerging and developed economies undergoing similar reforms and best practices.

Keywords: value relevance, net income, book value of equity, IFRS, inflation accounting, financial statements

1. Introduction

This study examines the cross-sectional and intertemporal association between accounting numbers and firm value and explores the impact of accounting reforms on this relationship by using an unbalanced panel data set of 116 firms traded in the then Istanbul Stock Exchange (ISE), now Borsa Istanbul (BIST), over the period 1992–2006. We base our study on prior

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research on the value relevance of accounting numbers and the consequences of accounting reforms and the worldwide efforts to converge accounting standards. More informative accounting standards and measurement bases, and improvements in disclosure reduce the information asymmetry among stakeholders of the firm. The idea that these improvements would lead to reported accounting numbers that better reflect the firm's fundamentals and, thus, strengthen the association between security prices and accounting numbers, form the basis of our argument.

Our first objective is to investigate the informativeness of financial statement bottom lines of net income (NI) and book value of equity (BV), the most important summary measures in financial statements (F/S) over a lengthy sample period of 15 years. Second, we compare value relevance in the pre-reform and reform periods to observe the overall impact of accounting reforms on value relevance. We specifically explore the value relevance of accounting numbers generated by the Uniform Chart of Accounts promulgated in 1994, the mandatory adoption of general price level accounting and consolidations in group firms in 2003–2004, the voluntary adoption of International Financial Reporting Standards (IFRS) by a subsample of firms during 2003–2004, and the mandatory adoption of IFRS by all public firms traded in the stock exchange in 2005.

Throughout the study, our main hypothesis is that firms that adopt higher quality accounting standards and more informative reporting and disclosure practices will have higher quality accounting numbers in the sense that their net incomes and equity book values will be more closely associated with stock prices. This, in turn, is expected to give rise to more efficient markets and better informed minority shareholders, which is expected to mitigate the expropriation of minority shareholders by concentrated family ownership, which leads to an important agency problem in Turkish firms and other emerging markets (EM).

We use an empirical specification of Ohlson's seminal theoretical accounting valuation model in [1] to estimate the association between firm value and the accounting bottom lines of NI and BV. We carry out subperiod and subsample tests and compare their R^2s to measure differences in value relevance. We also estimate pooled regressions with multiplicative interaction terms that measure the incremental effect of the periods or reforms in question on the coefficients of NI and BV. Our results indicate that the model in [1] is a valid model, and BV is generally more value relevant than NI in the BIST during the sample period. Furthermore, there is some evidence that inflation accounting (IFRS) has enhanced the value relevance of BV (NI). Consolidations, on the other hand, do not seem to have any incremental explanatory power in explaining the changes in stock prices.

Although this relationship has been tested on Turkish data (for example, see [2–4]), this chapter uses a much longer sample period, which allows us to evaluate the impact of a series of accounting reforms on the strength of the association. Moreover, this is the first study to exploit the interesting sequence of accounting and financial disclosure reforms that follow one another during the 2003–2006 period, to come up with comparative value relevance testing designs and results for all major voluntary and mandatory reforms, which we believe will be instructive for all emerging markets and developed economies also undergoing similar reforms and best practices.

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2. Motivation: Turkish financial reporting setting

Turkish accounting reforms and data provide a unique setting to study the impact of accounting reforms cross-sectionally and longitudinally over our sample period. First, limiting the study to a single country and to a series of consecutive reforms that followed one another within a short time period allows one to control for country-specific institutional-, cultural-, and market-based differences and mitigates model validity problems due to possible structural changes in model variables over time. Second, Turkey is one of the few countries in the world where only partial inflation accounting alongside historical cost has been used in spite of the high inflation rates experienced in especially the earlier part of our sample period (1992–2002).[1] Starting in 1986, plant asset costs reported in the balance sheets have been annually adjusted using a single index established by the Ministry of Finance. This practice may have mitigating effects on the value relevance of inflation accounting applied in 2003 and 2004. Third, a mandatory Uniform Chart of Accounts adopted by the Ministry of Finance in 1994 has fully harmonized the different account titles, numbers, and formats used in F/S to enhance comparability between the F/S prepared by the Turkish firms. This has certainly made the financial statements more consistent and comparable, but impacted only their form, rather than the substance. Hence, it will be interesting to see if this reform will enhance value relevance as strongly as the later reforms that have changed the accounting numbers themselves. Fourth, in response to globalization and accession to the European Union (EU), the regulatory body of traded companies, the Capital Markets Board (CMB), allowed the companies to apply IFRS as published by the International Accounting Standards Board (IASB) or to use the IFRS-based standards published by the CMB in 2003 (promulgated by Regulation Series XI, No. 25).[2] Companies voluntarily adopted these standards in 2003 and 2004; and then in 2005, CMB required all publicly traded companies to adopt IFRS as accepted by the EU. Hence, this setting will allow us to test if the IFRS numbers have any incremental explanatory power over inflation adjusted numbers, reported by different firms, during the same 2-year period. Finally, the voluntary adoption of IFRS in 2003–2004, immediately followed by its mandatory adoption in 2005, allows comparison of the value relevance of voluntary versus mandatory IFRS. Researchers can easily access the historical cost financial statements with plant asset revaluations, inflation-adjusted financial statements, and IFRS-converged (voluntary and mandatory) financial statements for most publicly traded firms on the BIST website. These reforms are depicted on a time line in **Figure 1**.

[1] Turkey has been grappling with very high levels of inflation since three decades. In our sample period, inflation rate has ranged from a high of 126% in 1999 to the lowest level of 9.5% in 2005. It has significantly decreased to single digits or low teens, as a result of economic reforms of the previous and current government, during our reform period of 2003–2006.

[2] In essence, the standards published by CMB are the same as IFRS as they are direct translations, except a few instances related to tax-based rules. Until the translations are completed, firms used the original IFRSs. For more detail on the exact accounting differences between the two, see [52].

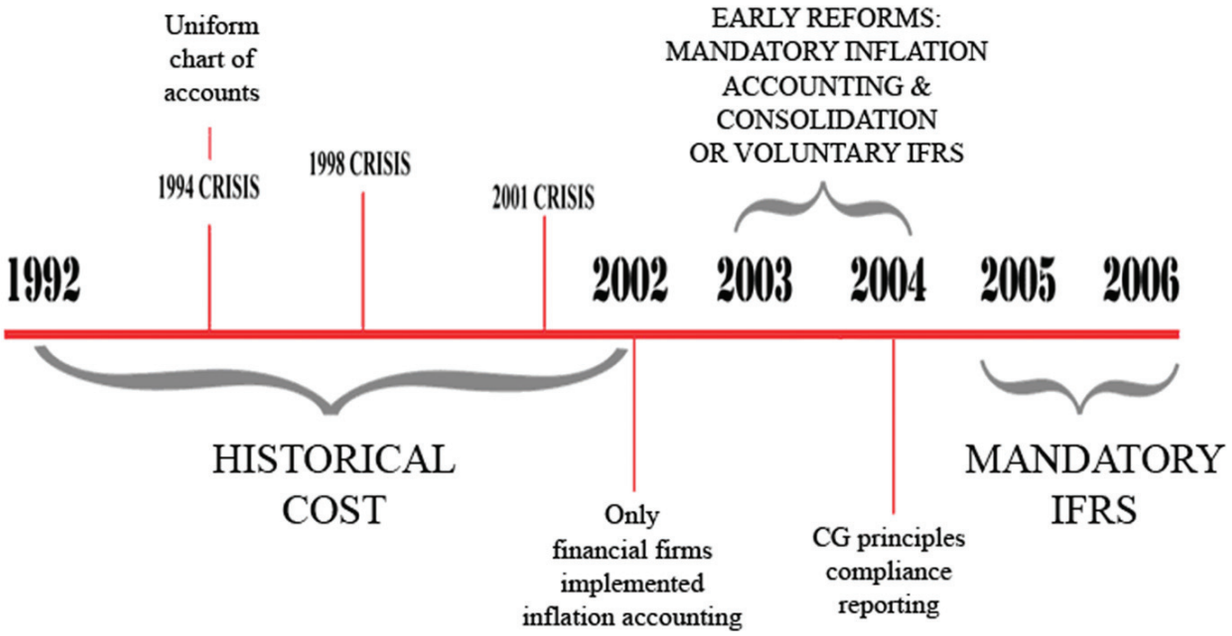


Figure 1. Timeline of accounting reforms in the BIST.

3. Prior research

Among the vast amount of prior literature on accounting valuation models, quality of accounting numbers, and disclosure practices, we will mostly review the work that has used [1] the seminal Ohlson model in estimating the impact of accounting reforms on the relation between accounting numbers and firm value.

3.1. Value relevance of accounting numbers

Researchers have been trying to link accounting numbers to firm value since the two seminal studies [5, 6] that found a significant price and volume reaction to earnings announcements in the USA. The value relevance of the bottom lines of financial statements, net income and owners' equity, was later formalized and modeled in these three seminal studies: [1, 7, 8]. We use both net income and owner's equity in our empirical implementation of the Ohlson's model since their theoretical model and its empirical applications suggest that both of these reported numbers are priced as shown in [1, 9–11].

Since these pioneering studies, there has been a proliferation of empirical work on value relevance. Some studies have found that the value relevance of financial reports is sensitive to country-specific factors as in [12] and firm-specific factors as in [13]. Furthermore, in [14, 15], it has been observed that the value relevance of F/S is weaker and BV is more value relevant than NI in Code Law countries. Since Turkey is a Code Law country in the French tradition, it will be interesting to see if these observations hold in Turkey.

Researchers have also measured value relevance over time and observed that the informativeness of accounting numbers, especially that of earnings, has declined [11, 16, 17]. With the

expectation that value relevance will decline under crisis, several studies investigate value relevance under adverse economic conditions as in [18], in loss years and as financial health decreases [19–21], and as earnings/book value ratio changes [22]. Most results point out that there has been a decline in the value relevance of earnings, compensated by an increase in that of book value, especially under such adverse conditions.

In addition to the research in more efficient developed markets, recent research on value relevance has tapped the unique regulatory, financial, and accounting environments of emerging markets (EM) to gain insight into some unanswered questions. To name a few, [23] examines value relevance of accounting numbers in Middle East and North Africa (MENA) countries [24], in the Korean chaebols [25], in Tunisia [18], during the Mexican financial crises [26], in the Czech Republic, and [27] in different segments of the Chinese market, with no conclusive results.

3.2. Value relevance of accounting reforms

Prior research on value relevance of inflation-adjusted accounting data has been inconclusive. Most of this research has been conducted in the USA around the time of the promulgation of SFAS 33, which required large companies to disclose supplementary information on the impact of changing prices on the firm. For example, while [28, 29] found that inflation-adjusted NI is not more value relevant than historical cost NI, [30] concludes that inflation adjustment has incremental explanatory power and [31] found that their predictive power is higher. In [32], the authors use an earnings and book value model and report that inflation-adjusted numbers prepared in accordance with Mexican accounting rules and US Generally Accepted Accounting Principles (GAAP) are both value relevant. The only study based on Turkish firms is [2], where the authors find that inflation-adjusted accounting numbers of 2003, required to be reported in 2004, alongside 2004 inflation-adjusted numbers for comparative purposes, and their 2003 historical cost counterparts are both value relevant.

Similarly, most of the research on the value relevance of IFRS-based accounting numbers has been carried out in developed markets. [33] shows that disclosure quality has increased significantly under both mandatory and voluntary adoption of IFRS. [34] found that the application of International Accounting Standards (IAS) leads to higher accounting quality. In [35–37], the authors found that the book value becomes more relevant than earnings when voluntary IAS adaptors are investigated in Germany, Greece, and some other European countries in separate studies. In [38, 39], incremental value relevance of book value increases during the voluntary adoption of IFRS in European countries.

Some studies such as [40] find that accounting reforms improve the value relevance of earnings and other accounting measures, whereas others fail to find any significant increase in value relevance of NI and BV as a result of accounting reforms [41, 42]. In [43], the authors investigate the effects of voluntary and mandatory IFRS adoption in 16 European countries and find that during the mandatory transition period, the largest improvement takes place in the information environment of firms that have already voluntarily adopted IFRS.

One of the major accounting changes in Turkey is the consolidation requirement that started in 2003. Previous research on the effect of consolidation on the value relevance of accounting

numbers is scant. In [44], the authors find that consolidated accounting numbers in Spain are more value relevant than the parent company disclosure alone where book value has higher value relevance than earnings. Similarly, using Finnish accounting data for domestic and foreign investors, [45] found that consolidated data provide more useful information to both types of investors.

3.3. Value relevance studies using Turkish data

Investigating the contemporaneous relationship between net income and stock returns, [46, 47] found that both levels and changes in earnings explain the changes in stock returns. [23] is noteworthy as it examines the association between value relevance and country and firm-specific characteristics of seven countries in the Middle East, including 90 Turkish firms. They find that disclosure quality enhances this relationship in both financial and non-financial firms. In [3, 4], the authors find that NI/share and BV/share are both significant and explain 57.5% of the variation in stock prices, but there is a steep decline in the value relevance of both variables during the 2000–2001 financial crisis that has increased the incidence of losses. In summary, only [2–4] have used both book values and earnings in their tests of value relevance in the BIST. However, none of these papers investigate the specific impact of any of the accounting and financial reporting reforms we examine in this study.

4. The hypotheses

Our primary expectation is that the higher the quality of accounting information in reflecting the true economic fundamentals of the firm, across countries and across firms, the more informative NI and BVE would be of security prices. The following are the specific hypotheses to be tested, all presented in the alternative form:

H_1: Net income (NI) and book value of equity (BV) are expected to be positively associated with firm value over the sample period of 1992–2006.

H_2: The relationship is expected to get stronger after the start of the accounting reforms in 2003.

H_3: The value relevance of NI and BVE is expected to have improved as a result of the Uniform Accounting System promulgated by the Ministry of Finance in 1994, unless it is perceived as just a change in form, not substance.

H_4: Firms that have voluntarily used inflation accounting (general price-level accounting) in 2003 and 2004 have more informative NI and BV, unless the inflation rate is perceived to be immaterial by market participants in those years.

H_5: The firms that voluntarily adopted IFRS in 2003 and 2004 have more informative NI and BV.

H_6: The value relevance of NI and BV has improved after IFRS became mandatory starting fiscal year 2005.

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H_7: Consolidating the accounts of the subsidiaries with that of the parent firm increases the value relevance of parents' accounting numbers.

H_8: We expect value relevance to be lower in crisis periods and in loss firms.

5. Sample, data, and methods of analysis

In this study, we use a panel data set of stock prices and financial statement data for BIST-100 firms traded in Borsa Istanbul over the years 1992–2006. Without considering the missing data leading to missing observations, our sample of BIST firms consists of 116 firms (mainly BIST-100 index firms) leading to a sample size of 1386 firm years, one of the largest data sets used in tests on BIST firms. The financial statement variables are manually collected from the BIST website, whereas the stock prices are obtained from a financial research and investment firm: http://www.analiz.com.

Our basic methodology in measuring the quality of accounting numbers (i.e., their value relevance) is borrowed from the theoretical accounting valuation model derived in the seminal works in [1, 7, 8]. They posit that the accounting bottom line numbers of earnings and book value of equity inform us about firm value because they both help in forecasting future expected earnings. Accordingly, [1] models firm value as a function of current book value, PV, of expected excess earnings and other orthogonal value relevant non-accounting information.

In our empirical application, we use both NI and BVE because both the theoretical model and its extant empirical applications suggest that both bottom line accounting numbers are priced [1, 9–11]. Prior research found higher value relevance for BV in Code Law countries and in risky economic environments and also provided evidence that the role of NI has diminished while BVE became a more important determinant of equity value over time in [11, 48], in financially distressed firms with losses, and when earnings/book value is low in [10, 19, 21, 22]. Following [49, 50], we take the natural log of both the dependent and the independent variables which took care of the nonlinearity and extreme skewness in the relationships and led to residuals that satisfy the assumptions of linear regression analysis.[3] The general log-log model specifications estimated for the sample period are as follows:

$$MVE_{it} = \beta_{0t} + \beta_{1t} BVE_{it} + \beta_{2t} Ni_{it} + \varepsilon_{it} \quad (1)$$

where *i* and *t* denote firms and years; MVE = close price on March 31_{t+1} * # of shares; BVE = book value of equity, December 31_t; NI = Net income, December 31_t; and Ln transformation is used for all the model variables.

[3] First, we tried taking logs of one variable at a time, but the econometric problems were not solved until we tried the log-log model. In the sensitivity analysis section, we also present some of the results under the usual specification $P_{it} = \beta_{0t} + \beta_{1t} BVE_{it} + \beta_{2t} NI_{it} + \beta_{4t} NIdummy_{it} * NI + \varepsilon_{it,}$ where price is regressed against BV and NI. In this specification, the variables are deflated by number of shares, to control for size differences between firms, and we use a net loss dummy to examine the incremental informativeness of losses.

In all specifications and the tables presented below, reporting the results of value-relevance regressions, we assume a random walk process for residual income and hence use current year income as a proxy for the PV of future residual incomes, as assumed in many empirical adaptations of the model. To control for year-specific effects that might confound the results, we use year dummies in regressions pooled across time. Only (+) NI observations are included when natural log transformation is undertaken for nonlinearities and skewness in the data and correction for size differences. We also drop the influential extreme observations based on the Cook's D procedure to ameliorate their effect on the regression line. Furthermore, White's correction is used to obtain standard errors and *P* values corrected for heteroscedasticity.

In terms of design, we first compare value relevance of accounting numbers in the relevant subsamples we want to compare (e.g., in firms that have and that have not adopted IFRS) where we measure statistical significance of the differences with adjusted R^2 comparisons using Cramer's procedure in [51]. We also estimate pooled regressions with multiplicative interaction terms to capture the significance of the incremental effects of reforms on the coefficients of BV and NI. That is, we let NI and BVE interact with a "year" or "type of reform" dummy to capture the incremental effect of reform years or a specific reform on the slopes of NI and BVE:

$$MVE_{it} = \beta_0 + \beta_{1t} BVE_{it} + \beta_{2t} NI_{it} + \beta_{3t} Dummy_t BVE_{it} + \beta_{4t} Dummy_t NI_{it} + \varepsilon_{it} \quad (2)$$

where $Dummy_t$ = 1, if the firm reports in a particular year or if the firm adopts a particular reform, used to capture the incremental effect of the year or accounting reform on the slopes of NI and BE, and 0, otherwise.

6. Results

6.1. Sample and descriptive statistics

Our sample is composed of both financial and non-financial BIST-100 index firms for which we have stock price and financial statement data over the period 1992–2006. In total, we have 239 firm-year observations for financial firms and 1147 for non-financial firms over the sample period. In our sample for 1992–2003 period, there are 135 financial firms and 765 non-financial firms that have used the historical cost for measurement basis. During the reform years 2003–2006, the number of firms using different accounting standards or measurement basis are as follows: In 2003 and 2004, there are 25 financial and 31 non-financial firms that have used inflation adjustment only; the number of firms that have used inflation adjustment and consolidation at the same period amounts to 25 and 84, respectively; and during the same year, the number of firms which voluntarily applied IFRS are 3 for financial and 79 for non-financial firms. For the 2005–2006 period, the number of sample firms that have applied IFRS mandatorily amounts to 51 and 188 for financial and non-financial firms, respectively.

Table 1 reports the means, medians, standard deviations of the dependent variable price/share and the independent variables NI, BVE, and the number of loss firms in each sample year. We

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Year	Price			BV/sh			NI/sh			Number of loss firms
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	
1992[1]	6,79	2,71	*10,15*	2,84	2,49	*1,38*	0,69	0,51	*0,74*	3
1993[1]	17,25	8,10	*31,21*	3,87	3,04	*2,62*	1,40	1,00	*1,71*	4
1994[1]	24,11	12,00	*47,74*	4,87	2,99	*8,01*	2,13	0,83	*7,11*	**6**
1995[1]	19,85	13,50	*22,92*	4,62	3,46	*3,84*	1,45	1,13	*3,20*	2
1996[1]	30,41	17,12	*46,56*	5,94	3,51	*7,89*	2,44	0,96	*6,30*	2
1997[1]	44,05	13,00	*95,86*	8,26	3,97	*15,45*	3,83	1,27	*12,09*	2
1998[1]	36,70	8,00	*111,02*	10,37	3,93	*23,98*	3,88	0,96	*15,50*	8
1999[1]	65,72	15,87	*225,84*	10,08	2,77	*37,97*	3,72	0,60	*19,21*	15
2000[1]	31,34	5,85	*144,93*	10,72	2,96	*45,99*	3,10	0,49	*18,53*	11
2001[1]	51,75	5,40	*304,93*	15,47	2,35	*80,93*	6,28	0,08	***50,80***	**44**
2002[1]	20,79	3,67	*138,62*	10,58	2,65	*56,86*	0,55	0,36	*2,83*	**20**
2003[1]	70,30	4,58	*405,70*	23,23	2,83	*110,70*	1,38	0,65	*3,29*	5
2003[2]	104,17	4,73	*516,65*	42,57	4,09	*185,17*	0,95	0,16	*4,48*	8
2003[3]	10,30	4,73	*18,70*	9,93	4,63	*15,97*	1,03	0,56	*1,62*	15
2003[4]	15,84	9,25	*21,42*	10,70	4,37	*15,63*	1,85	1,09	*2,80*	1
2003[5]	6,99	4,29	*7,27*	5,77	3,40	*6,92*	0,94	0,54	*1,59*	3
2004[2]	13,07	4,72	*32,29*	6,79	2,68	*9,17*	0,23	0,25	*1,20*	8
2004[3]	10,20	3,77	*24,14*	8,73	3,16	*15,74*	0,93	0,47	*1,41*	**16**
2004[4]	15,01	7,07	*22,47*	10,71	5,17	*17,91*	1,36	0,75	*2,25*	**1**
2004[5]	5,76	3,75	*6,95*	4,35	3,17	*5,55*	0,54	0,30	*1,14*	**5**
2005[6]	20,40	7,22	*36,73*	7,75	3,21	*11,88*	0,71	0,37	*1,76*	**10**
2005[7]	11,51	5,75	*20,15*	6,10	3,25	*11,03*	0,73	0,36	*1,32*	**19**
2006[6]	17,29	6,25	*30,41*	7,12	3,21	*10,66*	0,98	0,55	*1,19*	3
2006[7]	8,73	5,15	*13,42*	5,70	3,33	*11,24*	0,71	0,34	*1,33*	13

Mean, median, and standard deviations for the dependent variable, price, and independent variables BV/sh (book value of owner's equity per share) and NI/sh (net income/share) for each year in the sample period 1992–2006.
[1] Historical cost.
[2] Mandatory inf., adjustment.
[3]Mandatory inf. adjustment and consolidation.
[4]Voluntary IFRS (unconsolidated).
[5] Voluntary IFRS (consolidated).
[6] Mandatory IFRS (unconsolidated).
[7] Mandatory IFRS (consolidated).

Table 1. Descriptive statistics.

observe that NI/share seems to be lower in the financial crisis years of 1994 and 1998, the number of loss firms are the highest in the financial crisis year of 2001, and the standard deviations are high in general and even higher during the 1997–2003 period.

6.2. Yearly cross-sectional regression results: 1992–2006

As explained in Section 5, in all the tables reported henceforth, the regression coefficients of NI and BV and White's robust p values (***$p < 0.01$, **$p < 0.05$, and *$p < 0.1$) are based on an empirical specification of the seminal accounting valuation model of Ohlson. Natural log transformation is undertaken for nonlinearities and skewness in the data and correction for size. Hence, only (+) NI observations are included. Cook's D is used to trim the outlier influential observations.

Table 2 depicts the yearly average value relevance of accounting bottom lines for each year during the 1992–2002 pre-reform and the 2003–2006 reform periods, respectively. The pre-reform period constitutes the years in which a rules-based, mainly tax based, historical cost basis of accounting was used. The average value relevance results in pooled regressions across all years indicate strong informativeness for both NI and BV ($R^2 = 0.89$). Hence, we can state that our accounting valuation model is valid for BIST firms during our sample period. In the years 2003 and 2004, firms were required to use inflation accounting and consolidations (if they are parent firms) unless the firm has voluntarily adopted IFRS. Both prior to and during reform years, the explanatory power of our valuation model is high with R^2s ranging from 60 to 91.6%, highest in the years 2003–2006.

A crude comparison of R^2s in the pre- and post-reform period shows that while explanatory power remains constant at around 80% in the pre-reform historical cost period until 2003 (when it decreases to 60%), it increases to around 89% each year after 2003. Just based on this comparison, we can infer that the reforms have slightly improved value relevance as measured by R^2s of the yearly regressions. We also observe that BVE consistently has the expected positive, significant (P value = 0.00) coefficient during both pre-and post-reform periods. NI also has the expected positive and significant coefficient in the pre-reform and post-reform periods. However, it is not significant in 2001 and 2002, indicating a drop in value relevance of NI during the financial crisis of 2001 and NI resuming its significance in 2003.[4]

In **Table 3**, Panel A, we pool the relevant years and compare the significance of the coefficients of the accounting variables and the overall R^2 validity of our model in the pre- versus post-reform periods and during voluntary IFRS (2003–2004) versus mandatory IFRS (2005–2006) reform periods by using subgroup analysis. The regressions using all the 10-year cross-sectional and time series pre-reform data from 1992 to 2002 and the more recent pre-reform period 1999–2002, which is of equal length to the reform period, yield positive and highly significant coefficients for both BVE and NI, and the adjusted R^2 of the two regressions are 87% and 65%, respectively. In the reform period and its two stages (early voluntary reforms of 2003 and 2004 and the mandatory IFRS period of 2005 and 2006), we have a valid model and highly significant (+) coefficients for BVE and NI, both significant at $\alpha = 0.00$, consistent with the results of our yearly analysis. However, the coefficient for NI (BV) increases (decreases) in the

[4] Prior to ln transformation of the variables, we added a negative NI dummy for loss firms to the model with NI/share and BV/share. The coefficients of net loss dummy were either insignificant or barely significant or had a (−) sign in some years both prior to and during the reforms.

Variable	Year					
	1992HC	**1993HC**	**1994HC**	**1995HC**	**1996HC**	**1997HC**
Ln NI	0.631***	0.618***	0.254***	0.433***	0.462***	0.442***
Ln BV	0.278**	0.424***	0.637***	0.343***	0.457***	0.564***
Constant	2.520***	1.031	3.273***	5.165***	3.207***	1.681
No. of observations (n)	43	51	51	60	63	71
Adj. R^2	0.799	0.735	0.780	0.740	0.796	0.775
	1998HC	**1999HC**	**2000HC**	**2001HC**	**2002 HC**	**2003 HC**
Ln NI	0.476***	0.109*	0.314***	0.063	0.077	0.278***
Ln BV	0.693***	0.945***	0.664***	1.142***	1.023***	0.495***
Constant	−1.418	0.868	1.554	−2.953*	−1.526	5.065***
No. of observations (n)	68	67	84	50	68	39
Adj. R^2	0.808	0.787	0.719	0.772	0.783	0.603
		2003 EarlyREF	**2004 EarlyREF**	**2005IFRS**	**2006IFRS**	**1992–2006**
Ln NI		0.238***	0.184***	0.467***	0.317***	0.351***
Ln BV		0.763***	0.840***	0.477***	0.648***	0.574***
Constant		0.618	0.064	2.769***	1.815**	2.660***
#of obs. (n)		72	74	83	92	1057
Adj. R^2		0.883	0.902	0.916	0.865	0.893

Model: $Ln(MV_t) = \beta_{0t} + \beta_{1t}\ Ln(NI_t) + \beta_{2t}\ Ln\ (BV_t)$; White's robust p values.
*** $p < 0.01$; ** $p < 0.05$; and * $p < 0.1$.
HC: Historical cost based on local standards; EarlyREF: NI and BV based on mandatory inflation adjustment and consolidation or voluntary IFRS; and IFRS: Mandatory IFRS adoption.

Table 2. The time series of value relevance of accounting numbers in the ISE (1992–2006).

mandatory IFRS period. In this panel, we also use the Cramer's procedure in [51] to test the significance of the difference in the pre- and post-reform R^2 s. The Z-value test statistic comparing the R^2 for the pre-reform period 1992–2002 (1999–2002) versus 2003–2006 reform period is significant at $\alpha = 0.10$ ($\alpha = 0.01$), respectively.

In this panel, we also use an interactive dummy =1 if the firm reporting in these years is a financial firm to see if the value relevance results over the HC and reform periods are different for financial firms. Indeed, we find that financial firms have a significantly lower coefficient for NI under the HC period while a significantly higher one under the reform period of 2003–2006. Thus, we accept H2 and conclude that the reforms have significantly improved value relevance as measured by the significant increase in R^2 in the reform period.

In Panel B, we statistically test the incremental effect of all the reforms undertaken during 2003–2006 on the coefficients for positive NI firms. This time, we pool the data for the

Panel A. Subperiod tests: pre-reform and reform periods and the incremental effect of financial firms. *Model:* $Ln(MV_t) = \beta_{0t} + \beta_{1t}\ Ln(NI_t) + \beta_{2t}\ Ln\ (BV_t) + \beta_{3t}\ FINdummy*Ln\ (NI) + \beta_{4t} FINdummy*Ln\ (BV)$

Variable	**Period**				
	1992–2002 HC	**1999–2002 HC**	**2003–2006 REF**	**2003–2004 EarlyREF**	**2005–2006 IFRS**
Ln NI	0.445***	0.174***	0.231***	0.175***	0.297***
Ln BV	0.556***	0.799***	0.745***	0.855***	0.627***
FINdummy*Ln NI	−0.156*	0.075	0.196**	0.159	0.242***
FINdummy*Ln BV	0.097	−0.110	−0.169**	−0.143	−0.210**
Constant	1.746***	1.687**	1.328***	−0.123	2.677***
No. of observations	681	269	324	151	176
Adjusted R^2	0.872	0.654	0.867	0.866	0.873
Bootstrapping Std. Err.	0.011	.0339	0.014		
Z^*	1.57[1]	6.82[2]			

White's robust *p values* (*** $p < 0.01$; ** $p < 0.05$; and * $p < 0.1$).
HC: Historical cost based on local standards; EarlyREF: NI and BV based on mandatory inflation adjustment and consolidation or voluntary IFRS; and IFRS: Mandatory IFRS adoption.
[1]Z^* value for the significance of the difference between R^2 of HC (1992–2002) versus R^2 of REF (2002–2006) is calculated using Cramer's [51] procedure and is significant at $\alpha = 0.10$.
[2]Z^* value for the significance of the difference between R^2 of HC (1999–2002) versus R^2 of REF (2002–2006) is calculated using Cramer's [51] procedure and is significant at $\alpha = 0.01$.

Panel B. Pooled regressions: the interaction effect of reform period 2003–2006 on coefficients of NI and BV. *Model:* $Ln(MV) = \beta_0 + \beta_1 *Ln(NI) + \beta_2 *All\ Reforms*Ln(NI) + \beta_3 * Ln(BV) + \beta_4 * All\ Reforms*Ln(BV) + \beta_i *Year\ Dummy_i$

Dependent variable: Ln(MV)	**Positive NI**	
Variables	Coefficient	*P* value
Ln(NI)	0.317***	(0.000)
All Reforms*Ln(NI)	−0.084	(0.108)
Ln(BV)	0.677***	(0.000)
All Reforms*Ln(BV)	0.060	(0.210)
Constant	0.928***	(0.000)
No. of observations	1010	
Adjusted R^2	0.933	

*** $p < 0.01$; ** $p < 0.05$; and * $p < 0.1$.
Base category for "all reforms " interaction variables: historical c.
Year fixed effects are included in the regressions as dummy variables.

Table 3. The effect of the reform periods versus historical cost on value relevance.

subgroups which we ran separately in Panel A, and add a multiplicative reform period interaction term for NI and BV to capture the incremental effect of the 2003–2006, all reforms period, on the coefficients of NI and BV. In the regressions pooled across 1992–2006, we find that the coefficient of BV is not significantly changed during the reforms period 2003–2006 since the coefficient of the BV interaction term is not significant. Although R^2 has significantly increased in all reforms period, the coefficients of BV and NI have not changed significantly.

6.3. The impact of specific accounting reforms

We next investigate the impact of separate voluntary and mandatory accounting reforms during the sample period. Our yearly regressions in **Table 4** indicate that the overall explanatory power of the model does not seem to increase after 1994, the year firms start using the Uniform Accounting System promulgated by the Ministry of Finance (R^2 increases from around 0.74 to 0.78) in 1994. Our findings do not support H3, and we conclude that the consistency in the format and account titles of financial reports has not increased value relevance of NI or BV. Form does not seem to be as important as the substance in financial statements.

Table 4 depicts the results for each separate reform that took place one after the other starting 2003. We use subgroup analyses and pooled regressions with interaction terms for specific reforms and reform periods. Panel A includes subgroup comparisons of regression results on companies using the different accounting methods. Compared to a large 11-year sample of 900 firm-year observations under HC, value relevance (R^2) significantly drops for firms using inflation accounting in 2003–2004 from 87 to 83%, but then significantly increases under voluntary IFRS. The increase in R^2 is significant compared to both HC and inflation accounting. However, no significant difference in value relevance is observed between voluntary versus mandatory IFRS periods and accordingly, we reject H6.

Next, we pool all the firms using HC, inflation accounting, and IFRS across our sample period and estimate a regression model with different interaction dummies for firms using inflation accounting and both mandatory and voluntary IFRS to see the incremental impact of these two reforms on the coefficients of NI and BV. In Panel B, we again observe that inflation accounting significantly decreases the value relevance of NI, while it significantly increases that of BV. In contrast, IFRS does not significantly impact the already significant coefficients of BV or NI. To compare the incremental change in value relevance under IFRS compared to inflation accounting, we next pool the firms using these methods between 2002 and 2006 and use interaction dummies with BV and NI, which acquire a value of 1 if the firm has used IFRS during this time period. The results in Panel C strongly indicate that IFRS significantly increases (α = 0.00) the insignificant coefficient of NI under inflation accounting and hence makes it significant and significantly reduces (again at α = 0.00) the highly significant value relevance of BV under inflation accounting.

In Panel D, we use subsample tests to evaluate the difference in value relevance under historical cost versus inflation accounting versus voluntary IFRS, all measured during the early reform years of 2003 and 2004. These two years are the only ones some firms reported under both historical cost and inflation accounting while some other firms voluntarily reported

under IFRS. Since the years are held constant, we expect stronger results in Panel D. Compared to local historical cost standards, inflation-adjusted NI and BV are significantly more value relevant as the adjusted R^2 of 89% is significantly higher at $\alpha = 0.05$ compared to 62% for firms using HC. Similarly, overall value relevance, measured by the significance of the difference in adjusted R^2, is significantly higher at $\alpha = 0.05$ under voluntary IFRS than under HC. To summarize **Table 4**, historical cost NI and BV have been value relevant across our sample period. Inflation accounting required and experimented with for only 2 years has significantly increased (decreased) the value relevance of BV (NI), whereas IFRS regulation leads to increase in value relevance for NI and not for BV.

Panel A. Subgroup analysis of different accounting reforms. The incremental value relevance of financial firms. *Model:* $Ln\ (MV_t) = \beta_{0t} + \beta_{1t}\ Ln(NI_t) + \beta_{2t}\ Ln\ (BV_t) + \beta_{3t}\ FINdummy*Ln\ (NI) + \beta_{4t} FINdummy*Ln\ (BV)$

Variable	Standard				
	Historical cost (1992–2003)	**Inflation accounting (2003–2004)**	**Voluntary IFRS (2003–2004)**	**Mandatory IFRS (2005–2006)**	**IFRS (2003–2006)**
Ln NI	0.440***	0.020	0.338***	0.297***	0.298***
Ln BV	0.550***	0.964***	0.617***	0.627***	0.642***
FIN*Ln NI	−0.150*	0.029	0.256	0.242***	0.260***
FIN*Ln BV	0.095	−0.032	−0.213	−0.210**	−0.220***
Constant	1.892***	0.272	1.882**	2.677***	2.275***
No. of observations	720	97	72	176	243
Adjusted R^2	0.876	0.830	0.878	0.873	0.879
Bootstrapping Std. Err.	0.010	0.039	0.016	0.017	0.012
Z^*			2.24–2.60	1.19	1.80

White's robust *p values* (*** $p < 0.01$; ** $p < 0.05$; and * $p < 0.1$).
All Z^* values are calculated using Cramer's [51] procedure.
The Z^* values of 2.24 (1.8) for the significance of the difference between R^2 of inflation accounting in 2003 and 2004 versus R^2 of voluntary IFRS in 2003 and 2004 (IFRS in 2003–2006) are significant at α= 0.05 (at α = 0.10).
Z^* value for the significance of the difference between R^2 of historical cost (1992–2003) versus R^2 of voluntary IFRS (2003–2006) is 2.60 and it is significant at α= 0.05.
Z^* value for the significance of the difference between R^2 of voluntary IFRS (2003 and 2004) versus R^2 of mandatory IFRS (2005 and 2006) is 1.19 and it is not significant.

In 2003 and 2004, parent firms were for the first time required to report consolidated financial reports regardless of the accounting standards they use. In 2005 and 2006, again group firms had to consolidate the accounts since they were required to use IFRS. Furthermore, during 2002–2006, the Banking Regulation and Supervision Agency (BDDK) required all banks to report both consolidated and solo financial statements while using either inflation accounting or IFRS in 2003 and 2004. We again run subgroup and pooled regressions to try to disentangle the value relevance impact of consolidations. The results are reported in **Table 5**.

Panel B. Pooled regressions with interaction dummies for accounting reforms (inflation accounting and all IFRS versus HC). *Model:* $Ln(MV) = \beta_0 + \beta_1 * Ln(NI) + \beta_2 * InfAdj. * Ln(NI) + \beta_3 * IFRS(All) * Ln(NI) + \beta_4 * Ln(BV) + \beta_5 * InfAdj. * Ln(BV) + \beta_6 * IFRS(All) * Ln(BV) + \beta_i * Year\ Dummies_i$

Dependent variable: Ln(MV)	**Positive NI**	
Variables	**Coefficient**	***P* value**
Ln(NI)	0.309***	(0.000)
InfAdj.*Ln(NI)	−0.256***	(0.001)
IFRS(All)*Ln(NI)	0.021	(0.674)
Ln(BV)	0.687***	(0.000)
InfAdj.*Ln(BV)	0.198***	(0.004)
IFRS(All)*Ln(BV)	−0.033	(0.478)
Constant	0.861***	(0.001)
Observations	1016	
Adjusted R^2	0.932	

*** $p < 0.01$; ** $p < 0.05$; and * $p < 0.1$.
Base category for "Accounting Standard " interaction variables: Historical cost.
Year fixed effects are included in the regressions as dummy variables.

Panel C. Pooled regressions with interaction dummies for all IFRS versus inflation accounting. *Model:* $Ln(MV) = \beta_0 + \beta_1 * Ln(NI) + \beta_2 * IFRS(All) * Ln(NI) + \beta_3 * Ln(BV) + \beta_4 * IFRS(All) * Ln(BV)$

Dependent Variable: Ln(MV)

Variables	**Coefficient**	***P* value**
Ln(NI)	−0.015	(0.817)
IFRS(All)*Ln(NI)	0.321***	(0.000)
Ln(BV)	0.928***	(0.000)
IFRS(All)*Ln(BV)	−0.257***	(0.000)
Constant	1.569***	(0.000)
Observations	337	
Adjusted R^2	0.866	

***$p < 0.01$; **$p < 0.05$; and *$p < 0.1$.
Base category for "Accounting Standard " interaction variables: Inflation adjustment.
The influential observations are dropped based on the Cook's statistics.
Due to the heteroscedasticity problem, White correction method is implemented in order to obtain corrected p values.

In Panel A, we compare the solo and consolidated accounting numbers of only banks during the 2002–2006 period, holding the firms and years constant. To our surprise, we observe that consolidated parent NI is not significant, while their consolidated BV is highly significant,

Panel D. Subsample comparisons of historical cost versus inflation accounting versus voluntary IFRS for 2003–2004 period[1] *Model:* $Ln(MV_t) = \beta_{0t} + \beta_{1t}\, Ln(NI_t) + \beta_{2t} Ln\,(BV_t)$

Variable	Accounting standard and year		
	Historical cost (2003–2004)	**Inflation accounting (2003–2004)**	**Voluntary IFRS (2003–2004)**
Ln NI	0.297***	0.137**	0.163**
Ln BV	0.489***	0.834***	0.800***
Constant	4.892***	0.878	1.358**
No. of observations (n)	42	71	68
Adj. R^2	0.617	0.889	0.909
Bootstrapping Std. Err.	0.106	0.027	0.015
Z^*		2.486[2]	2.727[3]

[1]2003 and 2004 are the only years in which some firms reported under both historical cost and inflation accounting, and some other firms reported under voluntary IFRS. Since the year is kept constant, we get stronger results in Panel D. Comparisons for only year 2003 provide similar significant differences.
[2]Z^* value for the significance of the difference between R^2 under historical cost (2003–2004) versus R^2 under inflation accounting (2003–2004) is calculated using Cramer's [51] procedure and it is significant at $\alpha = 0.05$.
[3]Z^* value for the significance of the difference between R^2 under historical cost (2003–2004) versus R^2 under voluntary IFRS (2003–2004) is calculated using Cramer's [51] procedure and it is significant at $\alpha = 0.01$.

Table 4. Value relevance of different accounting reforms.

indicating that reporting ownership of net assets of subsidiaries and recording of goodwill are informative, while the group net income is somehow garbled and useless. In Panel B, we pool the solo and consolidated accounting numbers of all banks across the same time period and use a consolidation dummy equal to 1 if the bank reports consolidated results. The results show no incremental value relevance for either BV or NI. Considering the results may be different for financial firms as evidenced in **Tables 3** and **4**, Panel A, we next compare all parent firms that had reported solo financial statements in 2001 and 2002, with their consolidated reports in 2003 and 2004 when they were required to report consolidated financial statements for the first time. The results in Panel C show that historical cost solo NI of these parent firms was not value relevant in 2001 and 2002, while their BV was significantly value relevant. In the next two columns, we compare the consolidated accounting numbers of parents who consolidate while using inflation accounting and those who consolidate within IFRS. Both groups report significantly higher R^2s of 85% compared to the solo HC accounting bottom lines (73%) and have significant positive coefficients for both NI and BV. To control for the possible value relevance impact of using either inflation adjustment or IFRS in these reform years for these consolidated parents, we pool all consolidated parents and run two pooled regressions, one with an inflation dummy and the other with an IFRS dummy to control for their effects on value relevance. Untabulated results show that they neither have any value relevance. We conclude that non-financial parent firms have more value relevant bottom lines when they reflect the results of consolidations compared to their solo bottom lines.

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Panel A. Subgroup comparison of consolidated versus solo NI and BV (financial firms). *Model:* $Ln(MV_t) = \beta_{0t} + \beta_{1t}\, Ln(NI_t) + \beta_{2t}\, Ln\,(BV_t)$

Variables	Solo (2002–2006)	Consolidated (2002–2006)
Ln NI	0.401**	0.169
Ln BV	0.707***	0.954***
Constant	−0.955	−1.811
No. of observations (n)	43	43
Adj. R^2	0.902	0.881
Bootstrapping Std. Err.	*0.019*	*0.030*
Z^*	−0.586	

First financial firms are used to test the effect of consolidation as Banking Regulation and Supervision Agency (BDDK) required banks to report both consolidated and solo financial statements during 2002–2006
White's robust p values (*** $p < 0.01$; ** $p < 0.05$; and * $p < 0.1$).

Panel B. Pooled regressions with interaction dummies for consolidated versus solo NI and BV Base category for reform dummy interaction variables: unconsolidated NI and BV (financial firms). *Model:* $Ln(MV) = \beta_0 + \beta_1 * Ln(NI) + \beta_2 * Cons * Ln(NI) + \beta_3 * Ln(BV) + \beta_4 * Cons * Ln(BV)$

Variables	Coefficient	*P* value
Ln(NI)	0.287	(0.155)
Consolidated*Ln(NI)	−0.233	(0.332)
Ln(BV)	0.822***	(0.000)
Consolidated *Ln(BV)	0.214	(0.325)
Constant	−1.322	(0.340)
Observations	88	
Adjusted R^2	0.822	

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Z^* value for the significance of the difference between R^2 of consolidated financial statements versus R^2 of solo financial statements is calculated using Cramer's [51] procedure and is not significant.

Panel C. Comparison of HC solo NI and BV of parent firms in 2001 and 2002 with consolidated NI and BV of same firms in 2003 and 2004 (only non-financial firms). *Model:* $Ln(MV) = \beta_0 + \beta_1 * Ln(NI) + \beta_2 * Ln(BV) + \beta_3 * Inf.Cons * Ln(NI) + \beta_4 * Inf.Cons * Ln(BV) + B_5 * IFRSCON * Ln(NI) + B_6 * IFRSCON * Ln(BV)$

Variable	Solo HC 2001–2002	Cons with INF Dummy	Cons with IFRS Dummy
Ln NI	0.126	0.276**	0.304***
Ln BV	1.133***	0.779***	0.740***
Inf.Cons*Ln NI		0.027	
Inf.Cons*Ln BV		−0.038	

Panel C. Comparison of HC solo NI and BV of parent firms in 2001 and 2002 with consolidated NI and BV of same firms in 2003 and 2004 (only non-financial firms). *Model:* $Ln(MV) = \beta_0 + \beta_1 * Ln(NI) + \beta_2 * Ln(BV) + \beta_3 * Inf.Cons * Ln(NI) + \beta_4 * Inf.Cons * Ln(BV) + B_5 * IFRSCON * Ln(NI) + B_6 * IFRSCON * Ln(BV)$

Variable	Solo HC 2001–2002	Cons with INF Dummy	Cons with IFRS Dummy
IFRSCONS*Ln NI			−0.027
IFRSCONS*Ln BV			0.038
Constant	−4.200***	−0.303	−0.303
Observations	66	75	75
Adjusted R^2	0.728	0.856	0.854

Table 5. The effect of consolidated versus solo accounting numbers.

7. Sensitivity tests

Here, we also present some of the results for the regressions we estimated under the following usual specification:

$$P_{it} = \beta_{0t} + \beta_{1t} BVE_{it} + \beta_{2t} NI_{it} + \beta_{4t} NIdummy_{it} \times NI + \varepsilon_i. \quad (3)$$

In this specification, we do not use the log-log specification, which we used in previous analysis. Instead, the variables are deflated by the number of shares to control for size differences between firms, and we use a net loss dummy to examine the incremental informativeness of losses. Our main untabulated results, highlighting only the differences from the current results under ln transformation, are the following: (a) The Uniform Accounting System of 1994 increases the value relevance of accounting numbers (R^2 increases from around 0.40 to 0.80 in the year 1994 and remains around there in future years); (b) we find no overall discernable effect for the voluntary adoption of inflation accounting and IFRS during 2003 and 2004; (c) there is stronger indication in these tests that there is some learning going on as the 2005 and 2006 results under mandatory IFRS, after some firms have experienced with voluntary IFRS, are significant for both NI and BV. The results are the strongest in 2006 as the firms have had the time to apply IFRS and the market participants learned how to interpret the numbers under the new standards and the valuation implications of more informative and transparent disclosure practices; (d) Since we are able to include loss firms in these regressions, we have interesting results for loss firms. First value relevance is much lower in loss firms, and the coefficient of NI is either not significant or has an (−) sign in all years, whereas BV is highly significant for loss firms. These results strongly support prior research on loss firms. What is more interesting is that we observe a strong (+) coefficient on the NI dummy large enough to change the (−) sign of the NI coefficient to (+).

8. Conclusion and discussion

The study contributes to the extant literature on the value relevance of accounting numbers and the research on the consequences of disclosure intensity and financial reporting reforms by

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studying the Turkish market which has several unique characteristics that make the study particularly interesting. To our knowledge, this is the first study to explore the relationship between equity values and NI and BV over such a lengthy period of time and also provide time series evidence of the effects of a series of regulatory interventions. We investigate the following reforms: i) The use of the Uniform Chart of Accounts in 1994; ii) the mandatory use of general price level accounting, which better reflects the current purchasing power of the currency in periods of high inflation in 2003 and 2004; iii) the concurrent requirement for consolidation of parent firms' accounts with those of its subsidiaries; iv) first voluntary (2003-2004), and then mandatory (2005 and 2006) adoption of IFRS in more than 100 countries in the world, and finally, v) the CG Principles compliance reporting, promulgated on a comply or explain basis, in 2004.[5]

In summary, we find that NI and BE are highly value relevant over the sample years in the BIST, with BV leading the way during the full period. While the Uniform Accounting System of 1994 has not increased the value relevance of accounting numbers, we find that both bottom lines have had very significant coefficients over the historical cost period that extended until 2003 (with the exception of NI losing its value relevance around the crisis year of 2001). We find that in general, the value relevance of accounting numbers has increased slightly during the reform period. Experimenting with mandatory inflation accounting has reduced the value relevance of NI while increasing it for BV, while tests on consolidation accounting indicate the informativeness of the elimination of intercompany transactions and combination of net assets. Adoption of IFRS has an opposite effect, increasing the value relevance of NI, but reducing that of BV. This is good because it may signal Turkey's coming of age as a more developed country in which NI is generally more value relevant prior studies. Consolidation of group accounts, on the other hand, has increased value relevance of accounts of all parent firms, with the exception of banks. We conjecture that the slow impact on value relevance of IFRS may be due to the fact that either the preparers have not yet mastered preparing the financial statements in line with IFRS in the early reform years investigated or the market participants are yet unable to assess the revaluation implications of IFRS.

The results should be of interest to preparers of financial statements, international, and local policy makers including accounting standard setters, and investors at a time when debate on the usefulness of convergence to IFRS and other corporate governance and disclosure reforms has been continuing. As future research, we intend to examine the effect of other CG attributes (family versus non-family ownership, cross-equity ownership, float rate, foreign or institutional shareholdings) on the value relevance of accounting numbers. These independent variables are also expected to mitigate the agency problem related to the expropriation of minority

[5] We also investigated the effect of Corporate Governance Principles compliance reporting, promulgated on a comply or explain basis in 2004, leading to significant progress in the transparency and disclosure (TD) scores of BIST firms measured using S&P methodology over the 2003–2006 period, particularly with regard to financial information and ownership structure disclosures in the annual reports of listed companies [53]. Using the BIST firms in our sample with TD scores, we created two subsamples of high and low TD score firms and compared value relevance of NI and BE in these two subsamples. We find that the value relevance of NI is higher in both 2004 and 2006, and value relevance of BV is significant only in high TD firms in 2005 and 2006, indicating that complying with the corporate governance principles have increased the value relevance of the financial statements of these firms.

shareholders by concentrated family owners the BIST, and thus are expected to enhance the value relevance of accounting information.

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References

[1] Ohlson J. Earnings, book values and dividends in security valuation. Contemporary Accounting Research. 1995;**11**(2):661–688

[2] Kirkulak B, Balsari C K. Value relevance of inflation-adjusted equity and income. The International Journal of Accounting. 2009; 44: 363–377

[3] Senel K, Nural I, Pamukçu B. Is capital structure a significant determinant for value relevance from İstanbul Stock Exchange. Working paper [Internet]. 2004. Available from: http://www.u-cergy.fr/AFFI_2004/IMG/pdf/NURAL.pdf [Accessed: March 11, 2009]

[4] Anandarajan A, Hasan I, Isık I, McCarthy C. The role of earnings and book values in pricing stocks: Evidence from Turkey. Advances in International Accounting. 2006;**19**:59–89

[5] Beaver WH. The information content of annual earnings announcements. Journal of Accounting Research. 1968;**6**:67–92

[6] Ball R, Brown P. An empirical evaluation of accounting income numbers. Journal of Accounting Research. 1968;Autumn:159–178

[7] Ohlson J. The theory of value and earnings, and an introduction to the Ball-Brown analysis. Contemporary Accounting Research. 1991;**8**(1):1–19

[8] Feltham G, Ohlson J. Valuation and clean surplus accounting for operating and financial activities. Contemporary Accounting Research. 1995;**11**(Spring):689–731

[9] Ohlson J, Penman S. Disaggregated accounting data as explanatory variables for returns. Journal of Accounting, Auditing & Finance. 1992;**7**(4):553–573

[10] Penman SH. A synthesis of equity valuation techniques and the terminal value calculation for the dividend discount model. Review of Accounting Studies. 1997;**2**:303–323

[11] Collins DW, Maydew EL, Weiss IS. Changes in the value-relevance of earnings and book values over the past forty years. Journal of Accounting & Economics. 1997;**24**:39–67

[12] Ali A, Hwang L. Country-specific factors related to financial reporting and the value relevance of accounting data. Journal of Accounting Research. 2000;**38**(1):1–21

[13] Warfield TD, Wild KL. Managerial ownership, accounting choices, and informativeness of earnings. Journal of Accounting and Economics. 1995;**20**(1):61–91

[14] Hung M. Accounting standards and value relevance of financial statements: An international analysis. Journal of Accounting & Economics. 2001;**30**:401–420

[15] Arce M, Mora A. Empirical evidence of the effect of European accounting differences on the stock market valuation of earnings and book value. European Accounting Review. 2002;**11**(3):573–599

[16] Lev B, Zarowin P. The boundaries of financial reporting and how to extend them. Journal of Accounting Research. 1999;**37**(2):353–385

[17] Francis J, Schipper K. Have financial statements lost their relevance?. Journal of Accounting Research. 1999;**37**(2):319–352

[18] Davis Friday PY, Gordon EA. The Effect of Macroeconomic Changes on the Value Relevance of Accounting Information: The Case of Mexico and the 1995 Financial Crisis. [Internet]. 2002. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=322762 [Accessed: June 2, 2015]

[19] Barth ME, Beaver WH, Landsman W. Relative valuation roles of equity book value and net income as function of financial health. Journal of Accounting and Economics. 1998;**25**:1–34

[20] Collins DW, Pincus M, Xie H. Equity valuation and negative earnings: The role of book value of equity. The Accounting Review. 1999;**74**(January):29–61

[21] Franzen L. The nature of losses and the value relevance of earnings. Working Paper. Texas: University of Texas at Dallas; 2002

[22] Burgstahler D, Dichev I. Earnings, adaptation, and equity value. Accounting Review. 1997;**72**(2):187–215

[23] Hasan I, Anandarahan A. Transparency and Value Relevance: The Experience of Some Mena Countries [Internet]. 2003. Available from: http://www.erf.org.eg/CMS/getFile.php?id=635 [Accessed: March 21, 2010]

[24] Bae KH, Jeong SW. The value relevance of earnings and book-value, ownership structure and business group affiliation: Evidence from Korean business groups. Journal of Business, Accounting and Finance. 2007;**34**(5–6):740–766

[25] Naceur SB, Goaied M. The value relevance of accounting and financial information: panel data evidence. Applied Financial Economics. 2004;**14**:1219–1224

[26] Hellstrom K. The value relevance of financial accounting information in a transition economy: The case of the Czech Republic. European Accounting Review. 2006;**15**(3):325–349

[27] Sami H, Zhou H. A comparison of value relevance of accounting information in different segments of the Chinese Stock Market. The International Journal of Accounting. 2004;**39**: 403–427

[28] Beaver WH, Griffin PA, Landsman WR. The incremental information content of replacement cost earnings. Journal of Accounting and Economics. 1982;**4**:15–39

[29] Ketz JE. The effect of general price-level adjustments on the predictive ability of financial ratios. Journal of Accounting Research. 1978;**16**:273–284

[30] Bublitz B, Frecka TJ, McKeown JC. Market association test and FASB Statement no.33 disclosures: A reexamination. Journal of Accounting Research. 1985;**23**:(Suppl):1/23

[31] Sami H, Curatola AP, Trapnell JE. Evidence on the predictive ability of inflation-adjusted earnings measures. Contemporary Accounting Research. 1989;**5**:556–574

[32] Davis-Friday PY, Rivera JM. Inflation accounting and 20-F disclosures: Evidence from Mexico. Accounting Horizons. 2000;**14**(2):113–135

[33] Daske H, Gebhardt G. International financial reporting standards and experts' perceptions of disclosure quality. Abacus. 2006;**42**(3–4):461–498

[34] Barth M, Landsman W, Lang MH. International accounting standards and accounting quality. Journal of Accounting Research. 2008;**46**(3):467–498

[35] Hung M, Subramanyam K. Financial statement effects of adopting international accounting standards: The case of Germany. Review of Accounting Studies. 2007;**12**:623–657

[36] Stergios A, Athanasios V, Nikolaos D. Financial statement effects of adopting International Accounting Standards: The case of Greece. Working Paper. Greece: University of Macedonia; 2007

[37] Capkun V, Cazavan-Jeny A, Jeanjean T, Weiss LA. Transition to IFRS: Value Relevance and Earnings Management [Internet]. 2007. Available from: http://www.econ.kuleuven.ac.be/eng/tew/academic/afi/events/arnn/PDFPatrickB/jeanjean.pdf [Accessed: May 8, 2010]

[38] Paananen M, Lin H. The Development of Value Relevance of IAS and IFRS Over Time: The Case of Germany. Working Paper [Internet]. 2007. University of Hertfordshire. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1066604 [Accessed: January 20, 2015]

[39] Daske H, Hail L, Leuz C, Verdi R. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. Journal of Accounting Research. 2008;**46** (5):1085–1142

[40] Naceur SB, Nachi V. Does the Tunisian Accounting Reform Improve The Value Relevance of Financial Information? [Internet]. 2006. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=888922 [Accessed: October 4, 2015]

[41] Habib A, Weil S. The impact of regulatory reform on the value-relevance of accounting information: Evidence from the 1993 regulatory reforms in New Zealand. Advances in Accounting, Incorporating Advances in International Accounting. 2008;**24**:227–236

[42] Tsalavoutas I, André P, Evans, L. Transition to IFRS and Value Relevance in a Small But Developed Market: A Look at Greek Evidence [Internet]. 2008. Available from: http://ssrn.com/abstract=1286474 [Accessed: October 4, 2015]

[43] Horton J, Serafeim G, Serafeim I. Does Mandatory IFRS Adoption Improve the Information Environment? [Internet]. 2008. Available from: http://ssrn.com/abstract=1264101 [Accessed: August 2, 2011]

[44] Abad C, Laffarga J, Garcia-Borbolla A, Larrdn M, Pinero M, Garrod N. An evaluation of the value relevance of consolidated versus unconsolidated accounting information: evidence from quoted Spanish firms. Journal of International Financial Management and Accounting. 2000;**11**(3):156–177

[45] Niskanen J, Kinnunenb J, Kasanenb E. The value relevance of IAS reconciliation components: Empirical evidence from Finland. Journal of Accounting and Public Policy. 2000;**19** (2):119–137

[46] Ozer G. Firma değerlenmesinde muhasebe kârlarının rolü: İMKB'de deneysel bir araştırma. İktisat, İşletme ve Finans. 2002;**17**(201):112–122

[47] Ozer G, Yucel R. Bir yıldan uzun ölçüm dönemlerinin düzey ve değişim modelleri açısından muhasebe karları ile hisse senedi fiyatları arasındaki ilişki üzerine etkisi. Muhasebe ve Denetime Bakış. 2005;**14**:1–22

[48] Ramesh K, Thiagarajan R. Inter-temporal decline in earnings response coefficients. Working Paper. Evanston, IL: Northwestern University; 1995

[49] Hand J. The Value Relevance of Financial Statements Within and Across Private and Public Equity Markets [Internet]. 2003. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=484382 [Accessed: October 4, 2015]

[50] Hand J. The value relevance of financial statements in the venture capital market. The Accounting Review. 2005;**80**(2):613–648

[51] Cramer J. Mean and variance of R^2 in small and moderate samples. Journal of Econometrics. 1987;**35**:253–266.

[52] Simga-Mugan C, Hosal-Akman N. Convergence to international financial reporting standards: The case of Turkey. International Journal of Accounting, Auditing and Performance Evaluation. 2005**;2**(1–2):127–139

[53] Aksu M, Espahbodi H. The impact of IFRS adoption and corporate governance principles on transparency and disclosure: The case of Istanbul stock exchange. Emerging Markets Finance and Trade (SSCI). 2016;**52**(4):1030–1028. Published on line Sept. 18, 2015, in print April 2016. DOI: 10.1080/1540496X.2014.998570

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