



THE IMPACT OF THE FINANCIAL REPORTING STANDARDS ON THE VALUE RELEVANCE OF THE FINANCIAL INFORMATION IN MEXICO

Susan Miller , Department of Linguistics, Stanford University

Abstract

In this study, it is shown that the value relevance of the financial information, measured by the coefficient of determination (R^2), has improved as a consequence of the changes in the financial reporting standards. It is applied the Ohlson model (1995) with accounting variables (earning per share and book value) and the stock market price of Mexican stock market companies, during the period from 1992 to 2010. The econometric results are obtained applying an Ordinary Least Squared Regression Analysis and a Panel Data Analysis. The sample is divided into two periods, before and after the foundation of CINIF, and the Chow test is applied to confirm the existence of a structural change. The book value variable is consistently significant in both periods. The Ohlson model is also applied to sub-samples which distinguish the firm for its size, for belonging to the Food and beverages industry and for its classification as Tangible and Intangible firms.

Keywords: financial reporting standards, stock market price, relevance value, earnings per share, book value.



Introduction

The development of empirical research since the seventies has allowed the generation of a harmonization paradigm within accounting (Wolk, Dodd and Tearney , 2004) . Around the world, continuous efforts have been made by accounting and stock exchange organizations to harmonize accounting standards and thus achieve the establishment of a new and widespread financial information system.

To this end, two large organizations have contributed significantly; On the one hand, in the United States, the Financial Accounting Standard Board (FASB) has constantly updated the Generally Accepted Accounting Principles (GAAP); On the other hand, the creation and strengthening of the International Financial Reporting Standards (IFRS) , issued by the International Accounting Standard Board (IASB), to which a large number of countries have joined, such as those that make up the European Union, Australia, Canada, Brazil, the United Kingdom , India, China, among others. Achieving this paradigm is essential for financial information in general and for the financial information of Mexico in particular .

In the case of Mexico, the function of issuing financial reporting standards was begun by the Mexican Institute of Public Accountants (IMCP) through the Accounting Principles Commission (CPC) in 1974. As of June 2004 , it is the Mexican Council of Financial Reporting Standards (CINIF) who It has this function, in addition to seeking homologation with international standards (IFRS).



This research evaluates whether the relevance of financial information has been impacted by the changes that the CINIF has incorporated into the Financial Reporting Standards (NIF). Previous studies have analyzed the relevance of financial information in Mexico , but not the impact of the changes that Mexican regulations have had on the recent years in its harmonization process . Given that starting in 2012, companies listed on the Mexican Stock Exchange will adopt international standards, we are at the opportune moment to evaluate what the market's assessment of the financial information has been when it conforms to these standards.

The research is exploratory and correlational , as it seeks a cause- effect relationship between the study variables . The causal relationship proposes that changes in financial reporting standards impact profits and book value , the main accounting indicators .

The research is part of Capital Market Research because it is based on accounting information to study its relevance to the market , specifically in the value of the share price (Wolk, Dodd and Tearney , 2004).

The article is organized as follows: first, the theoretical framework of financial information, the research carried out on the subject of financial markets and the relevance of financial information in various parts of the world and, particularly, in Mexico, are presented. ; Then the methodology, the Ohlson (1995) model, as well as the characteristics of the variables and the study sample are explained ; Later, the analysis of the data and the discussion of the results are shown ; Finally, the conclusions are presented.

Theoretical framework



The study analyzes whether changes to Generally Accepted Accounting Principles (GAAP) and the issuance of new NIFs have impacted the relevance of financial information.

To contextualize such changes, table 1 shows the chronological evolution of the issuance of accounting regulations in Mexico. It can be seen that during the period 1992-1995, only four standards were modified or issued. The period 1996-1999 is the period with the lowest production since only two new standards were issued. In the year 2000, the work of issuing regulations began to pick up, but the period 2004-2007 was the period with the greatest promulgation in just four years. The last block of time , 2008 to 2011, also shows hard work in issuance and , mainly, in the convergence of national to international standards . In summary, based on its role as setter of accounting standards in Mexico, the CINIF, since 2006, has published 30 NIF and 16 INIF (interpretations of the NIF).

There is numerous research that has documented that changes in reported accounting profits affect firm value through changes in stock price.

A stock valuation theory that includes accounting concepts and stock market data is the clean surplus theory ¹ of Ohlson (1995), as well as Feltham and Ohlson (1995). This theory proposes that the valuation of a firm can be based on the book value at the beginning of the period plus the present value of expected future abnormal profits . Abnormal profits are defined as profits in excess of _ _ normal expected profits (Wolk, Dodd and Tearney, 2004).



The usefulness of accounting information to investors has been investigated empirically by associating the disclosed accounting data with changes in stock prices . If there is a significant association, then there is evidence that financial information is useful regarding the valuation of the company. These types of studies constitute tests of what is known as the efficient markets hypothesis .

The strongest evidence from capital markets research concerns the informational content of earnings reported in annual reports . Studies that seek to evaluate the relevance of information begin with the seminal study by Ball and Brown (1968) , in which the Authors point out that the direction of change in profit is positively correlated with movements in stock value.

In summary, empirical evidence from capital market securities research supports the assertion that earnings reported by accounting contain relevant information that impacts stock prices.

Table 1

Schedule for the issuance of the Standards Financial Information in Mexico

	Before 1992	1992- 1995	1996- 1999	2000- 2003	2004- 2007	2008- 2011
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NIF A Series: Conceptual Framework

NIF A-1	74-87				Jan -06	
NIF A-2	74-88				Jan -06	
NIF A-3	74-89				Jan -06	
NIF A-4	74-90				Jan -06	
NIF A-5	74-91				Jan -06	
NIF A-6	74-92				Jan -06	
NIF A-7	74-93				Jan -06	



NIF A-8	74-94 —	Jan- 95			Jan -06	
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NIF B Series : Standards applicable to financial statements as a whole

NIF					Jan -06	
B-1						Jan -08
NIF		Dec- 95		Jan-	Jan- 07	
B-2				01		
NIF				Apr		Jan-
B-3	Mar			-03	Jan -05	11
B-4	-76	Jan- 92				Jan-
NIF	Jan-					09
B-5	83				Jan-	Jan-
NIF	Jan-	Jun -95	Jan- 97		07	09
B-7	84		Jan- 98		Jan-	Jan-
NIF					04	11
B-8						Jan-
NIF						08
B-9						
NIF						Jan-
B-10						08
NIF						Jan-
B-13						10
B-14						



NIF B-15					
NIF B-16					

NIF C Series : Standards applicable to specific concepts of financial statements

NIF C-74			Jan- 01		Jan- 10
1 and 90					
C- 2 82			Jan- 01	Jan -05	
and 90					
C- 3 Jul- 74					
NIF C-Jan-					Jan- 11
4 74					
NIF C-Oct -					Jan- 11
5 81					
NIF C-Jul- 74					Jan- 11
6					
NIF C-Apr -			Jan -03		Jan- 09
8 76					
C- 9 Jan-			Jan -03		
74					
C- 10				Jan -05	
C- 11 76					



	and 90					
C- 12	Jan-74				Jan -04	
NIF 13	C-Jan-89				Jan- 07	
C- 15					Jan -04	
NIF 18	C-					Jan- 11

NIF D Series : Standards applicable to problems determining results

NIF D-3	Jul-74			Jan-00	Jan -04	Jan-08
NIF D-4	Dec-87			Jan-00	Jan- 07	Jan-08
D-5	Jan-91					
NIF 6	D-			Jan- 01		
D- 7						

NIF E Series: Standards applicable to specialized activities in different sectors

E-1				Jan -03		
NIF E-2						Jan- 10
Total stan	25	4	2	10	twenty	16



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The relevance of financial information shows the association between financial information from accounting, represented by values such as the profit and book value of the share, as well as the value of the share in the stock market.

There are some considerations that all research on the relevance of financial information assumes. First, that markets are efficient or at least solidly efficient. Second, it is assumed that the present value of the stock is determined by values from accounting. Finally, it is assumed that over time the book value and market value of the stock converge to zero (Goodwin, Sawyer, and Ahmed, 2002).

As noted above, the most relevant research on the topic is those carried out by Ball and Brown (1968), Beaver (1968), Ohlson (1995), Feltman and Ohlson (1995) . Some others are mentioned below.

The relevance of financial information is characterized by the quality of the information and is a concept that admits many definitions and ways of being measured. Earnings quality is measured by the coefficient of determination in a regression of stock market prices on earnings. The strength of the relationship between these values is the basis for most relevance measures . _ In studies carried out by Collins, Maydew and Weiss (1997), as well as by Lev and Zarowin (1999), the coefficient of this association is used to estimate the relevance of the information.

In their study, Easton, Harris and Ohlson (1992) analyze the relationship between stock market returns and profits. The research reviews two important financial



attributes : the accumulated profits in several periods and the extended period in which the profits are determined; These authors find that these attributes reduce “measurement errors” in accumulated profits. Their conclusion is that retained earnings are the natural variable to explain stock returns.

In another study on the relevance of financial information from 1978 to 1996, Lev and Zarowin (1999) find that the values of earnings, cash flow, and book value of equity have deteriorated in their predictive value during that period .

The relevance of financial information has been evaluated in all types of areas, in different countries , in different items of the financial statements and with different models; The most used is the Ohlson (1995) model in its original version or with modifications by adding new variables.

Below are mentioned , in chronological order , some works related to the relevance of financial information with data from Mexico .

Wong and Barnett (1984) conducted a study on the efficiency of markets. They used a methodology similar to that used by Ball and Brown (1968) with a sample of 70 companies listed on the Mexican Stock Exchange in 1979. The results showed that financial information has an impact on the share price, thus confirming its relevance.

Davis (1996) evaluated whether financial information maintains its information content (relevance) when using inflation - adjusted accounting data . The results indicate that the book value of stockholders ' equity and some of the components of



the income statement contain relevant information for the case. of companies listed on the Mexican Stock Exchange.

Gordon (1998) examines the relevance of using historical balance sheet and income statement values , which are updated by the general price level and replacement cost methods .² The study concludes that both methods provide financial information of greater relevance than that which uses historical values in both financial statements. Juárez (1999) also finds that the information from accounting adjusted to current prices, that is, restated, provides greater information.

Davis and Rivera (2000) evaluate the relationship between the share price of a Mexican company listed in the United States and the reported values of net income and stockholders' equity determined under Mexican and American standards. Their results indicate that reconciling accounting information under local standards with

At that time , accounting information could be updated using two restatement methods : general price index and replacement costs ; The second method was subsequently eliminated.

American standards does not have a significant impact on the share price, despite the Free Trade Agreement , the closeness between the countries and the fact that the SEC does not require reconciliation of the accounting treatment for inflation, which has been one of the most important differences between both regulations.

Davis and Gordon (2002) study in the period 1992-1997 the relationship between the market price of the share and its book value, profit and cash flow, considering the



financial crisis of 1995. They find that the value In stock books it maintains its informative content, but not its profits.

Palacios *et al.* (2006) apply the Ohlson model to look for differences in the relationship between accounting information and market information between different accounting systems. When analyzing Latin American companies listed on the New York Stock Exchange (NYSE) during the period 1997-2001 , we can affirm, based on the results, that the fundamental accounting variables calculated under American accounting principles have greater value relevance for the market than those obtained under Latin American principles.

Durán, Valdés and Valencia (2007) apply the Ohlson model adding variables such as EBITDA, dividends , operating cash flow and net cash flow during the period 1991-2003 . They conclude that such variables do not improve the original model by replacing utilities ; However , adding operating cash flow as a new independent variable does add relevance to the model .

Hernández (2009) finds that the earnings per share and book value variables provide greater relevance to the financial information , taking into account the changes in the NIF. His study of it covers until 2007 and he concludes that it is the earnings per share that gives the greatest explanation to the model in the recent years of his study.

Methodology

Model Description

The Ohlson (1995) model used in this study indicates that the value of a company's share in the stock market can be expressed as a function of its profits and its book value as follows:

$$P_{it} = \alpha_0 + \alpha_1 E_{it} + \alpha_2 BV_{it} + \varepsilon_{it} \quad (1)$$

Where:

P_{it} = Share price of firm i three months after the end of the fiscal year in the period t.

E_{it} = Earnings per share of firm i during period t .

BV_{it} = Book value per share of firm i at the end of period t . It is the other relevant information of firm i in period t.

Ohlson (1995) points out that to compare the explanatory power of earnings and book value, the total explanatory power can be decomposed into three parts: the explanatory power of earnings, the explanatory power of book value, and the explanatory power of combination of profits and book value.

To do this test , the following equations will be used :

$$P_{it} = \alpha_0 + \alpha_1 E_{it} + \alpha_2 BV_{it} + \varepsilon_{it} \quad (1)$$

$$P_{it} = \alpha_0 + \alpha_1 E_{it} + \alpha_2 BV_{it} + \varepsilon_{it} \quad (2)$$

$$(3) \quad P_{it} = \alpha_0 + \alpha_2 BV_{it} + \varepsilon_{it}$$

As Ohlson points out , the coefficients of the equations are denoted respectively .

$\bar{R}_t^2, \bar{R}_2^2, \bar{R}_3^2$

So:

represents the explanatory power of the book value . represents the explanatory power of utilities.

– $\bar{R}_C^2$ It represents the explanatory power of the book value and profits , that is, the common .

For the main research question, it is necessary to compare the results of two samples, so the structural stability test of regression models known as Chow test (Gujarati, 2001) will be applied .

First, the regression is carried out for the joint period of 19 years as indicated in regression (1):

$$(1) \quad P_{it} = \alpha_0 + \alpha_1 E_{it} + \alpha_2 BV_{it} + \varepsilon_{it}$$

To check if there is a structural change , regressions are performed and the results are compared. Such a change means that the intercepts, slopes , or both are different; If they are not , there would be structural stability in the data (Gujarati, 2001). Structural stability would mean that changes in the _ financial information have not increased the relevance of the information, while the structural change would suggest an increase in its relevance.

For this purpose, the information is analyzed by separating the sample into two blocks, one of twelve years (1992-2003) and another of seven years (2004-2010), since the aim is to find the increase in relevance from the changes in accounting regulations with the creation of the CINIF in 2004.

For the period prior to the modifications in financial reporting standards (1992-2003) , the regression is carried out :

$$P_{it} = \beta_0 + \beta_1 E_{it} + \beta_2 BV_{it} + \varepsilon_{it} \quad (2)$$

For the period after these modifications (2004-2010), the regression is carried out :

$$P_{it} = \gamma_0 + \gamma_1 E_{it} + \gamma_2 BV_{it} + \varepsilon_{it} \quad (3)$$

Hypothesis



To operationalize the model, the share price is used as a dependent variable and the accounting values (book value of the share and earnings per share) as independent variables (financial information indicators impacted by changes in NIF).

Consequently , the following working hypotheses are presented :

H₁ : The relevance of financial information has increased as a consequence of the changes in financial reporting standards made since 2004 in Mexico.

Financial reporting standards do not impact all companies in the same way; there may be companies that better reflect the changes in these standards due to the type of activities they carry out. There are Mexican companies that are listed on international markets that may represent another sample .

appropriate to evaluate modifications to NIF. Therefore, the second hypothesis is defined as follows:

H₂ : The relevance of financial information is greater in Mexican companies that are listed on the United States stock exchanges compared to those that are only listed on the Mexican stock exchange, as a consequence of the changes made in information standards in Mexico as of 2004.

The impact of the regulations can be reflected in different ways in each variable; That is, the relevance of the information may be greater due to changes in the NIF that impact the earnings per share or the book value of the share, so the third hypothesis is the following :

H₃ : The relevance of financial information has increased more for earnings per share than for book value per share as a consequence of the changes made to financial reporting standards in Mexico since 2004.

We have noted that some companies may be better able to reflect changes in financial reporting standards than others. This may be due to the sector they are in or the group to which they belong (tangible or intangible). To analyze the impact on the different sectors or groups, the following hypotheses are proposed:

H₄ : The relevance of financial information affects the food and beverage sectors, as well as commerce, in a different way, derived from the changes made to financial reporting standards in Mexico since 2004.



H₅ : The relevance of financial information affects differently the size of companies, as well as the group to which they belong, tangible or intangible, as a consequence of the changes made in financial information standards in Mexico starting in 2004.

Definition of variables

Independent variables (X):

- Value in books. It is the book value per share and is obtained by dividing the shareholders ' equity by the number of shares.

- Net profit . It is the net profit or loss per share and is calculated by dividing the company's profit or loss by the number of shares.

Both variables are obtained from the *Economática* database and are updated _ _

due to inflation as of December 31 of each year .

Dependent variable (Y):

- Share price . It is the market value of the share. According to _
The Ohlson model considers the price three months after closing and is also obtained from the *Economática* database that comes from information from the Mexican Stock Exchange (BMV).

Sample definition _ _

The study includes companies that were listed on the BMV for at least 10 of the 19 years of the study (1992-2010). Companies that belong to the financial sector are excluded because they have followed accounting rules issued by the National Banking and Securities Commission. Some companies are listed with two different series of shares and it was also a selection criterion to include only one type of share per company: the one that has been most widely traded. Due to the previous conditions , the sample is made up of 83 companies shown in table 2.

For hypotheses 2, 4 and 5 , the following subsamples were considered :

- 15 companies currently listed on any of the United States stock exchanges.
- 16 intangible companies and 67 tangible. Those are considered intangible

who participate in activities that could require greater investment in technology, such as the telecommunications sector and the services sector. Those that belong to the commercial and manufacturing sector are considered tangible.

- Small, medium, large and extra-large companies, separated by quartiles according to the total amount of their assets updated to constant pesos as of December 2010.
- When classifying them by economic sector, the classification of *Economic* and the number of companies participating in each sector is variable.

Table 2

Companies included in the sample

Compa ny	Econom ic sector	Size	Clu ster	Compan y	Economi c sector	Size	Clu ster
Accel, SA	Others	Small	Ta ngi ble	Gruma, SA C.V.	Food and dedrinks	Big	Tan gibl e
Alfa, SA	Steel and metal lurgic al	Extra big	Ta ngi ble	KUO Group	Industrial machinery	Extra big	Tan gibl e
Apasco, SA	Non- metallic	Big	Ta ngi	Pochteca Group	Trade	Small	Tan gibl

	minerals		ble				e
Ara Consortium	Construct ion	Media n	Ta ngi ble	Herdez, SA	Food and drinks	Media n	Tan gibl e
Autlan Cía. Mining	Mining	Media n	Ta ngi ble	Mexican Hilasal	Textile	Small	Tan gibl e
Bachoco Industries	Agriculture and fishing	Big	Ta ngi ble	Conmsorcio Home	Constructi on	Small	Tan gibl e
Bafar Group	Food and drinks	Small	Ta ngi ble	Hylsamex	Steel and metal lurgical	Extra big	Tan gibl e
Bimbo Group	Food and drinks	Extra big	Ta ngi ble	ICA Holding Soc	Constructi on	Extra big	Tan gibl e
Biper SA CV	Telecom munication	Media	Inta ngi ble	Ind. Automoti ve S.A.	Vehicles and parts	Small	Tan gibl e
Carso	Telecom	Extra	Inta	CH	Steel	Big	Tan



Global Teleco	municatio n	big	ngi ble	Industries	and metal lurgic al		gibl e
Chihuahua Cement s	Non- metallic minerals	Big	Ta ngi ble	Ceramic Inter	Non- metallic minerals	Media n	Tan gibl e
Cemex, SA	Non- metallic minerals	Extra big	Ta ngi ble	Iusacell Gpo	Telecomm unication	Big	Inta ngibl le
Cid Mega Resort	Others	Media n	Inta ngi ble	Kimberly Clark _	Paper and pulp	Big	Tan gibl e
Cintra, SA	Transport service	Big	Inta ngi ble	Lamosa Gpo	Non- metallic minerals	Media n	Tan gibl e
Coca Cola Femsa	Food and drinks	Extra big	Ta ngi ble	Liverpool Port _	Trade	Extra big	Tan gibl e
Collado , SA	Trade	Small	Ta ngi ble	Maseca Gl	Food and drinks	Media n	Tan gibl e

Mexican Commercial	Trade	Extra big	Tan gible	South Medical	Others	Small	Intan gible
Continental Group	Food and drinks	Media n	Tan gible	Mexican S.A. of CV	Chemistry	Media n	Tan gible
Corp Interam of Ent	Others	Big	Intan gible	Minsa, SA	Food and drinks	Small	Tan gible
Corp Moctez uma	Non- metallic minerals	Media n	Tan gible	Nutrisa Gpo	Trade	Small	Tan gible
Cydsa, SA	Chemistry	Big	Tan gible	Parras Cia Indus	Textile	Media n	Tan gible
Dixon Ticonderoga	Others	Small	Tan gible	Peñoles Industries	Mining	Big	Tan gible
Edoard o, SA	Textile	Small	Tan gible	Pepsigx (Gemex)	Food and drinks	Big	Tan gible
Elektra	Trade	Extra	Tan	Gpo Inns	Others	Media	Intan

Grpo		big	ngi ble			n	ngib le
Far- Ben	Trade	Small	Ta ngi ble	Procorp S.A.	Others	Small	Inta ngib le
Econom ic Develop ment Mexico	Food and drinks	Extra big	Ta ngi ble	Infra Prom and Op _	Constructi on	Big	Tan gibl e
Forge Corpora te	Trade	Media n	Ta ngi ble	Radio Center	Others	Small	Inta ngib le
Carso Group	Others	Extra big	Inta ngi ble	Saba House Group	Trade	Media n	Tan gibl e
Corvi Group	Trade	Media n	Ta ngi ble	San Luis Corp	Industrial machinery	Media n	Tan gibl e
United Gemb	Food and drinks	Media n	Ta ngi ble	Sap	Agricultur e and fishing	Extra big	Tan gibl e
Geo	Construct	Big	Ta	Simec	Steel	Big	Tan



Corporation			ngible	Group	and metal lurgical al		gible
Gpo Giant	Trade	Big	Ta ngi ble	Soriana Organizat ion	Trade	Extra big	Tan gibl e
Gln Saltillo	Non- metallic minerals	Media n	Ta ngi ble	Tekchem, S.A.	Chemistry	Small	Tan gibl e
GMacm a, SA	Food and drinks	Small	Ta ngi ble	Mexico Telephon es	Telecomm unication	Extra big	Inta ngib le
GMarti, SA	Trade	Small	Ta ngi ble	Televisa Gpo	Others	Extra big	Inta ngib le
GMex Develop ment	Construct ion	Media n	Ta ngi ble	TMM Group	Transport service	Big	Inta ngib le
GMexico	Mining	Extra big	Ta ngi ble	Mex Steel Pipes _	Steel and metal lurgical al	Big	Tan gibl e



GModel	Food and drinks	Extra big	Ta ngi ble	TV Azteca	Others	Big	Inta ngib le
GMode rna	Food and drinks	Media n	Ta ngi ble	CNCI Universit y	Trade	Small	Inta ngib le
Gomo Gpo	Trade	Small	Ta ngi ble	Valley Juices _	Food and drinks	Small	Tan gibl e
G Palace Iron	Trade	Big	Tang ible	Vitro	Non- metallic minerals	Extra big	Tan gibl e
				Wal Mart of Mexico	Trade	Extra big	Tan gibl e

Results

This section analyzes the results of the tests used to determine whether there are changes in the relevance of the financial information in accordance with what was stated in the hypotheses .

The research hypothesis assumes a relationship of the independent variables, book value per share (BV) and earnings per share (EPS), with respect to the dependent variable, share price in the stock market (PM). To explain the behavior of the relevance of the information based on the R^2 (Palacios *et al.* , 2006), different regressions were run according to the Ohlson (1995) model.

- For all companies in the sample in each of the 19 years

A longitudinal analysis is carried out through regression for the data of the 83 companies in each of the years of the study period (1992-2010) . That is, 19 regressions are carried out observing the behavior of R^2 , a reference to the relevance of financial information.

The results are shown in table 3 and are illustrated in graph 1. In the vast majority of the years prior to the changes in the NIF, the R^2 is less than 0.50, reaching a level of 0.11 in 2004. In 2005 there is a considerable increase with an R^2 of 0.48 which indicates that just over 48% of the share value in the market is explained by the variables book value of the share and earnings per share . Although in the period 1992-2004 the R^2 is volatile, starting in 2005 an upward trend is seen , suggesting what hypothesis 1 points out : an increase in the relevance of the



information after 2004 when the CINIF begins to develop the conceptual framework of the NIF .

When reviewing the coefficients and their statistical significance , we find that the relationship is mostly explained by the book value , which is positive and significant .

³ In this section the term R^2 will be repeated as a reference to the relevance of financial information . The greater R^2 , the greater the relevance.

cative in 17 periods. The positive result means that for an increase in the book value there is an increase in the share price , while it is statistically significant because the p values are practically zero .

For its part , the results for earnings per share are negative and not significant in some periods. Negative means that for each increase in profit there is a decrease in the share price , a situation that does not represent a problem as it is not significant; That is, the probability that this statement is not correct is high. The interesting thing is that starting in 2005 the earnings per share result becomes positive and statistically significant.

For each regression, the Durbin Watson test is analyzed , obtaining results greater than 1.688 (1.441) for significance levels of .05 (.01) in all years , which indicates that there is no autocorrelation in the variables.

- For all companies in the block sample

In order to evaluate whether the relevance of financial information has increased due to the changes made in accounting regulations in Mexico since 2004, the sample was divided into two periods .

For the analysis of the time blocks and the application of the Chow test, a regression was carried out for the entire period with unbalanced panel data (not all companies exist during the entire period studied) and regressions were carried out with panel data balanced in each time block for the 83 companies defined in the sample.

The results show that the R^2 of each block is greater than that of the entire period. On the other hand, the R^2 of the second block presents an increase of 23%



compared to the first and there is statistical significance of the book value variable in both blocks, increasing considerably in the last period (statistic $t = 17.12$). For its part, the variable earnings per share loses significance in the second period (Table 4).

In order to confirm the impact of the issuance of NIF following the creation of the CINIF on the share price, when analyzing the entire period, a *dummy* variable was added to the model to indicate the presence or absence of any categorical effect . starting in 2004. The result was that such variable was __ statistically

significant, reaffirming that indeed the relevance of financial information increases to the extent that important modifications are made to the NIF .

Table 3

Statistics of the R^2 of each year (1992-2010) of the 83 companies

Year	No. Obs.	Total companies	%	R^2	Coef. t EPS	t	Coef. f. V.L.	t
1992	37	83	Four r. Five %	0.28	3.89	1.27	0.28	1.11
1993	49	83	59 %	0.55	2.42	3.73	0.19	0.91
1994	58	83	70 %	0.34	-	-	0.19	5.23
nineteen	61	83	73 %	0.44	1.51	2.99	0.36	5.68
teen								
nine								
ty								
five								
nine	70	83	84	0.3	-	-	0.44	5.08



teen			%	8	0.05	0.11		
nine								
ty								
six								
199	81	83	98	0.4	-	-	0.71	7.22
7			%	0	0.21	2.58		
199	81	83	98	0.2	0.76	1.82	0.30	5.18
8			%	9				
199	83	83	100	0.1	-	-	0.23	2.91
9			%	1	0.28	0.81		
200	81	83	98	0.0	-	-	0.28	2.35
0			%	7	0.02	0.21		
200	80	83	96	0.1	0.69	2.22	0.54	4.13
1			%	9				
200	76	83	92	0.3	0.71	2.01	0.46	5.35
2			%	0				
200	77	83	93	0.3	-	-	0.95	6.40
3			%	6	0.25	0.88		
200	78	83	94	0.1	-	-	0.46	3.01
4			%	2	0.47	1.23		
200	77	83	93	0.4	2.33	7.18	0.40	2.81
5			%	9				
200	78	83	94	0.8	3.23	14.0	0.97	5.82
6			%	3		9		

200	71	83	86	0.5	2.44	2.64	1.82	5.98
7			%	6				
200	69	83	83	0.7	1.93	3.39	1.91	8.57
8			%	5				
200	68	83	82	0.8	3.93	3.28	2.57	10.6
9			%	0				3
201	66	83	80	0.7	6.07	3.35	2.71	10.5
0			%	6				9

Graph 1

R^2 for each year of the 83 companies (Cross section)

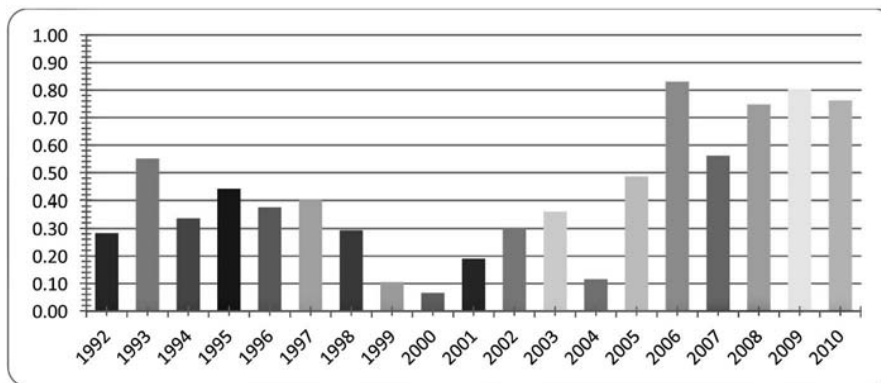


Table 4

R^2 statistics of the 83 companies analyzed throughout the period and divided into blocks (panel data)

Period	No. Comp anies	No. Obs .	Tot al	%	R ²	Coe ff EPS	t	Coe ff V.L	t	Coeff Dum my	t
1992- 2010	83	1008	1577	64%	0.65	0.83	6.72	0.43	10.86	13.58	5.75
Two blocks , before and after the creation of the CINIF in 2004											
1992- 2003	83	396	996	40%	0.69	0.91	7.61	0.13	3.64		
2004- 2010				75%	0.85		0.41		17.13		

Relevance of financial information in Mexican companies listed on the United States stock markets (Hypothesis 2)

Companies that are listed on other financial markets may have more complex operations and information needs that could be different from those that are only listed on the national market . For this reason, tests are carried out to determine the impact of changes in NIF on those companies listed on the United States stock markets .

- For the 15 Mexican companies in the sample that are listed on the United States values for each of the 19 years



The results of the R^2 are greater than 0.50 in the first eight years of the sample and there is a considerable increase in 2006 when it reaches 0.87 (graph 2). The coefficients for book value are positive in 16 of the 19 years, while for earnings per share they are positive in almost half of the cases . For both variables, the coefficients are statistically significant in eight years (not being the same) and only in the case of earnings per share are they significant in some years after (2004, 2005, 2006 and 2010) to the creation of the CINIF. It should be noted that the book value has not been significant since 2002.

- For the 15 Mexican companies listed on the stock markets of _ _
United States by blocks

By dividing the sample into two blocks, we can confirm that R^2 decreased in recent years and only the earnings per share coefficient is statistically significant in both blocks (Table 5).

Graph 2

R^2 of the 15 companies listed in the US (Cross section)

in accordance with GAAP/NIF filed with the BMV

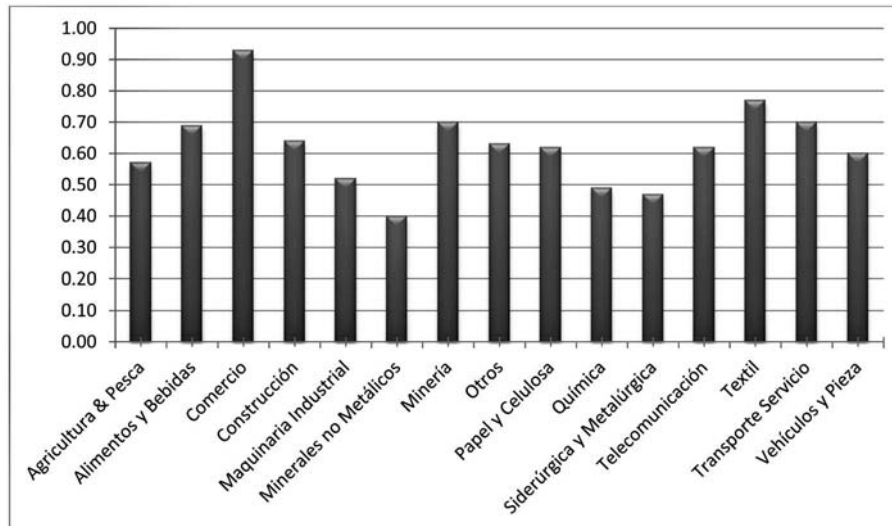


Table 5

R² statistics of the 15 companies divided into blocks __

Two blocks, before and after the creation of the CINIF in 2004 (panel data)

Period	No. Companies	No. Obs.	Total	%	R ²	Coeff of EPS	t	Coeff V.L.	t
1992-1993	fifteen	72	180	40%	0.83	1.06	5.75	0.42	5.46
2003-2004	fifteen	84	105	80%	0.64	0.52	2.29	- 0.04	- 0.15
2004-2010	thirteen	60	78	60%	0.75	0.61	2.82	0.01	0.01

Comparing the behavior of the R^2 of the entire sample of companies listed in the United States (also known as ADR⁴) and which is divided into two blocks, it can be seen that in the first block the R^2 of the ADR companies is higher to that of the companies in the entire sample in that period; However, in the second block we find that this decreases compared to that of the complete sample. These results suggest that NIF could have lost influence _

⁵ ADR is the acronym for American Depositary Receipt that represents the shares of a foreign company in

United States .

in companies listed in the United States because they are more interested in having a greater impact from foreign standards such as American ones (US GAAP) or international ones (IFRS).

Relevance of financial information for each variable _

In this section, the impact of the changes in the NIF on the relevance of the study variables will be analyzed, evaluating them separately as suggested by the Ohlson (1995) model and as proposed by equations 2 and 3. The results are presented both for the full sample and for companies listed abroad .

- Individual impact of each variable (UPA and VL) throughout the period

For the sample of 83 companies and performing 19 regressions, one for each year, we found that the relevance of the financial information (R^2), coming from each variable analyzed individually, is lower than that reported in the complete model,

which includes the two variables; This result is logical when eliminating an explanatory variable. However , the trend is similar to that of the complete model: there is an increase in R^2 of recent years (2006-2010) as can be seen in graph 3.

In the particular analysis of the UPA, we find a low R^2 in the first years (1994-2004), reaching its lowest level in 2000. However, it increases from 2005 and in 2006 is when a greater relevance.

The VL coefficients are positive and statistically significant in 15 of 19 periods . For its part, the UPA coefficients are positive since 2001 and significant since 2005, at least at a significance level of 0.10 , as seen in Table 6 .

- Individual impact of each variable (UPA and VL) in each block

When analyzing the data in two periods, the relevance of the VL increases by 31% and the coefficient is positive and statistically significant in both time blocks (see table 7).

In the case of companies listed on the United States financial markets, the results are similar to those found in the full model. The relevance of financial information (R^2) decreases in the second period and the book value coefficient is not statistically significant . It is worth mentioning that before the changes , the R^2 of companies that are listed in the United States is higher than that of those that are not.

Table 6

Statistics of the R^2 of each year (1992 - 2010) of the 83 companies

including each explanatory variable separately (cross section)

Year	Obs.	Total companies	%	R ²	Coeff V.L.	t	R ²	Coeff	t
								EPS	
1992	37	83	Four Fif e%	0.21	0.47	1.75	0.23	5.76	2.11
1993	49	83	59%	0.42	0.79	3.25	0.54	2.89	8.42
1994	58	83	70%	0.33	0.19	2.84	0.01	-0.11	-0.24
ninet een ninet y five	61	83	73%	0.36	0.38	2.54	0.13	1.85	1.44
ninet een ninet y six	70	83	84%	0.38	0.44	2.49	0.14	1.39	2.27



1997	81	83	98	0.35	0.59	4.1	0.0	0.07	2.5
			%			5	1		8
1998	81	83	98	0.26	0.31	3.3	0.0	0.98	1.5
			%			6	5		4
1999	82	83	99	0.10	0.24	2.1	0.0	-	-
			%			5	1	0.31	0.3
									6
2000	81	83	98	0.07	0.28	1.7	0.0	-	-
			%			9	0	0.02	0.5
									4
2001	80	83	96	0.14	0.46	1.9	0.0	0.32	0.8
			%			8	1		5
2002	76	83	92	0.26	0.45	2.6	0.0	0.61	0.5
			%			0	3		9
2003	77	83	93	0.35	0.91	2.6	0.0	0.26	0.3
			%			5	1		8
2004	78	83	94	0.10	0.34	1.3	0.0	0.26	0.4
			%			2	1		5
2005	77	83	93	0.13	0.6	1.3	0.4	2.50	3.5
			%			7	3		0
2006	78	83	94	0.39	1.97	4.7	0.7	3.80	10.
			%			9	6		49
2007	71	83	86	0.52	2.27	3.6	0.3	5.51	2.2
			%			4	3		0



2008	69	83	83	0.70	2.38	3.4	0.4	4.96	2.0
			%			9	7		0
2009	68	83	82	0.77	3.05	4.6	0.4	11.7	1.9
			%			5	6	1	1
2010	66	83	80	0.72	3.11	6.9	0.3	15.1	3.3
			%			7	4	8	3

Graph 3

Comparison between the R^2 of the complete and disaggregated model

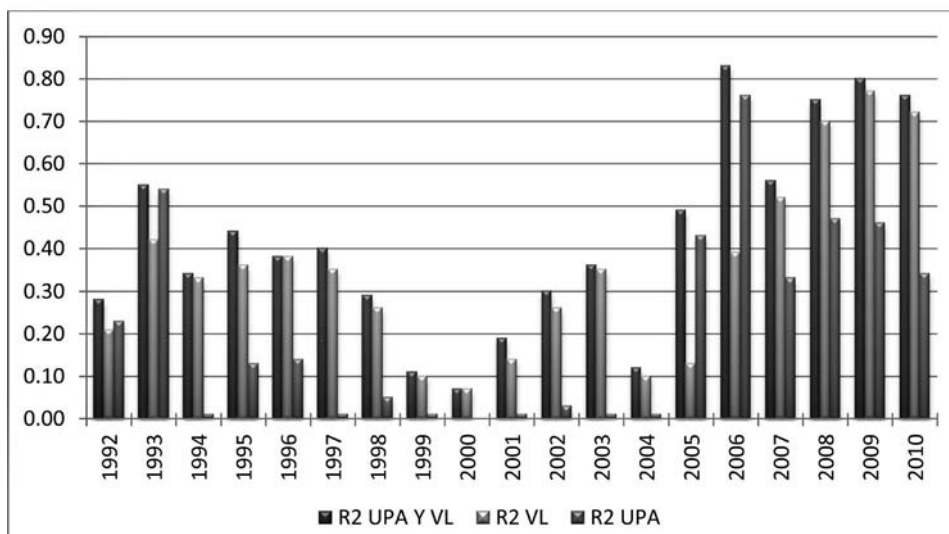


Table 7

Statistics of the R^2 of the 83 companies divided into blocks, including only the book value as an independent variable

Two blocks, before and after the creation of the CINIF in 2004 (panel data)

Period	No. Comp anies	No. Obs .	Total	%	R 2	Coef VL	t
1992-	83	396	996	40%	0.64	0.18	4.78

2003	83	434	581	75%	0.85	2.61	17.9
2004-							2
2010							

Regarding the EPS, when the 83 companies are analyzed, the relevance also increases due to the changes in the NIF and the coefficient of said variable is statistically significant in both periods, as seen in table 8.

Table 8

Statistics of the R^2 of the 83 companies divided into blocks, including only earnings per share as an independent variable

Two blocks, before and after the creation of the CINIF in 2004 (panel data).

Period	No. Comp anies	No. Obs.	Total	%	R²	Coef EPS	t
1992-	83	396	996	40%	0.68	0.99	8.29
2003	83	434	581	75%	0.73	1.48	3.91
2004-							
2010							

In the case of ADR companies, we find again that the relevance decreases when analyzing the sample in two blocks; However, the coefficient of the UPA variable



remains statistically significant. These results are consistent with those shown in the full model.

Related to additional tests

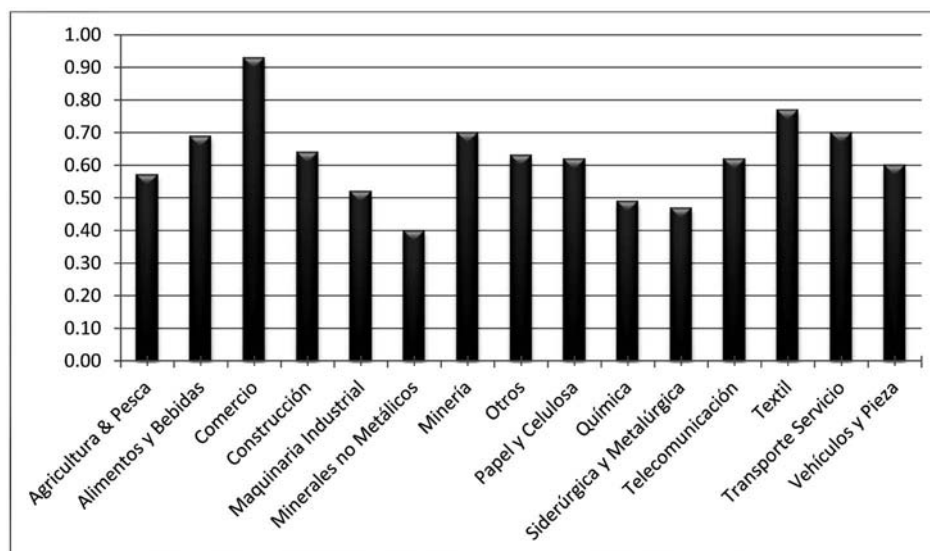
This section presents the results of additional tests that were carried out to further explain the relationship between the study variables. To do this, companies were analyzed by economic sector and by group (tangible and intangible).

- Relevance of financial information by sector _

The companies were grouped by economic sector, integrating a total of 15 sectors. Graph 4 shows that R^2 ranges from 0.40 to 0.93 in the different industries, which may be due to the difference in the number of companies included in each sector . In 10 of the 15 industries, both the EPS and NAV coefficients are significant.

Graph 4

R^2 per sector



Additionally, an analysis was carried out for the food and beverage and commerce industries because they are the ones that make up the largest number of companies and because they have the highest R^2 during the entire study period . Since there are few companies in each sector and not all of them existed during the entire period, regressions were carried out with unbalanced panel data. To analyze the effect of changes in the NIF, the sample was divided into two blocks: 1992-2003 and 2004-2010; Likewise, a *dummy* variable was included in the analysis of the entire period, which is statistically significant.

In both sectors, there is a greater relevance of financial information after the changes to the NIF, since the R^2 of the second block increases by 13 % for food and beverages, and 31% for commerce. In these sectors, the book value variable is statistically significant after of the changes in the NIF, both in the complete model and when analyzed separately. In the case of the profit per share variable, it is not statistically significant in the second block when analyzed in the complete model ,

1992-2003	14	15	168	90	0.7	0.56	3.7	0.4	5.1		
		1		%	6		6	1	0		
2004-2010	16	10	112	96	0.6	1.01	2.3	1.2	3.0		
		7		%	9		4	5	6		
Size	No.	Ob	Tot	%	R	Coef	t	Coe	t	Coef	t
extra	Comp	s.	al		2	EPS		ff		f	
large	anies							V.L.		Dum	
										my	
Model											
complete	twenty	31	399	80	0.7	0.88	4.2	0.7	11.	17.5	4.5
	-one	9		%	9		5	5	04	4	6
1992-2010											
1992-2003	16	18	192	97	0.7	1.02	8.8	0.3	7.6		
		6		%	8		6	6	9		
2004-2010	twenty	13	140	95	0.9	0.55	1.8	3.6	22.		
		3		%	5		9	6	42		

By separating the companies into two groups, tangible and intangible, those that existed at some point during the entire study period (1992-2010) were included , which is why unbalanced panel data was used. We found that the two variables (UPA and VL) are statistically significant both in the complete model and if each one is analyzed independently . On the other hand, the inclusion of the *dummy* variable with a statistical relevance Importantly, it confirms the existence of greater



significance in the explanation of the dependent variable from the creation of the CINIF.

The results of the regressions when separating the sample into two blocks, in this case with balanced panel data, show that in the tangible group the profit per share is not statistically significant in the second period. For its part, the book value variable continues to be so after the creation of the CINIF. In the case of the intangible group we found a decrease in the R^2 of the model; However, the coefficients are significant in both explanatory variables, at least at a significance level of .10. It should be noted that the negative sign of the second period in the variable VL is indicating a decrease in the share price in the face of an increase in said variable (see table 10) .

Table 10

R² statistics for companies divided by group (panel data) _

Cluster	No. Companies	Obs.	Total	%	R ²	Coef f EPS	Coef f V.L.	Coef f Dummy			
Complete model	67	825	1273	65%	0.65	0.99	6.4	0.37	8.70	14.63	5.36
1992-2010	28	336			0.61	1.09	7.4	0.09	2.31		
1992-			804	42%			8				

2003											
2004-2010	52	364	469	78%	0.86	0.69	1.69	2.77	17.22		
Cluster intangible	No. Companies	Obs.	Total	%	R²	Coeff EPS	Coeff V.L.	Coeff V.L.	Coeff V.L.	Coeff Dummy	t
Complete model	16	183	304	60%	0.68	0.57	3.51	0.96	9.10	10.68	2.66
1992-2010	5	60	192	31%	0.90	0.66	3.62	0.51	4.58		
1992-2003				%			2				
2004-2010	10	70	112	63%	0.68	0.63	3.24	-0.49	-1.98		

Conclusions

The issuance of new NIFs and their convergence with international financial reporting standards (IFRS) suggest that the changes have a positive impact on the relevance of financial information.



The results show that the relevance of the financial information did increase by finding an R^2 with an increasing trend from 2005 onwards . This relevance is explained in particular by the book value variable, which is consistently significant ; However, it is important to recognize that the earnings per share variable in recent years has increased its explanatory value in the relevance of the information.

When separating the sample into two periods to compare the relevance after the emergence of the NIF, we found an increase in R^2 starting in 2004. According to the Chow test, there is a structural change from that date.

In companies listed in the United States, a decrease in R^2 is found in the second time block. These results suggest that global companies could be more interested, therefore, in having a greater impact by American or international standards than by national ones. This result is consistent with previous studies of Mexican companies, such as that of Palacios *et al.* (2006).

When analyzing companies in the food and beverage and commerce sectors, the results suggest that the standards can have a different impact depending on the sector to which the company belongs and the issuance of new NIFs that may have a greater impact on some industry. in particular.

The results of the analysis of companies segmented by size show that the accounting variables of the largest companies affect their valuation in the capital market. In the sample divided into tangible and intangible groups, we found an increase in the



relevance of the information after 2004, with the exception of the intangible group , which when analyzed in two blocks loses relevance in the last period.

In conclusion, the results found show that the modifications made to financial reporting standards since 2004 have resulted in an increase in the relevance of financial information and , in general terms, an increase in the price of the action. Such results are encouraging for the academic and professional world due to the opportunity of the analysis , which suggests that since the accounting variables have been important in the valuation of companies in recent years in the face of a regulatory approval process, this may be impacted to the same or greater extent by adopting the IFRS in 2012.

Although in the study it was possible to evaluate the increase in relevance explained by two variables, future research could provide the analysis of specific accounting standards that are impacting said variables, or the inclusion of other lines of the financial statements in the model.



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