

CIENCIA CONTABLE: VISIÓN Y PERSPECTIVA

5 años de
de la PUCP



Capítulo 25

Libro homenaje
de la Facultad de Ciencias C

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José Carlos Dextre Flores
Editores

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Centro Bibliográfico Nacional

657 Ciencia contable: visión y perspectiva / Óscar Alfredo Díaz Becerra, José Carlos Dextre Flores,
C4 editores.-- 1a ed.-- Lima: Pontificia Universidad Católica del Perú, Fondo Editorial, 2017
(Lima: Tarea Asociación Gráfica Educativa).
405 p.: il., diagrs.; 24 cm.

«Libro homenaje por los 85 años de la Facultad de Ciencias Contables de la PUCP».
Incluye bibliografías.

D.L. 2017-15495
ISBN 978-612-317-308-1

1. Contabilidad - Ensayos, conferencias, etc. 2. Contabilidad - Normas 3. Contadores - Ética profesional 4. Auditoría - Normas 5. Finanzas públicas - Contabilidad 6. Contabilidad tributaria I. Díaz Becerra, Óscar Alfredo, 1962-, editor II. Dextre Flores, José Carlos, 1944-, editor III. Pontificia Universidad Católica del Perú

BNP: 2017-2877

Ciencia contable: visión y perspectiva

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www.fondoeditorial.pucp.edu.pe

Diseño, diagramación, corrección de estilo
y cuidado de la edición: Fondo Editorial PUCP

Primera edición: noviembre de 2017

Tiraje: 500 ejemplares

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Hecho el Depósito Legal en la Biblioteca Nacional del Perú N° 2017-15495

ISBN: 978-612-317-308-1

Registro del Proyecto Editorial: 31501361701192

Impreso en Tarea Asociación Gráfica Educativa
Pasaje María Auxiliadora 156, Lima 5, Perú

IFRS EFFECT ON EARNINGS MANAGEMENT IN PERUVIAN CORPORATIONS

Gustavo Tanaka Nakasone

This paper aims to analyze whether or not IFRS (NIIFs) have had any effect on earnings quality of Peruvian corporations. For that purpose, a comprehensive analysis of Earnings Management of Peruvian listed companies using the Jones (1991) model and the Osiris/Thomson databases was implemented. Companies from different representative industries in the 2006-2013 period were analyzed.

The main conclusions are 1) Peruvian corporations engage in some degree of EM; 2) The mandatory compliance of IFRS has a positive effect on earnings quality, more specifically on EM (measured by the level of discretionary accruals).

Keywords: earnings management, IFRS, Peru.

1. INTRODUCTION

Earnings quality is a multi-dimensional concept with no agreed-upon definition in the accounting literature. Several metrics have been developed to assess earnings quality (Zeghal *et al.*, 2012). According to Francis and Wang (2004), the earnings attributes can be divided into two classes: accounting-based measures and market-based measures. Four earnings quality constructs are widely used in the accounting literature, i.e., earnings management, timeliness, conservatism, and value relevance. This chapter focuses on earnings management.

2. BRIEF REVIEW OF THE ECONOMIC ENVIRONMENT, STATE OF ACCOUNTING AND SOCIAL ISSUES IN PERU

Peru is located on the West Coast of South America and features three distinct geographical regions: the coast, the highlands and the jungle. It has a population

of around 30 million inhabitants, of which the vast majority are Catholic. After suffering many years of internal conflict (from early 80's to mid-90's) Peru started the millennium with economic expansion. As presented in the Appendix, Peru has been growing consistently since 2003 with a Real GDP of 4% or more since 2003 (except 2009 with a real GDP of 0.9%). Peruvian GDP increased from 61.4 billion in 2003 to 206.7 billion in 2013. Moreover, Peru's GDP per capita is above the Latin-American and global averages. The CPI for the years 2007, 2008, 2009, 2010 and 2011 was 3.93%, 6.65%, 0.25%, 2.08% and 4.74% respectively, while the GDP growth was 8.9%, 9.8%, 0.9%, 8.8%, and 6.9% respectively. The unemployment rate in 2011 was 7.5%.

Regarding accounting issues, Peruvian listed corporations have been mandated to comply with IFRS since January 1st, 2012. A longer time period of data would validate more strongly the conclusions made regarding accounting quality. However, it is very important to mention that the movement promoting the adoption of accounting standards globally started only a decade ago. Peru, according to the World Bank (2004), started adopting IFRS between 1994 and 1998.

3. RELEVANT CONCEPTS

3.1. Earnings Management

Earnings management is the alteration of a firms' reported economic performance by insiders either to mislead some stakeholders or to influence contractual outcomes (Healey & Wahlen, 1999). Four aspects of earnings management can be mentioned: earnings smoothing, managing toward small positive earnings, accruals quality, and the magnitude of absolute discretionary accruals (Zeghal *et al.*, 2012)

4. THEORETICAL FRAMEWORK

A number of studies have been carried out about earnings management and most of them focused on developed countries. Previous research can be classified into three general groups: 1) Models for determining earnings management; 2) Possible reasons for earnings; and 3) Variables that affect Earnings Management. See below a review of the most relevant factors that influence earnings management.

4.1. Models for determining earnings management

Hribar and Collins (2002) concluded that studies using a balance sheet approach to test for earnings management are potentially contaminated by measurement error

in accruals estimates. In particular, if the partitioning variable used to indicate the presence of earnings management is correlated with the occurrence of mergers and acquisitions or discontinued operations, tests are biased and researchers are likely to erroneously conclude that earnings management exists when there is none. Additional results show that the errors in balance sheet accruals estimation can confound returns regressions where discretionary and non-discretionary accruals are used as explanatory variables. Moreover, we demonstrate that tests of market mispricing of accruals will be understated due to erroneous classification of «extreme» accruals firms.

After examining the specification and power of tests based on performance-matched discretionary accruals, and make comparisons with tests using traditional discretionary accrual measures (e.g., Jones and modified-Jones models), Kothari et al. (2005) stated that the results suggest that performance-matched discretionary accrual measures enhance the reliability of inferences from earnings management research when the hypothesis being tested does not imply that earnings management will vary with performance, or where the control firms are not expected to have engaged in earnings management.

4.2. Possible reasons for earnings management

Dechow *et al.* (1996) concluded that an important motivation for earnings manipulation is the desire to attract external financing at low cost. They also showed that this motivation remains significant after controlling for contracting motives proposed in the academic literature. Moreover, Dechow *et al.* (1996) also found that firms manipulating earnings are: (i) more likely to have boards of directors dominated by management; (ii) more likely to have a Chief Executive Officer who simultaneously serves as Chairman of the Board; (iii) more likely to have a Chief Executive Officer who is also the firm's founder, (iv) less likely to have an audit committee; and (v) less likely to have an outside blockholder. Finally, they documented that firms manipulating earnings experience significant increases in their costs of capital when the manipulations are made public.

Burgstahler and Dichev (1997) provide evidence that firms manage reported earnings to avoid earnings decreases and losses. Specifically, in cross-sectional distributions of earnings changes and earnings, they found unusually low frequencies of small decreases in earnings and small losses and unusually high frequencies of small increases in earnings and small positive income. Burgstahler and Dichev (1997) also found evidence that two components of earnings, cash flow from operations and changes in working capital, are used to achieve increases in earnings.

Teoh and others (1998) found that issuers who adjust discretionary current accruals to report higher net income prior to the offering have lower post-issue long-run abnormal stock returns and net income. Interestingly, the relation between discretionary current accruals and future returns (adjusted for firm size and book-to-market ratio) is stronger and more persistent for seasoned equity issuers than for non-issuers.

Healey and Wahlen (1999) concluded that the earnings management literature currently provides only modest insights for standard setters. Prior research has focused almost exclusively on understanding whether earnings management exists and why. Their findings indicate that earnings management occurs for a variety of reasons including to influence stock market perceptions, to increase management's compensation, to reduce the likelihood of violating lending agreements, and to avoid regulatory intervention.

Using data collected from proxy statement, Frankel and others (2002) found a positive association between nonaudit fees and the likelihood of reporting a small earnings surprise, the magnitude of absolute discretionary accruals, and the magnitudes of both income-increasing and income-decreasing discretionary accruals. There is a negative association between audit fees and these earnings management indicators. In contrast, they found no association between total fees and any of these earnings management indicators, indicating that combining audit and nonaudit fees into a single measure masks their differential incentive effects. Frankel and others (2002) also found no association between nonaudit fees and the likelihood of reporting a small increase in earnings, although audit fees are negatively associated with this earnings management indicator. Evidence from auditor-specific regressions indicates that the results are not driven by a particular auditor. Finally, they found evidence of a negative association between the disclosure of nonaudit fees and share values, although the reaction is small in economic terms and insignificant when measured over longer event windows.

Teoh and others (1998) provided evidence that issuers with unusually high accruals in the IPO year experience poor stock return performance in the three years thereafter. IPO issuers in the most «aggressive» quartile of earnings managers have a three-year aftermarket stock return of approximately 20 percent less than IPO issuers in the most «conservative» quartile.

Degeorge and others (1999) state that firms' stakeholders have a threshold oriented mentality. Their research identifies three thresholds that management will try to meet in order to avoid adverse effects on firms' stock prices. The three thresholds are to report zero or positive profits, to sustain recent performance and to meet analysts' consensus forecast. Accordingly, evidence is found that earnings management exists in U.S. companies to exceed all three thresholds.

4.3. Variables that affect Earnings Management

Klein (2002) found a negative relation between audit committee independence and abnormal accruals. A negative relation is also found between board independence and abnormal accruals. Reductions in board or audit committee independence are accompanied by large increases in abnormal accruals. The most pronounced effects occur when either the board or the audit committee is comprised of a minority of outside directors. These results suggest that boards structured to be more independent of the CEO are more effective in monitoring the corporate financial accounting process.

On the other hand, in a paper documenting systematic differences in the level of earnings management across 31 countries, Leuz and others (2003) concluded that outsider economies with relatively dispersed ownership, strong investor protection, and large stock markets exhibit lower levels of earnings management than insider countries with relatively concentrated ownership, weak investor protection, and less developed stock markets.

Becker and others (1998) found that companies with non-Big Six auditors report discretionary accruals that are significantly greater than the discretionary accruals of companies with Big Six auditors. While their hypothesis focused on income-increasing accruals, they also examined the variation in discretionary accruals. Such variation reflects the «accounting flexibility» that the auditor allowed. They found that companies with non-Big Six auditors have significantly larger variation in discretionary accruals compared to companies with Big Six auditors.

Subramanyam (1996) stated that evidence reveals that, on average, the market attaches value to discretionary accruals. This evidence is consistent with two alternative scenarios: (1) managerial discretion improves the ability of earnings to reflect economic value, and (2) discretionary accruals are opportunistic and value-irrelevant but priced by an inefficient market. Further evidence is consistent with the former explanation. There is evidence of pervasive income smoothing, which improves the persistence and predictability of reported earnings. There is also evidence that discretionary accruals predict future profitability and dividend changes. Despite several sensitivity checks, measurement error in the discretionary accruals proxy is an alternative explanation for the results.

Watts (2002) concluded that overall, existing evidence suggests accounting is conservative for at least contracting and litigation explanations. The evidence does not rule out earnings manipulation, but instead suggests conservatism's effects are more pervasive.

5. PREVIOUS RESEARCH ON ACCRUAL-BASED EARNINGS MANAGEMENT IN PERU

In an earnings management related study in Latin America (specifically the cases of Brazil, Chile and Peru), Timm and Santana (2014) concluded that there were substantial differences in earnings management in those countries before and after the adoption of IFRS. Thus, Timm and Santana (2014) findings show that the level of earnings management was significantly different among Brazil, Chile and Peru before the adoption of IFRS (under their respective domestic standards), but after IFRS adoption, these differences were no longer significant. These results indicate that, while the three countries are under similar institutional environment, the financial reporting system plays a definitive role in shaping accounting practices. Therefore, IFRS were capable of overcoming differences in accounting for the three countries, serving its purpose of making financial statements across borders comparable.

6. RESEARCH MODEL: MODIFIED JONES MODEL

The study applied the modified version of Jones (1991) model proposed by Dechow *et al.* (1996), which has been widely used in other studies. Consistent with Dechow *et al.* (1996), the accrual component of earnings is computed using the following formula;

$$\text{Total Accruals}_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta \text{Cash}_{it} + \Delta LDCL_{it} - \text{Dep}_{it}) / A_{t-1}$$

where ΔCA_{it} = change in total current assets; ΔCash_{it} = change in cash and cash equivalents; ΔCL_{it} = change in total current liabilities; $\Delta LDCL_{it}$ = change in long-term debt included in current liabilities; Dep_{it} = depreciation and amortization expenses. A_{t-1} = Total Assets in the $t - 1$ period.

Moreover, in order to estimate the nondiscretionary component of total accruals (TAC) the following formula was applied:

$$\frac{TAC_{it}}{A_{i,t-1}} = \beta_0 + \beta_1 \frac{\Delta REV_{it}}{A_{i,t-1}} + \beta_2 \frac{PPE_{it}}{A_{i,t-1}} + \varepsilon_{it}$$

Total accruals (TAC) are regressed on the change in revenues (REV) and the level of gross property, plant and equipment (PPE_{it}), scaled by lagged total assets (A_{t-1}), in order to avoid problems of heteroskedasticity. Using the estimates for the regression parameters, $(\hat{\beta}_0; \hat{\beta}_1; \hat{\beta}_2)$, we estimated each sample firm's non-discretionary accruals (NDCA) by adjusting the change in sales for the change in accounts receivable (ΔAR) to allow for the possibility that firms could have manipulated sales by changing credit terms (Dechow *et al.*, 1996).

$$\text{NDCA}_{it} = \hat{\beta}_0 + \hat{\beta}_1 \frac{\Delta \text{REV}_{it} - \Delta \text{AR}}{A_{i,t-1}} + \hat{\beta}_2 \frac{\text{PPE}_{it}}{A_{i,t-1}}$$

Moreover, we used discretionary accruals (DCA_{it}) for firm i in year t as the difference between Total Accruals and Non-discretionary Accruals:

$$\text{DAC}_{it} = \frac{\text{TAC}_{it}}{A_{i,t-1}} - \text{NDCA}_{it}$$

Finally, consistent with previous studies (Wartfield *et al.*, 1995; Gabrielsen *et al.*, 2002; Wang, 2006; Chen *et al.*, 2007; Barth *et al.*, 2008; Saenz Gonzalez & Garcia-Meca, 2013) on earnings management the absolute value of discretionary accruals [$\text{Abs}(\text{DCA})_{it}$] was used as a measure of the degree of Earnings Management. Those studies pose that the quality of results do not impose any direction or sign on the expectations of Earnings Management.

7. HYPOTHESIS

H₁: Peruvian listed corporations engage in some degree of Earnings Management

H₂: DAC_{it} decreased since the adoption of IFRS

7.1. Sample

For the financial figures the main source used was the Osiris database, which was complemented with data from the Lima Stock Exchange (BVL, acronym in Spanish), the Superintendence of the Securities Market (SMV, acronym in Spanish), and the annual reports of companies (in cases where the data was incomplete). Data from 84 Peruvian listed corporations (a total of 504 firm-year observations) for the period between 2007 and 2013 was analyzed.

Table 1. Sample's Summary

Number of Companies in the Osiris Database	190
Minus: Financial companies (Banks, Insurance companies, etc.), companies with incomplete/inconsistent data for the 2007-2013 period	(106)
Number of companies in the simple	84

8. DISCUSSION

When the pooled data from the period 2007 to 2013 was analyzed the mean value of discretionary accrual was statistically different from zero, which implies that Peruvian listed companies engage in some kind of earnings management. This conclusion is consistent with the first hypothesis. On the other hand, when the data was analyzed year by year a clear decrease in EM could be observed (notice the decrease in mean of discretionary accruals in Table 2 and Figure 1). It is important to mention that these conclusions are similar to those of Timm and Santana (2014); however, the methodology used is different (different number of years, the same companies used in the sample for consistency).

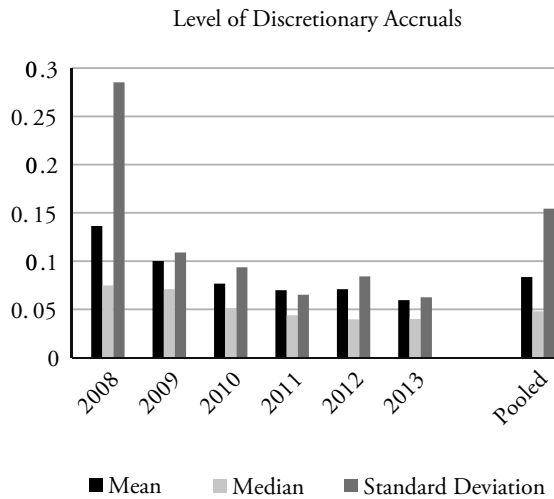
Moreover, it is important to notice that the lowest level of EM came after the year (2012) when Peruvian listed companies had to mandatorily comply with IFRS. However, Tanaka (2013) states that Peru has been gradually adopting IFRS. In 2010, Peru's regulator, CONASEV, issued resolution N° 102-2010-EF/94.01.1, according to which public filers in the local stock market must prepare financial statements under IFRS as issued by the IASB. Two years later, on April 27, 2012, the SMV issued resolution N° 011-2012-SMV/01, through which non-public filers in the local stock market were required to prepare financial statements under IFRS as issued by the IASB. The application of these resolutions was scheduled to take place in two phases: (a) companies with total assets and/or net revenues higher than US\$ 42.6 million (this is an approximate conversion of the 30,000 taxable units, or UIT, mentioned in the resolution) should have audited financial statements prepared under IFRS as issued by IASB for the fiscal year ending on December 31, 2012, with early application being optional; (b) companies with total assets and/or net revenues higher than US\$ 4.26 million (this is an approximate conversion of the 3,000 UIT mentioned in the resolution) should have audited financial statements prepared under IFRS as issued by IASB for fiscal year ending December 31, 2013, with early application being optional. In 2013, a UIT was equivalent to S/. 3,700 (S/. stands for Peru's currency, Peruvian New Soles). In 2012, a UIT was equivalent to S/. 3,650 (S/.2.6 per US\$ 1).

Finally, on October 10, 2012, the SMV (Resolution SMV N° 043-2012-SMV/01) modified some articles of Resolution CONASEV N° 102-2010-EF/94.01.1 and N° 012-2012-SMV/01 (Tanaka, 2013).

Table 2. Discretionary Accruals

Summary	ABS (DAC)						
	2008	2009	2010	2011	2012	2013	Pooled
Mean	0,14	0,10	0,08	0,07	0,07	0,06	0,08
Median	0,07	0,07	0,05	0,04	0,04	0,04	0,05
Standard Deviation	0,29	0,11	0,09	0,07	0,08	0,06	0,15

Figure 1. Discretionary Accruals



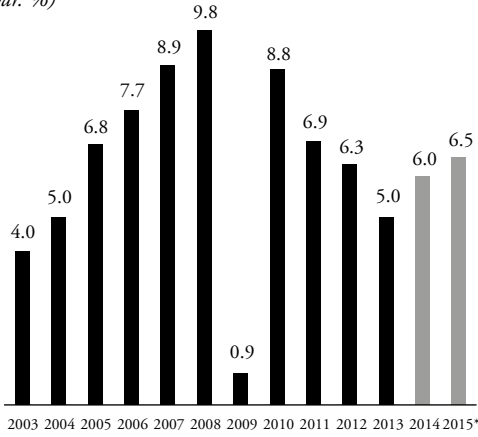
9. CONCLUSIONS, CONTRIBUTIONS AND LIMITATIONS

The main conclusions of this research are: 1) Peruvian corporations engage in some degree of EM; 2) The mandatory compliance of IFRS has a positive effect on accounting quality, more specifically on EM (measured by the level of discretionary accruals). The main contribution of this chapter is its originality since not much research has been done on accounting in Peru (more specifically on EM). However, the main limitation is the time period (a longer period of analysis would have been preferred for a stronger conclusion).

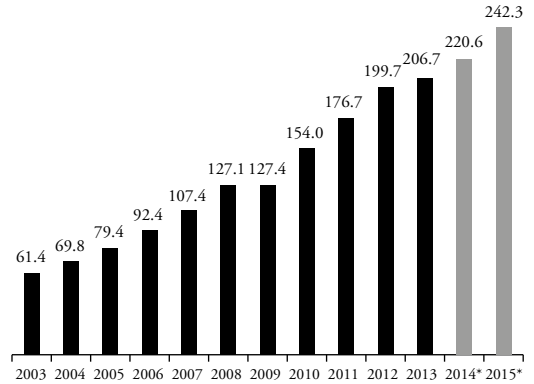
APPENDIX

Peruvian Macroeconomic Figures

Real GDP 2003-2015*
(var. %)

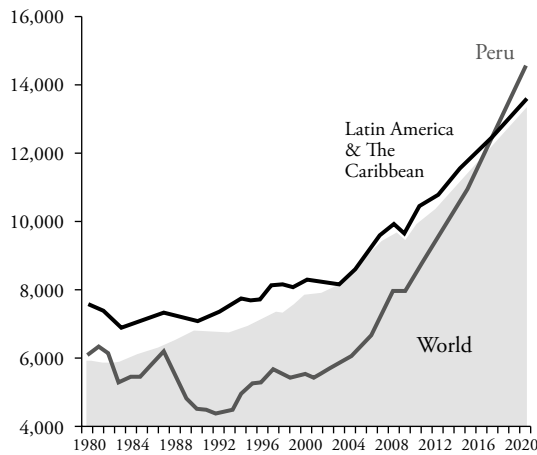


GDP, 2003-2015*
(US\$ Billion)



Source: Central Reserve Bank of Peru and IMF
* Estimated figures of BCRP (inflation report as of December 2013) and IMF

GDP per capita, PPP
(\$ International constant prices of 2005)



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