

Vasicek, Davor; Cicak, Josip

Article

Back to the core: Alternative performance measurement

UTMS Journal of Economics

Provided in Cooperation with:

University of Tourism and Management, Skopje

Suggested Citation: Vasicek, Davor; Cicak, Josip (2019) : Back to the core: Alternative performance measurement, UTMS Journal of Economics, ISSN 1857-6982, University of Tourism and Management, Skopje, Vol. 10, Iss. 2, pp. 237-247

This Version is available at:

<https://hdl.handle.net/10419/281863>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Review
(accepted November 10, 2019)

BACK TO THE CORE: ALTERNATIVE PERFORMANCE MEASUREMENT¹

Davor Vasicek²
Josip Cicak

Abstract

The reporting of alternative performance measures (APMs) is currently the focus of much debate in the world. In this paper, we analyse APMs basics, e.g. financial statements as the basis for alternative performance measurement. Accounting, with the basic concepts of documentation and verifiability, provides wide intervals of evaluation of all positions of all financial statements that have found economic expression in accounting policies. Using a variety of alternative accounting policies brings about different effects on the stated financial results and the value of the company. Each of the standard financial statements users has different information needs and their understanding of fair financial reporting. Which is why, APMs and financial ratios mustn't be basis for financial decisions without deep insight into the numbers from which ratios have been made. In this paper is given an overall literature review of accounting conservatism models, which should be used in assessment of bias in financial reporting.

Keywords: accounting, financial ratios, APMs, accounting conservatism.

Jel Classification: M41

INTRODUCTION

Organizational performance is one of the most important constructs in management research (Richard et al. 2009). Richard et al. (2009) in addition categorize performance measures in three main categories (accounting measures, financial market measures and mixed market/accounting measures).

Accounting measures by Richard et al. (2009) are: Cash flow from operations, Earnings before interest and taxes (EBIT); Earnings before interest, taxes, depreciation and amortization (EBITDA); Net operating profits (also termed earnings); Net operating

¹ This work has been supported in part by the University of Rijeka under the project number [uniri-drustv-18-166].

² **Davor Vasicek**, PhD, Full Professor; **Josip Cicak**, PhD, PostDoc, Faculty of Economics and Business, University of Rijeka, Croatia.

profit less adjusted taxes (NOPLAT) also referred to as Net operating profit after tax (NOPAT) Return on assets (ROA); Return on capital employed (ROCE) and also known simply as return on capital (ROC); Return on equity (ROE); Return on investment (ROI); Return on invested capital (ROIC); Return on net assets (RONA); Return on Sales (ROS); Return on total assets; Risk-adjusted return on capital (RAROC) this is also known as return on risk adjusted capital (RORAC); Sales; Sales Growth; Variance in accounting profitability.

Term financial market measure stands for (Richard et al. 2009): Beta coefficient; Earnings per share (EPS); Jensen's alpha; Market value (or market capitalization); Price-to-earnings ratio (P/E ratio); Stock price; Total shareholder return (TSR); Tracking stocks.

Mixed market/accounting measures are (Richard et al. 2009): Balanced scorecard; Cash flow per share; Cash flow return on investment (CFROI); Cash value added (CVA); Discounted cash flows (DCF); Economic Value Added (EVA) the generic name for this is economic profit; Free cash flows; Internal rate of return (IRR); Market-to-book value; Market value added (MVA); Net present value (NPV); Shareholder value analysis (SVA); Tobin's Q; Total business return (TBR); Warranted equity value (WEV); Weighted average cost of capital (WACC); Z-score.

APMs such as EBIT, EBITDA and all mentioned before, being common practice for entities to present, but usefulness of APMs is currently the focus of much debate in the world³. In multiple communications, these alternative profit numbers may appear, including corporate media releases and analyst briefings. APMs are often described in terms that are not defined by issuers of accounting standards or included in professional literature and are therefore not readily recognizable by users of financial statements.

Since all before mentioned ratios are derived from the financial statements, any weakness in the original financial statements will also creep in the derived analysis based on financial statement numbers. Thus, the limitations of financial statements also form the limitations of the ratio analysis. Hence, to interpret the ratios, the user should be aware of the rules followed in the preparation of financial statements and also their nature and limitations (Kumar 2015).

The limitations of ratio analysis which arise primarily from the nature of financial statements by Kumar (2015) are as under:

- Limitations of Accounting Data;
- Ignores Price-level Changes;
- Ignore Qualitative or Non-Monetary Aspects;
- Variations in Accounting Practices;
- Forecasting.

Therefore, the quality of APMs can be determined by determining the quality of the financial statements. The aim of this paper is to identify methods that test the quality of financial statements and to suggest ways to determine the quality of financial statements, thereby increasing the applicability of APMs.

³ See more at: <https://www.frc.org.uk/getattachment/ff987c01-416f-4635-8dba-fdda5530f4b5/091117-APMs-CRR-thematic-review.pdf>; <https://home.kpmg/uk/en/home/insights/2018/01/alternative-performance-measures--a-recurring-debate.html>; https://www.esma.europa.eu/sites/default/files/library/2015/11/2015-esma-1057_final_report_on_guidelines_on_alternative_performance_measures.pdf

Methodologically, the paper is designed as a literature review in the field of models for determining accounting conservatism, and therefore the first part of the paper defines and describes the term accounting conservatism, and the second part gives an overview of models that determine accounting conservatism in the literature. Finally, the final section of the paper provides concluding considerations on models for identifying biases in financial reporting and their possible application with APMs.

1. ACCOUNTING CONSERVATISM

As the limitation of accounting data is a basic obstacle for ratio analysis and the biggest reason of bias in financial reporting, a large number of studies have been published in the area of bias in financial reporting. Limitations of accounting data and variations in accounting practices are limitations which can be overcome by determining the level of accounting conservatism in financial statements.

Accounting conservatism involves the choice of accounting policies that tend to underestimate assets and revenues, and overestimate an entity's liabilities and expenses. The simplest explanation for accounting conservatism, or the maxim of accounting conservatism, is: "do not expect any income, but forecast all expenses" (Watts 2003a). It is often the view that such an approach protects investors when making business decisions, such as determining the amount of dividend to be paid to an investor, then bonuses that will be paid to management and determining the amount of capital to be retained. In each of these information needs, the consequences of overestimating assets and earnings can be much more serious than the consequences of underestimating them (Mrsa and Cicak 2015).

Accounting conservatism according to Solomons (1986) is a qualitative feature of financial statements that is not explicitly stated in accounting standards, but quality financial statements should be conservative.

Opponents of conservatism emphasize the need for financial statements neutrality. They also believe that conservative accounting policies result in undervalued "good" investments in the way that excessive prudence classifies them as bad investments. In contrast, aggressive accounting policies lead to the possibility of 'bad' investment being classified as good (Smith 2007).

Key factors influencing conservatism in the financial statements are provided by Watts (2003a, b). The author identifies conservative balance sheet requirements through the impact of the need to protect creditors, the liquidation value of assets, the impact of court costs on conservatism, taxation as a cause of conservatism, and the impact of the regulatory framework on the level of conservatism.

2. MODELS FOR DETERMINING THE LEVEL OF ACCOUNTING CONSERVATISM

In financial reporting, there is increasing literature on bias, most of it linked to the problem of accounting conservatism. Watts (2003a, b) gave theoretical background generally in the sector, defining accounting conservatism as the differential verifiability

needed to recognize financial profits versus losses. Review and analyze the accounting literature reviewed by Ruch and Taylor (2015).

Most used models for determining accounting conservatism are:

1. Market to Book or Book to Market ratio (MTB),
2. Basu (1997) AT measure (asymmetric timeliness of earnings measure),
3. Givoly and Hayn (2000) NA measure (negative accruals measure),
4. Penman and Zhang (2002) HR measure (hidden reserves measure),
5. Ball and Shivakumar (2005) AACF measure (asymmetric cash flow to accruals measure),
6. Cotter and Donnelly (2006) APC measure (accounting policy choices measure),
7. Khan i Watts (2009) C_score,
8. Composite index
9. Cicak and Vasicek (2019) LAM measure (low activity market measure)

The following is an overview of the most significant models in this field.

2.1. MTB ratio

MTB ratio is most commonly defined as the market value of an entity's equity divided by the book value of an entity's equity (McNichols, Rajan, and Reichelstein, 2014) and can be represented using the following formula:

$$\begin{array}{c} \text{Market Capitalization / Net Book Value} \\ \text{or} \\ \text{Share Price / Net Book Value per Share} \end{array} \quad (1)$$

If this ratio is greater than one, then the enterprise is overvalued and if less than one then the enterprise is undervalued. An MTB ratio of less than one indicates a conservative enterprise. Nevertheless, some authors such as McNichols, Ryan, and Reichelstein (2014) argue that the MTB relationship also consists of other factors that do not exclusively indicate conservatism in the financial statements. However, even before the studies mentioned above, authors were sceptical of this bias indicator, so other bias assessment methods have been developed, which are presented below.

2.2. Basu regression

Basu AT measure the starting idea is a reflection of the “good” or “bad” news on the company's earnings. Basu (1997) forms a regression model in which he uses return on investment information as “good” or “bad” news. As the stock price, apart from current earnings, reflects all the information on the market, the author notes that it could be used as a “news” indicator. Basu (1997) further develops the model by testing asymmetries in the recognition of losses and gains. The asymmetry of recognition is tested by the hypothesis that “bad” news (negative return on investment) will be recognized faster than “good” news (positive return on investment). To test the hypothesis, author forms a

regression model, known in the literature as Basu regression, which can be represented by the following equation:

$$E_t/P_{t-1} = \alpha + \beta \cdot R_t + \eta \cdot DR_t + \gamma \cdot R_t \cdot DR_t + \varepsilon_t \quad (2)$$

Where:

- E_t earn per share,
- P_{t-1} price per share at the beginning of the period,
- R_t return on the investment in the period,
- DR_t a dummy variable that has a value of one if R_t is negative, and a value of zero otherwise,
- β measures the ratio of earnings to returns on investment when returns are positive, and $(\beta + \gamma)$ measures the rate of recognition of negative returns on investment.
- γ is the coefficient of asymmetry and conservatism is present if $\beta + \gamma > \beta$, when $\gamma > 0$.

Basu regression is the most commonly used method in the papers of this area, but there are criticisms of this method such as Dietrich, Muller, and Riedl (2007) and Beaver et al. (2008). However, Basu (1997) first notices and formulates a way to estimate the asymmetry of “news” recognition in company earnings, so this method has been a major breakthrough in this area.

2.3. NA measure

NA measure⁴ was developed by Givoly and Hayn (2000). The focus of this measure is the non-operating activities of the company. The authors assume that conservative firms will more fully recognize the costs of non-operating activities, which are largely discretionary. They test the assumptions using the following model, shown in equation:

$$NA = TACC - OPACC \quad (3)$$

Where:

- NA, non-operating activities;
- TACC, total accruals, i.e. net profit (before depreciation) - net cash flows from operating activities;
- OPACC, operating accruals (nondiscretionary), measured as Δ of stock + Δ of receivables + Δ of other current receivables - Δ of current liabilities - Δ of other current liabilities.

Givoly and Hayn (2000) observe a sample of firms data from 1966 to 1998 and determine the level of conservatism using changes in non-business activities. The hypothesis is also corroborated by the correlation of NA measures (negative value) with the rise of conservatism due to USGAAP regulatory requirements during the 1980s.

⁴ Or „Skewness“

Wang, Hogartaigh, and Van Zijl (2009) states that the benefit of the NA measure is that it is also applicable to an individual enterprise. The advantage of this measure is that it is easy to apply because it does not require a lot of data. Furthermore, the NA measure is not based on market (stock) data and, unlike the Basu AT and MTB models, it can also be applied to unlisted companies.

The criticism of Givoly and Hayn (2000) is that this method is influenced by the base year, i.e. the year from which the data of the data are started to measure the values of non-business activities. Later papers (Garcia Lara, Garcia Osmá, and Penalva 2016, Ahmed and Duellman 2007) tried to standardize the base year on the basis of three years but did not remove baseline bias.

2.4. HR measure

The HR measure is the work of Penman and Zhang (2002). The authors developed a conservatism index they called Cit. This index of conservatism takes the following form:

$$C_{it} = \frac{ER_{it}}{NOA_{it}} \quad (4)$$

Where:

- C_{it} , index of conservatism,
- ER_{it} , estimation of hidden reserves,
- NOA_{it} , working capital.

The authors further estimate the silent reserve using the following equation:

$$ER_{it} = INV_{it}^{res} + RD_{it}^{res} + ADV_{it}^{res} \quad (5)$$

Where:

- INV_{it}^{res} , reserves in inventories, which are equal to the value of inventories calculated by the LIFO method.
- RD_{it}^{res} , research and development reserves, which are equal to the amount that the amortized cost of research and development would be included in the balance sheet if they were not recognized in the period expenses.
- ADV_{it}^{res} , reserves of brand assets, which are calculated by 'capitalizing' on advertising costs, are then amortized over the two-year period.

Criticism of Penman and Zhang (2002) method is in the estimation of silent reserves. Their method does not examine bias in the given circumstances, i.e. bias in accordance with the regulation, but includes accounting policies that are not allowed or are partially permitted in the international accounting regulation to estimate silent reserves within the financial statements. In addition, Wang, Hogartaigh, and Van Zijl (2009) state that research and development expenses are not explicitly stated in the financial statement, which is also confirmed in the Croatian case at Cicak and Vasicek (2019).

2.5. AACF measure

The AACF measure was designed by Ball and Shivakumar (2005). The AACF measure is a regression model that relies on the net cash flows of business activities when assessing conservatism. The model can be represented by the following equation:

$$ACC_{it} = b_0 + b_1DCFO_{it} + b_2CFO_{it} + b_3DCFO_{it}CFO_{it} + e_{it} \quad (6)$$

Where:

- ACC_{it} , accruals, i.e. Δ inventories + Δ receivables + Δ other current receivables - Δ current liabilities - Δ other current liabilities - depreciation.
- $DCFO_{it}$, dummy variable that takes on the value of one in the case when the net cash flows of operating activities are negative and the value is zero in other cases.
- CFO_{it} , cash flow operating for the period.

In equation above b_3 is a measure of accounting conservatism. A higher value of b_3 indicates a higher level of conservatism and vice versa.

Ball and Shivakumar (2005) model is very similar to the Basu regression model. The difference is that Basu (1997) uses earnings per share as an indicator of "good" or "bad" news, and Ball and Shivakumar (2005) have net cash flows of business activities. The second difference is that in Basu regression the dependent variable is the total earnings, while the Ball and Shivakumar (2005) AACF model as the dependent variable has only the earnings of business activities.

2.6. APC measure

The APC measure, by Cotter and Donnelly (2006), is a measure that has not been significantly used in the literature. The reason is that the measure is based on the calculation of the level of bias through the accounting policies applied which either cannot be read from the financial statements or are not applied in the business of most entities.

The authors use accounting policies of following financial statements items as a basis for assessing the level of bias:

- borrowing costs,
- goodwill write offs,
- revalorization reserves,
- development expenses,
- valuation of investments with quotation value.

The level of bias in this model is determined by evaluating each policy individually, and then a single measure of bias is obtained by weighting all values.

To this measure, the subjectivity of the approach in determining the level of conservatism is criticized, but more importantly the previously mentioned applicability on large samples. However, in this particular case, of the bias of an enterprise report, this conceptual approach is most appropriate.

2.7. C_score measure and C_index

C_score is a more recent measure of conservatism developed by Khan and Watts (2009). This measure is popular in recent studies in the field of financial reporting bias and has been used in the papers of Beatty and Liao (2011), Beatty, Petacchi, and Zhang (2012), Ettredge, Huang, and Zhang (2012), Kim et al. (2013), Tan (2013), Andre, Filip, and Paugam (2015), Garcia Lara, Garcia Osmá, and Penalva (2016) and Balakrishnan, Watts and Zuo (2016). C_score measure puts in Basu model a measure of conservatism with the specific characteristics of an individual company. The specific characteristics of an individual company are the size, MTB ratio and the indebtedness of the company. The regression model is basically an extended Basu regression and can be represented by the following equation:

$$X_i = \beta_1 + \beta_2 D_i + R_i (\mu_1 + \mu_2 \text{Size}_i + \mu_3 M/B_i + \mu_4 \text{Levi}_i) + D_i R_i (\lambda_1 + \lambda_2 \text{Size}_i + \lambda_3 M/B_i + \lambda_4 \text{Levi}_i) + (\delta_1 \text{Size}_i + \delta_2 M/B_i + \delta_3 \text{Levi}_i + \delta_4 D_i \text{Size}_i + \delta_5 D_i M/B_i + \delta_6 D_i \text{Levi}_i) + \varepsilon_i \quad (7)$$

Thus, the model differs from Basu regression by the specific characteristics of the firms, which are included in the regression as shown in formulas:

$$G_Score \equiv \beta_3 = \mu_1 + \mu_2 \text{Size}_i + \mu_3 M/B_i + \mu_4 \text{Levi}_i \quad (8)$$

$$C_Score \equiv \beta_4 = \lambda_1 + \lambda_2 \text{Size}_i + \lambda_3 M/B_i + \lambda_4 \text{Levi}_i \quad (9)$$

Where: G_Score represents the time lag in the recognition of good news and C_score the time lag in the recognition of bad news.

C_index is composed of average or standardized values of Basu measure, NA measure and C_score measure. This measure is used in recent work, and is calculated, for example, in the work of Beatty, Petacchi, and Zhang 2012, by standardizing the values obtained by the Basu measure, the NA measure and the C_score measure using the PCA (principal component analysis) method.

2.8. LAM measure

Cicak and Vasicek (2019) propose a way to measure the level of conservatism through a fuzzy logic model. Their model is a sequence of similar thinking as an APC measure, but, unlike the APC measure, it accesses the problem through the available data. The authors have developed a fuzzy logic model with four inputs and one output variable. The model input variables are named: TAX, AMORT, LTIA, and PROV, and the output variable is Conservatism level. The following shows how the authors formed the input variables of the model:

TAX variable is formed from following ratio:

$$\left(\frac{\text{Reported income tax}}{\text{Gross income}} \right) \quad (10)$$

AMORT variable has following form:

$$AMORT = 1 - \left(\frac{EBIT}{EBITDA} \right) \quad (11)$$

LTIA is ratio of long term intangible assets and assets:

$$LTIA = \frac{\text{Long term intangible assets}}{\text{Total assets}} \quad (12)$$

PROV is ratio of provisions (IAS 37⁵) and sources of assets:

$$PROV = \frac{\text{Provisions}}{\text{Total sources of assets}} \quad (13)$$

The theoretical assumption is that a higher or lower value of a particular variable indicates the aggressiveness or conservatism of financial statements. Variables TAX, AMORT, PROV and OCL behave uniformly, i.e. higher value of these variables indicates conservatism, while lower value indicates aggressive accounting. Variables LTIA and OCA theoretically have a reverse effect on the model; their higher value indicates aggressiveness, whereas their lower value points to conservative accounting. Cicak and Vasicek (2019) is a new model which needs to be checked and confirmed in the future but it can serve as a tool for determining the level of accounting conservatism in financial reporting.

CONCLUSION

The paper is designed to provide a solution to current discussions about the usefulness of APMs. The first part of the paper provides an introduction describing the issue that financial reporting shareholders are dealing with, followed by performance measures. As scientists have been addressing this issue for quite some time through the establishment of methods that can determine the level of bias in financial reporting, a review is provided of models that, depending on the availability of data, can determine the level of bias, both conditional and unconditional. Nine models are described, of which the first and most cited Basu (1997) model, which is also the basis for later models. Ball and Shivakumar (2005) AACF model, Khan and Watts (2009) C_score, and C_index rely on the Basu (1997) model. Givoly and Hayn (2000) and Ball and Shivakumar (2005) base their models on cash flow data, and Penman and Zhang (2002) their model on hidden reserves. Since it was necessary to have access to data that is often unavailable to unlisted companies and, in many regulations, not required making cash flow statements (ex. SMEs), models have been developed to detect bias even in such cases. Cotter and Donnelly (2006) developed a model based on accounting policy choices that lacks applicability on large samples. The latest model is Cicak and Vasicek (2019), which is

⁵ IAS 37 stands for International Accounting Standard 37

conceptually similar to the Cotter and Donnelly (2006) model, but is applicable to larger samples. Thus, this paper proposes the use of existing accounting conservatism models in addition to existing APMs, thereby providing performance measures verification. Future research needs to identify the differences between reported APMs by aggressive and conservative firms and examine the reflection of bias in financial reporting on reported APMs.

REFERENCES

- Andre, Paul, Andrei Filip, and Luc Paugam. 2015. The Effect of Mandatory IFRS Adoption on Conditional Conservatism in Europe. *Journal of Business Finance and Accounting* 42 (3–4): 482–514. doi: 10.1111/jbfa.12105.
- Ahmed, Anwer S., and Scott Duellman. Accounting conservatism and board of director characteristics: An empirical analysis. *Journal of Accounting and Economics* 43 (2–3): 411–437. doi: 10.1016/j.jacceco.2007.01.005.
- Balakrishnan, Karthik, Ross Watts, and Luo Zuo. 2016. The Effect of Accounting Conservatism on Corporate Investment during the Global Financial Crisis. *Journal of Business Finance and Accounting* 43 (5–6): 513–542. doi: <https://doi.org/10.1111/jbfa.12206>.
- Ball, Ray, and Lakshmanan Shivakumar. 2005. Earnings Quality in UK Private Firms: Comparative Loss Recognition Timeliness. *Journal of Accounting and Economics* 39 (1): 83–128. doi: 10.1016/j.jacceco.2004.04.001.
- Basu, Sudipta. 1997. The Conservatism Principle and the Asymmetric Timeliness of earnings. *Journal of Accounting and Economics* 24 (1): 3–37. doi: 10.1016/s0165-4101(97)00014-1.
- Beatty, Anne, and Scott Liao. 2011. Do Delays in Expected Loss Recognition Affect Banks Willingness to Lend? *Journal of Accounting and Economics* 52 (1): 1–20. doi: 10.1016/j.jacceco.2011.02.002.
- Beatty, Anne, Reining Petacchi, and Haiwen Zhang. 2012. Hedge Commitments and Agency Costs of Debt: Evidence from Interest Rate Protection Covenants and Accounting Conservatism. *Review of Accounting Studies* 17 (3): 700–738. doi: 10.1007/s11142-012-9189-4.
- Beaver, William H., Wayne R. Landsman, and Edward L. Owens. 2011. Asymmetry in Earnings Timeliness and Persistence: A Simultaneous Equations Approach. *Review of Accounting Studies* 17 (4): 781–806. doi: 10.1007/s11142-011-9174-3.
- Chandler, Nick. 2018. Alternative performance measures: A recurring debate. <https://home.kpmg/uk/en/home/insights/2018/01/alternative-performance-measures--a-recurring-debate.html> (accessed August 29, 2019).
- Cicak, Josip, and Davor Vasicek. 2019. Determining the Level of Accounting Conservatism through the Fuzzy Logic System. *Business Systems Research Journal* 10 (1): 88–101. doi: 10.2478/bsrj-2019-0007.
- Cotter, Derry, and R. Donnelly. 2006. Conservative accounting: The book-to-market ratio and stock returns. *Chartered Association of Certified Accountants*.
- Dietrich, J. Richard, Karl A. Muller, and Edward J. Riedl. 2007. Asymmetric Timeliness Tests of Accounting Conservatism. *Review of Accounting Studies* 12 (1): 95–124. doi: 10.1007/s11142-006-9023-y.
- Ettredge, Michael, Ying Huang, and Weining Zhang. 2012. Earnings Restatements and Differential Timeliness of Accounting Conservatism. *Journal of Accounting and Economics* 53 (3): 489–503. doi: 10.1016/j.jacceco.2012.01.002.
- European Securities and Markets Authority. 2015. *Final Report ESMA Guidelines on Alternative Performance Measures*, June 2015, https://www.esma.europa.eu/sites/default/files/library/2015/11/2015-esma-1057_final_report_on_guidelines_on_alternative_performance_measures.pdf (accessed September 2, 2019).
- Financial Reporting Council. 2017. *Corporate Reporting Thematic Review Alternative Performance Measures (APMs)*, November 2017, <https://www.frc.org.uk/getattachment/ff987c01-416f-4635-8dba-fdda5530f4b5/091117-APMs-CRR-thematic-review.pdf> (accessed August 27, 2019).
- Garcia Lara, Juan Manuel, Beatriz Garcia Osma, and Fernando Penalva. 2016. Accounting conservatism and firm investment efficiency. *Journal of Accounting and Economics* 61 (1): 221–238.
- . 2007. Accounting Conservatism and Corporate Governance. *Review of Accounting Studies* 14 (1): 161–201. doi: 10.1007/s11142-007-9060-1.

- Givoly, Dan, and Carla Hayn. 2000. The Changing Time-Series Properties of Earnings, Cash Flows and Accruals: Has Financial Reporting Become More Conservative? *Journal of Accounting and Economics* 29 (3): 287–320. doi: 10.1016/s0165-4101(00)00024-0.
- Khan, Mozaffar, and Ross L. Watts. 2009. Estimation and Empirical Properties of a Firm-Year Measure of Accounting Conservatism. *Journal of Accounting and Economics* 48 (2–3): 132–50. doi: 10.1016/j.jacceco.2009.08.002.
- Kim, Yongtae, Siqi Li, Carrie Pan, and Luo Zuo. 2013. The Role of Accounting Conservatism in the Equity Market: Evidence from Seasoned Equity Offerings. *The Accounting Review* 88 (4): 1327–1356. doi: 10.2308/accr-50420.
- Kumar, Dinesh. 2015. Accountancy Company Accounts and Analysis of Financial Statements. New Delhi: National Council of Educational Research and Training.
- Mcnichols, Maureen, Madhav V. Rajan, and Stefan Reichelstein. 2014. Conservatism Correction for the Market-to-Book Ratio and Tobin's q. *Review of Accounting Studies* 19 (4): 1393–1435. doi: 10.1007/s11142-013-9275-2.
- Mrsa, Josipa and Josip Cicak. 2015. Kvalitativno obilježje opreza u prezentiranju financijskih izvještaja. *Racunovodstvo revizija i financije* 25 (8): 116–119.
- Penman, Stephen H., and Xiao-Jun Zhang. 2002. Accounting Conservatism, the Quality of Earnings, and Stock Returns. *The Accounting Review* 77 (2): 237–64. doi: 10.2308/accr.2002.77.2.237.
- Richard, Pierre J., Timothy M. Devinney, George S. Yip, and Gerry Johnson. 2009. Measuring Organizational Performance: Towards Methodological Best Practice. *Journal of Management* 35 (3): 718–804. doi: 10.1177/0149206308330560.
- Ruch, George W., and Gary Taylor. 2015. Accounting Conservatism: A Review of the Literature. *Journal of Accounting Literature* 34: 17–38. doi: 10.1016/j.acclit.2015.02.001.
- Solomons, David. 1986. *Making Accounting Policy: The Quest for Credibility in Financial Reporting*. New York: Oxford University Press.
- Tan, Liang. 2013. Creditor Control Rights, State of Nature Verification, and Financial Reporting Conservatism. *Journal of Accounting and Economics* 55 (1): 1–22. doi: 10.1016/j.jacceco.2012.08.001.
- Wang, Richard Zhe, Ciaran O Hogartaigh, and Tony Van Zijl. 2009. A Signaling Theory of Accounting Conservatism. *SSRN Electronic Journal*. doi: 10.2139/ssrn.1415305.
- Watts, Ross L. 2003. Conservatism in Accounting Part I: Explanations and Implications. *Accounting Horizons* 17 (3): 207–21. doi: 10.2308/acch.2003.17.3.207.
- . 2003. Conservatism in Accounting Part II: Evidence and Research Opportunities. *Accounting Horizons* 17 (4): 287–301. doi: 10.2308/acch.2003.17.4.287.