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ACCOUNTING CONSERVATISM: EVIDENCE FROM THE ALGERIAN COMPANIES

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ABSTRACT: The aim of this paper is to explore the conservatism in the Algeria companies and measure its level; the hypothesis assumed the existence of conservatism in the financial statements of Algerian companies. The study used an unbalanced panel data of 152 firm-year observations that concern 21 Algerian companies during the period 2007-2019, using Ball and Shivakumar's (2005) model to measure the conservatism. The results are consistent with the expectations indicating the existence of conservative accounting practices in the Algerian companies. Comparing with the findings in different environment, the level of conservatism in Algeria is medium. The results confirm the assumptions that accounting practices in code-law countries are tend to be more conservative.

Keywords: Accounting quality, Accounting conservatism, Ball and Shivakumar's (2005) model, Operating cash flows, accounting accruals.

JEL Classification: M40, M41

1. INTRODUCTION

Providing high quality for accounting information is the traditional objective of financial reporting (FASB, 1980; IASC, 1989; IASB, 2010; IASB, 2018), while the achievement of this objective depends on a variety of factors that widely discussed in the literature. The improvement of accounting information quality starts from the conceptual framework, which determines the concepts, principles, assumptions, and characteristics allowing managers to select and apply accounting policies to prepare and present financial statements. Despite that, the reaching of accounting information quality has influenced by many aspects, like economic and institutional environment and financial statements' users (Nirwana and Haliah, 2018; Tontiset and Kaiwinit, 2018; Tambingon et al., 2018), conceptual framework and accounting policies remain the bases of accounting information quality, as they are under the control of companies (accounting policies) or the control of accounting regulators (conceptual framework).

Besides other components of the conceptual framework, accounting conservatism (prudence) is a concept that can substantially impact the accounting information quality. For many decades, conservatism has considered as the cornerstone of accounting thought and practice, especially, after the great depression of 1929, and later after the financial crises or the financial failure and bankruptcy of companies. Although the wide use of conservatism, there are some differences between environments in terms of its impact on financial statements. Thus, conservatism is among the characteristics used to distinguish between the Anglo-American accounting model and the Continental European accounting

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model (See: Nobes and Parker, 2020). Under the Continental model, stakeholders require managers to select and applying conservative accounting policies, as it is case in the code-law countries. However, the Anglo-American model includes the common-law countries, in which users of financial statements prefer aggressive accounting practices.

Measuring accounting conservatism is a step toward the measure of accounting information quality; since the literature not yet provided evidence about the adequate level of accounting conservatism in the financial statements. A high level of conservatism can support verifiability, and thus faithful representation, while it might contradict with neutrality or substance over form (IASB, 2018). On the other side, a weak level of conservatism can motivate managers to adopt aggressive or opportunistic accounting policies or making an excessive accounting estimation, and subsequently destroy the fair presentation of financial statements

The purpose of this paper is to explore whether or not accounting practices in Algeria are conservative, through measuring the level of accounting conservatism in financial statements of Algerian companies. The remainder of paper is structured as follows: Sections 2 and 3 review the theoretical framework and literature respectively, Section 4 presents the research design, and Section 5 discusses the results.

1.1. Research question

Since its independence from France in 1962, Algeria was considered as a code-law country having an accounting practice that tends toward conservatism; this fact has not changed even after the reforms that have been introduced in 1975 and 2010. Therefore, this study asks the question about the accounting conservatism level in the Algerian companies, to provide empirical evidence.

1.2. Hypothesis

This study starts from the following hypothesis:

- Accounting practice in the Algerian companies tends to be more conservative.

2. THEORETICAL AND BACKGROUND

Accounting literature did not determine clearly the source and the emergence of accounting conservatism, but it appears that this concept relates to the practice. Alkurdi et al. (2017: p. 609) identified a definition of conservatism by Bliss (1924) who defined accounting conservatism as: “Anticipate no profits, but anticipate all losses”. Neag and Mașca (2015: p. 1115) documented the first debate on accounting conservatism during 1939, by “Stephen Gilman” and “Kenneth MacNeal”, who discussed the problem of asset valuation bases reported in the financial statements. “Stephen Gilman” adopted the view that historical cost must be used and the distorting and unconservative convention “the lower of cost or market” must be abandoned. Contrarily, “Kenneth MacNeal” adopted the view that current market value must be used.

Conservatism has usually been included as a component of conceptual frameworks for financial accounting (FASB, 1980; IASC, 1989; IASB, 2018). It represents a concept that justifies many accounting practices. However, it is not understood as an attribute of reliability as in the USA and the UK or a central accounting principle (Haller, 2003: p. 92) or a constraint on the qualitative characteristics. Paton and Littleton (1940: p. 128) stated that conservatism should not be a concept within the framework, but an attribute to be added when interpreting accounting information. There is a long period tradition of conservatism accounting practice, especially in the code-law countries (Hellman, 2008: p.

72), where the banks dominate the financial structures of companies, so the protection of creditors through the activation of conservatism is a necessity.

The SFAC No. 2 issued by the FASB stated that "Conservatism is a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered. Thus, if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate; however, if two amounts are not equally likely, conservatism does not necessarily dictate using the more pessimistic amount rather than the more likely one. Conservatism no longer requires deferring recognition of income beyond the time that adequate evidence of its existence becomes available or justifies recognizing losses before there is adequate evidence that they have been incurred".

Many authors have simply and intuitively represented the accounting conservatism basing on the type of news that the company has to record. When the company has a bad news, the accounting will take it into account; in the case of good news, accounting does not consider it (Ferramosca and Ghio, 2018: p. 142). Thereby, managers must adopt a pessimist view when recognizing the event and transactions' effects. The origin of this concept can be easily found in financial theory.

The asymmetry timelines recognition of bad and good news has significant effects on the items of financial statements. Consequently, other definitions of accounting conservatism have based on its outcomes, like Wolk et al. (2013) who see conservatism as a means of choosing between accounting policies that lead to underestimate the assets or overestimate the liabilities, and thus an underestimation of the net asset. Feltham and Ohlson (1995) defined accounting conservatism as a persistent underestimation of the company's book value. Watts (2003) documented that conservatism is the asymmetry in the verification requirements for recognition of some income items; a greater degree of verification is required for gains than for losses.

Conservatism, which had been a sub-characteristic of reliability in the SFAC No. 2 of the FASB and the 1989 Framework of the IASC, was not considered a separate attribute of faithful representation in the 2010 Conceptual Framework, where the IASB concluded that it could be redundant and inconsistent with neutrality and substance over form. Conservatism was reinstated in the IASB's 2018 Conceptual Framework with exhaustive clarifications; due to different explanations given by stakeholders to the conservatism, as noted by the IASB (2018). The Board was persuaded by the view that defined conservatism as the exercise of caution when making judgments under conditions of uncertainty, can help to achieve neutrality in applying accounting policies, and thus, achieving faithful representation of accounting items.

The debate about different implications of accounting conservatism and its importance for the companies and regulators and stakeholders is still continuous. Watts (2003) was determined four exhaustive explanations for conservatism: accounting regulation, contracting, shareholder litigation, and taxation. LaFond and Watts (2008) suggested that conservatism is a mechanism of governance that reduces information asymmetry and restricts the manager's ability to manipulate or report excessive optimistic financial performance. Lara and Mora (2004) considered conservatism as a way for protecting the primacy of creditors' claims over shareholder claims.

Accounting conservatism is beneficial for financial statements' users, since it considered as an efficient contracting and a mechanism to limit managerial opportunism through restricting the managers' opportunities to transfer the wealth of company to themselves (overcompensation or bonus) or to other parties (dividends for example),

reducing agency problems arising from investment decisions, improving the efficiency of debts and other contracts, facilitating the supervision of contracts, and limiting the litigation costs. Furthermore, conservatism can reduce the political costs to companies (taxes for example), regulators, and standards setters (García Lara et al., 2009; André and Filip, 2016; Yin et al., 2020).

The relationship between conservatism and accounting information quality is controversial in the literature, which does not yet provide a definitive response to such problematic (Da Silva, 2019). According to Hendriksen (1982: p. 83), conservatism is a very poor method to process the uncertainty existed in valuation, and it leads to a complete distortion of accounting data. Conservatism can give a rise to information asymmetry (Ademola and Moses, 2017: p. 89), it can cause a subjective resource allocation reducing the company's value and its equity pricing in a long run (Penman and Zhang, 2002).

On the contrary, many studies documented that conservatism can enhance the usefulness of accounting information by reducing residual losses arising from asymmetric information between managers and stakeholders (Muttakin, 2019: p. 4). Conservative accounting practices can limit the earnings management and the use of aggressive accounting practices to increase opportunistically earnings (Muttakin, 2019: p. 2). Moreover, the application of a higher level of verification to recognize gains might constraint the managers' desire or incentives to overestimate income and assets and their tendencies to cover loss information in a timely manner (Yin et al., 2020: p. 3).

Accounting literature distinguishes between two forms of conservatism, conditional and unconditional conservatism. The first is embedded in accounting standards (Heflin et al., 2015: p. 978), as it depends on expected events and requires a lower level of verification for bad news in the counter of good news (Armstrong et al., 2014). Conditional conservatism is usually considered as a positive attribute of financial reporting for many reasons (André et al., 2015).

Unconditional conservatism relies on the managers' ability and being correct when selecting accounting policies (Rashidi, 2011). It is often considered as a negative attribute of financial reporting since it represents a systematic and biased decision to underestimate the net assets without taking into account the nature of news received (André et al., 2015). Examples for the unconditional conservatism include the expense of internally developed intangible costs, accelerated depreciation methods, the LIFO inventory, and the postponement of income recognition.

The concepts of conditional and unconditional conservatism are highly related, as affirmed Beaver and Ryan (2005) and Pope and Walker (2003) that a higher conditional conservatism must be preceded by a lower unconditional conservatism. Moreover, Chen et al. (2014) argued that it is not beneficial to differentiate between the two forms of conservatism from an empirical perspective, considering that the incentives leading accounting policies might affect both forms of conservatism.

3. LITERATURE REVIEW

Accounting conservatism has taken the interest of researchers and professionals for many decades. However, its importance differs according to different factors that determine its level, which measured through a variety of models and ratios, and was a subject of comparison between various environments.

García-Lara (2003) compared the level of accounting conservatism and assessed the statistical significance of the differences across eight European countries (United Kingdom,

Germany, France, Switzerland, the Netherlands, Italy, Spain, and Belgium). The study concluded that the balance sheet conservatism bias exists in all countries, due to the usage of historical cost and the non-recognition of certain intangible assets. However, continental countries present a large balance sheet conservatism bias than common-law based countries. The study concluded also that continental countries present lesser earnings conservative than common-law based countries.

Givoly et al. (2007) examined the power and reliability of the reporting conservatism measure developed by Basu (1997). They relied on a sample of 443,605 firm-year observations that concern 17,371 companies of Standard & Poor's Compustat 2001. They Indicated that assessing the extent of reporting conservatism using Basu (1997) requires the recognition of, and control for, the characteristics of the information environment unrelated to conservatism. They provided evidence on the negative association between Basu's (1997) measure and alternative aspects of conservatism.

Brouwer (2009) investigated the level of accounting conservatism in the financial statements of European companies' overtime during the period 1991-2005. He concluded that the financial statements of European companies showed a certain level of balance sheet conservatism and earnings conservatism that decreased over time. The differences in the level of balance sheet conservatism and earnings conservatism between European companies have reduced after the introduction of IFRS.

Khan and Watts (2009) attempted to estimate accounting conservatism and analyze its empirical properties. Using a sample of 115,516 firm-year observations during the period 1963-2005 from CRSP and Compustat databases, the results provided evidence that C-Score captures variation in conservatism and it predicts asymmetric earnings timeliness at the horizon of 3 years ahead. The results indicated also that companies with longer investment cycles and a higher level of information asymmetry present a higher level of accounting conservatism.

Van den Hoek (2010) examined the existence of accounting conservatism in the Dutch companies and its development, and whether a difference exists between listed and non-listed companies in term of accounting conservatism level. The study consisted of 64 large Dutch listed and 41 large non-listed companies during 2001-2008, using the model of Ball and Shivakumar (2005). The results showed that Dutch companies apply conservative accounting, without any observable trend about its level, and any evidence that the degree of accounting conservatism for non-listed companies is lower than listed companies.

Embring and Wall (2012) focused on the model of Basu (1997) to measure accounting conservatism in the Swedish companies, using 6450 firm-year observations from 430 companies listed on the Swedish stock exchanges during the period 1997-2012. The results demonstrated a decrease in accounting conservatism by the Swedish companies, where the conservative accounting practices remain, although to a lesser extent than before the adoption of IFRS in 2005. This may affect negatively the value relevance of accounting information.

Kordlouie et al. (2014) investigated the relationship of accounting conservatism with financial statements quality for the companies listed on the Tehran Stock Exchange. The study included the financial statements of 102 Iranian companies over the period 2006 to 2010 and indicated that the relationship between accounting conservatism and financial statements quality is positive and statistically significant.

Vishnani and Misra (2016) investigated the existence of conditional conservatism in the accounting practices of Indian companies. They intended to validate the C-score, Basu's (1997) model, and established monotonicity of C-score measure. They used 5,803 firm-year

observations from the Indian S&P BSE 500 index, during 2000-2015. According to the results, C-score can predict conditional conservatism up to two years ahead, and a positive association of C-score decile ranks with decile wise leverage and variability has existed. However, the C-score decile ranking is negatively associated with size, age, market-to-book ratio, ROA, and non-operating accruals.

Rijneker (2016) investigated the effect of accounting conservatism on information quality for 14,061 firm-year observations that concern 1,969 companies over 32 European countries during the period 2006-2014. The regression analyses indicated that the association between conservatism and the bid-ask spread was not significant, while the associations of conservatism with forecast error and returns volatility were significant in the unexpected direction, and only the associations of conservatism with analyst following was significant in the expected direction. Thereby, the study concluded that accounting conservatism does not affect information quality.

An (2017) analyzed the earnings quality overtime for the listed companies on the Korean stock exchange, using a sample of 9,584 firm-year observations over the period 1995-2006. Earnings quality was measured by persistence, value-relevance, accounting conservatism, and accruals quality. The study found that the earnings quality of Korean companies is relatively lower than that of companies in developed countries across three earnings quality measures except for accounting conservatism.

Hansen et al. (2018) investigated whether a firm's reporting conservatism differs according to its life cycle stage. The study employed 106,577 firm-year observations for the main analysis, and 70,963 firm-year observations for the additional analysis, from COMPUSTAT and CRSP databases during 1988-2012. The reporting conservatism measured using Givoly and Hayn (2000) and Basu (1997), where the companies have classified annually into life cycle stages consistent with Dickinson (2011). The study found that, unlike conditional conservatism, which does not associate with life cycle stages, unconditional conservatism decreases over life cycle stages.

Li et al. (2018) examined the effects of 2001 and 2007's accounting reforms in China on earnings conservatism using a variety of measures. Based on 24,186 firm-year observations during 1998-2013 from China Stock Market and Accounting Research (CSMAR) Database, The results suggested that conservatism has existed in the financial statements of Chinese companies since the 1998's accounting reform. The 2001's accounting reform has significantly improved earnings conservatism, whereas the 2007's accounting reform has negatively affected the earnings conservatism level.

Čičak and Vašiček (2019) tried to develop a fuzzy logic solution for determining accounting conservatism in the financial statements on low-activity financial markets. The study developed a fuzzy logic system using 1,060 Croatian companies for the year 2015, using the MatLab software and the Mamdani fuzzy inference method. The study provided a relevant and valid model to discover accounting conservatism.

Wronski and Klann (2020) intended to evaluate the influence of Hofstede's cultural dimension (2017) on companies accounting conservatism level. They based on a sample of 54,484 firm-year observations from 32 countries, during 2010-2016, using Ball and Shivakumar's model (2005) to measure accounting conservatism. They suggested that the national culture can impact accounting information quality through influencing accounting conservatism.

The present study interests with the accounting conservatism level following the methodological procedures of previous studies, while it employed the model of Ball and

Shivakumar (2005) and carried out using the financial data of companies from a developing country like Algeria.

4. RESEARCH DESIGN

The present study based on the descriptive approach, and used the statistical method in order to test the hypothesis.

4.1. Model specification

Wang (2009) identified five key measures of accounting conservatism including:

- Basu's (1997) asymmetric timeliness of earnings measure (AT);
- Ball and Shivakumar's (2005) asymmetric accruals-to-cash-flow measure (AACF);
- Market-to-Book ratio measure (MTB);
- Penman and Zhang's (2002) Hidden Reserves Measure (HR); and
- Givoly and Hayn's (2000) Negative Accruals Measure (NA).

In order to measure accounting conservatism we used the Ball and Shivakumar's (2005) model, which relates the operating cash flows with accounting accruals in a multiple leaner regression as shown in Equation (1). We estimated that the Shivakumar's (2005) model is adequate for Algerian companies, as it includes variables from financial statements and do not requires any market variables, where the majority of Algerian companies are not listed in the stock exchange.

$$ACC_{it} = \alpha_0 + \alpha_1 OCF_{it} + \alpha_2 DOCF_{it} + \alpha_3 OCF*DOCF_{it} + \varepsilon_{it} \quad (1)$$

Where:

ACC_{it}: is the total accruals for the company *i* during the period *t*.

OCF_{it}: is the net operating cash flows for the company *i* during the period *t*.

$DOCF_{it}$: is a dummy variable, which takes 1 if OCF_{it} is negative, otherwise 0.

$OCF*DOCF_{it}$: is the net operating cash flows multiplied by the dummy variable.

α_0: is the constant.

α_1, α_2, α_3: are the regression coefficients.

ε_{it}: is the residuals.

The accounting conservatism level can be accessed through the value of the incremental coefficient α_3, the larger the value of the incremental coefficient α_3, the high the level of accounting conservatism.

4.2. Data collection

Considering the difficulty of collecting the financial information of the Algerian companies, due to the secrecy and caution characterizing their corporate governance and the lake of databases for this purpose, the selection of companies was based on the availability of their financial information. The study was carried out using an unbalanced panel data of 152 firm-year observations that consists 21 Algerian companies during the period 2007-2019. The variables have been measured directly using the amounts related to them in the financial statements, which have been weighted using the total assets, in order to isolate the size effect.

5. RESULTS AND DISCUSSION

5.1. Descriptive statistics

Table N° 1 summarizes the descriptive statistics of data, including 152 firm-year observations for 21 companies, from 2007 to 2019. Although the standard deviation shows that the net operating cash flows (OCF_{it}) and accounting accruals (ACC_{it}) are consistent in

terms of dispersion, the Mean indicates that the net operating cash flows, which reached 5.48% from the total assets on average, is more than accounting accruals, which reached only 1.84% on average. When comparing the Mean with the Median, we observe that they are consistent suggesting that the data related to net operating cash flows and accounting accruals followed the Normal distribution. The Maximum and the Minimum values show that cash flows and accruals contain negative besides positive values. Concerning the dummy variable ($DOCF_{it}$), it takes only the values 0 or 1, but the Mean reveals that most of its values are nil, so the most values of operating cash flows are positive.

Table N° 1: Descriptive statistics for 152 firm-year observations (2007-2019).

	ACC_{it}	OCF_{it}	$DOCF_{it}$	$OCF*DOCF_{it}$
Mean	-0.0184	0.0548	0.1974	-0.0455
Median	-0.0205	0.0641	0	0
Maximum	2.1603	1.9429	1	0
Minimum	-1.4461	-2.0844	0	-2.0844
Std. Dev.	0.2827	0.3013	0.3993	0.2222
Observations	152	152	152	152

Source : Based on EViews V10.

5.2. Correlation

Table N° 2 summarizes the correlation relationships between variables, measured by the Pearson coefficient, which indicates that all of the correlation relationships are statistically significant at 1% level. The table shows a negative high correlation relationship between accounting accruals (ACC_{it}) and operating cash flows (OCF_{it}), and a positive high correlation relationship between accounting accruals (ACC_{it}) and operating cash flows dummy variable ($OCF*DOCF_{it}$). The correlation relationship between accounting accruals (ACC_{it}) and dummy variable ($DOCF_{it}$) is positive and medium. Finally, the correlation relationships between independent variables (OCF_{it}, $DOCF_{it}$, and $OCF*DOCF_{it}$) are negative and medium, except for the relationship between net operating cash flows (OCF_{it}) and operating cash flows dummy variable ($OCF*DOCF_{it}$), which is positive.

Table N° 2: Pearson's correlation coefficients between the variables.

Correlation / ***Probability***	ACC_{it}	OCF_{it}	$DOCF_{it}$	$OCF*DOCF_{it}$
ACC_{it}	1.0000			

OCF_{it}	-0.9757	1.0000		
	0.000	-----		
$DOCF_{it}$	0.4473	-0.4712	1.0000	
	0.000	0.000	-----	
$OCF*DOCF_{it}$	0.8533	0.4961	-0.4144	1.0000
	0.000	0.000	0.000	-----

Source : Based on EViews V10.

5.3. Unit root test

Before estimating the model of study, it must examine the stationary or the integration order of the variables series, through testing whether they contain or not unit root. Table N° 3 presents the results of five unit root tests at the level, i.e. I(0), under the three possible options (Individual intercept, Individual intercept and trend, None), knowing that the null hypothesis of all tests assumes the presence of unit root (non-stationary) in panel data. According to the results, all of the variables do not contain unit root, due to the significance of all tests at 1% level, except "Levin, Lin & Chu t" and "Im, Pesaran and Shin W-stat" for dummy variable ($DOCF_{it}$) and "Breitung t-stat" for cash flows dummy variable ($OCF*DOCF_{it}$), which are significant at 5%. The non-significance of "Levin, Lin & Chu t" and "Breitung t-stat" for accounting accruals (ACC_{it}) and operating cash flows (OCF_{it}) and "ADF - Fisher Chi-square" for dummy variable ($DOCF_{it}$) does not change the tendency of results, and subsequently, all of the variables series are stationary at the level, i.e. I(0).

Table N° 3: Unit root test results.

Method	Test	ACC_{it} Stat.	ACC_{it} Prob.	OCF_{it} Stat.	OCF_{it} Prob.	$DOCF_{it}$ Stat.	$DOCF_{it}$ Prob.	$OCF*DOCF_{it}$ Stat.	$OCF*DOCF_{it}$ Prob.
Individual intercept	Null: Unit root (assumes common unit root process)								
	Levin, Lin & Chu t*	-19.62	0.000	-1306	0.000	-2.19	0.014	-7.08	0.000
	Null: Unit root (assumes individual unit root process)								
	Im, Pesaran and Shin W-stat	-10.19	0.000	-680.92	0.000	-1.63	0.050	-3.50	0.000
	ADF - Fisher Chi-square	123.90	0.000	81.59	0.000	22.88	0.062	47.66	0.000
	PP - Fisher Chi-square	151.48	0.000	91.75	0.000	32.39	0.001	52.55	0.000
Individual intercept and trend	Null: Unit root (assumes common unit root process)								
	Levin, Lin & Chu t*	6.06	1.000	4.88	1.000	-12.16	0.000	-16.12	0.000
	Breitung t-stat	-0.00	0.500	-0.00	0.500	-3.73	0.000	-2.17	0.015
	Null: Unit root (assumes individual unit root process)								
	Im, Pesaran and Shin W-stat	-5.17	0.000	-2.69	0.004	-2.53	0.006	-3.37	0.000
	ADF - Fisher Chi-square	103.37	0.000	74.60	0.000	60.76	0.000	67.99	0.000
	PP - Fisher Chi-square	143.19	0.000	118.07	0.000	81.50	0.000	84.21	0.000
None	Null: Unit root (assumes common unit root process)								
	Levin, Lin & Chu t*	-9.20	0.000	-5.51	0.000	-4.09	0.000	-8.85	0.000
	Null: Unit root (assumes individual unit root process)								
	ADF - Fisher Chi-square	148.30	0.000	103.21	0.000	29.19	0.009	62.77	0.000
	PP - Fisher Chi-square	166.24	0.000	120.74	0.000	46.56	0.000	67.00	0.000

Source : Based on EViews V10.

5.4. Model estimation

The model of the study was estimated by the three methods of panel data (Pooled, Fixed, and Random) as shown in Table N° 4, which indicates that the model is significant at 1% level under the three methods. The constant and the regression coefficients are also significant at 1% level under the three methods, except the regression coefficient of dummy variables ($DOCF_{it}$), which is not significant under the three methods. When comparing between the three methods, we record a convergence between their results; nevertheless,

the Fixed Effects Model provides high values in terms of constant and regression coefficients and determination coefficient, then the Random Effects Model and the Pooled Regression Model respectively, except for the regression coefficient of the cash flows dummy variables ($OCF*DOCF_{it}$), which takes the lower value under the Fixed Effects Model, then the Random Effects and the Pooled Regression respectively. The results summarized in Table N° 4 does not allow selecting the valid model, they provide consistent measures under the three methods, except the Durbin-Watson, which suggests that the Fixed Effects is the most valid, where the calculated value is the closest from the value 2.

Table N° 4: Model (2)'s results using the different methods of panel data.

Independent variables		**Dependent variable: ACC_{it}**		
		Estimation method		
		Pooled Regression Model	**Fixed Effects Model**	**Random Effects Model**
Constant	**Coefficient**	0.0296	0.0341	0.0337
	t-statistic	5.1406**	8.1454**	3.8018**
OCF_{it}	**Coefficient**	-0.7803	-0.8248	-0.8073
	t-statistic	-30.9945**	-42.8984**	-44.5710**
$DOCF_{it}$	**Coefficient**	-0.0175	-0.0114	-0.0093
	t-statistic	-1.4130	-1.2063	-1.0261
$OCF*DOCF_{it}$	**Coefficient**	0.2459	0.1745	0.2016
	t-statistic	7.4326**	6.1675**	7.7281**
Adj. R^2		0.9644	0.9850	0.9823
F-statistic		1364.64**	283.93**	2788.49**
Durbin-Watson		0.8192	1.9363	1.5723
S.E. of regression		0.0533	0.0345	0.0362
Sum squared residuals		0.4212	0.1393	0.1939
Log likelihood		231.86	315.95	-
Periods included		13	13	13
Cross-sections included		21	21	21
Obs.		152	152	152

* Significant at 5% level

** Significant at 1% level

Source : Based on EViews V10.

5.5. Model selection

Testing the hypothesis requires selecting the valid model between those that previously estimated using the three methods of panel data. Firstly, we used the Restricted *F* test to compare between the Pooled Regression Model and the Fixed/Random Effects Model starting from the following hypothesis:

H_0: Pooled Regression Model is valid.

H_1: Fixed/Random Effects Model is valid.

From Table N° 5, we see that the *F*-calculated value (F'), which reached 8.72, is more than the *F*-critical value obtained from the *F*-distribution at the numerator degree of freedom (N – 1 = 20) and denominator degree of freedom (NT – N – K = 127 ≈ 100) and

1% level of significance, which reached 2.54. This means that the model must be estimated using the Fixed Effects Model or Random Effects Model, as assumed by H_1.

Table N° 5: F-test results.

N	T	K	R^2_{FEM}	R^2_{PM}	F'	F-critical value
21	13	4	0.9850	0.9644	8.72	2.54

$$F' = \frac{(R^2_{FEM} - R^2_{PM})/(N-1)}{(1-R^2_{FEM})/(N\times T - N - K)}$$

Where: F' is the *F*-calculated value, N is the number of sections, T is the number of periods, K is the number of estimated parameters, R^2_{FEM} is the determination coefficient from the Fixed Effects Model, R^2_{PM} is the determination coefficient from the Pooled Regression Model.

Source : Based on EViews V10.

Second, we used the *Hausman* test to compare between the Fixed Effects Model and the Random Effects Model starting from the following hypothesis:

H″₀: Random Effects Model is valid.

H″₁: Fixed Effects Model is valid.

As summarized in Table N° 6, it appears that the *Hausman* test is significant at 5% level. Consequently, H''_0 must be rejected and H''_1 must be accepted, so the model of study must be estimated using the Fixed Effects Model, as we expected previously when we compared between the models using Durbin-Watson.

Table N° 6: Hausman test results.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.7932	3	0.0322

Source : Based on EViews V10.

5.6. Hypothesis Testing

The selection criteria proofed that the Fixed Effects Method is valid to estimate the model of study and test the hypothesis. The outcomes of the Effects Fixed Model indicate that the operating cash flows and the two variables derived from them explain 98.50% of the variations in accounting accruals. Regarding the conservatism level, it can be assessed by the regression coefficient of cash flows dummy variable ($OCF*DOCF_{it}$), which represents the conservatism coefficient (α_3 in the model of study). This coefficient is significant at 1% level and reaches 0.1745, indicating the existence of conservative accounting practices in the Algerian companies.

The conservatism coefficient is very high when compared with the companies in emerging countries, like Nigeria, where it reached 0.055 (Ademola and Moses, 2017), and

India, where it reached 0.0527 (Vishnani and Misra, 2016). However, it is medium when compared with the companies in developed countries, like the Netherlands, where it was more than 0.269 during the period 2001-2008 according to Van den Hoek (2010), and Spain, where it was less than 0.21 according to García Lara et al. (2009), and the UK, where it was between 0.184 and 0.37 according to Ball and Shivakumar (2005). From these results, it is easy to conclude that accounting practice in the Algerian companies tends to be more conservative, which confirms the *Hypothesis*.

The results of this study are consistent with the most previous studies that suggested the existence of accounting conservative practices in the companies, like García-Lara (2003) and Brouwer (2009) in Europe, Givoly et al. (2007) and Khan and Watts (2009) in the USA, Kordlouie et al. (2014) in Iran, An (2017) in Korea, Li et al. (2018) in China, Van den Hoek (2010) in the Netherlands. On the other hand, the results of this study are inconsistent with some previous studies that recorded a decrease in accounting conservatism, like Embring and Wall (2012) in Sweden.

6. CONCLUSION

Conservatism is a prominent concept in accounting thought and practice for many decades; its existence has preceded the emergence of conceptual frameworks. The shift of accounting practice to reliance on the standardization since the beginning of the 70's did not neutralize the conservatism, which has become an attribute of reliability (faithful representation), or a constraint on qualitative characteristics, in other cases. The impact of conservatism on accounting practice does not confine in qualitative characteristics; it extends to include many aspects of financial reporting.

Algeria is considered a code-law country, where the accounting practices of companies are expected to be more conservative, while there is no empirical evidence about the reality of accounting conservatism in the Algerian companies. As a result, we attempt with the present paper to measure the conservatism in Algeria and explore its level in the companies, our hypothesis assumed the existence of conservatism in the financial statements of the Algerian companies.

The study used an unbalanced panel data of 152 firm-year observations from 21 Algerian companies during 2007-2019, using Ball and Shivakumar's (2005) model to measure the conservatism. The results are consistent with the expectations indicating the existence of conservative accounting practices in the Algerian companies. Comparing with the findings in different environments, the level of conservatism in Algeria is medium.

The existence of conservatism in the Algerian companies can be explained by the nature of the economic and institutional environment of the Algerian companies, where the stock exchange is not active, and the banks considered the main channel to finance the companies. It can be explained also by the accounting system in Algeria, which reflects the code-law tradition-oriented toward conservatism. The weak level of conservatism in Algeria comparing many common-law countries can be explained by the different mechanisms of control in the developed countries, which does not exist in Algeria.

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