



The Impact of Earnings Persistence on the Operating Cash Flows with Emphasis on Financial Constraints

Orman Hamedil Ilkhechi*

Department of Accounting,
Islamic Azad University, Ilkhchi, Iran

Saeid Anvar Khatibi

Department of Accounting,
Islamic Azad University, Ilkhchi, Iran

Abstract: The purpose of this study is to investigate the effect of earnings stability on operating cash flows with emphasis on financial constraints. Evidence suggests that earnings stability has a positive and significant effect on operating cash flows. Financial constraints have a negative and significant effect on operating cash flows, and financial constraints do not have a significant interactive effect on the relationship between profit stability and operating cash flows. To measure operating cash flow, the cash flow from operating activity obtained through the cash flow statement is obtained by dividing the company's total assets. From 2012 to 2016 that a total of 121 companies active in various industries have formed the research sample. The present research method is descriptive-correlational in terms of applied purpose and post-event in terms of the data collection method. A multivariate regression method has been used to test the research hypotheses. The independent variable in this study is profit stability, and the dependent variable is operating cash flow and financial constraint as a moderating variable. The result is also supported by stakeholder theory. In general, the study adds to the literature by emphasizing the importance of earnings stability in shaping operating cash flow and its financial constraints.

Keywords: Profit stability, operating cash flows, financial constraints, stakeholder, efficient market theory

Received: 26 June 2020; **Accepted:** 17 August 2020; **Published:** 25 October 2020

INTRODUCTION

Information plays a vital role in economics and this can be seen in conditions of Adam Smith's Theory of Indivisible Hand that is the first and well-known economic theory. The different theories have also focused on the importance of information and its characteristics in economics. For instance, famous Article written by Hayek (1945), Efficient Market Theory of Fama (1970), and subsequent theories about efficient market can be named. Most of these theories are about the investors' reactions to the information. The most significant factor in this theory is timely access to accurate information, which has received a considerable attention from the declaration of theoretical concepts of the US and Iran (Dudycz & Prażników, 2020; Salehi, Bayaz, Mohammadi, Adibian, & Fahimifard, 2020). Accordingly, investors' reactions toward information depend on these two features (accessibility and accuracy of informants). Hence, different quality levels and relevance rate of information leads to different reactions in the market. This is called the Earnings Response Coefficient (ERC). In other words, earnings reaction includes the various market reactions to the earnings information (Ang, Chen, Goetzmann, & Phalippou, 2018; Atiase, Li, Supattarakul, & Tse, 2005; Meshki & Nourideh, 2012; Shivakumar, 2010).

Nowadays, timely access to the accurate information and analysis of this information is the most substantial tool to make right decisions, to obtain the expected profits, and to use financial facilities optimally owing to the expansion of

*Correspondence concerning this article should be addressed to Orman Hamedil Ilkhechi, Department of Accounting, Islamic Azad University, Ilkhchi, Iran. E-mail: hamediorman@gmail.com

economic activities, development of financial markets, and the boost of investment in capital markets, particularly Stock Exchange Market by real and legal individuals. The investors and stakeholders have to evaluate and predict the value of the upcoming shares to buy stocks. This value is determined based on the profitability prediction power of companies as well as their stability (Payne & Thomas, 2008; Rees & Thomas, 2010). The earnings reported in financial statements and reports cannot reflect the capacity of institution in creating the optimal cash flows in a suitable manner because accrual accounting and personal appraisals are used in such statements (Ebrahimi, Bahraminasab, & Mamashli, 2017).

Earnings persistence is one of the most important qualitative properties of accounting profit, which implies the stability and durability of this profit (Healy, Serafeim, Srinivasan, & Yu, 2014). The earning acquired from ongoing business operations are more stable relative to reported items in the financial statements (Ashley & Yang, 2004; Bahri, E, & Poniwati, 2017). Accruals are other examples because they are taken into account somehow personally, which leads to the low stability of these items. The actual and potential investors are sensitive to earnings persistence when making decisions about investing their capital in the stock market because this variable helps them to have a precise prediction of expected cash flows (Modares & Abbaszadeh, 2008; Zunairoh & Fatkhurrohman, 2019).

Theoretical Literature and Background

Earnings persistence is one of the qualitative properties of the accounting profit that depends on the accounting information. Earnings persistence is an index used by investors to evaluate ongoing profits and cash flows of the firm (Khajavi, Valipour, & Askari, 2010). Earning persistence means the continuity of current earnings. The higher the firms capacity in maintaining current earnings, the higher the quality of firms earnings (Saghafi & Kordestani, 2004). Persistent earnings are a part of current earnings with continuous durability (Modares & Abbaszadeh, 2008). Channing components of current earnings that are transferred to future earnings indicate the durability and high quality of earnings (Kormendi & Lipe, 1987).

Management efficiency depends on the use of existing resources and earnings persistence represents this efficiency rate. The more earnings obtained from operating assets, the higher the earnings persistence (Khajavi et al., 2010). The more efficient and capable managers, the better understanding of risk and the more optimal projects are selected and the more efficient the operations of the firm will be managed. Such measures by managers will positively affect the ongoing earnings persistence in accruals and operating cash (Almeida, Campello, & Weisbach, 2004). Accounting profit comprises of two accrual and cash items. The accrual item is less persistent, as is an estimated component (Cleary, 2006). The subjective nature of the accrual component of earnings reflects the role of mental estimation of manager in earnings calculation. The managers of business entities estimate the accruals based on their understanding on current and upcoming economic conditions as well as the economic environment of the industrial unit; in this case, the reported earnings are affected by managers judgments and estimations. The inherent capabilities of managers can affect their estimation of accruals (Chou, Gombola, & Liu, 2009). Therefore, it is expected that the managers potential positively affect not only the persistence of operating cash flows but also the durability of the accrual component of earnings.

Financial reports are the most significant outcome of the accounting system as an informational system and subsystem of management informational system; these reports aim to provide the information required for performance appraisal and profitability of the economic firm. Net profit is one of the accounting items presented in financial reports (Profit and Loss Statement). Financial reports provide some information about the earnings and their items that draw the attention of users of financial statements such as investors, creditors, managers, employees, analysts, and government. These users pay attention to the financial statements to make investment decisions, lending, earnings payment policies, corporate appraisal, tax calculation, and other relevant decisions. Since the accruals are influenced by management methods, cash items of earnings are more stable and persistent (Hassanzadeh, Nahandi, & Negahban, 2014).

Financial constraints are defined as constraints that prevent from supplying cashes required for the desired investment of firms. In fact, a financially constrained firm faces a high cost for external finance or lack of access to the financial resources so that optimal investment decisions cannot be made in such a firm. If a company cannot access to external financial resources in the capital market, a significant part of this need is financed by internal financial resources. In this case, the firm will face a financial constraint. It is argued that financially constrained firms may avoid accepting projects with positive Net Present Value (NPV) due to high financing cost, which limits the investment in these firms. Investors should not only consider the persistence of cash items but also the persistence of accruals in order to have a perfect estimation of expected returns. This study was conducted to examine the impact of earnings persistence on the operating cash flows with emphasis on financial constraint by using the data obtained from companies listed in Tehran

Stock Exchange. [Blaylock, Shevlin, and Wilson \(2012\)](#) studied the relationship between tax avoidance and earnings persistence. They found that there is lower earnings persistence and accruals in firms with positive tax-book income difference caused by earnings management. However, there will be more earnings persistence if the positive tax-book difference is caused by tax avoidance. [Bao, Gao, Xu, and Yang \(2014\)](#) examined the sensitivity rate of cash flows to financial constraints as well as information asymmetry between shareholders and managers. Bao and colleagues indicate that the higher the information asymmetry, the more sensitivity of cash flows. Such association influence on the financing and use of external financial resources.

[Peek, Cuijpers, and Buijink \(2010\)](#) carried out a study to investigate the effect of conservatism on the earnings persistence and concluded that the more the firm is conservative, the higher the earnings persistence.

[Allen, Larson, and Sloan \(2013\)](#) proved the lower persistence of accruals items of earnings relative to the cash items due to the subjective nature of accruals. This author focused on the difference between accruals and cash items of the earnings introducing the estimation method of accruals as the reason for such difference.

[Almeida et al. \(2004\)](#) studied the relationship between operating cash flows and cash reserves and introduced the cash flow sensitivity of cash is an optimal measure used to identify financial constraints. In this regard, the cash amount is a crucial element considering the financial constraints and obligations.

Basem and colleagues (2013) examined the effect of a specialized audit on ECR. They compared the ECR of customers with specialized and non-specialized audits and found a positive relationship between audit quality and quality of earnings gained by customers as well as their ECRs (reactions to unexpected earnings). In other words, customers who employed professional auditors had a higher ECR compared to customers who employed non-professional auditors.

[McGuire, Neuman, and Omer \(2012\)](#) studied the association between earnings persistence and tax strategy in 21667 firms during 1998-2009 in the US. The obtained results showed a higher persistence of profit before tax and its items in companies with higher uniform tax rates. Moreover, it was found that investors could understand the tax rate uniformity using it as a sign to evaluate the persistence of profit before tax and its items.

Hypotheses

The research variables were designed based on the questions:

H1: *Earnings persistence has a significant impact on the operating cash flows.*

H2: *Financial constraint has a significant impact on the operating cash flows.*

H3: *Financial constraint has a significant interactional impact on the relationship between earnings persistence and operating cash flows.*

METHODOLOGY

This is an applied research in terms of objective. An applied research aims to develop practical knowledge in a specific field. In other words, the applied studies are conducted to make knowledge practical in a scientific manner.

Furthermore, this is a descriptive study in terms of methodology, which describes the interactions between studied factors. The Correctional method was used in this study, which is used to discover or clarify the associations by using correlations. As the data related to past events in the market and previous financial statements were used in this research, this paper is a post-event research.

Table 1 *SELECTING THE FIRMS BASED ON THE SYSTEMATIC ELIMINATION*

Description	Number of Firms
Total number of firms listed in stock market up to the end of 2016	530
Financers, investors and insurance firms	150
Companies that have had a transactional interruption during 2011-2016	88
Those firms that their financial years does not ended in March	99
If research data of studied companies are not available	73
Number of remaining companies	120

The statistical population of study comprised the companies listed in Tehran Stock Exchange for a 6-year interval (2011-2016). These subjects included all of the firms with specific properties reported in Table 1.

According to Table 1, the statistical population includes 120 firms after adjustments ($N = 120$).

Variables

Dependent variable: Operation Cash Flow (OCFit) - As a benchmark for measuring liquidity, cash flow indicates the cash inflow and outflow. The firms with positive and negative cash flows have high and low liquidity, respectively. OCF is calculated through dividing the cash flow generated by operating activities by the total assets of the firm.

Independent variable: Earnings Persistence (EPER) - Earnings persistence is calculated by using an autoregressive model:

$$E_t = \beta_0 + \beta_1 E_{t-1} + \varepsilon_t$$

Where, E_t indicates operation earnings in year t , E_{t-1} is the operating earnings in $t+1$ year and ε shows the residual error of the model in year t . In accounting literature, β_1 indicates EPER. If the obtained value of the explanatory variable coefficient (β_1) is close to 1, the earnings are more persistent; therefore, β_1 0 indicates earnings instability.

Moderator variable: KZ financial constraint - The most complete and clear definition of financial constraint is related to the situation in which companies experience a gap between internal and external expenses and allocated cash to these expenses. KZ index was used in this research to measure the financial constraint. To distinguish the financially constrained firms from other commercial units, the financial constraint index of Kaplan and Zingales (1997) was used. This index was localized in Iran by Tehrani and Hesarzadeh:

$$kz_{IR} = 17.330 - 37.486C - 15.216Div + 3.394 Lev + 1.402MTB$$

Where,

C: ratio of cash flow to assets

Div: dividend to assets ratio

Lev: debt to assets ratio

MTB: ratio of the total market value of equity and book value of debts to the book value of assets

This index was used in this order: first, the real values were inserted into the KZ equation to calculate the KZ index and then values were ordered in ascending way then divided into 5 parts so that firms at the fourth and fifth quintiles are identified as the financially constrained companies.

Control variable: MB variable is calculated as the market value to book value ratio of the firm at the end of the year of t (Benlemlih & Bitar, 2018).

$$MB = \frac{\text{market value of equity}}{\text{book value of equity}}$$

Financial Leverage (LEV) is defined as the ratio of the book value of total debts to total assets at the end of the year of t (Benlemlih & Bitar, 2018).

$$LEV = \frac{\text{Book value of total debts}}{\text{Book value of total assets}}$$

Return on equity (ROE) is calculated by dividing the income before common items by the book value of equity at the end of year t (Benlemlih & Bitar, 2018).

$$ROE = \frac{\text{Net Income}}{\text{Equity}}$$

SIZE: logarithm of the market value of equity at the end of year t (firm size). McGuire, Neuman, and Omer (2013) employed this control variable and argued that firm size has an effective impact on the social activities of the company.

Firm Size = LN (book value of assets)

GRO: The growth of revenue obtained from the sale

$$\text{Annual Sales Growth} = \frac{\text{Sales for the current period} - \text{sales for the prior period}}{\text{Sales for the prior period}}$$

RESULTS AND DISCUSSION

Descriptive statistics of studied data were measured for data analysis. Descriptive statistics of research variables of all of the studied firms have been reported in Table 2; this table indicates descriptive parameters including mean and med of each variable. The second category of data includes parameter pertained to the distribution such as standard deviation indicating data dispersion around the mean value.

Table 2 DESCRIPTIVE STATISTICS OF VARIABLES

Variables	Mean	Med	SD	Min	Max
OCF	0.663	0.561	0.512	-0.851	2.878
EPER	0.501	0.426	0.213	-0.411	0.864
Firm size	13.34	12.14	4.169	10.26	18.81
Growth opportunities	1.320	1.180	1.472	1.017	0.047
Return of equity	0.252	0.182	0.258	-0.112	0.775
Financial Leverage	0.576	0.600	0.209	0.082	0.852
Sales growth	0.242	0.191	0.411	-0.598	1.651

According to Table 2, mean value is the main central index indicating distribution balance point; mean also is a good indicator of data centrality. For instance, Mean values of OCF and EPER equaled 0.663 and 0.501, respectively indicating data centrality around this point. Med is another central index indicating society situation. For example, med values of operating cash flows and EPER obtained to 0.561 and 0.426, respectively indicating that a half of data are lower than this value while the other half is greater than this value.

Minimum and maximum values show the lowest and highest variable value in statistical society, respectively. For instance, min value of -0.112 was associated with the return on asset and the highest value (18.81) was calculated for firm size. In general, distribution parameters indicate the dispersion pattern of data from each other and from the mean value. Standard deviation is one of the most significant dispersion parameter that equaled 4.169 and 0.213 for firm size and EPER, respectively. These values indicate that firm size and ownership concentration had the highest and lowest dispersion values, respectively.

Table 3 FREQUENCY OF FINANCIAL CONSTRAINT INDICATORS

Variable	Observations (n)	Response	Frequency	Frequency Percent
KZ financial constraint	720	Yes (1)	310	0.43
		No (0)	410	0.57

Table 3 indicates frequency of financial constraint indicators; accordingly, 310 firms are financially constrained and 410 firms are not financially constrained based on the KZ Index.

The results of *F*-Limer (Chow) and Hansman tests on research hypotheses have been reported in Table 4.

The first step is taken to determine data homogeneity and heterogeneity using the Limer test (Chow).

Table 4 *F*-LIMER TEST RESULTS (HOMOGENOUS INTERCEPTS)

H0	Test model	Statistics	<i>p</i> -Value	Result
All of the intercepts are homogenous	H1	4.902	0.000	Rejected
	H2	4.133	0.000	Rejected
	H3	4.430	0.000	Rejected

In *F*-Limer test, H0 indicates the use of combined data while panel data are used in H1. According to the obtained significance level, all of the studied intercepts are heterogeneous with individual difference; hence, panel data are used for all three models. Hansman Test was done after selecting panel data based on *F*-Limer Test. According to Hansman Test, random effects are used if H0 is accepted and fixed effects are used if H1 is accepted. The summary of Hansman results is presented in Table 5.

Table 5 HANSMAN RESULTS (RANDOM OR FIXED EFFECTS)

H0	Test Model	Chi-square	p-Value	Result
There is not any difference between systematic coefficients	H1	9.566	0.092	Accepted
	H2	10.964	0.065	Accepted
	H3	10.122	0.076	Accepted

According to Table 5, this value was insignificant for all of the models and the reported significance level was greater than 0.05 for all of the models; accordingly, H0 is accepted and H1 is rejected at the confidence level of 95%; hence, random effects method is used.

Hypothesis testing

H1: The results obtained from H1 (Table 6) indicate the positive (0.548) and significant effect (0.001) of EPER on the OCF at confidence level of 95%. The adjusted determination coefficient (R^2) indicates that independent variable (EPER) and other variables could explain about 49% of changes in dependent variable (COF). Durbin-Watson value obtained between 1.5 and 2.5; therefore, errors are differences between real and predicted values in the regression model are not auto-correlated. Significance level of F equaled 0.000, which is less than 0.05 indicating the significance of the model. Moreover, VIF value of all of the variables obtained less than 10 in testing H1 indicating lack of collinearity between the studied variables.

Table 6 THE IMPACT OF EPER ON OCF

$OCF_{it} = \beta_0 + \beta_1 EPER_{it} + \beta_2 LEV_{it} + \beta_3 MB_{it} + \beta_4 SIZE_{it} + \beta_5 GRO_{it} + \beta_6 ROE_{it} + \varepsilon_{it}$					
Dependent Variable: COF					
Variables	Non-normalized Coefficients		t	Significance	VIF
	Coefficient	Error			
Constant coefficient	-0.893	0.410	-2.180	0.029	-
EPER	0.548	0.162	3.384	0.001	1.034
LEV	-0.061	0.010	-6.358	0.000	1.304
MB	1.558	0.057	27.128	0.000	1.294
SIZE	1.824	0.171	10.674	0.000	1.059
GRO	0.1925	0.140	1.371	0.171	0.919
ROE	0.012	0.068	0.173	0.863	1.024
Adjusted R^2			0.490		
D-W			1.669		
F value			126.680		
F prob.			0.000		

The results obtained from the H2 (Table 7) prove a negative (-0.718) and significant (0.000) effect of the financial constraint on OCF at the significance level of 95%. The adjusted R^2 shows that about 49.4% of changes in OCF can be explained by the independent variable of financial constraint and other variables. The D-W value (1.669) proved a lack of the autocorrelation of errors or differences between real and predicted values on the regression model. Significance level of F obtained to 0.000, which is less than 0.05 indicating the significance of the model in a whole. Moreover, the VIF statistic of all of the variables was <10 in the H2. Therefore, there was not any collinearity between studied variables.

Table 7 THE IMPACT OF EPER ON OCF

$$OCF_{it} = \beta_0 + \beta_1 KZ_{it} + \beta_2 LEV_{it} + \beta_3 MB_{it} + \beta_4 SIZE_{it} + \beta_5 GRO_{it} + \beta_6 ROE_{it} + \varepsilon_{it}$$

Dependent Variable: COF					
Variables	Non-normalized Coefficients		t	Significance	VIF
	Coefficient	Error			
Constant coefficient	-0.562	0.386	-1.455	0.146	-
KZ	0.718	0.164	4.377	0.000	1.023
LEV	-0.066	0.010	-6.943	0.000	1.316
MB	1.539	0.057	26.920	0.000	1.293
SIZE	1.803	1.170	10.598	0.000	1.058
GRO	0.187	1.340	0.181	0.919	1.089
ROE	0.016	0.068	0.236	0.813	1.013
Adjusted R ²				0.494	
D-W				1.871	
F value				128.827	
F prob.				0.000	

The results obtained from the H3 (Table 8) prove a negative interactional (-0.124) but insignificant (0.492) effect of the financial constraint on EPER and OCF at the significance level of 95%. The adjusted R² shows that about 41.1% of changes in OCF can be explained by the independent, mediating and the other variables. The D-W value (1.871) proved lack of the autocorrelation of errors or differences between real and predicted values on the regression model. The significance level of F obtained to 0.000, which is less than 0.05 indicating the significance of the model in a whole. Moreover, the VIF statistic of all of the variables was <10 in the H2. Therefore, there was not any collinearity between studied variables.

Table 8 THE INTERACTIONAL EFFECT OF THE FINANCIAL CONSTRAINT ON THE RELATIONSHIP BETWEEN EPER AND OCF

$$OCF_{it} = \beta_0 + \beta_1 (EPER * KZ)_{it} + \beta_2 LEV_{it} + \beta_3 MB_{it} + \beta_4 SIZE_{it} + \beta_5 GRO_{it} + \beta_6 ROE_{it} + \varepsilon_{it}$$

Dependent Variable: COF					
Variables	Non-normalized Coefficients		t	Significance	VIF
	Coefficient	Error			
Constant coefficient	-1.257	0.412	-3.050	0.002	-
EPER	0.625	0.186	3.354	0.001	1.401
KZ	0.759	0.219	3.472	0.001	2.278
EPER*KZ	-0.124	0.180	-0.687	0.492	3.101
LEV	-0.060	0.009	-6.370	0.000	1.304
MB	1.531	0.057	27.805	0.000	1.309
SIZE	1.794	0.169	10.610	0.000	1.061
GRO	0.167	0.139	1.201	0.230	1.090
ROE	0.039	0.068	0.577	0.564	1.046
Adjusted R ²				0.411	
D-W				1.881	
F value				103.378	
F prob.				0.000	

Present finding (Table 8) are in agreement with Alipour, Barandagh, and Nazari (2014), who shows significant positive relationship is found in Iran between private ownership and earnings, as private ownership increases the transparency of financial information.

In agreement with Soukhakian and Khodakarami (2019), we confidently reported that in a complete market, financial decisions of firms have no impact on their values. Under such circumstances, external finance with a reasonable price can be obtained. Accordingly da Cruz, Kimura, and Sobreiro (2019), it is not rational to maintain cash assets and decisions made on investing in cash assets have no effect on the value of stakeholders. Nevertheless, this subject is not accepted practically and evidences do not prove this case. There is an optimal level of cash in an incomplete market, which balances costs and profits and maximizes the firm value.

CONCLUSION

Considering the cash advantages, the firm requires cash to do activities, to benefit from ongoing profitable investment opportunities, and to manage the unpredicted events. Furthermore, cash holdings in a firm mean reduced dependence on external finance. Hence, the objective of this study was to investigate the causal effect of financial constraint and EPER on operating cash flows in the firms listed in Tehran Stock Exchange. To this end, 120 firms were selected based on the time interval of 2011-2016. Three main hypotheses were designed in this research. H1 indicated the positive and significant effect of EPER on the OCFs. It means the higher the EPER, the higher the OCFs. In fact, EPER points to firms quality of earnings so that a high quality of earnings leads to an increase in cash flows. H2 indicated the negative and significant effect of financial constraint on the OCFs. Accordingly, the financial constraint would reduce the availability of OCFs. Those companies that are financially constrained have fewer operating cash flows. Finally, H3 proved the significant interactional impact of financial constraint on the relationship between EPER and OCFs. Accordingly, there is an insignificant relationship between EPER and OCFs in companies with financial constraints.

1. According to the above mentioned points, it is recommended to investors for examining the financial constraint of the firms because this constraint leads to a decline in cash flows making the firms at the liquidity risk. Therefore, investors should analyze the financial constraint of firms to evaluate their capacity when tackling market failures.

2. It is suggested that firms consider the EPER because the high quality of earnings leads to a rise in cash flows. Therefore, managers can choose some mechanisms to increase EPER and firm growth.

3. It is recommended to expand literature on the financial constraint and operating cash flows in order to discover opportunistic behaviors of managers through suitable regulatory manners to improve OCFs.

4. As EPER is a vital issue for Iranian firms, it is recommended that investors particularly retail investors make reasonable decisions when purchasing the share of these firms. Investors should find beneficial information about firms because an increase in EPER may lead to a reduction in financial constraints and a rise in operating cash flows.

REFERENCES

- Alipour, M., Barandagh, M. I., & Nazari, N. (2014). An analysis of the earnings quality of Iranian public and private firms. *Strategic Change*, 23(1-2), 31–46. doi:<https://doi.org/10.1002/jsc.1958>
- Allen, E. J., Larson, C. R., & Sloan, R. G. (2013). Accrual reversals, earnings and stock returns. *Journal of Accounting and Economics*, 56(1), 113–129. doi:<https://doi.org/10.1016/j.jacceco.2013.05.002>
- Almeida, H., Campello, M., & Weisbach, M. S. (2004). The cash flow sensitivity of cash. *The Journal of Finance*, 59(4), 1777–1804. doi:<https://doi.org/10.1111/j.1540-6261.2004.00679.x>
- Ang, A., Chen, B., Goetzmann, W. N., & Phalippou, L. (2018). Estimating private equity returns from limited partner cash flows. *The Journal of Finance*, 73(4), 1751–1783. doi:<https://doi.org/10.1111/jofi.12688>
- Ashley, A. S., & Yang, S. S. (2004). Executive compensation and earnings persistence. *Journal of Business Ethics*, 50(4), 369–382. doi:<https://doi.org/10.1023/b:busi.0000025031.81884.ed>
- Atiase, R. K., Li, H., Supattarakul, S., & Tse, S. (2005). Market reaction to multiple contemporaneous earnings signals: Earnings announcements and future earnings guidance. *Review of Accounting Studies*, 10(4), 497–525. doi:<https://doi.org/10.1007/s11142-005-4211-8>
- Bahri, C., E, M. S., & Poniwati, M. (2017). The influence of undervaluation, free cash flow, leverage and dispersion of ownerships toward companys stock repurchase (An empirical study of Indonesia stock exchange public listed companies). *Journal of Administrative and Business Studies*, 3(5), 235-247. doi:<https://doi.org/10.20474/jabs-3.5.3>

- Bao, Y., Gao, Z., Xu, M., & Yang, H. (2014). Tradable credit scheme for mobility management considering travelers loss aversion. *Transportation Research Part E: Logistics and Transportation Review*, 68, 138–154. doi:<https://doi.org/10.1016/j.tre.2014.05.007>
- Benlemlih, M., & Bitar, M. (2018). Corporate social responsibility and investment efficiency. *Journal of Business Ethics*, 148(3), 647–671.
- Blaylock, B., Shevlin, T., & Wilson, R. J. (2012). Tax avoidance, large positive temporary book-tax differences, and earnings persistence. *The Accounting Review*, 87(1), 91–120. doi:<https://doi.org/10.2139/ssrn.1524298>
- Chou, D.-W., Gombola, M., & Liu, F.-Y. (2009). Long-run underperformance following private equity placements: The role of growth opportunities. *The Quarterly Review of Economics and Finance*, 49(3), 1113–1128. doi:<https://doi.org/10.1016/j.qref.2008.11.003>
- Cleary, S. (2006). International corporate investment and the relationships between financial constraint measures. *Journal of Banking & Finance*, 30(5), 1559–1580. doi:<https://doi.org/10.1016/j.jbankfin.2005.03.023>
- da Cruz, A. F., Kimura, H., & Sobreiro, V. A. (2019). What do we know about corporate cash holdings? A systematic analysis. *Journal of Corporate Accounting & Finance*, 30(1), 77–143. doi:<https://doi.org/10.1002/jcaf.22368>
- Dudycz, T., & Prażników, J. (2020). Does the mark-to-model fair value measure make assets impairment noisy?: A literature review. *Sustainability*, 12(4), 1504. doi:<https://doi.org/10.3390/su12041504>
- Ebrahimi, S. K., Bahraminasab, A., & Mamashli, R. (2017). The effect of financial crisis on earnings quality. *Journal of Accounting and Auditing Review*, 23(4), 415-434.
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383–417.
- Hassanzadeh, R. B., Nahandi, Y. B., & Negahban, L. (2014). The impact of financial constraints and agency costs of investment efficiency. *Journal of Financial Accounting Research*, 6(1), 7-18.
- Hayek, F. A. (1945). The use of knowledge in society. *The American Economic Review*, 35(4), 519–530.
- Healy, P., Serafeim, G., Srinivasan, S., & Yu, G. (2014). Market competition, earnings management, and persistence in accounting profitability around the world. *Review of Accounting Studies*, 19(4), 1281–1308. doi:<https://doi.org/10.1007/s11142-014-9277-8>
- Kaplan, S. N., & Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints? *The Quarterly Journal of Economics*, 112(1), 169–215. doi:<https://doi.org/10.1162/003355397555163>
- Khajavi, S. h., Valipour, H., & Askari, S. (2010). Investigating the effect of conservatism on the earnings persistence of the companies listed in Tehran stock exchange. *Accounting and Auditing Research*, 3, 60-69.
- Kormendi, R., & Lipe, R. (1987). Earnings innovations, earnings persistence, and stock returns. *Journal of Business*, 60(3), 323–345.
- McGuire, S. T., Neuman, S. S., & Omer, T. C. (2012). *Sustainable tax strategies and earnings persistence*. Retrieved from <http://ssrn.com/abstract=1950378>
- McGuire, S. T., Neuman, S. S., & Omer, T. C. (2013). *Sustainable tax strategies and earnings persistence*. Retrieved from <https://bit.ly/36GrdkY>
- Meshki, M., & Nourdideh, L. (2012). The effect of earnings management on the earnings persistence of companies listed in Tehran stock exchange. *Journal of Financial Accounting Research*, 6(11), 650-666.
- Modares, A., & Abbaszadeh, M. R. (2008). Analytical study of the effect of the ability to predict accrual components and cash flows on the quality of projected earnings. *Knowledge and Development*, 60(55), 550-593.
- Payne, J., & Thomas, W. (2008). *The incremental effect on stock returns of achieving earnings thresholds* (Working paper). University of Oklahoma, Oklahoma, OKLA.
- Peek, E., Cuijpers, R., & Buijink, W. (2010). Creditors and shareholders reporting demands in public versus private firms: Evidence from Europe. *Contemporary Accounting Research*, 27(1), 49–91. doi:<https://doi.org/10.1111/j.1911-3846.2010.01001.x>
- Rees, L., & Thomas, W. (2010). The stock price effects of changes in dispersion of investor beliefs during earnings announcements. *Review of Accounting Studies*, 15(1), 1–31. doi:<https://doi.org/10.2139/ssrn.1098896>
- Saghafi, A., & Kordestani, G. (2004). Review and description of the relationship between earnings quality and market reaction to changes in cash earnings. *Reviews of Accounting and Auditing*, 72, 37-51.
- Salehi, M., Bayaz, M. L. D., Mohammadi, S., Adibian, M. S., & Fahimifard, S. H. (2020). Auditors response to readability of financial statement notes. *Asian Review of Accounting*, 28, 463-480. doi:<https://doi.org/10.1108/>

[ARA-03-2019-0066](#)

- Shivakumar, L. (2010). Discussion of aggregate market reaction to earnings announcements. *Journal of Accounting Research*, 48(2), 335–342. doi:<https://doi.org/10.1111/j.1475-679X.2010.00369.x>
- Soukhakian, I., & Khodakarami, M. (2019). Working capital management, firm performance and macroeconomic factors: Evidence from Iran. *Cogent Business & Management*, 6(1), 1-24. doi:<https://doi.org/10.1080/23311975.2019.1684227>
- Zunairoh, & Fatkhurrohman. (2019). Liquidity, leverage, and cash holding: Evidence from Indonesia listed real estate firms. *Journal of Administrative and Business Studies*, 5(2), 79-87. doi:<https://doi.org/10.20474/jabs-5.2.2>