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Article

Firms' characteristics and the catering theory of dividend: MENA region evidence

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Abstract: "This paper's purpose l is to determine whether certain firm-specific factors have an influence on the catering theory of dividend in the MENA region." The catering theory of dividend related to the dividend policy by the different companies used in our paper to explain the decision by managers. The sample includes 600 non-financial firms listed stocks in the Stock Exchange of 6 countries from MENA region during the years 2010–2019. Catering theory explains why managers initiate (continue) to distribute dividends. A high dividend premium encourages managers to increase the level of dividend payment and explains why firms pay dividends or do not pay them thereafter. Investors should increase their demand for dividends to push managers to comply. Investors show their preference for dividend to self control, satisfaction and increase their profit. "This could be the catering incentive of the firm to decide to pay dividends". Even although the result Investor preference for dividend is explained by different factors related to the firms characteristics from each firms is different from markets, it can be the evidence supporting the catering theory of dividend, not only in well-developed markets, but also in emerging markets such as our country.

Keywords: dividend premium; firm characteristics; catering theory; MENA region

1. Introduction

Dividend policy is an indicator about the firms' health and conditions. Markets and investors react more positively when a firm distributes dividends, but, they react negatively when a firm cuts or decreases their dividends (see Li and Zhao (2008), Miller and Rock (1985)).

Management judgment is required when it comes to catering (Baker and Wurgler, 2012; Polk and Sapienza, 2009). On the one hand, management will not accommodate if they are only focused on long-term shareholders and have no regard for short-term prices. However, managers that are concerned about current short-term shareholders will also be concerned about short-term prices and will make an effort to accommodate. Information should therefore be more significant when managers are more concerned with near-term pricing. It is thought that a few internal systems are involved. We concentrate on the variations in ownership structures across various nations in this study. Because this mechanism reports to managers' discretion, we argue that corporations with more concentrated ownership pay out greater dividends.

In addition, we anticipate larger dividend payouts in businesses with autonomous systems and frameworks meant to support manager oversight for the benefit of stockholders.

According to Baker and Wurgler (2012), catering describes business moves taken to appease irrational investors who are prepared to pay a price over the fundamental. Companies invest more and pay out larger dividends when equity is overvalued (Baker and Wurgler, 2004; Baker et al., 2003; Polk and Sapienza, 2009). On the other hand, investors do not benefit from catering. Despite the fact that this issue has been extensively documented in the literature, no one knows how to solve it. To what extent any current strategy can discourage managerial catering behavior is still up for debate among researchers.

According to Xin et al. (2021), companies boost dividend payments in response to demands for larger dividends from controlling shareholders following the dividend tax reform. According to Alok et al. (2022), companies launch or boost dividends when there is a stronger emotion for dividends, particularly in areas where this sentiment is prevalent. Increased investor demand for dividends and greater returns for high-dividend firms are predicted by changes in dividend sentiment. Furthermore, when dividend sentiment is higher, high-yield mutual funds see an increase in inflows.

There is proof that nations in the Middle East and North Africa are catered to when it comes to investor attitude toward dividends. The dividend payers are large, profitable, mature enterprises with minimal growth potential and high dividend premiums, as demonstrated by Hadfi and Kouki (2020, 2021) and Mona and Elbannan (2020), and supporting the agency, life cycle, and catering theories. The practice of catering continues even after accounting for the impact of the Arab Spring. Additionally, catering continues to be used in nations with high rates of corruption and subpar legal systems in order to lower agency costs and replace inadequate legal frameworks with lax enforcement of the law. Yasir et al. (2024) demonstrate that the governments direct share purchases cause higher levels of horizontal agency conflicts between the controlling andminority shareholders, and the affected firms are more likely to cater to the controlling shareholders and top executives' aversion to receiving overvalued stocks.

According to traditional dividend policy, firm-specific factors play an important role in explaining dividend decisions. Referring to a recent dividend policy theory, catering, we try to explain and examine the effect of these factors on investor demand or dividends. Fama and French (2001) show in their famous seminal work that firm-specific factors like profitability, debt, size, liquidity and growth do affect dividend policy. Firms with high level of profitability, liquidly and growth opportunities should distribute more dividend to their shareholders. Moreover, investors react more positively and demand more dividends from profitable than from unprofitable firms (see Denis and Osobov (2008),Fama and French (2001), Ho (2003), Ibrahim Ahmed (2014),Jin et al. (2011) and Kovalewski et al. (2008)). In addition, we add some other factors in our model to interpret this relationship between catering and firm characteristics such as debt level, size and life cycle. Investors pay more attention to mature firms because they pay more dividends than

newly established firms (see DeAngelo et al. (2004, 2006), Grullon et al. (2002), Mohammad and Fatemeh (2013) and Richard et al. (2014)).

Jinho et al. (2021) they show that there are important differences in corporate dividend policies across countries. Second, they find that the catering incentive is stronger when investor sentiment is low. Third, firms domiciled in countries with strong legal protections for investors are more likely to catering to investors, especially when investor sentiment is low. Their findings shed light to the factors contributing to the fluctuations in dividend catering around the world. Daniel and Ernest (2021) suggest that catering effects weaken the negative impact of managerial entrenchment onpayout policyand that in firms with entrenched managers an increase in the propensity to pay dividends is conspicuous only when there is external investor demand for dividends.

2. Theoretical frame work and research hypothesis

2.1. Firm profitability and catering theory

One of the most relevant factors dividend policy is profitability. Several studies found that firm profitability is probably the key factor behind a stable dividend policy (Litner, 1957; Turki and Ahmed, 2013; Siew et al., 2012). Dividend policy describes a company's decision to pay dividends to shareholders. Firms generate profits, some is kept as retained earnings and some is distributed to shareholders as dividends. Ajanthan (2013) in Sri Lanka, Fakhra et al. (2013) in Pakistan, Fama and French (2001) in the US, Naceur et al. (2006) in Tunisia, Nguyen (2012) in Vietnam, Aivazian et al. (2003) and Mattias et al. (2013) in different African countries, and Duha Al-Kuwari (2009) in the Gulf Co-operation Council countries (GCC), point to the important role of profitability in managers' decision to pay dividends. Furthermore, firms choose to pay more dividends when they are big and accumulate more profits.

H1: There is a positive relationship between firm profitability and investor demand in the Mena region.

2.2. Catering theory and debt level

Bhattacharya (1979), Litner (1956) and Jensen (1986) claim that because of changes in their size, profitability, opportunities for growth, life cycle, and dividend returns, companies are now less likely to pay dividends above what is reasonable. Indeed, Fama and French (2001) discovered that variations in US companies' size, profitability, and growth prospects account for a decline in dividend payout. Several writers offer different theories to account for this decline. The role of debt and dividends as agency-cost control mechanisms is widely supported by the financial literature because they reduce information asymmetries between firms and potential investors and resolve the conflict of interest between owners and managers (see Grossman and Hart (1980) and Jensen (1986) for debt; Rozeff (1982) and Jensen (1986) for dividends). For example, DeAngelo et al. (2004) discovered that during the previous 20 years, there has been a decline in the frequency of dividend payments and a prevalence of non-payment. According to Banerjee et al. (2007), this

decline in the tendency to pay dividends can be explained by transaction costs that are based on the customer. Hence, we formulate the following hypothesis:

H2: There is a link between investor preference for dividend and debt level in the Mena region.

2.3. Firm life cycle and catering theory

According to research by DeAngelo et al. (2004), dividends in the US are typically concentrated among a select group of significant payers. The life-cycle theory, put forth by DeAngelo et al. (2006), explains this occurrence by having enterprises choose an optimal dividend policy in accordance with the evolution of their opportunity set. Early on in their existence, companies pay out smaller dividends since they have more options for internal investment than profit. In contrast, companies thereafter increase dividend payments in order to reduce the risk that free cash flows will be squandered because internal funding exceeds investment prospects. DeAngelo et al. (2006) employed the earned-to-contributed equity mix as a proxy for a firm's life-cycle stage, providing empirical support for the life-cycle hypothesis. This proxy measures the proportion of the internally generated to firm's contributed profit and is calculated as the ratio of retained earnings to the book value of equity (RE/BE). Grullon et al. propose the maturity hypothesis, positing that a firm tends to increase dividends as it moves from a growth phase to a more mature phase.

Mahammad and Fatemeh (2013) used two criteria as proxies of life cycle. These are RETA and RETE. The authors show just a meaningful RETA has a positive effect on dividend payout policy. Richard et al. (2014) show that life cycle theory posits that larger firms tend to be more mature and have higher free cash flows. Thanatawee (2011), similarly, found that retained earnings affected dividend policy in Thailand. Then, we formulate the following hypothesis:

H3: There is a link between catering and firm cycle life in the Mena region.

2.4. Catering theory and size

According to Fama and French (2001), larger firms tend to spend a greater portion of their net profits as cash dividends than smaller firms. Moreover, greater ownership dispersion in large firms results in higher bargaining power and thus higher agency costs (Jensen and Meckling, 1976). Moreover, Sawicki (2005) show that dividend payouts are one factor that can help to monitor the performance of large firms. Large firms feature greater information asymmetry as a result of ownership dispersion and shareholder ownership dilution, leading to a lack of ability to monitor the activities of the firm, both internally and externally, resulting thus in management inefficiency. Thus, a large dividend payout ratio can be one solution for this problem because higher dividend payout increases the need for external financing. According to Holder et al. (1998), larger firms have greater access to financial markets, making it easier for them to reduce their costs, become they are more profitable and pay higher dividends.

Al-Kuwari (2009) focused on determining the dividend policies of companies listed in Kuwait, Saudi Arabia, Muscat, Doha, and Bahrain, operating under the

same tax free scheme. For Saudi firms, the effect of a company's size on dividend policy was shown to be positive and significant (Al Ajmi and Abo Hussain, 2011). Hence, firm size is shown to have a significant effect on dividend payouts for Saudi firms, in agreement with the conclusion of Aivazian et al. (2003).This latter stat founded that firm size and dividend payout are positively correlated. Firm size plays a role in explaining the dividend-payout ratio of firms. Mahira Rafique (2012) show that larger firms tend to be more mature and thus have easier access to capital markets. Then, the following hypothesis is formulated:

H4: There is a positive relationship between firm size and investor demand in the Mena region.

2.5. Catering theory and growth opportunities

Firms with great growth opportunities choose between two decisions, to pay dividends or to finance the retained earnings. The relationship between these two is different across studies; Naceur et al. (2006), studying in the Tunisian context, found that an investment opportunity does not impact dividend reimbursement of firms. Kowalewski et al. (2008) found an insignificant relationship between the QTobin's proxy of growth opportunities and dividend payment in Poland. Myers and Majluf (1984) discovered that increasing growth opportunities of firms raises the ex-ante underinvestment leading to fewer dividends paid to shareholders. Ngauyen (2012) show in their study of the Vietnam context an absence of relationship between dividend policy and growth opportunities of firms. Hananeh et al. (2013) insist that investment opportunities are important determinants of dividend payout. Firms with positive investment opportunities all opted to payout dividend. Then, we formulate the following hypothesis:

H5: There is a relationship between growth opportunities and investor demand in the Mena region.

2.6. Catering theory and firm liquidity

Liquidity is the extent to which a firm can pay short-term liabilities based on its liquid assets. Ibrahim Elsiddig Ahmed (2014) concludes that liquidity measured by net cash flow is a linear relationship with dividend payout in the UAE. Ho (2000), found that more liquid firms have a higher dividend payout. Jin et al. (2011), studying UK firms from 1989 to 2009, found that liquidity has a weak effect on dividend payout policy. Moreover, there is evidence indicating that liquidity can replace catering incentives to explain the change in propensity to pay dividend (Aber and Ines, 2024; Hadfi, 2021, 2024).

H6: There is a relationship between liquidity and catering theory in the Mena region.

3. Materials and methods

3.1. Data

Table 1. Companies in each country.

Country	Number of companies	Percentage of companies	Number of observations	Percentage of observations	Company by region
Tunisia	24	4	240	4	North Africa
Morocco	56	9.22	560	9.22	208
Egypt	128	21.02	1280	21.02	
UEA	78	12.82	780	12.82	Middle East
Saudi Arabia	146	23.97	1460	23.97	392
Kuwait	168	28	1680	28	
Total	600	100.00	6000	100.00	600

Table 1 show the data of companies for which information is available for ten consecutive years between 2010 and 2019. After removing the first-year data, the remaining samples consist of24 companies (240 observations) for Tunisia, 56 companies (560 observations) for Morocco, 128 companies (1280 observations) for Egypt, 78 companies (780 observations) for the UAE, 146 companies (1460 observations) for Saudi Arabia, 168 companies (1680 observations) for Kuwait.

Table 2. Number of dividend payers (P), non-payers (NP) and total number of firms (To) by country, over the period 2010–2019.

Years/Countries	Tunisia			Morocco			Egypt			UAE			S.ARABIA			Kuwait		
	P	NP	T	P	NP	T	P	NP	T	P	NP	T	P	NP	T	P	NP	T
2010	16	8	24	42	14	56	81	47	128	46	32	78	68	78	146	91	77	168
2011	16	8	24	44	12	56	81	47	128	48	30	78	67	79	146	101	67	168
2012	17	7	24	47	9	56	81	47	128	52	26	78	68	78	146	96	72	168
2013	18	6	24	48	8	56	83	45	128	55	23	78	79	67	146	112	56	168
2014	18	6	24	50	6	56	81	47	128	52	26	78	77	69	146	61	107	168
2015	16	8	24	46	10	56	82	46	128	54	24	78	77	69	146	59	109	168
2016	16	8	24	46	10	56	85	43	128	52	26	78	80	66	146	70	98	168
2017	18	6	24	42	14	56	79	49	128	53	25	78	84	62	146	71	97	168
2018	17	7	24	45	11	56	76	52	128	54	24	78	84	62	146	77	91	168
2019	17	7	24	46	10	56	75	53	128	55	23	78	86	60	146	85	83	168

The sample from **Table 2** includes non-financial firms extracted from the database for the financial markets from different country. A firm is a dividend payer if it has a positive dividend per share; otherwise the firm is classified as a non-payer.

3.2. Methodology

This paper examines dividend policy in a comprehensive sample of MENA countries and non-financial firms listed on6 MENA stock markets. These are the Saudi stock exchange (Tadawul), the Tunis stock exchange (BVMT), the Morocco stock exchange (CBE), the Kuwait stock exchange (KSE), the UAE stock exchange (ABSE and DSE), and Egypt stock exchange (ESE). The variables are selected in line with the literature. The variables are constructed from the available annual financial performance indicators. Some additional variables are manually collected

from the annual financial statements of the companies under study. The study period spans from 2010 to 2019, covering all 24 publicly listed firms in Tunisia, 52 publicly listed firms in Morocco, 128 in Egypt, 78 in the UEA, 146 in Saudi Arabia and 167 in Kuwait stock exchange excluding financial institutions and insurance companies. The balanced panel contains 600 companies observed from 2010 to 2019, representing 6000 observations. Market regulations may have led firms to change their board structure just to comply with the rules and regulation. In this study, the STATA Software is used to process the collected data.

A fixed effects panel regression is used to ensure that any characteristics that are not measured are controlled during analysis. Fixed-effects or random effects models are more appropriate as we use a panel dataset. These models are able to account for the heterogeneous agents traditionally found in panel datasets.We also use the random effects model to identify differences across firms. We examine the two-tailed and one-tailed P-value to test the hypothesis that each coefficient is different from 0. This allows us to determine whether the independent variable has a significant effect on the dependent variable. The Hausman test is used to decide whether to use a fixed or a random effects model. In our model, we try to estimate the relationship between catering theory of dividend and some firm-specific variables. A panel model is used to determine the expected proportion of firms paying dividends. The model is specified as follows:

$$DP_{it} = \beta_0 + \beta_1 ROE + \beta_2 LIQ_{it} + \beta_3 DL_{it} + \beta_4 REBE_{it} + \beta_5 SIZE_{it} + \beta_6 GRO_{it} + \varepsilon_{it}$$

$$MDP_{it} = \beta_0 + \beta_1 ROE + \beta_2 LIQ_{it} + \beta_3 DL_{it} + \beta_4 REBE_{it} + \beta_5 SIZE_{it} + \beta_6 GRO_{it} + \varepsilon_{it}$$

$$MTB_{it-1} = \beta_0 + \beta_1 ROE + \beta_2 LIQ_{it} + \beta_3 DL_{it} + \beta_4 REBE_{it} + \beta_5 SIZE_{it} + \beta_6 GRO_{it} + \varepsilon_{it}$$

DP is the dividend premium proxy explained by catering theory of dividend and is the difference between the market to book average for payers and non payers of dividend; The modified dividend premium is the residual of firms payers divided by the residual of firms non payers, the previous market to book is measured by dividend the firms market value to the firms book value; We used this proxy to explain the decision to demand dividend by the investor to the managers of firms. This variable it measured by divided the book value of firms' with their market value. The previous market to book (MTB) indicate the firm performance and quality of their share, this suggest that firms with high market to book attract more shareholders. Moreover, firms with high (low) performance drive to demand more (low) dividend by investor. This proxy it used by Kamel Anouar in French context (2009).

The modified dividend premium (MDP) is the third proxy of the catering theory established Baker and Wurgler (2006) and Jin and Jinho (2013). To calculate the modified dividend premium we regress the firms' market-to-book ratios on the current assets growth and capital expenditures and then use the residuals from the regression to compute a proxy for the dividend premium. Since when the residuals are less than or equal to zero, the log of residuals has no value, we construct a modified dividend premium as the mean of payers' residuals, divided by the mean residuals of dividend non-payers. ROA is the profitability variable measured by dividing the retained earnings to total assets; DL in the debt level variable measured

by dividing total debt to total assets; LIQ is the liquidity variable determined by total current assets to total current liabilities of the firms.; GROW is firm growth variable represented by the growth of the total assets of firms, SIZE is the natural logarithm of total assets. REBE is the life cycle variable proxy represented by the retained earnings to book equity. The second proxy of catering of dividend indicates the investor prevailing for dividend.

4. Results and discussion

Table 3. Descriptive statistics.

Variables	MEAN	MIN	MAX	SD	KURTOSIS	SKEWNESS
DP	0.0113145	−0.2047049	14.77351	0.3080744	1898.586	42.89669
MDP	0.0125137	−0.513812	1.698105	0.0752256	213.3185	12.9585
MTB(t-1)	0.0145275	−0.5261261	2.053459	0.0737266	219.2336	12.49405
PROF	0.0581825	−10.741608	3.857143	0.1316887	151.5504	5.064568
LIQ	0.2282634	−0.046055	3.404869	0.2714881	12.12312	1.761831
DL	0.1607076	0	2.15529	0.1864677	6.502267	1.415819
SIZE	2.664113	0.2227165	8.984617	1.141472	6.30431	1.035205
REBE	0.1520821	−4.324248	38.99754	0.6284599	2620.086	45.60237
GROW	0.413284	−0.9987168	1432.804	18.54343	5935.823	76.8481

The descriptive statistics table illustrates the following results for all the dependent and independent variables.

Let's start by the dependent variable. Firstly, the mean value for the variable dividend premium (DP) held at 0.0113145 and suggests a standard deviation of 0.3080744. The maximum and minimum value for the period under review was 14.77351and −0.2047049. The market to book variable (MTB) is ranges from −0.5261261 and 2.053459, with a means of 0.0145275 and standard deviation of 0.0737266. We observed the variable modified dividend premium (MDP) to have a value of 0.0208957 and a standard deviation of 0.1021601. For the independent variables,we observed the variable cycle life (REBE) to have avalue of 0.1520821 and a standard deviation of 0.6284599. The maximum and minimumvalue was 38.99754 and −4.324248. The mean value for the variable liquidity (LIQ) heldat 0.2282634 and suggests a standard deviation of 0.2714881(see **Table 3**).

The **Table 3** asserts that the test of normality Skewness and Kurtosis it not verified for the entire model variable. Firstly, the Skewness test does not follow the normal law because is different of 0. Secondly, the Kurtosis test does not follow the normal law because is different of 3.

Table 4 reports the correlation matrix for the variables. We note that there are no high correlations between the investigated variables and hence multicollinearity is not an issue in our models. Absence of multicollinearity is indicated by the coefficient of the relationship between the variable, which is less than 0.8. Moreover, we can observe that all our explanatory variables have a VIF value of "variance inflation factor" less than 10, the limit suggested by Gujarati (1995) and Kennedy (1998). This leads us to conclude that there is no multicollinearity problem.

Table 4. Matrix correlation.

	Size	REBE	Liquidity	Debt level	Profitability	Growth	
Size	1						1.02
REBE	−0.0766	1					1.09
Liquidity	0.0944	−0.0610	1				1.02
Debt level	0.0957	−0.2479	0.0487	1			1.28
Profitability	0.0121	0.2109	−0.0366	−0.3425	1		1.17
Growth	0.0460	−0.0662	0.0892	0.2653	−0.0147	1	1.09
Mean Vif							1.11

Figure 1 shows the valuation of firms' payers, firms non-paying and dividend premium for our different countries during the period 2010–2019. We conclude from the figure that firms' non-payers and firms' payers number are volatile in different countries. In addition, the dividend premium amount showed volatile from 2010 to 2019. This inconstancy can be explained by different factors such as, the internal environment of the firms, market situation, institutional environment, investor psychology. Dividend premium is the difference between the average market to book of firms' payers and firm's non-payers.

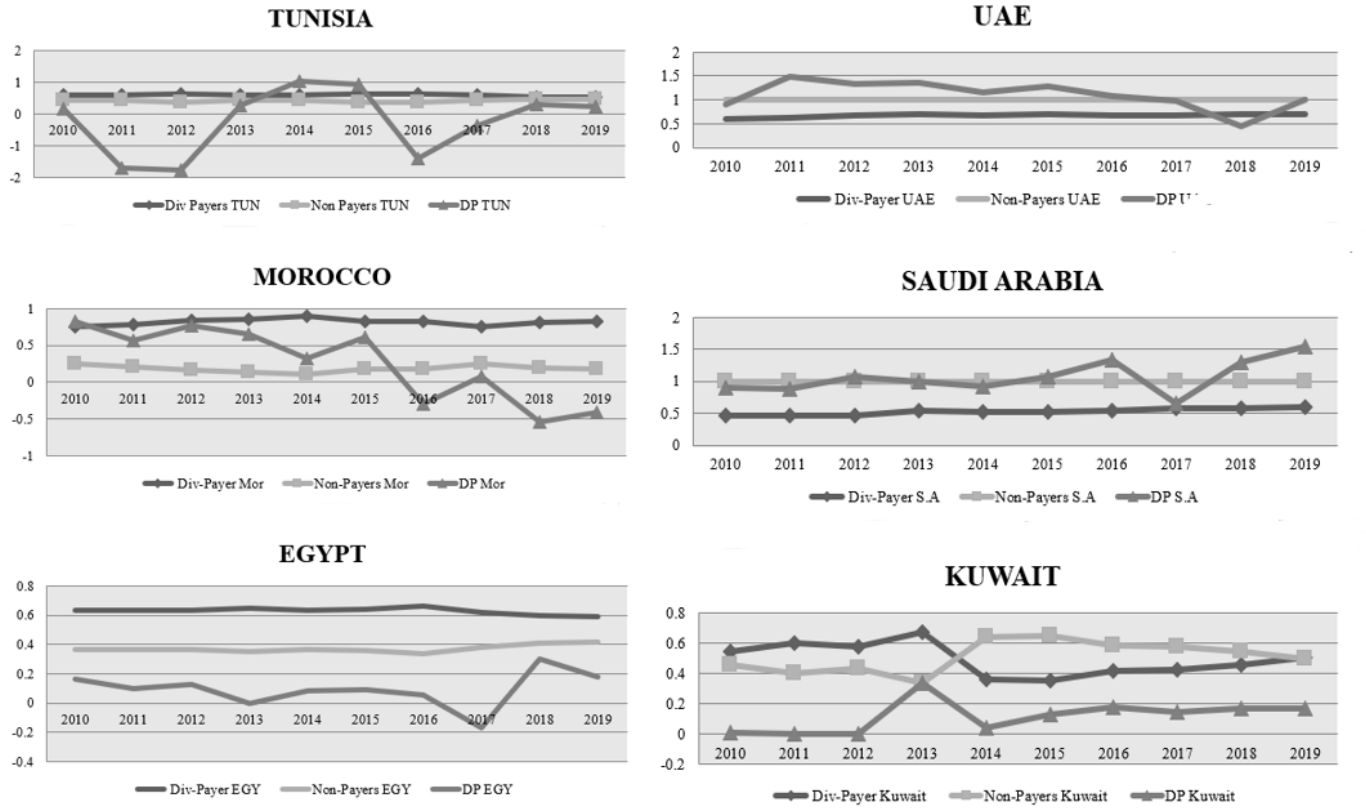

Figure 1. The number of dividend payers, dividend non-payers and dividend premium variation over the 2010 to 2019 period (Edited by the authors).

Table 5. Firm characteristics effect on catering theory of dividend: North Africa.

Dependent variable		**TUNISIA**			**MOROCCO**			**EGYPT**	
	DP	MTB	MDP	DP	MTB	MDP	DP	MTB	MDP
Firm characteristics as Independent variable									
C	−0.001815	0.0261048	−0.00212	0.0020348	0.0180443	0.0173487	0.0000331	−0.0001228	−0.0001376
P(Value)	0.598	0.787	0.964	0.703	0.802	0.026	0.918	0.927	0.978
ROA	−0.001845	−0.0079169	0.061743	0.0034416	0.0411595	0.0111031	−0.0001817	−0.0010467	0.0008092
P(Value)	0.936	0.983	0.690	0.673	0.082***	0.529	0.615	0.390	0.901
LIQ	−0.000452	−0.1042845	−0.05319	−0.0049706	0.0056905	−0.004793	0.1039464	0.9030881	2.320187
P(Value)	0.950	0.300	0.135	0.445	0.831	0.628	0.001*	0.000*	0.000*
DL	−0.015837	0.3859125	0.06872	−0.0114364	−0.0085887	−0.0220492	0.0000873	0.0013778	0.0053188
P(Value)	0.265	0.053**	0.365	0.116	0.795	0.046**	0.866	0.257	0.360
REBE	−0.000695	−0.0790536	−0.03420	−0.0068897	0.0220406	−0.004016	0.0011618	−0.0003744	−0.003560
P(Value)	0.878	0.342	0.319	0.298	0.551	0.659	0.109***	0.611	0.629
SIZE	0.0005288	0.014236	0.00635	0.0018437	−0.0006108	0.0006515	−0.000079	−0.0001649	−0.0004208
P(Value)	0.299	0.310	0.369	0.275	0.975	0.797	0.648	0.814	0.881
GROW	0.0101	−0.0224252	0.00997	−0.005400	0.003506	0.000198	−0.01506	−0.0001406	−0.0005698
P(Value)	0.312	0.898	0.896	0.977	0.115	0.574	0.993	0.686	0.762
CHI2	2.85	6.10	5.40	5.60	13.46	6.82	15.62	276.66	57.26
P (CHI2)	0.8274	0.4126	0.4935	0.4697	0.0362	0.3376	0.0160	0.0000	0.0000
P (Hausman)	0.8922	0.7560	0.9378	0.7489	0.9331	0.7218	0.4637	0.0014	0.2219
EN	RE	RE	FE	RE	RE	RE	RE	FE	RE
Model EST	Panel	PCSE	PCSE	Panel	PCSE	GLS	PCSE	PCSE	PCSE
Breusch and Pagan Lagrangian for RE									
Chibar2	0.00	1.94	0.00	0.07	212.74	69.37	0.00	0.00	0.00
Prob > chibar2	1.0000	0.0816	1.0000	0.3968	0.0000	0.0000	1.0000	1.0000	1.0000
Modified Wald test for groupwise heteroskedasticity									
Chibar2	2.1×10^{6}	11787.15	6053.09	1.3×10^{6}	1.4×10^{9}	3.2×10^{7}	$5.0e\times 10^{8}$	1.8×10^{8}	3.9×10^{8}
Prob > chibar2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Wooldridge Test for Autocorrelation									
Chibar2	0.860	12.814	133.753	0.103	5.563	0.721	6.309	22.245	58.638
Prob > chibar2	0.3632	0.0016	0.0000	0.7500	0.0219	0.3996	0.0133	0.0000	0.0000

This table reports the regression used to estimate the relationship between catering theory of dividend represented by the dividend premium proxy as used by Baker and Wurgler (2004). The regressions are based on firm-year observations available in our sample that are reported in **Table 5**. The dependent variable is the catering theory explained by DP, MDP and MTB. The independent variables are profitability (ROA),), asset growth (dA/A), debt level (D/A),), size (Size), liquidity (CA/CL), and REBE life cycle proxy (RE/BE).

Table 6. Firm characteristics effect on catering theory of dividend: Middle East.

Dependent variable		**UAE**			**Saudi Arabia**			**KUWAIT**	
	DP	MTB	MDP	DP	MTB	MDP	DP	MTB	MDP
Firm characteristics as Independent variable									
C	−0.011506	0.0032511	0.002865	0.0012399	−0.0237417	−0.06548	0.0002742	0.001901	0.0001363
P(Value)	0.018	0.153	0.000	0.721	0.242	0.004	0.530	0.251	0.798
ROA	0.0095848	0.0022878	−0.000412	−0.000662	0.0137149	−0.00184	−0.0007043	−0.0001684	0.0044585
P(Value)	0.092***	0.302	0.692	0.540	0.195	0.877	0.038*	0.912	0.000*
LIQ	−0.000342	−0.0003391	−0.000673	0.0008631	−0.0146959	−0.01369	0.0007693	0.0033351	0.0018388
P(Value)	0.903	0.721	0.081***	0.388	0.071**	0.135	0.034*	0.082**	0.010*
DL	0.0002582	−0.0022228	−0.000613	−0.001892	0.0005234	−0.00688	−0.000411	−0.0020765	−0.000331
P(Value)	0.961	0.321	0.268	0.347	0.961	0.572	0.267	0.252	0.678
REBE	−0.000073	−0.0001828	−0.000030	0.0057135	0.0155905	0.008006	0.0000662	−0.0000809	−0.000802
P(Value)	0.783	0.031**	0.578	0.026*	0.038*	0.342	0.815	0.963	0.355
SIZE	0.0041198	0.0004856	−0.000172	−0.000263	0.0137215	0.022750	0.0001965	0.0022428	0.0012073
P(Value)	0.010*	0.582	0.179	0.748	0.019*	0.001*	0.368	0.092***	0.000*
GROW	−0.000144	−0.0014628	−0.000016	−0.000028	0.0003351	0.000328	-20.67×10^{-6}	0.0014683	0.0000253
P(Value)	0.540	0.030*	0.910	0.545	0.671	0.711	0.830	0.039*	0.796
Fisher	1.82				2.65	2.72		15.78	
P (F)	0.0917				0.0147	0.0125		0.0150	
CHI2		9.48	7.75	5.51			8.92		42.65
P (CHI2)		0.1483	0.2568	0.4798			0.1783		0.0000
P (Hausman)	0.0062	0.0000	0.3246	0.0771	0.0136	0.0032	0.7494	0.0026	0.1497
EN	FE	FE	RE	RE	FE	FE	RE	FE	RE
Model EST	Panel	PCSE	GLS	PCSE	Panel	Panel	PCSE	PCSE	GLS
Breusch and Pagan Lagrangian for RE									
Chibar2	8.79	215.81	640.03	25.17	1710.17	3.24	1449.64	2115.24	585.88
Prob > chibar2	0.0015	0.0000	0.0000	0.0000	0.0000	0.0360	0.0000	0.0000	0.0000
Modified Wald test for groupwise heteroskedasticity									
Chibar2	1.2×10^6	2.2×10^6	1.4×10^6	3.6×10^9	2.0×10^6	2.3×10^7	6.2×10^7	2.2×10^6	4.8×10^7
Prob > chibar2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Wooldridge Test for Autocorrelation									
Chibar2	0.001	4.220	0.764	4.922	1.080	0.137	35.237	9.955	0.879
Prob > chibar2	0.9752	0.0433	0.3847	0.0281	0.3005	0.7116	0.0000	0.0019	0.3499

Note: *, ** and *** significant at the 1%, 5% and 10% level, respectively.

Table 7. Firm characteristics effect on catering theory of dividend: All mena firms.

	MENA Region		
Dependent variables	DP	MTB	MDP
Firms characteristic as Independent variable			
C	−0.0133533	−0.0056626	−0.0002229
P(Value)	0.721	0.858	0.383

Table 7. (*Continued*).

	MENA Region		
ROA	−0.0001756	0.0101733	0.0001709
P(Value)	0.987	0.011*	0.819
LIQ	0.0057295	0.0029172	−0.0013181
P(Value)	0.661	0.723	0.000*
DL	−0.0065298	0.0082467	−0.002027
P(Value)	0.790	0.254	0.000*
REBE	−0.0005327	−0.0001426	−0.0002294
P(Value)	0.558	0.817	0.382
SIZE	0.0099387	0.0066061	0.0015034
P(Value)	0.337	0.589	0.000*
GROW	6.53×10^{-7}	5.78×10^{-6}	0.0000109
P(Value)	0.943	0.097***	0.742
CHI2	2.69	10.17	212.29
P (CHI2)	0.8467	0.1176	0.0000
P (Hausman)	0.2739	0.0000	0.1186
EN	RE	FE	RE
Model EST	PCSE	PCSE	GLS
Breusch and Pagan Lagrangian for RE			
Chibar2	3908.49	1599.64	2502.65
Prob > chibar2	0.0000	0.0000	0.0000
Modified Wald test for groupwise heteroskedasticity			
Chibar2	1.5×10^{14}	2.5×10^{9}	2.8×10^{11}
Prob > chibar2	0.0000	0.0000	0.0000
Wooldridge Test for Autocorrelation			
Chibar2	4173.802	12.379	0.020
Prob > chibar2	0.0000	0.0005	0.8878

Note: *, ** and *** significant at the 1%, 5% and 10% level, respectively.

Table 6 and **7** reports the main result of the relationship between firm characteristics and catering theory of dividend for the entire MENA zone. We conclude that some fundamental factors like profitability, liquidity, debt level, growth, and firm size can play an important role in explaining catering proxies, but the variable life cycle is found insignificant. Moreover, the coefficient of profitability is positively significant with the market to book proxy. This suggests that investor demand for dividend can be deduced from by profitability level of firms. Furthermore, firms with high profitability attract more investors than firm with low profitability.

Firms with high profitability can disclose their healthy conditions and can distribute more cash dividends to their shareholders. Accordingly, Li and Lie (2006) assume that investors classify companies referring to the amount of dividends paid and not just classify them into payers and non-payers. Kamel Anour (2012) also reported that profitability and debt level could propel catering incentives. They found

that firms with more profitability and lower debt levels have higher tendency to respond to investor demand for dividend. The results show a significant link between assets growth and the market to book ratio, suggesting that firms with high growth levels tend to distribute more dividends than firms with low growth levels. Moreover, firms with high growth opportunities tend to distribute more dividends to their shareholders than tend to retain their earnings to finance their investments. In line with the literature on the relationship between dividend distribution and some firm characteristics, our results confirm some studies which found that growth plays an important role in affecting managers' decision to pay dividends (see Christopher and Rim (2014) studying the Lebanese stock exchange; Farman Ali and Nawaz (2017) the Pakistani stock exchange; Hananeh et al. (2013); Luis Antonio and Elisabeth (2014) the Portuguese stock exchange and Yong and Malina (2016) the Malaysia stock Exchange). In contrast, our results confirm those of some other authors like Naceur et al. (2006) in the Tunisian context and Ngauyen (2012) in the Vietnamese context. These authors found no relationship between dividend policy and growth opportunities. Investors pay more attention to firms with growth opportunities investment more than to firms with low growth. Investors should demand more dividends and put more premiums in the stocks of firms with high growth to encourage managers to accept and pay more dividends. Moreover, the coefficient of profitability is positively significant with the previous market to book ratio. Our results suggest that investors are more attracted to firms with high profitability than to firms with low profitability. Furthermore, our results are consistent with those reported on the relationship between profitability and dividend policy. We can conclude that profitability plays a crucial role in influencing managers' decision to pay dividends to their shareholders (see, Darling (1957), Denis and Osobov (2008), Fama and Babiak (1968), Litner (1957), Nguyen (2012), Nissim and Ziv (2001), Turnovsky (1967), Turki and Ahmed (2013) and Siew et al. (2012)). Companies with consistent high profit levels tend to pay higher dividends to their shareholders.

This can explain why higher profitability persistence is witnessed in larger companies because they are more flexible to changes than small-sized firms in similar markets (see, Jasim and Hameeda (2011) in the Saudi Stock exchange; Bahaa Awad (2015) in the Kuwait stock exchange; Amjad etal. (2016) in the Palestinian stock exchange; Maysa'a Munir Milhem (2016) in the Jordan stock exchange; Christopher and Rim (2014) in the Lebanese stock exchange; Osama and Gomaa (2012) in the Egyptianstock exchange Dialdin and Elsaudi (2010) in the Saudi stock exchange; Arupam Mehta (2012) in the UAE stock exchange; Turki and Ahmad (2013) in the Saudi Stock exchange; Duha Al Kuwari (2009) in the GCC stock exchange).

The coefficient of liquidity shows a negative and a significant relationship with the modified dividend premium proxy. This suggests that firms with high liquidity do not pay dividends to their shareholders than firms with low liquidity. Furthermore, firms with high demand of dividends tend to decrease their liquidity than firms with high liquidity, indicating an absence of demand for dividends. Additionally, liquidity of firms with demand for dividends is much lower than that of firms with no demand for dividends. Besides, investors should increase their demand for dividends to limit firm liquidity, i.e., limiting the existing cash.This tends to limit the possibility of

expropriation and rooting by the manager. Investors pay attention to both firm liquidity and manager rooting behavior.

Finally, we conclude that firm liquidly variable plays an important role in investors' decision to demand or not demand dividends. This is in line with some previous studies suggesting the important role of liquidity on firm dividend policy (see Farman Ali and Nawaz (2017) in the Pakistani stock exchange; Ebender Badu (2013) in Ghana stock exchange; Yong and Mazlina (2016) in Malaysia stock Exchange, Ibrahim Elsiddig Ahmed (2014) in the UAE; Jin et al. (2011) in the UK).

The relationship between debt level and the modified dividend premium is negatively significant. Our finding suggests that investors demand a low dividend from firms with high debt level and a higher dividend from firms with low debt level. Moreover, the more the amount of dividend payout increases, the less there will be debt financing. Managers of firms with a higher debt level can opt for either decision; to pay dividends to their shareholders, or to finance their investment opportunities. Furthermore, firms with a higher debt level are synonymous with paying more dividends to shareholders.

Another finding is that firm size significantly and positively affects the modified dividend premium, our proxy of catering. This result suggests that investors are more attracted to large firms than to small firms. This means that larger firms are usually mature firms with limited growth opportunities and are likely to pay more dividends in order to avoid overinvestment. Additionally, larger firms enjoy better access to capital markets and, consequently, are less financially constrained, allowing them to pay higher dividends. Like some previous studies, we conclude that firm size plays an important role in the dividend policy (see Jasim and Hameeda (2011) in the Saudi Stock exchange; Amjad et al. (2016) in the Palestinian stock exchange; Maysa'a Munir Milhem (2016) in Jordan stock exchange; Dialdin and Elsaudi (2010) in the Saudi stock exchange; Arupam Mehta (2012) in the UAE stock exchange; Duha Al Kuwari (2009) in the GCC stock exchange). Dividends payout will help in mitigating the agency cost of free cash flow.

Finally, the results indicate that firm characteristics play an important role in investor preference for dividends. We conclude that most firm-specific variables (size, growth, profitability, liquidity and debt) except their life cycle affect catering behavior as operationalized by three proxies (dividend premium, modified dividend premium and the previous market to book ratio). Moreover, our results suggest that investors pay more attention to firms' financial prospective.

However, the results on the relationship between firm's characteristics and the dividend premium are different across the sample. For instance, firm characteristics do affect the dividend in Tunisia and Morocco. However, liquidity is found to play an important effect on the dividend premium in Egypt, the UAE, Kuwait and MENA. This finding suggests that investors demand more dividends from firms with high liquidity. Moreover, Pinheiro et al. (2006) discovered that the choice to pay dividends is directly influenced by the degree of liquid assets held by the company and the degree of attention that the manager of the company gives to shareholder preferences (Fama and French, 2001). This leads us to believe that there may be a relationship between a company's liquid assets and investor sentiment regarding

dividends. More specifically, we anticipate that a firm's liquid assets will increase investor preference for dividends.

The size variable affects investor preference for dividends in two ways, Moreover, in the UAE; firm size affects positively the dividend premium. In contrast, this factor affects negatively the dividend premium in Kuwait and MENA. This suggests that firm size plays an important role on the decision to demand dividends from firms. According to the literature, investors prefer big firms than small firms. This can be explained by the fact that when the firms are big they pay more and large amounts of dividends. The estimated coefficient for the relationship of firm life cycle proxied by the retained earnings to book equity ratio is positive and significant with our dependent variable in Egypt and Saudi Arabia, suggesting that firms at a mature stage attracts more investor demand for dividends. Investor show more demand when the firm is in a growth and a maturity stage, because firms at this stage accumulate more profit and tend to pay dividends.

The relationship between profitability and the dividend premium is twofold. On the one hand, it is positive in the UAE, suggesting that investors put more premiums on the stock price of firms with higher profitability than of firms with low profitability. Therefore, more profitable firms provide shareholders with large dividend payments. On the other hand, this relationship is significant and negative in Kuwait. This can be explained by the fact that Kuwaiti investors demand more dividends from firms but do not increase a high premium on the stock price of firms with high profitability.

Finally, the MENA results indicate that debt level is negatively associated with the dividend premium. This suggests that investors demand more dividends from firms with low debt level than from firms with high debt level. Moreover, managers can use debt in two ways; first to pay dividends to their shareholders, and second, to finance their investments opportunities.

5. Conclusion

Baker and Wurgler (2004) established the catering theory of dividend as a new framework to explain dividend payout propensity**.** This new theory suggests that managers can cater more and accept investor demand when they put more premiums in the stock price of firms. Most authors confirmed and concluded to the important effect of the dividend premium on managers' decision to pay dividends (see Li and Lie (2006), Malcolm and Baker (2004), Manoj Kulchania (2013), Hoberg Prohbala (2006) in the US; Nopphron Tangitprom (2013) in Thailand; Chikashi Tsuji (2010) in Japan; Jing et al. (2013) in the UK, Rihanat et al. (2014) in Nigeria). This paper examined the moderating role of some firm characteristics using the catering theory of dividends purposed by Baker and Wurgler (2004a). Our sample consisted of 6 MENA countries; Tunisia, Morocco, Egypt, the UAE, Saudi Arabia and Kuwait. The dividend premium is the proxy provided by the catering theory of dividend and is measured by the difference between the average market to book ratio of payer and non-payer firms.

We conclude that firm characteristics, such as life cycle, liquidity, profitability, size and debt life, can play an important role in explaining investor preference for

dividend. Investors' decision to demand dividends is informed by signals about the firms such as their profitability, liquidity, debt level, growth and size. In this way, investors tend to evaluate properly the firms. Furthermore, this evaluation can play an important dual role; one is to decrease investor-mispricing problems, two is to help managers avoid such problems.

However, our results show different tendencies across the sample. Such tendencies may report to differences in ownership structure, corporate governance mechanisms and investor type. Nevertheless, this study has several empirical implications for policy makers in the MENA region. First, applying this new catering theory of dividend could be an appropriate analytical framework to study dividend policy. Second, it is important for policy makers to improve the role of firm characteristics. Moreover, applying the dividend premium as a proxy of catering behavior sounds a viable methodological alternative. This fundamental variable representing firm characteristics can play an important role in explaining investor demand for dividends, yet, non-fundamental variables like corporate governance and ownership structure can as well affect investor preference for dividends.

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