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# Finance Research Letters

journal homepage: [www.elsevier.com/locate/frl](http://www.elsevier.com/locate/frl)

## Flexible firm-level dividends in Latin America

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### ARTICLE INFO

#### Article history:

Received 20 January 2017

Accepted 15 February 2017

Available online 20 February 2017

#### JEL classification:

G15

G32

G35

O16

#### Keywords:

Dividends

Flexibility

Latin America

### ABSTRACT

We show, for a sample of up to 757 industrial firms, in seven Latin American countries from 1994–2014, that these firms exhibit comparatively flexible payout behavior. Flexibility is defined in respect to (i) variability in firm payout status and amounts and (ii) parameters of the Lambrecht-Myers (2012) theory on the Lintner (1956) dividend equation. The results indicate that Latin American firms have higher speeds of adjustment and target payout ratios as well as lower rates of habit formation than found in the payout policies of United States firms. This note, thus, highlights an open question regarding conspicuously flexible payout policies in Latin American firms.

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## 1. Introduction

Cash dividends represent *circa* 34% of earnings globally (Faccio et al., 2001) and recent studies have shown a substantial variation of dividend ratios internationally, both among developed (Denis and Osobov, 2008) and emerging markets (Goyal and Muckley, 2013; Mitton, 2004). There is, nevertheless, a relative dearth of research concerning payout policies in emerging markets such as those in Latin America.<sup>1</sup> An exception is that of Benavides et al. (2016), who show that Latin American firms' smooth dividends more in relatively well governed countries in the region, and that these firms show evidence of adhering to the pecking order and trade-off theories. Also, Boulton et al. (2012) indicate a catering explanation for Brazilian firm preferences to pay cash dividends rather than interest on equity, despite tax incentives to the contrary. In this paper, we establish the comparative flexibility of payout policies in Latin America, and in so doing highlight an intriguing open question in the dividend policy literature.

We report, year-by-year, from 1994 to 2014, the proportion of firms in Latin America which initiate (omit), markedly increase (decrease) their cash dividend payouts as well as the proportion of payers which pay in consecutive years or exhibits a stable dividend policy. The results suggest that Latin American firms show marked flexibility in their dividend policies. For instance, 8% of Latin American firms omit dividend payments each year on average. In contrast, in the United States only

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<sup>1</sup> Some studies, however, do include Latin American countries, but do not exclusively focus on them. LaPorta et al. (2000) examine agency "outcome" and "substitution" models of cash dividends in Argentina and Mexico in 1994. Chay and Suh (2009) consider the cross-sectional determination of payout policies, in particular the importance of cash flow uncertainty, with regard to small samples of firms in Argentina, Brazil and Chile.

about 1% of firms omit each year (Skinner, 2008), while in international data Twu (2010) reports a figure of approximately 4.5%. Moreover, more than 26% of Latin American firms increase their dividends by at least 30% each year while nearly 20% reduce dividends by this amount. These are far larger figures than reported, for instance in, Denis and Osobov (2008) and Skinner (2008) who show remarkable stability in dividend payments internationally.

We also investigate the question of cash dividend flexibility using the Lambrecht-Myers (2012) theory in relation to the well-known Lintner model (1956). We use Arellano-Bover (1995) and Blundell-Bond (1998) dynamic panel regressions to show that the speed of adjustment and target payout ratios are substantively higher in Latin American firms than in firms based in the United States. Moreover, rates of habit formation are shown to be much lower in Latin America. This distinction can arise due to the relative financial immaturity of Latin American firms, and, thus, the importance of signaling (La porta et al. 2000) as opposed to agency costs (Lambrecht and Myers, 2012) in determining their payout policies. Although, we do not test this latter conjecture. Taking these findings together, we report compelling evidence that Latin American firms show remarkable (and unexplained) flexibility in their dividend policies.

The remainder of the paper is organized as follows. In Section 2, we describe the measurement of the broad concept of corporate payout flexibility. In Section 3, we report our sample and variables. In Section 4, we present the empirical findings. Section 5 concludes.

## 2. Payout policy flexibility and hypotheses development

To quantify the concept of payout flexibility we, initially, study the proportion of firms in Latin America which initiate (omit), markedly increase (decrease) their cash dividend payouts as well as the proportion of payers which pay in consecutive years and the proportion with a stable dividend policy.

Then, we turn to the Lintner equation (1956)

$$DIV_t = \alpha_0 + \alpha_1 \cdot NI_t + \alpha_2 \cdot DIV_{t-1} + \varepsilon_t \quad (1)$$

where  $DIV_t$  is the level of cash dividends at time  $t$ ,  $NI_t$  is the net income at time  $t$ , and  $\varepsilon_t$  is the error term. Due to the lagged dividend variable, we avoid a Nickell (1981) bias, and estimate the coefficients with Arellano-Bover (1995) Blundell-Bond (1998) dynamic panel specification.  $\alpha_1$  is the sensitivity to earnings and  $(1 - \alpha_2)$  is the speed of adjustment (SOA). The target payout ratio (TPOR) is  $\alpha_2 / (1 - \alpha_1)$ .

Lambrecht and Myers (2012) show that  $\alpha_2$  depends on  $\beta$  (the market discount factor =  $1/(1+r)$ , where  $r$  is the risk free rate) and on habit formation,  $h$ , by the managers:  $\alpha_2 = \beta * h$ . Thus, habit formation is defined

$$h = (1 + r) * \alpha_2 \quad (2)$$

Lambrecht and Myers (2012, Eq. 47) elaborate to show that habit formation can also be calculated, if managers have a negative exponential utility function, as  $\gamma_1$  in this first differences in dividends equation:

$$\Delta DIV_t = \gamma_0 + \gamma_1 \cdot \Delta DIV_{t-1} + \varphi_t \quad (3)$$

The combination of the Lintner Eq. (1) and the habit formation Eqs. (2) and (3) facilitates our formal analyses of the distinctiveness of Latin American firms' dividend payout policies. A higher flexibility in Latin American payout policies is consistent with relatively fast SOAs and low habit formations. Finally, relatively high TPORs in Latin America may indicate the importance of cash dividend signaling in the region.

## 3. Data and variable construction

We test our flexibility related hypotheses with firm-specific data on 757 listed firms (up to 7876 firm-years) on exchanges (and headquartered) in seven Latin American countries (1994–2014).<sup>2</sup> Specifically, the annual firm-specific Latin American data is sourced in Worldscope on the following countries viz. Argentina (Buenos Aires SE – 72 firms), Brazil (BM&F Bovespa – 257 firms), Chile (Santiago SE – 142 firms), Colombia (Bolsa de Valores de Colombia – 41 firms), Mexico (Bolsa Mexicana de Valores – 121 firms), Peru (Bolsa de Valores de Lima – 103 firms), Venezuela (Bolsa de Valores de Caracas – 21 firms), and the USA (NYSE and NASDAQ, 3190 firms). The Latin America exchanges are selected as they have a minimum market capitalization of US\$ 25 Billion for each sample year studied (World Federation of Exchanges).

In line with the corporate payout determination literature (e.g. Fama and French, 2001; Denis and Osobov, 2008; Skinner 2008), our sample excludes foreign firms, ADRs, firms with negative dividends or market-to-book ratios, and firms which operate in the financial services (SIC codes 6000–6999) and utilities (SIC codes 4900–4949) sectors. We search the Worldscope database for active as well as dead and suspended listings in order to avoid survivor bias, and select companies with usable ISIN and SIC industry codes. We eliminate companies with similar ISIN codes and similar names, and companies that give error codes in downloading data. Finally, we adopt the country specific CPIs to convert the nominal firm specific accounting and financial data into real 1994 prices and then convert it to a common U.S. dollar numeraire using the year-end country-specific exchange rate. Winsorization is undertaken at the upper and lower 1% level.

<sup>2</sup> The sample commences in 1994 as there is limited coverage of firms headquartered outside the U.S. prior to this date (Denis and Osobov, 2008) as well as limited capital market liberalization before 1990 (Bekaert and Harvey, 1995).

**Table 1**

Table presents the proportions of firms in Latin America which disclose their payout policies from 1994 to 2014. Payer is the proportion of firms paying dividend in the current year. Prior Pay is firms which pay dividends over two consecutive years. Initiate (Omit) are the firms that did not pay anything last (current) year, but paid cash dividend in the current (last) year. Inc. by 30% (Dec. by 30%) are firms that increased (decreased) their dividend payout in the current year by more than 30% compared to last year. Stable Payers are firms whose payout in current year is within +/- 30% of last year.

Year	Payer	Prior Pay	Initiate	Omit	Inc. by 30%	Dec. by 30%	Stable Payers
1994	76.652						
1995	71.484	78.027	13.672	11.454	26.457	24.215	49.327
1996	69.310	71.542	11.724	6.250	32.411	17.787	49.802
1997	69.745	69.097	10.828	5.517	30.208	18.750	51.042
1998	68.254	69.836	16.667	7.643	25.246	22.951	51.803
1999	58.600	68.785	18.000	14.550	15.470	30.939	53.591
2000	58.473	58.932	11.359	8.000	24.230	18.275	57.495
2001	56.473	57.965	6.379	8.752	21.497	17.658	60.845
2002	55.028	57.143	6.262	8.255	17.761	26.448	55.792
2003	58.550	55.319	8.550	3.985	33.269	10.832	55.899
2004	59.425	58.667	8.977	6.320	33.524	12.952	53.524
2005	60.708	59.963	9.612	5.027	32.775	11.732	55.493
2006	63.158	60.174	7.470	5.396	26.783	13.913	59.304
2007	65.422	63.763	9.740	4.924	35.366	13.937	50.697
2008	66.281	65.488	7.438	7.630	24.411	22.222	53.367
2009	60.984	66.496	6.393	11.240	27.009	25.641	47.350
2010	65.154	61.008	11.345	6.557	36.807	15.798	47.395
2011	67.657	65.552	7.096	5.673	30.602	15.217	54.181
2012	66.156	68.096	5.442	8.746	20.240	23.156	56.604
2013	67.254	66.667	6.514	7.483	22.695	22.340	54.965
2014	64.286	67.904	4.329	18.486	19.214	24.454	56.332
Average	63.429	63.610	9.014	8.001	26.941	19.044	54.016

#### 4. Empirical results

Table 1 presents the proportion (percentage) of firms, year-by-year from 1994 to 2014, in our seven Latin American markets, which conduct reported cash dividend payouts.<sup>3</sup> The panel also shows the proportions of these firms which are prior payers (*i.e.* pay dividend over two consecutive fiscal years), which conduct cash dividend initiations and abandonments, which either increase or decrease the cash dividend payout by more than 30% compared to the previous year's cash dividend payout (Chemmanur et al., 2010), and which are stable payers *i.e.* neither initiate nor abandon or substantially increase / decrease their dividend payout amount from the previous fiscal year.

In comparison with firms in the United States (Skinner, 2008) and in international markets (Twu, 2010), we find, on average, a markedly higher proportion of firms either abandoning (8%) or decreasing (19%) their payout amount by more than 30% from last fiscal year in Latin America. We also observe that initiators (almost 9%) and marked dividend increasers (27%) are also prevalent in Latin America. In contrast, Skinner (2008) shows that in the United States the proportion of firms increasing dividends (by any amount) ranges from 17.9% to 11.2% in recent decades. The corresponding proportion of firms reducing dividend is at about the 1% level (also see Chemmanur et al., 2010). Moreover, while the proportion of prior payers who pay is reported internationally as above 95% in Twu (2010), it is on average about 63% in Latin America. Hence, this constitutes intriguing evidence of a distinctively high flexibility in payout statuses and amounts in Latin America.

Turning to Table 2, we report findings in respect to the Lintner-Myers theory which can inform interpretation of the Lintner (1956) equation. In line with our dividend flexibility hypothesis, we find that the speed of adjustment and the target payout ratios are substantially higher in Latin America than in the USA. Further, habit formation is substantially lower in Latin America, once outliers are removed at the 5% and 95% levels.<sup>4</sup>

We conjecture that the higher target payout ratios reported in Latin America vis-à-vis North America can stem from the greater importance of signaling to the higher target payout ratio firms. Our main conclusion is that the higher target payout ratios and speed of adjustment, and lower habit formation rates in Latin America, show the relative flexibility of payout policy in Latin America. We leave to future work the identification of an explanation for this result.

#### 5. Conclusion

In this paper, we have examined the relative flexibility of corporate payout policies of firms listed in seven Latin American countries. Our initial motivation to study the Latin American region is as a result of distinctive dividend ratios in emerg-

<sup>3</sup> For summary statistics on the variables we study see Appendix A1.

<sup>4</sup> It is remarkable that habit formation, using Eq. 3, gives in general a negative rate for both mature and immature firms in LA and in the USA, unless outliers at the 5% level are removed.

**Table 2**

Arellano-Bover/Blundell-Bond system estimator results with robust standard errors. The dependent variable of the regressions is the amount of dividend paid (DIV). LDIV is the lagged value of the amount of dividend paid, NI is net income. *P*-values are presented below the coefficients within parentheses. SOA is the speed of adjustment and it is calculated as 1 minus the coefficient of LDIV. TPOR is the target payout ratio, calculated as the coefficient of NI divided by the SOA. HF is the habit formation calculated from the change in dividends (for trimmed observations) based on Myers and Lambrecht (2012, Eq. 47).

Variables	USA firms	Latin American firms
NI	0.124 (0.001)	0.279 (0.007)
LDIV	0.487 (0.002)	0.351 (0.000)
Constant	99,843 (0.000)	9,211 (0.196)
Observations	12,466	2,991
Number of firms	1208	417
SOA	0.513	0.649
TPOR	0.242	0.430
HF from Eq. 2 <sup>a</sup>	0.489	0.404
HF from Eq. 3	−0.286 (0.000)	−0.250 (0.001)
HF from Eq. 3 <sup>b</sup>	0.304 (0.000)	−0.085 (0.068)

<sup>a</sup> Using a risk free interest rate of 0.5% for the USA and 15% for Latin America.

<sup>b</sup> Based on trimmed observations at 5% and 95%.

ing markets (Denis and Osobov, 2008; Goyal and Muckley, 2013) and the relative riskiness of economic growth variation exhibited by these markets.

Our findings suggest that there is a substantive payout policy flexibility in Latin America. Using the Lambrecht-Myers (2012) theoretical insight into the Lintner (1956) equations, we show that the speed of adjustment and target payout ratios are, indeed, much higher in Latin America than in North America. Moreover, the rate of habit formation, of firm managers in respect to payout policy decisions, is markedly low. We suggest that Latin American firms may exhibit greater information asymmetries (due to a financial immaturity) which can be somewhat offset by high dividend ratios. We leave to future work, however, the provision of an explanation for the relative flexibility of Latin American pay outs.

#### Appendix A1. Definition of the variables used in this study and their mean and median values for all the firms, and cash dividend payers and non-payers for seven Latin America countries, from 1994–2014

Variable acronym	Variable definitions	Mean			Median		
		All firms	Payers	Non-payers	All firms	Payers	Non-payers
DIV	Total annual common cash dividend paid in million US\$, 1994 prices.	44.739	70.534	0.000	1.730	9.470	0.000
Net_Inc	Net annual income in million US\$, 1994 prices.	92.952	144.204	3.223	9.140	20.800	0.220

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