

FUNDAÇÃO GETULIO VARGAS

ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO

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**M&A announcements on stock returns: evidence from private takeovers in
Latin America**

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2019

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**M&A ANNOUNCEMENTS ON STOCK RETURNS: EVIDENCE FROM PRIVATE
TAKEOVERS IN LATIN AMERICA**

Thesis presented to Escola de
Administração de Empresas de São Paulo
of Fundação Getulio Vargas, as a
requirement to obtain the title of Master in
International Management (MPGI).

Knowledge Field: Finance

Adviser: Prof. Dr. Marcio Gabrielli

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ABSTRACT

This master thesis aims to analyze the impact of private takeovers announcements on acquires' stock prices in Latin American countries, such as Brazil, Mexico, Chile, Argentina, Colombia and Peru. I gathered data from 161 M&A transactions and stock prices from 1999 to 2019 in order to test whether M&A announcements generate abnormal returns for acquiring companies in these countries as well as for the aggregate sample. I found evidence of significant and positive post-event returns for acquiring firms in Brazil, Mexico, Argentina, Chile and for the aggregate Latin America sample. Also, shareholder value creation tends to be stronger for transactions in which the target size increases relative to the acquirer. Furthermore, I found evidence of both cash and equity-financed acquisitions as being value creating for shareholders around the announcement date. Only cash deals provide significant positive abnormal returns for longer periods, though. Finally, I found evidence that both horizontal and vertical deals generate positive abnormal returns whereas there was no evidence of such effect for diversification acquisitions. This study is relevant for common shareholders, board of directors, senior management teams, investment banks, global fund managers, equity analysts, brokers as well as financial regulators. The present research contributes to corporate restructuring as well as market efficiency literature, especially for emerging and developing markets.

KEY WORDS: M&A, Abnormal Returns, Event Study, Latin America

RESUMO

Esta tese de mestrado visa analisar o impacto de anúncios de fusões e aquisições, nas quais a empresa adquirida é privada, nos preços das ações da empresa compradora em países da América Latina, como Brasil, México, Chile, Argentina, Colômbia, Colômbia e Peru. Reunidos dados de 161 transações de fusões e aquisições e preços de ações de 1999 a 2019 para testar se os anúncios geram retornos anormais para as empresas adquirentes nesses países, bem como para a amostra agregada. Encontrei evidências de retornos pós-evento positivos e significativos para empresas adquirentes no Brasil, México, Argentina, Chile e para a amostra agregada da América Latina. Além disso, a criação de valor para o acionista tende a ser mais forte nas transações em que o tamanho da empresa adquirida aumenta em relação ao adquirente. Além disso, encontrei evidências de aquisições financiadas com caixa e por ações como geradoras de valor para os acionistas na data do anúncio. Porém, apenas pagamentos com caixa fornecem retornos anormais positivos significativos por períodos mais longos. Para finalizar, encontrei evidências de que transações horizontais e verticais geram retornos anormais positivos, enquanto não houve evidências desse efeito para aquisições de diversificação. Este estudo é relevante para acionistas, conselhos de administração, diretoria das empresas, bancos de investimento, gestores de fundos, analistas de ações, corretores e reguladores financeiros. A presente pesquisa contribui para a literatura de reestruturação corporativa e eficiência de mercado, especialmente para mercados emergentes e em desenvolvimento.

PALAVRAS CHAVE: Fusões e Aquisições, América Latina, retornos anormais, estudo de evento

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1. Introduction

Mergers and acquisitions have been an important growth driver for companies, thereby becoming a popular topic of interest within academic researchers.

The volume of M&A has been exceeding 3 trillion dollars annually since 2014, according to the Financial Times journal. Generally, companies seek to merge with or acquire another one due to potential synergies, diversification, growth, increase market power and eliminate existing or potential competition.

Even though the popularity of M&A peaked, there is a vast literature of academic research indicating that mergers and acquisitions, on average, destroy much more value for acquirers' shareholders than create. Grubb and Lamb (2000) estimated that only 20% of all mergers and acquisitions really succeed and the other majority typically eroded shareholders' wealth.

M&A performance empirical evidence varies substantially depending on different factors, such as the economic and financial development stage of the region where the acquisition is taking place, payment method, the degree of industry relatedness between the two companies and the legal nature of the target (i.e., public or private).

The legal nature of the transactions is a huge issue for testing the hypotheses that were found in developed nations as the bulk of research was conducted analyzing public deals. In Latin America, the volume of M&A is driven largely by private transactions, though. According to data gathered from S&P Capital IQ, over 93% of the deal value for sample countries was generated by private takeovers. Hence, making private deals dominant relative to public deals.

This master thesis aims to test whether private takeovers announcements create value for acquiring firms in Latin America. Following the previous work of researches ((Arbeleche and Rochman, 2008) (Sehgal, Banerjee and Deisting, 2012) (Sevindik and Gokgoz, 2018)), I tested the significance of abnormal returns in different Latin American economies. Further, I tested

the presence of significant abnormal returns for the whole Latin America sample taking into consideration different factors, such as size difference between acquirer and target, consideration offered and deal type.

This research addresses two main issues in the corporate restructuring and market efficiency literature. First, this study provides insights to better assess the impact of private takeovers announcements on stock prices of acquiring firms, which still is not a topic as mature as public deals analysis research. Second, I bring the discussion towards less developed nations, in which research has been lagging compared to developed economies.

As far as I know, this is the first study to analyze market reaction towards private M&As in Latin America through a cross-country perspective and breaking it down in different deal features. The outcome of this study will be useful for common shareholders, board of directors, senior management teams and investment banks for corporate acquisition planning and deal structure. Understanding the factors that influence market reaction towards takeovers announcements can lead to more efficient inorganic growth strategies and capital raising activities. In addition, this study will be valuable for the investment community as well, such as global fund managers, equity analysts and brokers. Investment strategies and styles can be applied whenever a corporate restructuring event occurs (e.g., investors would go long (short) in the acquirer if the deal payment method is cash (stock)). Hence, understanding the impact dynamics of deal features and type on shareholder value creation provide solid insights for profiting when such events occur. Finally, evidence found in this study is also valuable for financial regulators. These entities might be interested in assessing whether information leakage and potential insider trading activities are active in their countries.

This master thesis is organized in 6 sections, including this one. In Section 2 I have consolidated the most traditional studies involving the estimation of stock abnormal returns in developed markets. Furthermore, I have also gathered studies which aimed to find evidence

in less developed markets in order to emphasize how this topic remain in interest of global academia. Private takeovers literature, payment method, deal type as well as relative size empirical evidence is also provided. Section 3 provides the data used, screening criteria and sample characteristics. Section 4 introduces the methodology and the hypotheses. Section 5 embeds the empirical results and in Section 6 I restate my findings and conclusion.

2. Literature Review

2.1 Developed markets

The impacts on shareholders' wealth for target firms is frequently a consensus for both academicians and market participants. For instance, Langetieg (1978) found evidence of cumulative abnormal return (CAR) of + 10.63% for target firms in the United States from a sample of 149 transactions within 1929 and 1969. In addition, Lang, Stulz and Walkling (1989) found average CAR for target firms of + 28.99% and + 40.33% in US tender offers, respectively. Target firms on average captures the premium benefit paid by acquires, thereby creating value for targets' shareholders. On the other hand, research focused on the acquirer side is ambiguous with many researches finding controversial results both in the short and long-term return prospects.

Even though most studies that were developed prior to 2000 were conducted in the same countries, empirical findings vary relatively high when comparing each one. This major incomparability is due to different sample characteristics, event window specification and variations within the event study methodology that allow for such degree of flexibility when estimating model parameters.

The theme of abnormal returns received attention from two groups of academics with controversial theoretical background, those who defend the efficient market hypothesis and those who criticize it.

For the former group, there is a relatively stable consensus that markets are unable of correctly price cost and synergies in merger and acquisitions transactions, thereby creating downward pressure on prices. Asquith (1983) and Agrawal, Jaffe and Manfelker (1992) found evidences of extremely non-positive cumulative abnormal returns involving M&A deals in the United States. Gregory (1997) analyzed the long run performance of 452 mergers in the U.K from 1984 to 1992 and found cumulative non-positive returns for the acquirer ranging from 12 to

18% in two years. In addition, André, Kooli and L'Her (2004) studied 267 transactions occurring from 1980 to 2000 in Canada and found evidence of acquirer stock underperformance within a 3-year long run horizon.

On the other hand, efficient markets defendants argue that most of the negative abnormal returns that were found by previous research is due to model misspecification, in which market models used to estimate return parameters were problematic. Specifically, Fama (1998) and Mitchell and Stafford (2000) highlighted different reasons for why those models were finding statistical evidence where there was none. The former authors redesigned the model by accounting for positive cross-correlations of event-firm abnormal returns and did not find evidence of such non-positive cumulative return to be significantly different from zero. Also, Eckbo and Thorburn (2000) analyzed 1261 M&A deals in Canada during 1964 to 1983 and found positive cumulative abnormal returns of + 1.71% on average for domestic transactions.

2.2 Emerging and developing markets

For emerging and developing markets, Chari, Ouimet and Tesar (2009) found evidence of significantly increase in stock prices for developed-country multinational firms when acquiring control of emerging-country firms. Using a sample of transactions within 1986–2006, developed-market acquirers experienced positive and significant abnormal returns of 1.16%, on average, over a three-day event window. Positive acquirer returns and dollar value gains appeared unique to emerging-market mergers and acquisitions and were not replicated when the same developed-market acquirers took over firms in developed markets. The authors also stated that the size of the stock price increase is deeper for weaker contracting environment in emerging markets and for industries with high asset intangibility.

Arbeleche and Rochman (2008) focused their analysis in Latin American countries. They analyzed the long-run performance (36 months post-event period) of 429 Latin American

mergers and acquisitions from 1994 to 2005. Brazil, Mexico, Chile, Argentina, Peru, Colombia and Venezuela were selected due to their relatively more developed capital markets. He found mixed results. On one hand, Mexico and Argentina presented hard evidence on the existence of significant negative abnormal returns. On the other hand, Chile showed evidence of significant positive long-run abnormal returns. There is no proof of abnormal performance for acquiring companies in the rest of the analyzed countries (Brazil, Peru, Colombia and Venezuela).

Ma, Pagán e Chu (2009) investigated abnormal returns to shareholders of bidder firms around the day of M&A announcement for ten emerging Asian markets: China, India, Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand. Using a sample of 1,477 M&A deals in the ten emerging Asian markets, they found that the stock markets have expected positive cumulative abnormal returns in three different event windows: a two-day (0, 1) window, a three-day (-1, +1) window, and a five-day (-2, +2) window. Valuation effects of information leakage about M&A deals were statistically significant. The findings suggested that as investors reap the financial benefits associated with M&A deals, external growth through M&A activity may be highly recommended to managers.

2.3 Private targets

A phenomenon observed in studies of U.S. acquisitions is that acquirers achieve zero or negative average announcement period cumulative abnormal returns (CARs) when acquiring listed targets and positive average CARs when acquiring unlisted targets (Chang (1998), Fuller, Netter, and Stegemoller (2002), Hansen and Lott (1996), and Moeller, Schlingemann, and Stulz (2004), Capron and Shen (2005), McConnel and Stolin, (2005)) . In addition, for European acquisitions, Faccio, McConnel and Stolin (2006) and Conn, Cosh, Guest and Hughes (2005) found similar results and classified such wealth creation difference from listed to unlisted targets as the *listing effect*. There are a few arguments for such outperformance of

private deals. The first one is the fact that private bids are less exposed to public gaze. Market participants generally do not know how the bidding process is going through, which avoids market scrutiny and deal pressure especially for hostile bids. At some degree, post-deal performance due to hubris might be limited compared to public bidding. Secondly, there is the potential of blockholder formation, which will lead to greater monitoring and hence less agency costs after the acquisition.

Such effect occurs when the payment method chosen is equity and the target relative size is large making its shareholders representative in the new post-merger entity. Thirdly, the private nature of the deal may lead to some degree of information advantage as the disclosure of information between the parties is different, which would be impossible in a public bid where, frequently, takeover codes and listing rules require equal and public information disclosure to all shareholders. Lastly, private targets being assessed by multiple bidders is less likely than for public companies due the illiquid feature of their equity. Hence, payments of significant premium, which is highly present in contested public acquisitions, are less likely to occur. Therefore, bidder returns have a higher likelihood of being positive than for public deals as a result of such illiquidity discount.

2.4 Financing strategy

How companies choose to finance their acquisition plan has important implications for market participants. Main researchers have found that equity-financed acquisitions are associated with significant negative returns at deal announcements whereas cash-financed transactions are either zero or slightly positive (Asquith, Bruner and Mullins (1987), Huang and Walkling (1987), Travlos (1987) and Yook (2003)). The rationale behind such market reaction against stock payment is that it signals a potential overvaluation of acquirer's shares at the time of the announcement, whereas cash payment conveys the confidence that the target firm's value was accurately assessed. This is aligned with "information content" hypothesis developed by

Myers and Majluf (1984) and the “free cash flow” hypothesis developed by Jensen (1986), which assess cash-financed acquisitions as reducing free cash flows agency costs.

However, there is substantial difference on the direction of how the means of payment determines the bidders’ CAARs in different regions. On one hand, US studies unanimously agree that the announcements of all equity-financed acquisitions are associated with significantly negative abnormal returns on the bidders’ shares, and that these takeovers substantially underperform the all-cash bids. On the other hand, European studies provide somewhat different results: equity-financed takeovers result in positive and sometimes significant returns to the bidder, such as was shown by Goergen and Renneboog (2004) that bidders’ CAARs in all-equity deals significantly exceed those in all-cash deals. In addition, Sehgal, Banerjee and Deisting (2012) analyzed the impact of M&A announcements and the method of payment chosen by bidders for BRICKS markets from 2005 to 2009. They found strong and significant negative post-event returns for Chinese, Indian and South Korean acquirers. Further, equity-financed acquisitions provided positive abnormal returns while cash acquisitions were considered value destroying by investors in the short-term. Such results are aligned with alternative theories, such as the Investment Opportunity Hypothesis and the Risk Sharing Hypothesis.

The first hypothesis states that there is a link between growth opportunities and payment method for M&A transactions. Myers (1977) highlights that firms with good investment opportunities are less likely to raise capital through debt than companies with poor investment opportunities. The rationale behind is that the first group needs to preserve its cash flows in order to seize good investment opportunities whereas the second group can use it for debt service without losing investment opportunities. Analogously, Jung, Kim and Stulz (1996) argue that the choice between equity and debt capital raise is based on the discretion regarding future cash flows, hence managers will favor equity over debt. Therefore, such overlap

between mechanism of capital raising and method of payment in corporate acquisitions provide support to theories that companies rather finance their acquisition plan with equity rather than cash. Martin (1996) tested the Investment Opportunity hypothesis and found evidence that firms with good investment opportunities are more likely to finance their acquisition plan with stock. These results are aligned with evidence found by Jung, Kim and Stultz (1996) study, in which not only firms with good investment opportunities are more likely to issue equity, but also market reaction towards equity issuance of these firms outperform equity offerings of poor investment opportunities ones.

The second hypothesis also embeds the “information content” brought by Myers and Majluf (1984), but now the information asymmetry is seen as affecting the acquiring firm in an opposite direction. The rationale behind this theory is that the true value of the target firm is extremely difficult to measure even after an in-depth due diligence process by the acquirer. In addition, risks related to the likelihood of expected synergies to materialize are also an issue for its shareholders. For the target firm, though, its intrinsic value is, in most cases, clear for it. Hansen (1987) models such scenario of potential information asymmetry and argues that if the bidder company is uncertain about the valuation of the target, it will rather pay in stock than in cash in order to share the risks of future revaluation effects. This theory is also supported by Martin (1996) by stating that bidder will rather use equity if the acquisition outcome is uncertain, and by Rappaport and Sirower (1999) as they argue that cash-financed transactions should be valued with a discount since acquirers bear the acquisition-success risk alone.

2.5 Acquisition type

Even though there are factors that support diversification deals, such as the potential for entering new markets (Tremblay & Tremblay, 2012), cheaper access to capital (Agrawal, 1992) and income stability (Datta, Pinches, & Narayanan, 1992), there is a consensus among finance

studies that diversification destroys value and focus either conserves it or enhances it ((King, et al., 2004) (Megginson, Morgan and Nail, 2003)). Berger and Ofek (1995) found an average loss in value from diversification of between 13 and 15 percent. They also argue that there is a conglomerate trading discount as the sum of the business units, if they operated independently, would be more valuable than the whole diversified firm.

The degree of relatedness between the bidder business and target has a direct and positive relationship with post-merger returns. The rationale behind it is that potential synergies or savings arise from the economics of the two firms (Andre, Kooli and L'Her, 2004). On the other hand, diversification deals (i.e., deals between firms with unrelated lines of business) are associated with the poorest returns when compared with related mergers. Maquieira et al. (1998) found negative, but insignificant returns to buyers in diversification deals whereas significant returns to buyers in non-diversification deals were found. Furthermore, DeLong (2001) found that bank mergers that focus both activity and geography enhance buyer's share value by 2.0 to 3.0 percent more than other types of mergers, which also supports related acquisitions as being value enhancers for firms.

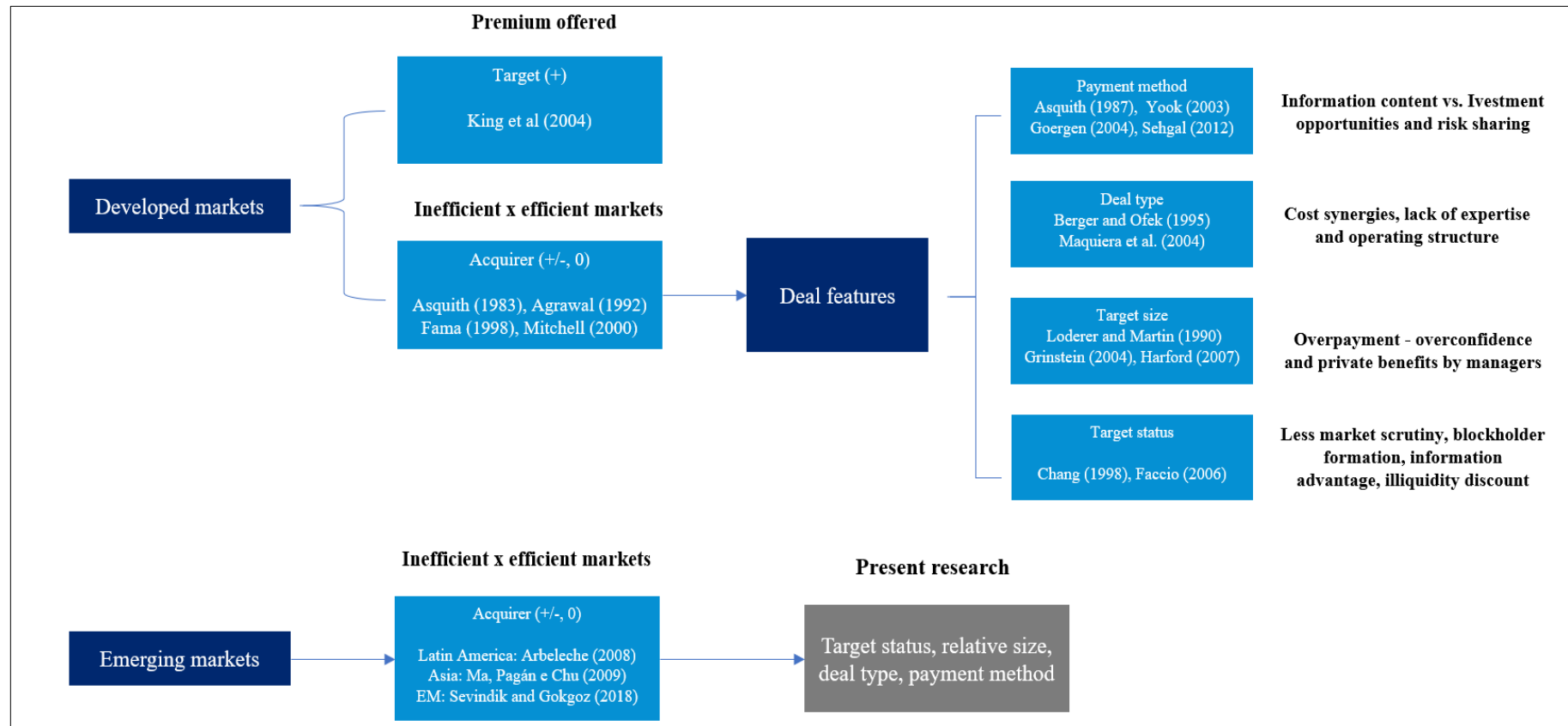
2.6 Relative size

There is a considering amount of empirical evidence that large takeovers destroy more value for acquiring companies. BusinessWeek (2002) reported that 61% of deals with target valued at least \$500 million provided losses for shareholders. Analogously, a study by Boston Consulting Group (2007) shows that mega-deals valued over \$1 billion were impaired approximately two times more value than smaller acquisitions. Loderer and Martin (1990) argue that bidders experience heavier losses when buying large targets due to the likelihood of overpaying for them. This is aligned with overconfidence theory by managers where excessively confident managers overestimate their ability to extract gains and savings through acquisition synergies end up overpaying for large targets (Hayward and Habrick, 1997;

Malmendier and Tate, 2008; Roll, 1986). Moreover, another explanation for large deals underperformance is that top executives may pay above-average premium because the target firm usually provides particularly high private benefits for their executives (Grinstein and Hribar, 2004; Harford and Li, 2007; Loderer and Martin, 1990; Morck et al., 1990).

Finally, in order to better assess the relation between deal features and M&A performance, Figure 1 depicts a short summary of a few previous results, theories linked with them and my contribution to current literature.

Figure 1 – Literature overview summary



3. Data

M&As completed during January 1, 1999 to January 31, 2019 were considered. Further, the acquiring companies needed to be publicly traded and incorporated in one of the following Latin American countries, such as Brazil, Mexico, Argentina, Colombia, Chile and Peru. These countries were selected due to their economic and financial relevancy in the region and since M&A volume has been highly concentrated there. According to IMF latest data (International Monetary Fund, World Economic Outlook Database, 2019), these countries GDP accounted for over 85% of Latin America and Caribbean region GDP. Furthermore, as I am testing the presence of abnormal returns individually for each country, constraints regarding sample size are avoided when only active M&A markets are tested.

This data sample of transactions was extracted from S&P Capital IQ database and initially 1,308 deals were available based on the screening criteria. In order to include in my analysis only transactions in which equity markets reacted to the announcements I am reducing the sample to only those deals in which the acquiring company market value is at least 15% of the acquirer market value before the announcement. As the sample is composed by private targets, we are using the disclosed total transaction value as proxy for sorting candidates. In addition, other criterion for company selection was the availability of daily stock prices for 169 days, including the 100-day estimation window and the pre (10 days) and post-event window (60 days). I gathered pricing data using Bloomberg and excluded deals in which required price data was missing. Finally, only takeovers in which change of control occurred were included.

The final sample of transactions embeds 161 completed deals, in which it represents 53% of the total M&A financial volume during the period analyzed. The remaining deals are those in which targets' relative size are under the 15% threshold and those in which price history availability do not follow required specifications.

Table 1. Sample breakdown by country

	2018 GDP (USD bn)	Deals	Deal Value (USD mm)	GDP (%)	Deals (%)	Deal Value (%)
Brazil	1,868	66	108,496	43%	41%	49%
Mexico	1,223	42	78,107	27%	26%	35%
Argentina	518	13	4,960	11%	8%	2%
Colombia	333	13	8,132	7%	8%	4%
Chile	298	21	21,045	6%	13%	9%
Peru	225	6	1,940	5%	4%	1%
	4,466	161	222,680	100%	100%	100%

Source: IMF, World Economic Outlook Database, April 2019 and S&P Capital IQ

Table 1 depicts sample deal and deal value breakdown by country. Sample distribution seems to be representative of both economical and financial dynamics in Latin America as deal value distribution among sample countries is aligned with their GDP contribution in the region.

Table 2. Screening criteria

Criteria	Description
Countries	Brazil, Mexico, Argentina, Colombia, Chile, Peru
Acquirer status	Public
Target status	Private
Data of Announcement	01/01/1999 to 01/31/2019
Deal status	Closed / Completed
Change of control	Yes
Deal size	At least 15% of acquirer Market Cap proxied by transaction value
Number of deals	161

Table 2 shows the screening criteria for including transactions. As mentioned previously, bidder must be incorporated in one of the following Latin American countries, Brazil, Mexico, Argentina, Colombia, Chile and Peru. Also, they must be publicly traded and have price history availability in order to estimate market model parameters. Further, transactions must had been successfully completed and the event of change of control is also a requirement. The 15% relative size threshold proxied by the acquirer's 1-day prior the event market capitalization is based on the assessment that markets would not considerably react to

transactions in which there is big size difference between target and acquirer. As can be seen in Figure 2 and 3, deals are highly concentrated in the lower band of 1.5% with over 500 transactions. In addition, there is a significant amount of approximately 400 deals within the 1.5-15% range, in which their transaction value is also considered too small for market participants to engage in valuation procedures. The average transaction value for deals below the 15% threshold is USD 135 million whereas for those above is USD 1200 million. Hence, in order to avoid downward pressure on sample mean abnormal returns due to deal size fragmentation, this study has limited its analyses to the upper band of 15%.

Nevertheless, in Section 5.2.4 I checked the 15% threshold results robustness by running the hypotheses again with both a higher (20%) and lower (10%) sample filter and findings did not substantially change. Both abnormal returns direction and t-stats economic interpretation remained the same. More details are provided in Section 5.2.4.

Figure 2. Deal volume histogram by relative size

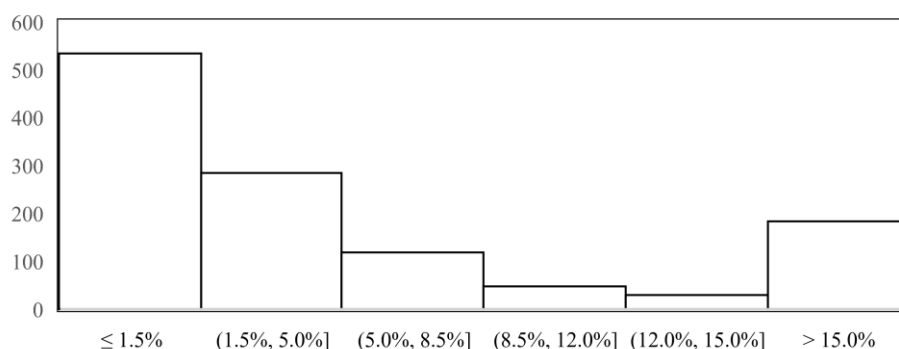


Figure 3. Deal volume and value distribution by relative size

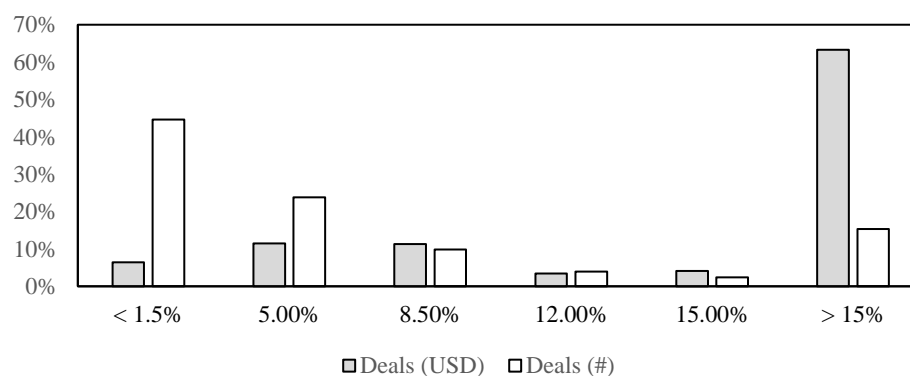


Table 3. Sample breakdown by deal type

	Horizontal	Vertical	Diversification	
Brazil	51	14	1	66
Mexico	25	16	1	42
Argentina	6	4	3	13
Colombia	5	7	1	13
Chile	8	12	1	21
Peru	2	4	0	6
	97	57	7	161

Table 4. Sample breakdown by acquirer sector and primary industry

Sector	Primary Industry	Deals	%
Communication Services	Integrated Telecommunication Services	2	
	Publishing	1	
	Wireless Telecommunication Services	2	
Communication Services Total		5	3%
Consumer Discretionary	Apparel, Accessories and Luxury Goods	1	
	Auto Parts and Equipment	2	
	Automotive Retail	1	
	Education Services	1	
	Home Improvement Retail	1	
	Homebuilding	5	
	Hotels, Resorts and Cruise Lines	2	
	Housewares and Specialties	1	
	Restaurants	3	
	Textiles	1	
Consumer Discretionary Total		18	11%
Consumer Staples	Agricultural Products	3	
	Distillers and Vintners	2	
	Hypermarkets and Super Centers	6	
	Packaged Foods and Meats	14	
	Soft Drinks	2	
Consumer Staples Total		27	17%
Energy	Integrated Oil and Gas	1	
	Oil and Gas Exploration and Production	6	
	Oil and Gas Refining and Marketing	2	
	Oil and Gas Storage and Transportation	1	
Energy Total		10	6%
Financials	Consumer Finance	1	
	Diversified Banks	17	
	Multi-Sector Holdings	2	
	Other Diversified Financial Services	1	
Financials Total		21	13%
Health Care	Health Care Distributors	2	
	Health Care Facilities	1	
	Health Care Services	2	
	Managed Health Care	1	
	Pharmaceuticals	2	
Health Care Total		8	5%
Industrials	Agricultural and Farm Machinery	1	
	Airlines	1	
	Building Products	3	
	Commercial Printing	1	
	Construction Machinery and Heavy Trucks	2	
	Human Resource and Employment Services	1	
	Industrial Conglomerates	4	
	Marine	1	
	Trading Companies and Distributors	1	
	Trucking	4	

Industrials Total		19	12%
Information Technology	Systems Software	1	
	Technology Hardware, Storage and Peripherals	1	
Information Technology Total		2	1%
Materials	Commodity Chemicals	4	
	Construction Materials	9	
	Fertilizers and Agricultural Chemicals	1	
	Forest Products	1	
	Gold	1	
	Metal and Glass Containers	2	
	Paper Products	2	
	Steel	10	
Materials Total		30	19%
Real Estate	Diversified Real Estate Activities	2	
	Real Estate Operating Companies	2	
Real Estate Total		4	2%
Utilities	Electric Utilities	10	
	Gas Utilities	2	
	Independent Power Producers and Energy Traders	3	
	Renewable Electricity	2	
Utilities Total		17	11%
Grand Total		161	100%

Table 3 depicts sample deal breakdown by deal type. Deal type categorization is based on S&P Capital IQ data. As shown in Table 4, if the acquirer and target share the same primary industry classification the deal is classified as horizontal. Similarly, a deal in which that acquirer and target do not share the same primary industry category but share the same sector category is classified as vertical. Finally, deals in which both the acquirer and target are from different sectors are classified as diversification.

Table 5. Sample breakdown by consideration offered

	Cash	Equity	Combinations	Total
Brazil	35	17	14	66
Mexico	38	2	2	42
Argentina	9	3	1	13
Colombia	12	1	0	13
Chile	15	6	0	21
Peru	5	1	0	6
	114	30	17	161

Table 5 and 6 depicts sample breakdown by consideration offered. Over 70% of all deals were financed with cash whereas 18.5% were stock-financed and the remaining were hybrid payment methods.

Table 6: Sample breakdown by period and consideration offered

	Cash	Equity	Combinations	Total
1999	1	0	0	1
2000	1	0	0	1
2001	1	1	0	2
2002	1	1	2	4
2003	4	0	0	4
2004	5	1	0	6
2005	4	1	1	6
2006	5	0	0	5
2007	11	1	1	13
2008	7	3	3	13
2009	3	4	2	9
2010	5	3	2	10
2011	9	3	1	13
2012	8	4	0	12
2013	10	2	0	12
2014	7	2	1	10
2015	5	0	1	6
2016	12	2	1	15
2017	3	1	2	6
2018	11	1	0	12
2019	1	0	0	1
Total	113	30	17	161
Average	5.4	1.4	0.8	7.6
Std. Deviation	3.6	1.3	0.9	4.5

Further, sample deal distribution among the period analyzed (i.e, 1999 to 2019) has shown a relatively stable behavior with an average of 7.6 deals per year and a standard deviation of 4.5. Even though deals have increased considerably after 2007, such change was not considerably volatile throughout the years, which avoid issues of capturing market behavior in a specific point of time that could make findings in this study misleading.

4. Methodology

The methodology used to test the presence of abnormal stock returns was traditional event study following MacKinley (1997), which aims to capture the abnormal returns in the stock prices of publicly traded stocks that occur in conjunction with a specific event as in the case of Warner and Brown (1980,1985). The event date labeled ‘T+0’ is the date of announcement of the merger or acquisition. Daily closing stock prices for the period T-110 days to T+60 days are used. This daily price series is converted into daily return series using the formula:

$$R_{i,t} = \ln(P_{i,t} / P_{i,t-1}) \quad (1)$$

The event window is the number of days for which I will measure the effect of an event and this window needs to be appropriate enough to capture the effect of the event. This research will analyze different event-windows in order to assess whether market reaction intensifies or smooths as time passes by the announcement date. I will start analyzing whether there is information leakage by looking to abnormal returns 10 days prior the announcement until the event date (T-10 to T-1). Then, I assess market reaction for the post-event date for 1 day, 3 days, 7 days, 15 days and 60 days after the announcement. The estimation period to assess the values of alphas and betas of the stocks would be kept at 100 trading days (T-110 to T-11). It is not a part of the event window as normal returns need to be observed separately from the event related returns.

The formula for the market model is as follows:

$$R_{i,t} = \alpha_i + \beta_i \cdot R_{Mt} + \varepsilon_{it} \quad (2)$$

Where $R_{i,t}$ equals return on the security i at date t , R_{Mt} equals return on the market portfolio on day t , ε_{it} equals the zero-mean disturbance term and α and β are the parameters of the market model estimated by running an ordinary OLS regression over the estimation window. 1st order serial correlation is checked for in the error term using Durbin-Watson. In case

autocorrelation is detected at 5%, the GLS estimation procedure is adopted to ensure efficiency of the estimated parameters.

To calculate the abnormal returns ($AR_{i,t}$), I first calculate the daily stock returns of the firms in the sample and then subtract the expected returns based on the OLS outputs and the market index returns.

$$AR_{i,t} = \text{Actual Return}_{i,t} - \text{Expected Return}_{i,t} \quad (3)$$

If the firm performs better than the expected return, it will experience positive abnormal returns and whereas if the expected return performs better than the actual, negative abnormal returns will be experienced. I find daily abnormal returns for the pre-event window and for the post event window (e.g., T+0 to T+60). For drawing inferences about the event impact, the abnormal return observations must be aggregated. The aggregation is studied along 2 dimensions: through time and across securities.

I will use the Cumulative Abnormal Returns (CARs) technique in my analysis to study the overall conclusion of abnormal returns for time aggregation.

I am defining CAR for equities as:

$$CAR = \sum_{t=1}^T AR_{i,t} \quad (4)$$

The CAR values are standardized as follows:

$$\text{Standardized CAR (SCAR)} = \frac{CAR}{SE_{CAR}} \quad (5)$$

where SE_{CAR} is the standard error of CAR calculated as:

$$SE_{CAR_i} = SE_{i, \sqrt{L+1}} \quad (6)$$

The standard error of CAR (SE_{CAR}) for the company i is the standard error (SE_i) provided by the OLS regression adjusted by the length (L) of the window analyzed. For instance, the 10-day SE_{CAR} for a company i is calculated by multiplying its OLS standard error by

the square root of 11 as $L = 10$ for the 10-day CAR.

The SCAR values follow t-distribution and hence, compared to t-statistic, at 5% confidence level, 2-tailed with $(n-2)$ degrees of freedom. This allows us to find which of the sample companies have significant abnormal returns in the pre-event and post-event windows.

For country analysis, I take the average of Abnormal Returns, day-wise for all the companies in each country and label this Average Abnormal Return (AAR) in order to aggregate across securities. The AARs are cumulated for the pre-event and post-event windows to obtain CAAR (T-10 to T+0) and all other post-event CAAR (e.g., CAAR (T+0 to T+60)). The CAARs are standardized as follows:

$$CAAR = \sum_{t=1}^T AAR_{it} \quad (7)$$

$$Standardized\ CAAR\ (SCAAR) = \frac{CAAR}{SE\ CAAR} \quad (8)$$

$$SE\ CAAR = \frac{\sum_{i=1}^n SE_i}{n} \quad (9)$$

Where SE_{CAAR} is the standard error of CAAR. SE_{CAAR} is simply the average (n = number of companies) of the individual standard errors (SE_i) for the equities embedded in the sample analysis already adjusted by the length of the desired window. This approach can be used if correlation coefficient within securities to be 0 is assumed. If there is no overlap in the event windows this accounts for any cross-correlations between them.

The SCAAR values follow t-distribution and now compared to t-statistic, at 5% confidence level, 2-tailed with $(n-2)$ degrees of freedom. This allows us to find

significant average abnormal returns in the pre-event and post-event windows.

I tested the following hypotheses:

(H1): There are significant and positive average cumulative abnormal returns (CAARs) for each country and for the whole aggregate Latin America sample. The null hypothesis is that average cumulative abnormal returns (CAARs) are either zero or less than zero.

(H2): The difference between average CAARs from the half-biggest relative bidders and the half-smallest relative bidders is significant and negative. The null hypothesis (H0) is that the difference between average CAARs is either zero or greater than zero.

(H3): There are significant and positive average cumulative abnormal returns (CAARs) for cash-financed, equity-financed and combinations-financed deals for the whole Latin America sample. The null hypothesis (H0) is that average cumulative abnormal returns (CAARs) for cash-financed, equity-financed and combinations-financed deals are either zero or less than zero.

(H4): There are a significant and positive average cumulative abnormal returns (CAARs) for vertical and horizontal deals and negative CAARs for diversification deals for the whole Latin America sample. The null hypothesis (H0) is that average cumulative abnormal returns (CAARs) for vertical and horizontal are either zero or less than zero and for diversification deals are zero or greater than zero.

Table 7 depicts an overview of the hypothesis I tested, my expected direction/signal of average CAARs, and the literature backing the expected results.

Table 7: Hypothesis overview

	Expected CAAR Signal	Previous findings
H1: CAARs for Latin American countries	Positive	Chang (1998), Fuller (2002), Hansen (1996), Moeller (2004), Capron (2005), McConnel (2005) found positive abnormal returns for unlisted targets
H2: Difference between relatively big and small targets CAARs	Negative	Loderer and Martin (1990) Hayward and Hambrick (1997), Malmendier and Tate (2008), Roll (1986) found large deals with negative performance por public deals
H3: CAARs for cash, equity and combinations-financed deals	Literature Mixed Results	Asquith, Bruner and Mullins (1987), Huang and Walkling (1987), Travlos (1987), Yook (2003) found positive returns for cash deals and negative for stock in the US Goergen and Renneboog (2004), Sehgal, Banerjee and Deisting (2012) found negative for cash deals and positive for stock deals for Europe and emerging markets, respectively
H4: CAARs for horizontal, vertical and diversification deals	Positive for vertical/horizontal Negative for diversification	Tremblay & Tremblay (2012), Agrawal (1992) Datta, Pinches and Narayanan (1992) associated diversification deals as value enhancers King, et al., (2004), Megginson, Morgan and Nail (2003), Berger and Ofek (1995) associated diversification deals with negative returns Andre, Kooli and L'Her (2004), Maquieira et al. (1998) DeLong (2001) found non-diversification deals with positive returns

5. Empirical Results

5.1 Country aggregate analysis

The pre and post-event CAAR values for individual countries are provided in table 8. In addition, Figure 1 depicts their CAARs (-10, +65). Five out of 6 countries showed significant presence of abnormal returns especially around the event date as shown by SCAAR values for the 1-day and 3-day windows.

Table 8: Pre and post-event CAAR and SCAAR values for sample countries

	Brazil	Mexico	Argentina	Colombia	Chile	Peru
CAAR (T-10 to T-1)	0.99%	-0.27%	-1.25%	1.38%	0.34%	1.43%
CAAR (T+0 to T+1)	1.96%	0.93%	0.78%	-2.13%	2.06%	0.08%
CAAR (T+0 to T+3)	2.20%	1.70%	3.31%	0.13%	2.28%	1.08%
CAAR (T+0 to T+7)	2.39%	1.50%	5.85%	-0.09%	0.60%	1.10%
CAAR (T+0 to T+15)	1.82%	2.40%	7.04%	0.01%	0.43%	2.04%
CAAR (T+0 to T+60)	2.67%	10.01%	11.17%	1.56%	2.77%	0.08%
SCAAR (T-10 to T+0)	0.94	-0.31	-0.55	1.05	0.40	0.89
SCAAR (T+0 to T+1)	4.37***	2.50**	0.81	-3.80***	5.57***	0.12
SCAAR (T+0 to T+3)	3.46***	3.22***	2.43**	0.17	4.36***	1.12
SCAAR (T+0 to T+7)	2.66***	2.01*	3.03***	-0.08	0.81	0.80
SCAAR (T+0 to T+15)	1.43	2.28*	2.58**	0.00	0.41	1.05
SCAAR (T+0 to T+60)	1.08	4.86***	2.10*	0.51	1.36	0.02
Number of deals	66	42	13	13	21	6

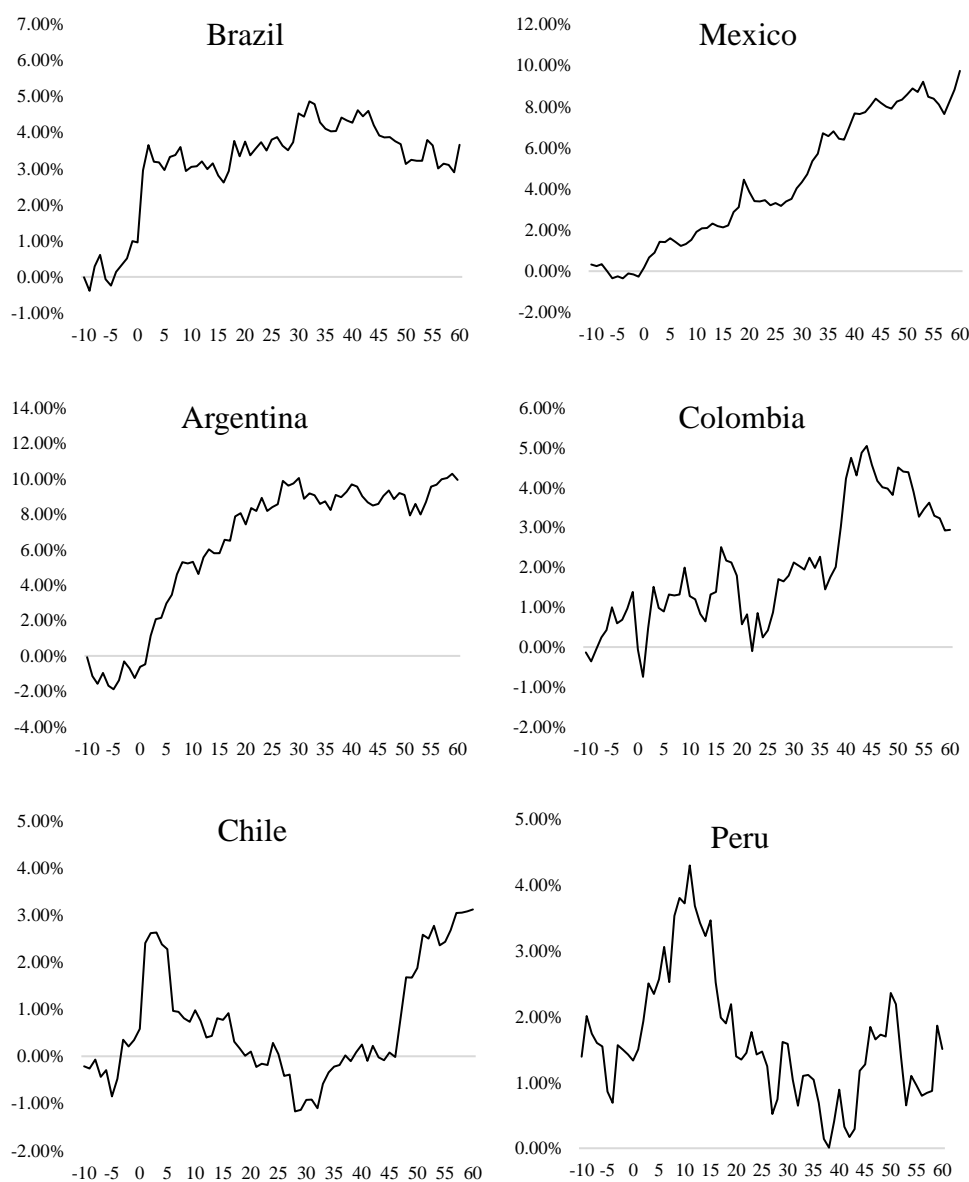
*significant at 10%; **significant at 5%; ***significant at 1%

As shown in Table 8, Brazil, Mexico, Argentina, and Chile reported strong positive abnormal returns for either 1-day, 3-day or 7-day window. However, only Mexico (significant at 1%) and Argentina (significant at 10%) were able to sustain value creation until longer periods, such as represented by the 60-day event window, which points to a change in market sentiment for the other countries. Investors react positively when the deal is announced anticipating being potentially value creating but when more details are released sentiment is reversed, generally based on overpayment doubts and/or overestimated synergies. Further, Colombia seems to be

the only exception regarding the direction of abnormal returns. The country reported a strong and significant negative market reaction at the announcement day (Table 8, Figure 4).

Even though some degree of insider trading was expected due to the nature of less developed financial markets, the hypothesis of potential information leakage has been refused as neither any country nor the whole sample provided significant pre-event SCAAR values. This might be due to the nature of this sample, in which private targets make harder for market participants to exploit insider information.

Figure 4. CAARs (-10, +60) by sample countries



5.2 Region aggregate analysis

Herein, the analysis will investigate the whole Latin America sample rather than each country individually as my focus is to analyze M&A announcements impact on acquirer's wealth in the region of interest. Three more tests were conducted in order to analyze market reaction and the effect on shareholder wealth depending on certain conditions. The first test aims to analyze target's relative size to acquirer as a source of abnormal returns. The sample was broken down into two groups, the half biggest and the half smallest. The midpoint was the relative size of 34.5% proxied by the total transaction value. Then, I assess whether the difference in average CARs is significant. The second test investigates one of the main topics on M&A literature, which is the consideration offered. Tests were conducted to find evidence of different market reaction based on acquirer's financing deal strategy. Finally, the third test focus on market sentiment related to deal type, whether it is vertical, horizontal or diversification.

5.2.1 Latin America

Table 9 depicts pre and post-event CAARs for the Latin America sample including its relative size analysis. Furthermore, Figure 5 provides their CAARs (-10, +60). As was expected its abnormal returns followed the Brazilian and Mexican patterns as both countries represent over 65% of the sample size, thereby pushing them upwards and making the CAARs statistically significant for all post-event windows analyzed. Other hypothesis of no significant difference in CAARs for relative size was also rejected. for the 3-day window. This signals a divergence from previous public deals research as target size relative to acquirer increases, the likelihood if overpayment also increases. However, there is a strong, but not significant, sign reversal.

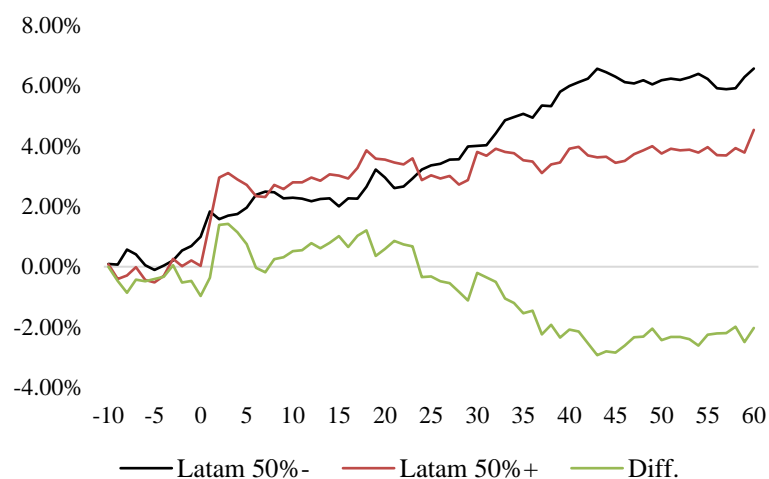
I assess this situation with the following rationale. First, at deal announcement, investors might interpret that even with the bidder buying a relatively large target, it is probably not overpaying compared to a public company based on the target's illiquidity and information asymmetry discount. Hence, markets react positively to the merger.

Table 9: Pre and post-event CAAR and SCARR values for Latin America

	All	50% +	50% -	Diff.
CAAR (T-10 to T-1)	0.44%	0.21%	0.68%	-0.48%
CAAR (T+0 to T+1)	1.21%	1.27%	1.15%	0.12%
CAAR (T+0 to T+3)	1.96%	2.90%	1.00%	1.90%
CAAR (T+0 to T+7)	1.95%	2.10%	1.81%	0.29%
CAAR (T+0 to T+15)	2.07%	2.82%	1.32%	1.50%
CAAR (T+0 to T+60)	5.10%	4.33%	5.88%	-1.55%
SCAAR (T-10 to T-1)	0.84	0.27	0.97	-0.45
SCAAR (T+0 to T+1)	5.38***	3.79***	3.82***	0.26
SCAAR (T+0 to T+3)	6.17***	6.14***	2.36**	2.98***
SCAAR (T+0 to T+7)	4.35***	3.14***	3.01***	0.32
SCAAR (T+0 to T+15)	3.26***	2.98***	1.55	1.18
SCAAR (T+0 to T+60)	4.11***	2.35**	3.54***	-0.63
Number of deals	161	81	80	-

*significant at 10%; **significant at 5%; ***significant at 1%

Figure 5: Relative size CAARs



Then, as further acquisition details are disclosed to the public, investors might readjust their positions based on new information, which could be now a potential overpayment as consideration offered has been opened to the public or overestimation of synergies by executives for the post-merger entity. Therefore, my theory is that the private nature of the

transaction has a delay effect on market sentiment towards large deals and thus, investors only adjust their positions once payment information and more concrete/accurate information regarding deal features are disclosed to them.

5.2.2 Financing Strategy

Table 10 depicts pre and post CAARs breakdown by payment method and Figure 6 their CAAR (-10, +60). One robust empirical finding in the merger and acquisition literature is that, on average, bidder stocks experience negative abnormal returns in stock-financed deals and positive returns in cash-financed deals around deal announcement time.

Table 10: Pre and post CAAR and SCAAR values breakdown by payment method

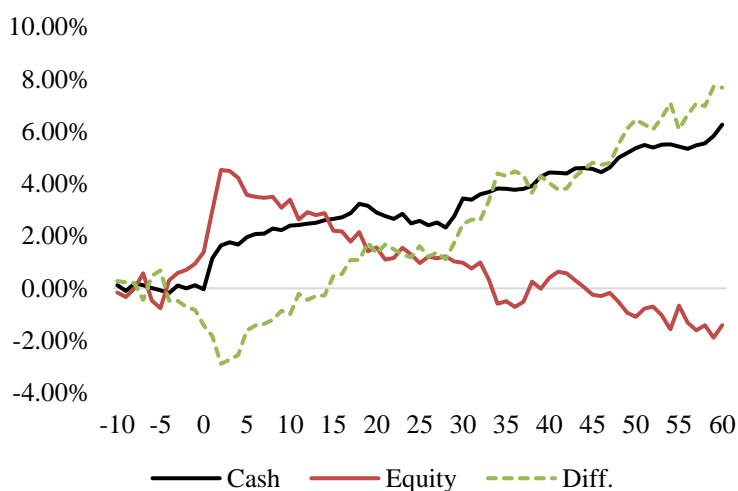
	Cash	Equity	Combinations
CAAR (T-10 to T-1)	0.13%	0.94%	1.67%
CAAR (T+0 to T+1)	1.08%	2.03%	0.62%
CAAR (T+0 to T+3)	1.78%	3.55%	0.36%
CAAR (T+0 to T+7)	2.16%	2.51%	-0.43%
CAAR (T+0 to T+15)	2.75%	1.26%	-1.01%
CAAR (T+0 to T+60)	7.55%	-2.35%	1.78%
SCAAR (T-10 to T-1)	0.23	0.65	0.89
SCAAR (T+0 to T+1)	4.38***	3.26***	0.78
SCAAR (T+0 to T+3)	5.09***	4.04***	0.32
SCAAR (T+0 to T+7)	4.38***	2.02*	-0.27
SCAAR (T+0 to T+15)	3.94***	0.71	-0.45
SCAAR (T+0 to T+60)	5.54***	-0.69	0.40
Number of deals	114	30	17

*significant at 10%; **significant at 5%; ***significant at 1%

My results are aligned with such theory as cash-financed deals provided statistically significant SCAAR values throughout all event windows analyzed. However, I did not find evidence of negative cumulative abnormal returns in the short-term (i.e., around the announcement date) for equity-financed deals. Controversially, I found significant and positive market reaction in the short-term towards equity deals. Such cash-financed results are aligned with the standard financing theory of signaling under asymmetric information. In the context of the Myers and

Majluf (1984) model and Wansley et al. (1987), bidders prefer to finance investments with stocks (cash) if they believe their assets are overvalued (undervalued) based upon their private information. For equity-financed deals, though, results are aligned with both investment opportunity and risk sharing hypotheses as well as with blockholder formation theory, in which markets react positively to stock deals as these firms have good investment opportunities, share the risk of expected synergies materialization and potentially have less agency costs due to greater monitoring.

Figure 6: Consideration offered CAARs



Nevertheless, equity deals did not maintain CAARs throughout longer event windows. In fact, their direction changed and 60-day CAAR ended up being negative. Such reverse could be due to once the choice of payment is released, bidders' private information is revealed, and outside investors update their beliefs regarding the true stand-alone value of the bidder. This causes bidder stock value to decrease in stock-financed deals and to increase in cash-financed deals, which would be the information content theory explanation for such reversal (Myers and Majluf, 1984). Another plausible explanation goes back to blockholder formation theory. Once more details about the deal are announced and there is no presence of blockholder formation, markets react negatively pricing greater agency costs towards future cash flows, hence penalizing the post-merger entity's value.

5.2.3 Acquisition Type

Table 11 depicts pre and post CAARs and SCAARs values by type of acquisition and Figure 7 provides their CAAR (-10, +60).

Table 11: Pre and post CAAR and SCAAR values breakdown by deal type

	Vertical	Horizontal	Diversification
CAAR (T-10 to T-1)	0.88%	0.21%	0.10%
CAAR (T+0 to T+1)	0.48%	1.62%	1.40%
CAAR (T+0 to T+3)	1.32%	2.32%	2.15%
CAAR (T+0 to T+7)	0.81%	2.65%	1.65%
CAAR (T+0 to T+15)	1.26%	2.32%	5.27%
CAAR (T+0 to T+60)	7.95%	3.75%	0.65%
SCAAR (T-10 to T-1)	1.12	0.29	0.04
SCAAR (T+0 to T+1)	1.44	5.24***	1.37
SCAAR (T+0 to T+3)	2.78***	5.31***	1.49
SCAAR (T+0 to T+7)	1.21	4.28***	0.81
SCAAR (T+0 to T+15)	1.32	2.65***	1.82
SCAAR (T+0 to T+60)	4.29***	2.19**	0.11
Number of deals	57	97	7

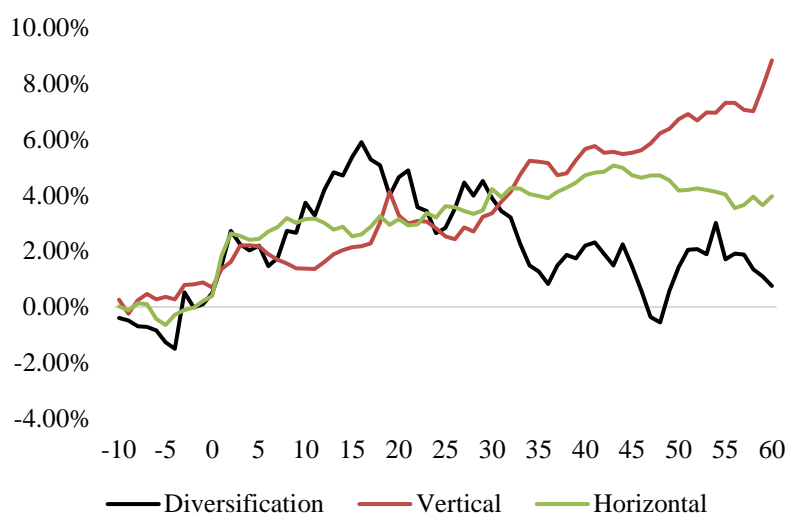
*significant at 10%; **significant at 5%; ***significant at 1%

Diversification deals CAARs behavior has shown an unexpected pattern throughout event windows. Positive abnormal returns appeared around the announcement date, as show by 1-day, 3-day, 7 and 15-day windows. None was statistically significant due to sample size issues, though. Then, a strong market correction changed abnormal returns direction and 60-day CAAR ended up being roughly zero.

I assess such share price behavior to the delay effect already mentioned in this study. Investors, on average, react positively around the announcement date to any deal based on targets' private discount and thus, assess deals as value creating. However, as deal characteristics are disclosed and new information is processed by markets, investor adjust their positions based on their assessment of the impact of such information on deal performance. The findings found on public deals research seem to not apply on the very short-term (i.e, around the announcement

date) due to private nature of the target and the illiquidity discount embedded in their valuation. Hence, markets could interpret such diversification behavior by the acquirer as an opportunistic investment (i.e, in price terms) rather than a value-destroying one. Targets' performance then can be leveraged through acquirer's resources, such as access to different funding instruments and higher-skilled workforce, rather than cost synergies.

Figure 7: Deal-type CAARs



For longer periods, though, results seem to be more aligned with traditional public deals findings. Such market reaction shows how markets penalize firms that seek diversification even when targets' valuation appears to be attractive. New information disclosed might provide insights that such price discount was not justification enough for entering new markets, in which the acquiring company has no industry expertise, required operating structure and competitive advantages, thereby creating downward pressure on the acquirer' stock.

Both horizontal and vertical transaction results are aligned with theory as investors reward bidders that are focusing their efforts into their core business potentially via an increase in market power and cost efficiencies (Dutz, 1989) (Tremblay & Treblay, 2012).

5.2.4 Robustness tests

One could argue that the 15% threshold applied as sample filter could bring validity problems. In order to correct for such issue, I ran the Latam hypothesis again varying the relative size

screening criteria both down and upwards, hence easing the threshold band within the 10-20% range.

Table 12 – Latam CAARs by relative size threshold

	20%	15%	10%
CAAR (T-10 to T-1)	0.55%	0.44%	0.62%
CAAR (T+0 to T+1)	1.54%	1.21%	1.14%
CAAR (T+0 to T+3)	2.56%	1.96%	1.97%
CAAR (T+0 to T+7)	2.33%	1.95%	1.97%
CAAR (T+0 to T+15)	2.68%	2.07%	2.28%
CAAR (T+0 to T+60)	6.11%	5.10%	5.35%
SCAAR (T-10 to T-1)	0.95	0.84	1.4
SCAAR (T+0 to T+1)	6.29***	5.38***	6.05***
SCAAR (T+0 to T+3)	7.42***	6.17***	7.42***
SCAAR (T+0 to T+7)	4.78***	4.35***	5.25***
SCAAR (T+0 to T+15)	3.88***	3.26***	4.29***
SCAAR (T+0 to T+60)	4.53***	4.11***	5.16***
Number of deals	135	161	204

As can be seen in Table 11, both CAARs and SCAARs results roughly changed and their direction and economic interpretation remained the same. Therefore, the 15% threshold seems to accurately capture average market reaction towards M&A deals in the region of interest.

6. Summary and Conclusion

To conclude, I found significant post-event abnormal returns for five out of six sample countries. While post-event abnormal returns are significantly positive for Brazil, Mexico, Argentina and Chile, they are strongly negative for Colombia. The only two countries that were able to sustain a longer period value creation were Mexico and Argentina whereas the other countries suffered a market correction. There was no evidence of information leakage for any country, despite their financial system development stage.

Hypothesis involving the aggregate Latin America sample were made and evidence was found of significant positive post-event abnormal returns pushed by the representativeness of Brazil and Mexico in the sample.

Target size seems to be another important factor to consider when assessing private M&A transactions. I found evidence of significant value creation as target relative size increases, which diverges from previous studies as the overpayment and overconfidence theories indicate that as target size increases, the likelihood of overpayment and overestimation of synergies by managers also increases. However, these results might differ from previous studies due to the private nature of the sample. Overpayment and overconfidence are features of public deals and are frequently linked with high premiums and overestimation of synergies by the acquiring company. Unlisted targets are valued at a discount and information asymmetry is greater in private deals, which can potentially lead executives to underestimate synergies due to higher valuation uncertainty. Hence, markets might be reacting positively to executives' conservatism expecting that synergies could be greater than priced.

Payment method results are aligned with previous findings for public deals and for those found in private takeovers research as both stock-financed-deals and cash-financed deals were value creating. There was no evidence of substantial impact for combinations-financed deals.

Lastly, I found evidence of both horizontal and vertical deals being value creating whereas there was no evidence for diversification deals. Horizontal and vertical acquisitions results are aligned with previous findings potentially via an increase in market power and cost synergies for the post-merger entity.

For future research I recommend testing such hypothesis for public deals and compare to those found in this study. In addition, embedding a cross-border analysis would be interesting to assess whether market reaction differs substantially when acquirers are buying foreign targets. Also, including smaller deals (i.e., less than the 10-20% threshold band applied) would also

provide insights on whether market behavior differs or reacts at all to smaller relative size transactions. Furthermore, a regression analysis to test which deal features (e.g., payment method) affect cumulative abnormal returns would be also interesting. Event-study procedure applied in this study is unable to breakdown deal features effects on abnormal returns. Payment method, relative size and deal type analyses cannot assess accurately their individual effect on returns. Therefore, a regression analysis controlling for such variables would provide more accurate results on whether such deal features indeed shape abnormal returns size and direction. Finally, multifactor models like Fama-French (1993) could be used as estimation method to see whether CAARs results are still robust when value and size premiums are controlled.

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