



**Doctorado en  
Finanzas de Empresa**

**Documento de Trabajo  
0401**

***MERGERS AND ACQUISITIONS: A SURVEY OF  
MOTIVATIONS***

Autor: **Diego ABELLÁN MARTÍNEZ**

2004

### **Abstract**

**In this paper, I review the literature on the motivations for corporate mergers and acquisitions. I first introduce the main definitions and some relevant empirical studies in the field. Secondly, I study the historical evolution of the mergers and acquisition activity in the United States, explaining the environment in which they took place. I then explain the theoretical motivations for mergers and acquisitions, focusing in rational and irrational behaviors. The controversy generated around this topic is due to the differences between managements' arguments for mergers and acquisitions and the real performance of this activity for acquirers. The main motivations and the relevant theoretical arguments and empirical results are addressed. Finally, I discuss my view about this particular process that has created so much literature in the last decades.**

## **INDEX**

- 1. Introduction, 4**
- 2. Mergers and Acquisitions Waves, 12**
- 3. Motivations for Mergers and Acquisitions, 18**
- 4. Conclusions, 36**
- 5. References, 38**
- 6. Appendix, 41**

## 1. INTRODUCTION

Mergers and acquisitions are a controversial phenomenon in corporate finance. The theoretical support for this practice is the expected value creation for shareholders once the transaction takes place. However, empirical evidence does not support this hypothesis. Empirical studies support only value created for the shareholders' of the acquired company.

Companies can grow merging or consolidating their businesses. *Merger or consolidation* is the combination of two or more corporations into a single one. The surviving one holds all the rights, properties and liabilities from the constituents. Another way to expand the company's business is via a successful *tender offer*. In such an operation, one part is seeking to get the control of another by offering a specific price in a public solicitation. When the Board of Directors of the target company does not approve this offer, it is called *hostile takeover*. One of the consequences of such action may be a total or partial replacement of the target company's management.

There have been developed a number of mechanisms to avoid hostile takeovers, especially in the 80s and 90s. In this period, there was an increase of hostile takeovers financed with instruments such as *junk bonds* or venture capital. In this context companies felt less safe against a possible hostile takeover and, helped by investment banks<sup>1</sup>, developed anti takeover devices. Some examples are poison pills, super majority provisions, fair price and staggered board elections. In addition, the target's management can look for a white knight as an alternative offer to the hostile bid. It is not obvious that these anti takeover devices reduce shareholders' value, because they may provide an option to receive a higher offer.

Other formats of corporate control used are proxy fights, open market purchases, and bear hugs.

Mergers and acquisitions are only one piece of a wider phenomenon: the tendency for corporate concentration and control. Companies have used mergers and acquisitions as a method for growth and/or diversification. In addition, in some periods firms have been able to achieve adjustments between supply and demand through this mechanism.

Some authors argue that the market for corporate control is a market in which alternative management teams compete for such rights<sup>2</sup>. That is, the control over a corporation is a valuable asset, and the value of an asset is related to the agent using it. Another underlying assumption highlighted by Manne<sup>3</sup> is that there is a high positive correlation between managerial efficiency and stock price. That implies that markets can differentiate the quality of management between companies in the same industry and

---

<sup>1</sup> *Investment banks* have played an important role in corporate mergers and acquisitions. They get a percentage of the deal if it takes place and, at the same time, they look for new anti takeover mechanisms to sell to possible target companies.

<sup>2</sup> JARRELL, Gregg A.; BRICKLEY, James A. and NETTER, Jeffrey M. : "The market for corporate control : the empirical evidence since 1980" *Journal of Economic Perspectives* 2 (1), winter 1988, pp. 49-68

<sup>3</sup> MANNE, Henry G. "Mergers and the market for corporate control" *Journal of Political Economy* 73(2), pp. 110-120

punish those poor managed companies. The punishment would be translated in a lower price. The lower the stock price the higher the attractiveness of a possible takeover. In this market, stockholders would be passive actors and they would act by selling their stocks to the bidder. In this battle, management would act with resource constraints looking for shareholders' value creation using this mechanism and valuing the expected synergies and benefits from this reorganization in the corporate structure.

Other researchers argue that managers have different motivations to make acquisitions<sup>4</sup>. These motivations are not based on shareholders' value creation, but are based on maximizing managers' own utility functions. Variables that would increase their utility function may not be monetary, such as power or personal risk diversification through the company's diversification.

#### *Empirical Evidence on Mergers*

Mandelker<sup>5</sup> studies the return obtained by both shareholders of the acquiring and acquired companies. He takes a sample of all common stocks that traded in the NYSE from February 1926 to June 1968 and uses monthly percentage returns adjusted for dividends, stock splits and capital gains. He takes the day the merger takes place as the reference date. One of the main novelties in this study is the methodology used. Using the empirical market line:

$$R_{i,t} = \hat{\gamma}_{0t} + \hat{\gamma}_{1t} \beta_{j,t} + \varepsilon_{j,t}$$

Utilizing the Fama and MacBeth methodology, he estimates betas, with seven years (1926-1934) of monthly returns, for individual stocks to allocate them in one of the twenty portfolios. After that, he uses the next five years to recalculate betas and average them to obtain portfolio betas. The next step is to run monthly cross sectional regressions for each portfolio, obtaining  $\gamma_0$  and  $\gamma_1$ .

Using the estimates of  $\gamma_0$  and  $\gamma_1$ , he defines the abnormal return for individual stocks involved in mergers as:

$$\varepsilon_{j,t} = R_{j,t} - \hat{\gamma}_{0t} - \hat{\gamma}_{1t} \beta_{j,t}$$

This residual measures the abnormal performance of the stock  $j$  in the month  $t$ . The average residual is the sum of all of the residual obtained by merged firms in date  $t$  over the number of firms in that date. The sum of the average residuals from month  $-K$  to month  $T$  is the cumulative abnormal return (C.A.R).

The results obtained are that shareholders of the acquiring firm earn normal return on the acquisitions without any indication that acquiring firms overpay for them. On the

---

<sup>4</sup> ROLL, Richard: "The Hubris Hypothesis of Corporate Takeovers" *Journal of Business* 59 (2), April 1986, pp.197-216

<sup>5</sup> MANDELKER, Gershon: "Risk and return: the case of merging firms" *Journal of Financial Economics* 1, 1974, pp. 303-335.

other hand, shareholders of the acquired firm obtain abnormal returns, around 14% in the seven months preceding the merger. One surprising result is the efficiency of the market to translate information to stock prices efficiently.

Dodd<sup>6</sup> improves Mandelker's research in the sense that he uses daily observations instead of monthly observations and measures the abnormal returns around the negotiation announcement date, not the effective date of the merger. He uses a sample of public announcements of proposals to merge (by acquisition) during a seven-year period ending in December 1977. The sample is 151 possible mergers, of which 71 were completed and 80 were cancelled. Dodd uses the security market line methodology, with the prediction error as the measure of abnormal return. After that, he obtains the average prediction error for day  $t$  as the sum of all the prediction errors that day over the number of firms which have prediction error in date  $t$ . The sum of the average prediction errors is the cumulative prediction error, over a window of 100 days ( $t = -50$  to  $t = 50$ ). The results are that sellers obtain positive cumulative abnormal returns on average, independent of the final result from the merger, while buyers obtain negative, but small, cumulative abnormal return. Over the duration of the merger proposal ( $t = -10$  to  $t = 10$ ), in a successful merger, the target's shareholders obtain a 33.96% abnormal returns, while acquiring shareholders obtain -7.22% abnormal returns. On cancelled mergers, when the decision is taken by the target company, its shareholders obtain a 10.95% abnormal return and the bidder experiences a -3.12% abnormal return. When the cancellation is due to other factors, target shareholders experience an abnormal return of 0.18%, while bidders experience an abnormal return of -6.46%.

Asquith<sup>7</sup> analyzes the abnormal returns for both bidders and targets during the overall merger process, for successful and unsuccessful mergers bids. In both cases, the targets are listed in the NYSE, and the period of analysis is July 1962 to December 1976 for successful mergers and 1962-63, 1967-68 and 1974-75 for unsuccessful bids. He determines two dates: the press date, which is when the bid is announced and the outcome date, which is the resolution date. Using daily returns, he calculates the daily abnormal returns as the difference between the returns of the merging firm and the return of a control portfolio with similar beta. To form this control portfolio, all the stock are ranked once and are included in one of 10 portfolios based on their betas.

---

<sup>6</sup> DODD, Peter: "Merger proposals, management discretion and stockholder wealth" *Journal of Financial Economics* 8, 1980, pp. 105-137.

<sup>7</sup> ASQUITH, Paul: "Merger bids, uncertainty, and stockholder returns" *Journal of Financial Economics* 11, 1983, pp. 51-83.

	Pre- press date (from 480 to 20 days before the press announcement)	Press date	Day after the press date to the final resolution	Outcome date	Date after the final resolution to 240 days latter on
<b>Successful mergers</b>					
Bidder	14.3	N.S.	N.S.	N.S.	-7.2
Target company	-14.1	6.2	8.0	1.3	N.A.
<b>Unsuccessful mergers</b>					
Bidder	N.S.	N.S.	-6.2	N.S.	-9.6
Target company	11.7	7.0	-8.1	-6.4	-8.7
N.A. not available, N.S. not significantly different from zero					
Built from data from Asquith, Paul:” Merger bids, uncertainty, and stockholder returns” <i>Journal of Financial Economics 11</i> ,1983, pp. 51-83.					

These results support the theory of inefficient management of the target firm. Based on this argument, stockholders of the target company obtain those abnormal returns from the merger thanks to a more efficient management.

Schipper and Thompson<sup>8</sup> argue that for acquiring companies, an acquisition is only one action in a continuous strategic plan of acquisitions. For that reason, the main impact would have been produced at the beginning of the announcement of this plan.

Asquit et al<sup>9</sup> study the effect of mergers on the wealth of the bidding firms' shareholders. Prior studies did not account for the difference in size between bidder and target companies and the analysis of mergers as a structured program of acquisitions. Prior studies identified first the target company. If bidding firms are following a merging program, that approach may overlook for possible program effects. First, they identify the bidding firm as listed firms in the NYSE or AMEX that attempted the first merger process during the period 1963-1979. They exclude bidding firms with any merger in the previous eight years prior to 1963. They measure the size factor as the ratio between the market value of target's equity to the market value of the bidder's equity. The results of the study are as follow:

Average cumulative returns	Merger number (turn from 20 days before until the day of the announcement)					
	1-4	1	2	3	4	2-4
Bidder	2.8% (5.20)	2.4% (2.21)	3.7% (3.13)	2.4% (1.37)	2.8% (2.38)	3.1% (4.53)
Target	16.8% (9.42)	20.3% (6.38)	17.9% (5.98)	14.9% (3.38)	12.3% (3.24)	15.3% (7.21)
Built from ASQUIT, Paul; BRUNER, Robert F. and MULLINS, David W. Jr.:” The gains to bidding firms from mergers” <i>Journal of Financial Economics 11</i> , 1983, pp.121-139						

<sup>8</sup> SCHIPPER, K. and THOMPSON, R.:” Evidence on the capitalized value of mergers activity for acquiring firm” *Journal of Financial Economics 11*, 1983, pp.85-119

<sup>9</sup> ASQUIT, Paul; BRUNER, Robert F. and MULLINS, David W. Jr.:” The gains to bidding firms from mergers” *Journal of Financial Economics 11*, 1983, pp.121-139.

Average cumulative returns in the 21 prior and including the announcement day for the bidder	Before Oct.1, 1969	Oct. 1, 1969 and after
<u>Successful mergers</u>	7.1% (3.52)	3.7% (1.96)
Target firm greater than 10% of bidding firm	2.9% (1.64)	1.6% (1.41)
Target firm less than 10% of bidding firm		
<u>Unsuccessful mergers</u>		
Target firm greater than 10% of bidding firm	3.5% (0.95)	-1.1% (-0.37)
Target firm less than 10% of bidding firm	3.4% (1.65)	-2.0% (-0.61)
ASQUIT, Paul; BRUNER, Robert F. and MULLINS, David W. Jr.: "The gains to bidding firms from mergers" <i>Journal of Financial Economics</i> 11, 1983, pp.121-139		

The main results from the study are:

- 1) Bidding shareholders benefit from mergers. The abnormal return for the bidder is 2.8%, but this number would be higher after controlling for target's size, outcome of the merger bid (success or failure) and time period it occurs.
- 2) There is a positive relationship between the bidding firm's cumulative excess return and the target's equity size. On average, a bid for a target firm half the bidder's size produces a cumulative excess return of 1.8%, greater than a bid for a target with a tenth of the bidder's size.
- 3) Bidders are rewarded for merger success, and then the theory of benefits from the merger is supported.
- 4) Cumulative excess returns from mergers are quite similar in size, independently of the state of the program. The study support the theory that companies carry out mergers as part of a program, but it does not support the idea of capitalization of returns in the bidder's stock price at or before of the announcement of the merger program.
- 5) Rational support for mergers activity.

Agrawal et al<sup>10</sup> argue that prior studies had methodological problems because they did not properly adjust for the firm size effect. In addition, those studies did not allow for monthly shifts in beta. The authors do not adjust by book to market, which has been suggested as an explanatory variable in Fama and French<sup>11</sup> (1992) and Lakonishok et al.<sup>12</sup> (1994). The results of those studies can be biased. After controlling for the firm size effect as well as beta risk, they find that stockholders of acquiring firms experience a wealth loss of about 10% in the five years after the merger takes place. They conclude that the market does not appear to be more efficient over time.

<sup>10</sup> AGRAWAL, Anup; JAFFE, Jeffrey F and MANDELEKER, Gerhson N. "The post-merger performance of acquiring firms: a re-examination of an anomaly" *Journal of Finance* 47 (4), September 1992, pp.1605-1621

<sup>11</sup> FAMA, Eugene and FRENCH, Kenneth : "The cross section of expected stock returns" *Journal of Finance* 47(2), June 1992, pp 427-465

<sup>12</sup> LAKONISHOK, Josef; SHLEIFER, Andrei and VISHNY, Robert W.: "Contrarian investment, extrapolation, and risk" *Journal of Finance* 49(5), December 1994, pp.1541-1578



*Empirical Evidence on Acquisitions (Tender offers)*

Dodd and Ruback<sup>13</sup> (1977) use monthly data to analyze tender offer returns. They analyze tender offers of companies listed in the NYSE during the period 1958 through 1976. Month zero is defined as the first public announcement of the tender offer. Their results are summarized in the next table:

	12 months before the bid announcement	Month of the bid announcement	12 months after the bid announcement
<b>Successful acquisitions</b>			
Bidder	11.66	2.83	N.S.
Target company	8.79	20.58	N.S.
<b>Unsuccessful acquisitions</b>			
Bidder	8.44	N.S.	N.S.
Target company	N.S.	18.96	N.S.
N.S. not significantly different from zero			
DODD, Peter and RUBACK, Richard: "Tender offers and shareholders returns: and empirical analysis" <i>Journal of Financial Economics</i> 5, 1977, pp. 351-373.			

One of the main results of Dodd and Ruback is that unsuccessful targets merge within five years after the tender offer is rejected. Their results support the hypothesis of an efficient market that anticipates the possibility of a subsequent merger.

In a subsequent study, Kummer and Hoffmeister<sup>14</sup> (1978) find positive abnormal returns for target shareholders from 16 to 20% in the month of the announcement. Bidder firms experience a positive abnormal return of 5% at the time of the tender offer announcement.

Bradley<sup>15</sup> (1980) studies 258 cash tender offers between July 1962 and December 1977. He groups securities in 10 control portfolios according to the estimated risk, and using the CAPM defines daily excess returns as the difference between the realized return of the stock and the one of the control portfolio. The mean premium for successful tender offers is 49% to the stock price 40 days before the offer announcement and one month after the offer announcement target stock price continues experiencing a premium of 36% over the price 40 days before the offer. On the other hand, the acquiring company experiences a 4% abnormal return in a successful tender offer and -4% in unsuccessful offers.

<sup>13</sup> DODD, Peter and RUBACK, Richard: "Tender offers and shareholders returns: and empirical analysis" *Journal of Financial Economics* 5, 1977, pp. 351-373.

<sup>14</sup> KUMMER, Donal R. and HOFFMEISTER, J. Ronald: "Valuation consequences of cash tender offers" *Journal of Finance* 33(2), May 1978, pp.505-516

<sup>15</sup> BRADLEY, Michael: "Interfirm tender offers and the market for corporate control" *Journal of Business* 53(4). 1980, pp.345-375

*Other Studies*

Kaplan and Weisbach<sup>16</sup> study the success of acquisition strategies in the US analyzing the proportion of divested acquisitions in the following years to the acquisition. The authors point out that divestitures are failures in the acquisition strategy. The sample of acquisitions is related to the period 1971-1987 including public companies, private owned companies and divisions of other companies. They restrict the sample eliminating acquisitions with a transactional value lower than \$100 million in 1982 dollars, acquisitions by foreign acquirers, some sectors (insurance, banks, and railroads) and deals in which the acquirer does not obtain complete ownership of the target. In addition, acquirers have to be included in the CRSP database and purchase value has to be at least a 5% of the acquirer's market value of equity. They consider acquisitions completed by 1982 and observe divestitures until the end of 1989. They find that 43.9% of the acquisitions were divested by the end of 1989. Based on accounting data and comments by reporter and managers only a 34% of the divested acquisitions are unsuccessful.

Cumulative Abnormal Returns (CARs) From five trading days before of the initial announcement to five trading days after the final bid.	All acquisitions	Non Divested Acquisitions	Divested Acquisitions	Divested Acquisitions		
				Unsuccessful	Successful	No reason
Change Acquirer value / Acquirer value	-1.49%	-1.11%	-1.99%	-4.42%	-0.64%	-2.48%
Change Target value / Target value	26.90%	27.83%	25.81%	27.13%	23.54%	34.5%
[Change Acquirer + Target] / [Acquirer + Target]	3.74%	4.11%	3.31%	0.74%	4.59%	NS
Change Acquirer value / Target value	-8.29%	-9.03%	-7.35%	-12.90%	NS	NS
[Change Acquirer + Target] / Target	12.11%	14.01%	NS	NS	19.04%	NS
N.S. not significantly different from zero						
Table IV page 120 from KAPLAN, Steven N. and WEISBACH, Michael S.: "The success of acquisitions: evidence from divestitures" <i>Journal of Finance</i> 67(1), March 1992, pp. 107-138						

From a stock market perspective, the acquirer returns are slightly negative (CARs mean of -1.49%) and target returns are positive (26.9%). The combined return for both acquirer and target is positive and it is almost all kept by the target's shareholders. In addition, the market seems to predict the success of the acquisition.

Rau and Vemaerlen<sup>17</sup> (1998) use a more developed methodology controlling for explanatory variables such as book to market and size. The sample is 3169 mergers and 348 tender offers with bids announced and completed between January 1980 and December 1991. They analyze mergers and tender offers, differentiating between glamour and value companies. They find that acquirers in mergers underperform equally weighted control portfolios by 4% in the three years after the merger is completed. However, acquirers in tender offers overperform the control portfolio by 9% on average.

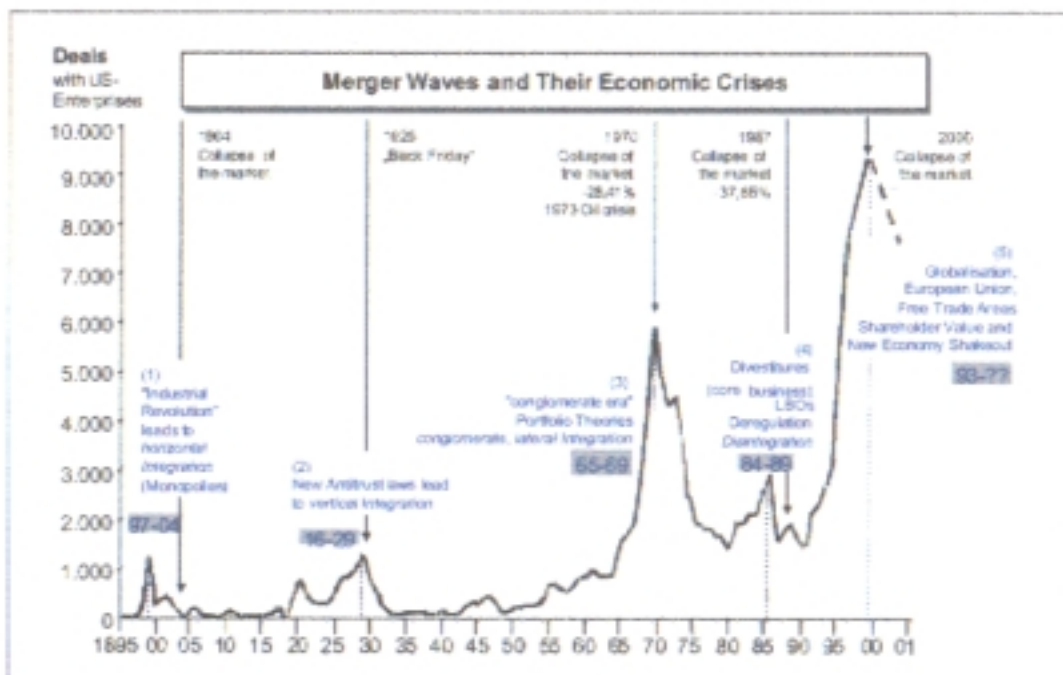
<sup>16</sup> KAPLAN, Steven N. and WEISBACH, Michael S.: "The success of acquisitions: evidence from divestitures" *Journal of Finance* 47(1), March 1992, pp. 107-138

<sup>17</sup> RAU, P. Raghavendra and VERMAELEN, Theo: "Glamour, value and the post acquisition performance of acquiring firms" *Journal of Financial Economics* 49, 1998, pp. 223-253

Classifying bidder in value and growth, value bidders overperform glamour ones in both situations, mergers (8% vs -17%) and tender offers (16% vs 4%).

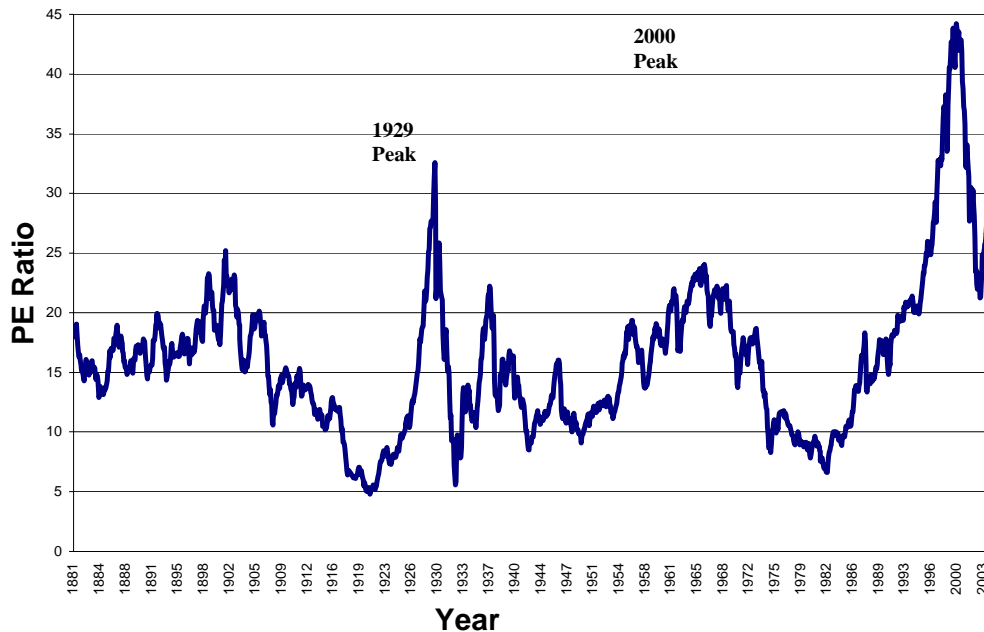
## 2. MERGERS AND ACQUISITIONS WAVES

Mergers and acquisitions have a historical cyclical pattern. Technological, political, regulatory and economic changes affect the competitive environment and the “rules of the game”, creating a need for companies to take actions such as mergers or acquisitions in order to maintain or improve their competitive position in the market. Merger waves are as follow:



JANSEN, Stephan A.: "Pre-und Post Merger-Integration in Cross Border Transactions:Trends, tools, theses and empirical tests of old and new economy deals" in Gehard PICOT (coord.), *International Handbook of Mergers & Acquisitions: preparation, interpretation and implementation*, London, Palvrage MacMillan, 2002, pp.371-398.

The PE ratio in real terms for the period:



Data from <http://www.econ.yale.edu/~shiller/>. PE ratio has been calculated as real price divided by real earnings using the Consumer Price Index (CPI) to change from nominal terms to real ones. Data are on a monthly base.

There is a high correlation between evolution of the stock market and mergers activity. The merger waves from late 1920s, 1970s and late 1990s coincided with a hot stock market characterized by especially high PE ratios.

The first wave was the *Industrial Revolution*, characterized by a change to capital-intensive production, with a high increase in productivity, the formation of big corporations and overcapacity. While there was a sustained growth in productivity, production costs and prices dropped dramatically. This drastic reduction in prices and production costs produced an overcapacity in the market. This problem was increased by the decrease in demand due to the recession and panic of 1893. Jensen<sup>18</sup> argues that while some actions took place to try to solve this problem, such as cartels and associations, the problem was not solved until the development of capital markets. In this wave, mergers and acquisitions had an transcendent role by adjusting supply and demand. The adjustment was based on the close of marginal factories.

In most recent years, changes that began in the 70s are still underway, driven by technological development, global competition, new regulation and tax law, free flow of capital between countries and the conversion from socialist to capitalist societies.

Business strategies undertaken in the 60s and 70s, supported by investors, analysts and journalists seemed to be wrong in the 80s. Donaldson<sup>19</sup> argues that business

<sup>18</sup> JENSEN, Michael C.: "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems" *Journal of Finance* 48(3), July 1993, pp. 831-880.

<sup>19</sup> DONALDSON, Gordon: "Corporate Restructuring of the 1980s-and its import for the 1990s" *Journal of Applied Corporate Finance* 6(4), winter 1994

goals in the 60s and 70s were growth and diversification. This is the period in which big conglomerates were born; they had a presence in many different sectors.

The most important concept of this period was “loyalty”, that is, there was a commitment between investors and companies they invested in. The development and more common use of investment funds as investment vehicles produced a new kind of investor not focused on one company but on the whole market, creating diversified portfolios. The new concept is “disloyalty”, which indicates a new prototype of investor with diversified investments and a high mobility to the best market investment opportunities in each moment.

Companies were focused on growth as the base for shareholders’ value creation. In business strategy, growth and market share are the two bases that support the products and markets strategy. That is, a company is more competitive as it increases its market share. The basic scheme is:

		<b>MARKETS</b>				
		A	B	C	D	E
<b>PRODUCTS</b>	I	X			X	
	II		X			X
	III					
	IV			X		
	V					

The firm has a group of target markets and actual and potential products to sell in those markets. Managers have to decide which products to sell in those markets. One strategy for introducing a product in a market is through merging or acquiring a company with a presence there. In this theory, growth is the key driver for value creation.

Well-diversified investors are focused on overall economy growth, not on a single basis. Profit quality, and not quantity is the basis for investments. Thus, small firms with high returns are interesting.

In addition, there are different views of diversification between investors and managers. In some industries diversification is a key element for a company’s survivorship: in a mature industry with a reduction in return, companies look for other sources of growth and return. Managers use the words “growth” and “stability” as justification of diversification. Defining a company as a portfolio, declining product markets can be absorbed by growth product markets. Managers see investments in new sectors as a challenge. However, since the article “*Portfolio Selection*”<sup>20</sup> was published in 1952, it is believed that investors are more efficient diversifying portfolios than companies.

The dispersion in the ownership to a more fragmented one, with investors looking for the best investment opportunities, increased the role of analysts in the investment

<sup>20</sup> MARKOWITZ, Harry “Portfolio Selection” *Journal of Finance* 7(1), March 1952, pp. 77-91

process. Managers began to listen more carefully to analysts' opinions, because their opinions had a significant effect on stock price. The key value driver for management efficiency in the 70s was the *Earnings per Share (EPS)*, and analysts gave recommendations based on the company and competitor's recent evolution. In the 70s while the number of stocks was almost flat, earnings were growing slowly, increasing the EPS indicator.

*The Modern Industrial Revolution* of the 80s and 90s has been characterized by technology advances, new regulation, deregulation in sectors traditionally protected by the government and development of new industries.

The 80s was a period of restructurings to defend from hostile takeovers. There have been three consequences of this change on business strategy:

1. Rejection of non-related diversification, whose extreme was conglomerates. Management is again focused on the business' core competences.
2. Companies go to the financial market if they need to finance interesting investment projects.
3. Increase need in the renewal of the sources that produce the long-term profit.

In the 60s and 70s business diversification was accepted as a good management practice. The Boston Consulting Group developed a matrix to manage company's products based on relative market share and market growth rate. This model tried to support a conglomerate's management. However, the management model of the 80s was based on the company's core businesses.

In the 80s, there were a huge number of mergers and acquisitions, with a premium over the target company's market value. This premium was based on the expected synergies from the acquisitions and levered restructurings. That was possible because of the development of a specific market to finance those mergers and Leverage Buyouts (LBOs)<sup>21</sup>: the high yield bond (junk bond) market. This market began to grow in 1977 because of the uncertain economic situation and high volatility in interest rates. In addition, growth in medium size companies that without credit history were not able to obtain enough financing. Junk bonds allowed those companies to obtain financing with a lower cost than traditional sources. Drexel Burnham, market leader in the junk bond market, began to sell bonds to finance LBOs in 1981, and in 1983 began to finance hostile takeovers. One of the main characteristics of junk bonds in the hostile takeover market was the speed the bidder was able to get the resources.

---

<sup>21</sup> The most important effects of LBOs were: 1) replacement of ownership, from a fragmented one to a highly concentrated and focus on value creation. 2) replacement of equity by debt, increasing the company's leverage. Once managers were the owners, they were focused on maximizing operating cash flow, not only to repay debt but also to take advantage of growth opportunities. Based on that, they tried to optimize tax liability, reducing EBT as much as possible. In addition, leverage reduces the principal-agent problem, expecting a more efficient management under this financial structure.

Jensen<sup>22</sup> argues that for companies located in mature markets, in which there is no rational reason for a productive investment, LBOs were one of the most efficient practices. The mix between the high debt repayment schedule with a high management ownership produced a change to a more efficient organization (avoiding the free cash flow problem).

However, the boom of the 80s produced some controversy because their high leverage<sup>23</sup>, translated in a drop in those transactions in the early 90s. The general use of this financing mechanism in the 80s contributed to the increase in bankruptcy filings in big corporations in the 90s. Kaplan and Stein<sup>24</sup> analyze the agreement of those situations and conclude:

1. Increase in the price paid as a multiple of the cash flow, which were especially high in operations financed with junk bonds.
2. Banks took small positions, requiring acceleration in the principal payments and allowing a higher leverage in the financial structure. That is, a reduction in debt coverage increased the probability of financial problems and the cost of restructuring.
3. Managers, investment banks and promoters obtained a lower participation in the invested funds due to two reasons: (1) lower percentage of equity over total funds invested and (2) payment of high commissions to investment banks, managers and advisers.

There are some factors that may provoke an excess of capacity. The most evident one is a contraction in demand, which is more related to recessive economic cycles. The overcapacity can be produced by a technological improvement that increases the production capacity. Finally, it can happen because a lot of competitors in the same industry simultaneously implement new technologies that are highly productive without considering the global effect of this decision on the overall market, whose demand will not be able to absorb the production. Sahlman and Stevenson<sup>25</sup> attribute this overcapacity to an “investment mania” based on the implicit assumption of a long-term growth and return. In the second half of the 80s LBOs promoters were paid for doing agreements, not for the success of those transactions.

While mergers and acquisitions from the mid 70s until the end of the 80s were associated with industry restructurings, as a response to overcapacity, in the 90s they

---

<sup>22</sup> JENSEN, Michael: “The Eclipse of the Public Corporation” *Harvard Business Review* 67, September-October 1989, pp. 61-74.

<sup>23</sup> Those operations might hurt bondholders, because they decrease bonds’ value. One mechanism developed to protect bondholders was the poison puts.

<sup>24</sup> KAPLAN, Steven N. and STEIN, Jeremy C.: “The evolution of Buyout Pricing and Financial Structure in the 1980s” *Quarterly Journal of Economics* 108(2), May 1993, pp.313-357.

<sup>25</sup> SAHLMAN, William A. and STEVENSON, Howard H.: “Capital Market Myopia” *Journal of Business Venturing* 1, 1985 pp. 7-30.



seemed to be more related to industry expansion (Andrade and Stafford 1999<sup>26</sup>). In the 90s, mergers and acquisitions were focused on the telecommunication, entertainment and financial services industries, to introduce consolidated companies in new markets and to adapt to technological change. In the late 90s the main industries were Internet and high technology.

In conclusion, mergers and acquisitions in the 60s were based on the idea of diversification, investing in non-relating businesses. That produced big conglomerates, whose drivers were growth and diversification. In the 80s, there was an increase of hostile takeovers, with the active participation of investment banks and the usual method of payment was cash, all that supported by a young junk bond market. It eliminated conglomerates' advantage and turned investor sentiment against diversified companies. In the 90s there was a related diversification, both companies came from the same sector and the most common method of payment was stock swaps, as in the 60s. In both cases, the stock market was overvalued.

The questions that are still unsolved about mergers and acquisitions are why they are made in waves and why they are clustering by industries.

---

<sup>26</sup> ANDRADE, Gregor and STAFFORD, Erik 1999: "Investigating the Economic Role of Mergers" *Journal of Corporate Finance* 10, 2004, pp. 1-36

### 3. MOTIVATIONS FOR MERGERS AND ACQUISITIONS

Why do mergers and acquisitions take place? It is a question on which researchers have spent lot of time. Strategists argue that mergers and acquisitions' main issues relate to the strategy taken by companies. However, managers' ultimate goal, based on economic rationality, is the maximization of shareholder value. So, one expects to see companies making decisions to increase shareholders' wealth. The main goal of such an operation is the creation of synergies between both companies. Synergies are the main argument to justify mergers and acquisitions. The sum of two companies rarely is equal to the sum of each one. That is,  $2+2$  almost never is equal to 4; it may be 3 or 5. Synergies can be defined as the ability to achieve a global value higher than the sum of each company independently. Sirower<sup>27</sup> argues that synergies increase competitiveness and because of that there is an increase in cash flows compared to the ones obtained by the companies independently. Synergies are the theoretical support for the rationalism of those transactions. Synergies support a view of well-run companies that through consolidation obtain benefits. Those benefits come from operations or from financing.

The market is an arena in which managers are competing for a companies' control. Under control mechanisms such as takeovers, the market for corporate control predicts that inefficient management will be replaced. Rational managers can find those undervalued companies and acquire them. However, inefficient managers try to continue obtaining benefits from the perks they are receiving. Mechanisms such as poison pill plans may diminish the opportunity to create value through the takeover processes. Mergers and acquisitions are viewed as an effective mechanism for correcting market or managerial inefficiencies.

However, there may be conflicts of interest within stakeholders when there is a separation between ownership and control. In such case, managers may not only search for value creation, but also for personal goals. Investors only care for stock return. Thus, shareholders only care for getting rich. On the other hand, managers have lots of goals and getting rich is only one of them. When running a company, managers try to maximize their utility function. Thus, they will not always follow value-maximizing strategies. Shleifer and Vishny<sup>28</sup> argue that acquisitions are often the easiest and quickest way for managers to achieve their personal goals, through introducing the company in new ventures. Internal control mechanisms such as the Board of Directors are not efficient. That is, they do not avoid non-value-maximizing strategies. As a response to failures in the internal control, takeovers may be an external control alternative. However, in the acquisition process managers' non-value maximizing goals play a central role not allowing for the efficiency of the tool. In addition, there are significant costs associated to takeovers. The main one is that the threat of a possible takeover can change

---

<sup>27</sup> SIROWER, Mark L. *The synergy trap: How companies lose the acquisition game*. New York, The Free Press, 1997.

<sup>28</sup> SHLEIFER, Andrei and VISHNY, Robert W.: "Value maximization and the acquisition process" *Journal of Economic Perspectives* 2(1), Winter 1988, pp. 7-20

company's strategy. That is, under this uncertainty management may focus on running the company with short-term goals, without investing in human capital or long-term projects. In addition, there may be a lack of leadership and guidance in the management team. As a conclusion, these theories explain mergers and acquisitions as an irrational transaction driven by managers' own interest.

The following table summarizes the explanations for mergers and acquisitions:

### MOTIVES FOR MERGERS AND ACQUISITIONS

NEOCLASSICAL ARGUMENTS			
Short term financial synergies	Long term financial synergies	Operating synergies	
- EPS or PE ratio effect - Increase in liquidity - Tax effects	- Increase of leverage capacity - More efficient capital use - Reduce indebtedness, reduce bankruptcy risk - Stabilize cash flows	- Economies of scale - Flat growth in the industry - Reduce competition - Acquire management or technological knowledge - Growth in products or markets - Reduction of risk and uncertainty	
Undervaluation of the target company			
- Inefficient capital markets	- Privilege information	- Superior analytical skills	- Replacement of inefficient management
Management motivations			
- Power, firm's size, growth, .....	- Management's retribution	- Personal risk diversification	- Hubris (Roll)
- Personal ego			

#### *Rational Motives for mergers and acquisitions: Synergies*

In an early study, Haugen and Langetieg<sup>29</sup> analyze the synergies obtained through the consolidation of firms. They study non-conglomerate mergers. For the authors, if there are real synergies, they have to translate into higher stockholder rates of return. That is, the distribution of the rates of return of the stocks has to differ from the portfolio an investor will be able to create through combining both stocks. They analyze 59 mergers of companies listed in the NYSE from 1951 to 1968. As the benchmark they use two other firms from the NYSE from the same industry with the closest sales volume. The authors use market values for the weights of each stock in the portfolio and rebalance at the beginning of each year. The comparison period between both portfolios is 36 months following the merger. They conclude that there is not real evidence of synergies in industrial mergers. In addition, they do not find benefits from lower bankruptcy risk or reduction in fluctuation in prices.

In a more recent study, Opler and Weston<sup>30</sup>, analyzing 216 takeovers between 1979 and 1987, conclude that takeovers have increased post-takeover profitability of the companies involved. They use accounting measures such as industry-adjusted cash flow

<sup>29</sup> HAUGEN, Robert A. and LANGETIEG, Terence C.: "An empirical test for synergism in merger" *Journal of Finance* 30(4), September 1975, pp.1003-1014

<sup>30</sup> OPLER, Tim C. and WESTON, J. Fred.: "The impact of takeovers on firm performance: evidence from the eighties" *Working paper UCLA, 1993*.

(IACF) to assets and asset turnover. They notice a slightly increase in IACF, from  $-0.9\%$  before the takeover to  $1.8\%$  after<sup>31</sup> it. These results rise significantly after a hostile takeover. It may support the replacement of the inefficient management team hypothesis. These results support the synergistic argument for carrying out those transactions.

Operating synergies<sup>32</sup> allow companies to increase operating income, increase growth, or both. Those synergies can be classified as follow:

- *Cost reductions*: economies of scale, price power (both to buy and/or sell) and a combination of different operating strengths. The consolidation of two companies can produce a reduction in the production cost per unit of output. The main factor is a more efficient operation and management. Those synergies are common in horizontal mergers, in which both companies belong to the same industry and can take advantage of increases in the quantity produced. In vertical integrations, it is more common to find reductions based on more efficient logistics management.
- *Growth*: consolidation can be used to grow in either the actual or a new market. This motive has been extensively argued as one of the most important for mergers and acquisitions. Growth is an easily measurable, which is one of the premises of management's goals. Through acquisitions companies may penetrate in new markets that otherwise it would not be able to enter. Other reason can be to follow clients. That is, when clients are internationalizing suppliers may have to supply them materials in foreign countries. In addition, companies can adopt a follower strategy, that is, follow the leader in the market. When the leader begins to take positions in the international markets, the followers try to do the same, and they can develop that process through consolidations with foreign companies. Finally, the saturation of the local market can help to make the decision of going to other markets. Usually, competition is high in international markets. Because of that, consolidation may be an efficient tool.

In the 60s and 70s growth was a common accepted practice. Bodie et al<sup>33</sup> argue that investors are not looking only for growth. Growth will increase firm value only if the company invests in project with attractive returns. That is, when the return on equity obtained with that strategy is higher than the cost of equity. For that reason management has to differentiate "growth" from "growth opportunities", which are the ones that create value for shareholders.

During the 90s, technology companies were specially valued based on their potential growth. That is, investors paid for expected but highly uncertain cash flows. Those companies achieved incredible prices compared to their

---

<sup>31</sup> The authors notice that the changes in profitability ratios may be due to a mean reversion process and not to the takeover effect.

<sup>32</sup> In this section I use the word consolidation to refer to both mergers and acquisitions

<sup>33</sup> BODIE, Zvi; KANE, Alex and MARCUS, Alan J.: *Investments*, New York, McGraw Hill International, 2002, pp. 563-605.

fundamentals. Under that scenario, Kohers and Kohers<sup>34</sup> study mergers in the technology sector in the second half of the 90s. Acquirers were looking to obtain profits from the potential for growth that existed in the overall technology sector. At that stage with a hot technology sector, particularly the Internet, investors were paying not for actual returns but for potential ones. That is, growth was the main concept in valuation. Lots of companies had no profits at that time, which implied a higher risk for the buyer. Other valuation techniques were used as proxies for value, different from the traditional discount cash flow model. Their results show that acquirers of technology companies experienced a significant positive abnormal return at the time of the announcement, independently of the financing source. The authors argue that the market responded positively to the news because of the trust in technology sector potential and the expected future growth in cash flows of bidders. This article shows management's focus on growth at that time.

-*Market Power*: some companies try to be leaders in markets through mergers and acquisitions. The arguments for that are:

- Increase the company's market share: but it is not clear if an increase in market share will be translated in an increase in value. When the result is only a bigger company, there are economies of scale. When making the deal, managers are assuming economies of scale exist in the industry and targets prior to the deal were not working efficiently. When increasing market share, companies are increasing their size more than its competitors. However, other strategies such as internal growth can get similar results. It is argued that through consolidations, the results are obtained earlier. On the other hand, it is not clear that the premium paid is smaller than the benefits generated.
- Advantages of a dominant position in the market are monopoly or monopsony. Companies with market power exercise it establishing entrance barriers and increasing the period they obtain abnormal profits. Antitrust law protects consumers of abuses made by companies with market power. The antitrust tribunal plays an important role in the merger and acquisition industry, analyzing how deals can affect consumers.

Financial synergies can produce a higher cash flow or a reduction in the corporation's cost of capital. Some of the financial synergies are:

- Combination of a company with excess cash but few growth opportunities and a company with high return projects but cash constrains. Usually it happens when big corporations buy small companies and when companies are in different stages of their cycle, that is, one is focused on mature segments and the other is immersed in a growth segment.

---

<sup>34</sup> KOHERS, Ninon and KOHERS, Theodor: "The Value Creation Potential of High-Tech Mergers" *Financial Analyst Journal* 56(3), May-June 2000, pp.40-50.

- Increase in debt (leverage) capacity after the consolidation, because of more stable or predictable cash flows, that would be translated in a higher leverage capacity or lower cost.
- Tax profits: one company takes advantage of the tax credit of the other.
- Lower cost of capital: it can happen when a big company absorbs a small company. Melle 2001<sup>35</sup> shows that there is asymmetric information in the credit market, implying that small companies may not get into debt at their rate in an efficient market. When small corporations are absorbed by public companies, they can finance projects with new instruments such as corporate bonds. That may reduce the cost of debt, and by that the cost of capital.

*Dubious Reasons for Mergers and Acquisitions:*

- *Risk diversification:* Corporate diversification is one of a once popular management idea that has fallen from grace. Based on diversification theory, risk averse companies can minimize risk through investing in other businesses, balancing their profits. It was the argument used in the 60s and 70s to support conglomerates. Diversification strategy affects to the firm's stakeholders in different ways. Managers may want a diversify company to reduce their personal risk or increase their compensation. Creditors may prefer a more diversify firm in which cash flows are more stable and predictable. Stockholders with a diversified portfolio may not want diversified firms, because they can diversify the portfolio at a lower cost.

Researchers have argued that a firm's diversification has different motivations such as building empires and personal risk management. Diversification can create benefits via economies of scale or scope (Weston (1970), Chandler (1977)), higher debt ratio and internal capital markets eliminating asymmetric information problems. Companies with imperfectly correlated activities may get more stable cash flows. Diversification costs are agency problems and the struggle within divisions.

Diversification can take different forms:

- *Industrial diversification:* firms expand their activities across industries creating conglomerates that operate in more than one business.
- *Geographic (international) diversification:* firms diversify their activities across countries.

Lot of research has taken place in both diversification strategies. This section will be organized as follow: first, industrial diversification will be addressed; later, the implications of geographic diversification will be discussed.

---

<sup>35</sup> MELLE, Mónica: "Características diferenciales de la financiación entre las Pymes y las grandes empresas: Asimetrías Informativas, Restricciones Financieras y Plazos de Endeudamiento" *Papeles de Economía Española* 89/90, 2001, pp.140-166

### *Industrial diversification*

During the 50s and 60s companies took massive diversification programs. The theoretical arguments supporting such actions were the increase in operating efficiency and cost cuttings. Berger and Ofek<sup>36</sup> study the effect of diversification on firms. The period analyzed is 1986-1991. They include companies with at least \$20 million in sales, and because of the skewness of the distributions they focus on median values. The authors compare the value of the conglomerate company with the sum of its divisions. Diversification will create value if the total value of the company is higher than the sum of the parts. Among the valuation methods, they estimate segment values using multiples, because it includes investors' sentiment. Also they use Tobin's q ratio. Additionally, they use profitability measures such as operating margin (EBIT/sales) and return on assets (EBIT/total assets) to measure the overall effect. They estimate that there has been a value loss between 13% and 15% due to diversification strategies. This loss mitigates when the diversification is within the industry. In addition, diversified companies are less profitable than single line businesses. Furthermore, diversified firms tend to over invest more than non diversified ones. Potential benefits from diversification are too low (tax shield estimated in 0.1% of sales) to offset those costs.

There may be misleading results due to the methodology applied in Berger and Ofek's study if there are systematic differences between the business divisions of the conglomerate firm and the focused comparables. Graham et al<sup>37</sup> use a new approach to control for differences between conglomerate's divisions and stand alone companies: comparison of conglomerate divisions that arise through acquisitions of single companies that disappear from the public records due to a consolidation. The authors conclude that conglomerates are traded at discount. That is, there is destruction in value through this strategy, but only one half of the discount in their sample can be attributed to negative valuation consequences from this strategy.

Agency theory argues that diversification can be driven by different motivations from a value-maximizing strategy. That is, managers' private benefits or personal goals obtained through this strategy are the key driver. Aggarwal and Samwick<sup>38</sup> explain company's diversification within this theory. First, managers increase their utility function through the company's diversification. That happens because managers have a big amount of their personal wealth invested in the company<sup>39</sup>, so they do not have a diversified investment portfolio. They can reduce their personal risk diversifying

---

<sup>36</sup> BERGER, Philip and OFEK, Eli: "Diversification's effect on firm value" *Journal of Financial Economics* 37, 1995, pp.39-65.

<sup>37</sup> GRAHAM, John R.; LEMMON, Michael L, and WOLF, Jack G.: "Does corporate diversification destroy value?" *Journal of Finance* 57(2), April 2002, pp. 695-720

<sup>38</sup> AGGARWAL, Rajesh K. and SAMWICK, Andrew A: "Why do Managers Diversify Their Firms? Agency Reconsidered" *Journal of Finance* 58(1), February 2003, pp.71-118.

<sup>39</sup> New management compensation such as stocks or stock options try to reduce agency problems between shareholders and managers.

company's portfolio of investments. Secondly, managers can have higher private benefits in more diversified firms such as social prestige, higher career opportunities and remuneration. Their results only support the proposition of private benefits as the main reason for corporate diversification.

Some researchers have argued that diversification is not a value maximizing strategy. Jensen<sup>40</sup> argues that the greater the diversification the more companies invest in negative cash flow projects comparing to non-diversified companies. Servaes<sup>41</sup> analyzes value created through diversification in the 60s and 70s. His results support that diversification has damage shareholders. That may explain why companies began to focus on their core businesses in the late 70s. One of the main findings in this study is that diversification produces the diversification discount and not the other way.

Morck and Yeung<sup>42</sup> study why companies diversify, under the internalization and agency theory. They find that geography, within industries and size diversifications create value under the presence of intangibles based on R&D and publicity, but destroy value when they are not driving the process. It may happen because of agency problems. They argue that the capital market in the 60s and 70s was not as developed as nowadays. That joint with regulatory restrictions reduced the company's capacity to obtain debt financing. Nowadays, central financing may not increase value because of the development of capital markets and changes in regulation. However, some countries have less developed capital markets and copyright law diversification between industries continues creating value. The study does not cover the diversification cost in less efficient markets. In such countries, companies may be able to diversify at a lower cost, creating value for shareholders.

Diversification can be understood as a dynamic value-maximizing strategy under the base of transference of organizational capabilities. That is, diversification is not the cause of poor performance but the result. This view defines markets as a mix of organizational capabilities and companies that are collectors of these capabilities and that are able to transfer them among different industries. Matsusaka<sup>43</sup> argues that corporate diversification and shareholders value creation are not substitutive goals. He develops a theoretical model based on organizational capabilities and their transmission between companies. Diversification is a process in which companies are looking for new productive uses for company's capabilities. A poor relation between organizational capabilities and businesses produce a discount and provoke a company's diversification. The author suggests that the diversification discount provokes diversification, but not the other way around. The model shows that companies with the worst matches of organizational capabilities will liquidate; only firms whose matches are not bad will hold

---

<sup>40</sup> JENSEN, Michael C.: "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers" *American Economic Review* 76(2), May 1986, pp.323-329

<sup>41</sup> SERVAES, Henri: "The Value of Diversification During the Conglomerate Merger Wave" *Journal of Finance* 51(4), 1996, pp. 1201-1225.

<sup>42</sup> MORCK, Randall and YEUNG, Bernard: "Why Firm diversify: Internalization vs Agency Behavior" forthcoming John HAND and Baruch LEV (ed.) *Intangible Assets* Oxford University Press.

<sup>43</sup> MATSUSAKA, John G.: "Corporate Diversification, Value Maximization and Organizational Capabilities" *Journal of Business* 74(3), 2001, pp.409-431.



on their existing businesses and diversify. Diversification may be good due to a signaling effect, because firms avoid liquidation option. More generally, the model predicts that the market reaction will depend on the characteristics of the announcing company. One of the main implications of his model is that companies can be at discount in the stock market, even when diversification's goal is to value maximization.

Haspeslagh and Jemison<sup>44</sup> criticize financial research in mergers and acquisitions. The authors argue that success from a finance point of view is based on the immediate market response to the announcement. For the authors, this is a very simplistic analysis of this phenomenon and for that reason managers and academics trust in it. They say that the key success factors are the firm's capabilities, same as Matsusaka. Through capabilities, companies can develop sustainable competitive advantages. Competition and changes in the environment erode those advantages and create a constant need in companies to renew in order to maintain their position in the market. Among the main renewal choices for managers are acquisitions, internal growth and joint ventures. Markets are inefficient and shareholders and managers carry out mergers and acquisition to maintain companies' position in the market. The authors do not realize that value creation is measured in the market, and not outside it. Shareholders are looking for returns, basing their strategies on stock prices.

New research in corporate diversification has created divergence against the traditional view of the diversification discount associated with diversify firms. The idea is that diversified and non-diversified firms have different fundamentals and once controlling for those characteristics the discount may even change to a premium. Villalonga<sup>45</sup> addresses the econometric problems studying diversification. Diversification is not the cause but one of the effects. Diversified firms trade at a discount prior to the diversification process. That is, low performance causes diversification. Other interpretation to those results is that in efficient capital markets, stocks would be trading at a discount because of the possibility of managerial decisions that would be against shareholders' interests. The author finds that after controlling for specific factors, the diversification discount turns in a premium.

Campa and Kedia<sup>46</sup> after modeling diversification like an endogenous variable argue that diversification does not cause diversification discount. *"The failure to control for firm characteristics that lead firms to diversify and be discounted may wrongly attribute the discount to diversification instead of the underlying characteristics. For example, consider firm facing technological change, which adversely affects its competitive advantage in its industry. This poorly performing firm will trade at a discount relative to other firms in the industry. Such a firm will also have lower opportunity costs of assigning its scarce resources in other industries, and this might lead*

---

<sup>44</sup> HASPELAGH, Philippe and JEMISON, David B.: *Managing acquisitions: creating value through corporate renewal* New York, The Free Press 1991.

<sup>45</sup> VILLALONGA, Belen: "Does diversification cause the "diversification discount"? *Working Paper*, Harvard University, 1999.

<sup>46</sup> CAMPA, Jose Manuel and KEDIA, Simi: "Explaining the diversification discount" *Journal of Finance* 57(4), August 2002, pp. 1731-1762

it to diversify. If poorly performing firms tend to diversify, then not taking into account past performance and its effect on the decision to diversify will result in attributing the discount to diversification activity, rather than to the poor performance of the firm". They control for endogeneity in three ways: 1) control for the unobservable firm characteristic that affect the diversification decision, 2) modeling diversification status as a function of the industry, firm and macroeconomic characteristics and 3) use Heckman's two stage model to correct for self-selection bias. After controlling for such factors, discount drops and even switch to a premium.

Finally, another study by Villalonga<sup>47</sup> highlights the skepticism of the results obtained using COMPUSTAT. This database provides disaggregated financial information for business segments that represent at least 10% of firm sales, assets or profits. The concerns are that the real disaggregation is higher than the reported in the database (maximum number of industries within a firm is 10), the reporting of segments depends on the firm's choice and firm may change segments they report without a real change in operations. Those factors may cause bias in the estimation of the diversification premium or discount. Using BITS, a new database, the author finds that diversified firms traded at a significant premium. The author provides two plausible explanations for the results: "Relatedness" and "strategic accounting". Under the Relatedness hypothesis, there is a discount for unrelated diversification and a premium for related diversification. Conglomerates use to diversify into related businesses, being the overall effect positive. Under the Strategic Accounting Hypothesis, companies trade at a discount because of an aggregation of segments that make them appear to be low performance relative to single-segment firms.

It is not clear if diversification creates or destroys value for companies involved in such an activity. The premises for creating value following this strategy are:

- 1) Diversification reduces non-systematic risk at a lower cost than investors.
- 2) Diversification reduces risk and, thus, allows higher leverage.

### *Geographic diversification*

Companies can diversify internationally, looking to reduce recessive periods in the local market. Microeconomic theory support international expansion when companies want to increase their economic rents. Adler and Dumas<sup>48</sup> argue that the managerial decision to diversify is irrelevant when investors can substitute completely it through local diversification. However, when there are economies of scale or the cost of diversification is substantially higher for investors, Adler and Dumas' proposition is less sustainable.

---

<sup>47</sup> VILLALONGA, Belen : " Diversification discount or premium? New evidence from the Business Information Tracking Series" *Journal of Finance* 59(2), April 2004, pp. 479-506

<sup>48</sup> ADLER, Michael and DUMAS, Bernard: "Optimal International Acquisitions," *Journal of Finance* 30 (1), March 1975, pp 1-19

International diversification can create value through increasing management's skills. Ezzamel<sup>49</sup> highlights benefits from diversification not related to value creation: managerial power, reduction in the risk of firing managers, maximize size and managers' personal wishes. However, managers can increase the ability to manage companies in a much more complicated environment. Thus, they can use this knowledge in the local market. Thus, the net value of diversification would be the difference between the costs such as overpayment due to management's personal goals and the profits from increasing their ability to manage companies.

Bodnar et al<sup>50</sup> argue that the potential diversification advantages are economies of scale, optimization of tax liabilities, more flexible operations allocating production in the more efficient country and adjust demand between countries. On the other hand, disadvantages associated to global diversification are basically that cost can be higher than benefits. In addition, investors have more difficulties to monitor the activities of managers. The more complex the organization is the more difficult it is to monitor.

- *Speculation*: under this theory the market undervalues companies, and managers can find those attractive investments. Barney<sup>51</sup> argues that the market undervalues some companies. The reason is that there are imperfections in the market for strategic factors and that produces noise around the valuation. Private information plays an important role, because if managers possess information that is not in the market yet they can acquire companies at a discount. Barney defines two possibilities for speculation: First, myopic market focuses on short term periods because important players such as institutional investors are focused on short term returns. As a consequence, companies with long term investment horizons are undervalued in the market. Thus, those companies are attractive targets for acquirers with financial resources. Secondly, firms can have a market price under the real value of their net assets. When that happens, companies looking for growth will acquire companies as a strategy to increase production capacity.

Shleifer and Vishny<sup>52</sup> develop a model in which mergers are driven by the stock market. That is, managers of the acquirer firm choose those targets that are misvalued by the market. This model is based on opposite assumptions to the "hubris" hypothesis argued by Roll (1986) in which markets are efficient and managers are irrational. Neoclassical Theory considers mergers and acquisitions as efficient responses to shock in the industry. The main assumptions are that markets are inefficient, so some firms are valued incorrectly. In contrast, managers are rational and take advantage of those inefficiencies in the market. The key explanations of the model are: who are the

---

<sup>49</sup> EZZAMEL, Mahmoud: "Discussion of International Diversification and Firm Value" *Journal of Business, Finance & Accounting* 25(9-10), November-December 1998, pp.1284-1285

<sup>50</sup> BODNAR, Gordon M.; TANG, Charles and WEINTROP, Joshep: "Both Sides of Corporate Diversification: The Value of Impacts of Geographic and Industrial Diversification" *National Bureau of Economic Research Working Paper 6224*, October 1997

<sup>51</sup> BARNEY, Jay B.: "Strategic Factor Markets: expectations, luck, and business strategy" *Management Science* 32(10), 1986, pp. 1231-1241

<sup>52</sup> SHLEIFER, Andrei and VISHNY, Robert W.: "Stock Market Driven Acquisitions" *National Bureau of Economic Research Working Paper 8439*, August 2001.

acquirers, the medium of payment, valuation consequences of mergers and why they come in waves. Market valuations drive mergers and acquisitions. The bases for this model are the development of behavioral finance and the arbitrage made by managers, finding undervalued companies in the market. The model predicts: 1) managers time the market, using the method of payment as the tool for that. They would use stock payment when the stocks are overvalued and cash payment otherwise. 2) The volume of stock acquisition increases with the dispersion of valuations among firms. 3) Managers resistance to some tender offers is in the interest of shareholders. 4) Bidders in stock acquisition show signs of overvaluation. 5) Despite the long run negative returns, acquisitions for stocks serve the interest of the long-term shareholders of the bidders because they arise from the overvaluation of the bidder relative to the target, even acquisitions made by glamour bidders seem to be a defensive strategy in their model.

The premises of the model are that companies can reduce the principal-agent conflict between shareholders and managers, who can detect undervalued companies applying rationality. This rationality should be supported by the use of valuation techniques. However, the most common method for firm's valuation is the Discount Cash Flow Method (DCF) at a discount rate (WACC), which is obtained as the weighted average of financing sources. Cost of equity<sup>53</sup> used in practice is obtained applying the CAPM model, which uses market data, which are biased because of the inefficiencies in the capital market. How can managers apply rationality without using a rational tool? However, this model is an important advancement in the economic thinking about mergers and acquisitions.

Some companies based their acquisition strategy in companies with a prior bad management. That is, those companies have good fundamentals such as growth prospects and attractive products but the market correct those companies' values because they are not efficiently run. Parrino and Harris<sup>54</sup> show that when the target management is replaced, acquisitions have a better post-acquisition performance. The period studied is 1982-1987, in which they analyze 197 transactions. In order to measure performance they use industry-adjusted cash flow returns (IACFR)<sup>55</sup>. The overall IACFR was 2.1%, significantly different from zero. Transactions with management replacement have an IACFR of 3.1%, and the other ones had no significant positive returns. Their results support the idea of a key correcting role of takeovers.

---

<sup>53</sup> Numerous studies have shown that the most used method for projects' valuation is the NPV rule (Graham and Harvey 2001), sustained on the discount of the cash flow of the project at the risk adjusted rate. One source of the resources, equity, is found using the CAPM method. It is difficult to justify a rational mechanism for mergers and acquisitions when the tools used are biased by market's behavior.

<sup>54</sup> PARRINO, James D. and HARRIS, Robert S.: "Takeovers, management replacement, and post-acquisition operating performance: some evidence from the 1980s" *Bank of America Journal of Applied Corporate Finance* 11(4), Winter 1999, pp.88-97

<sup>55</sup> Cash flow returns are defined as operating cash flows over market value of assets. They are industry adjusted subtracting the median industry performance.

In a recent study, Agrawal and Jaffe<sup>56</sup> find that target companies do not perform poorly prior to the acquisition, using both operating and stock returns. They study operating and stock returns of 2,000 target companies during the period 1926-1996. The sample included target companies listed in the NYSE or the AMEX. They analyze targets involved in both issues, mergers and tender offers. They measure operating performance using accounting ratios: return on assets and return on sales. Looking at changes in both performance measures, and comparing with a control benchmark target companies do not seem to underperform a control portfolio. The authors study subsamples differentiating between items such as mergers vs tender offers, friendly vs hostile takeovers, single vs multiple bidders and merger waves. The authors do not find evidence that target underperform the control benchmark. When measuring stock returns, they control for factors such as size, book-to-market ratio and employ a calendar time abnormal return. They define a control portfolio, and obtain the target's abnormal returns as the difference between target's stock return and the appropriate portfolio's return. Adding all the abnormal returns for targets in various intervals, they get the cumulative abnormal returns (CAARs). For stock returns, the CAAR from month -100 to month -3 for the studied period is only -1.93%. There is some underperformance in the subsamples, but it generally occurs many years prior to the acquisition. One would expect a faster response from the market in such cases. Finally, the study does not account for attempted takeovers. It is possible that a disciplinary role in the market for corporate control makes managers of possible targets to be more efficient.

- *Unsatisfactory Growth Rate*: usually it happens in mature industries. It is argued that mergers and acquisitions are defensive strategies in periods of stagnant and low returns. Consolidations increase companies' strengths and market share. Growth is the key driver of management decisions under this argument.

Mergers usually fail because of two factors. First, acquirers overvalue the target company, expecting some synergies that will never take place (pre-acquisition). Secondly, inefficient integration of the target in the acquirer's structure, and synergies are not obtained because of poor management (post-acquisition).

With perfect capital markets, the mergers and acquisitions mechanism would be instantaneous; at the exact time managers diverge from the goal of value maximization. Perfect information would produce a decrease in the stock price and the inexistence of transaction costs would produce intervention without costs. If markets are not perfect the mechanism does not work perfectly. With transaction costs and agency problems it is not clear that the mechanism continuous working efficiently, because of different goals to value maximization. There are several theories that argue why acquirer's shareholders do not obtain abnormal returns from this process:

---

<sup>56</sup> AGRAWAL, Anup and JAFFE, Jeffrey J.: "Do takeover targets underperform? Evidence from operating and stock returns?" *Journal of Financial and Quantitative Analysis* 38(4), December 2003, pp.721-746

- *Overvaluation*: Usually it is assumed that mergers and acquisitions are developed in highly competitive environment in which prices are well established. Sirower<sup>57</sup> argues that prices in mergers and acquisitions may be not related to the real value of the target company. He denominates that the limitations in the synergies achieving through the process. Synergies have a low expected value. Thus, the higher the premium paid based on synergies the higher the post acquisition lost. That low probability to achieve the synergies should be included in the valuation model via scenario analysis or increasing the discount rate.

At the same time he argues that due to the complexity of those processes, it is extremely difficult to find some participant with a global vision, but at the same time detailed to be able to value the opportunity.

Negative returns obtained by bidders can be due to overvaluation of the target company. Overpayment may happen because managers pursue personal objectives different to value maximization. Mork et al<sup>58</sup> argue that when companies make acquisitions their managers are considering both their personal benefits from the operation and the market value of the firm. They include the idea of private benefits in acquisitions. Managers will be predisposed to reduce market value when highly increasing personal benefits ( $NPV_{\text{acquisition with private profits}} < NPV_{\text{acquisition without private profits}}$ ). Private benefits exist because shareholders cannot perfectly monitor managers. The authors focus on two strategies: buying growth and diversification. They include in the sample bidders that have obtained control, controlling for outliers. The event day is the day the first bid is announced in Wall Street Journal. They find that bad acquisitions are not only driven by stock financing or managers' ego (the results do not support the idea of hubris). Companies doing unrelated diversification or buying growth are reducing their returns. That is, buying growth and unrelated diversification are bad ideas. In addition, the market punishes more unrelated diversification strategy in the 80s than in the 70s. Another important finding from this study is that bad managers<sup>59</sup> underperform good managers. They do not find negative effects of diversification in the 70s, probably because of the inefficiencies in the capital market.

- *Agency problems*: there are conflicts between the agents participating in the process. Investment banks get a commission over the total amount of the deal. Thus, they have incentive to increase the size of the deal as much as possible. (Kesner, Shapiro y Sharma<sup>60</sup>).

---

57 SIROWER, Mark: *The synergy trap: how companies lose the acquisition game*. New York, The Free Press, 1997

58 MORK, Randall; SHLEIFER, Andrei and VISHNY, Robert W.: "Do managerial objectives drive bad acquisitions?" *Journal of Finance* 45 (1), March 1990, pp.31-48

59 The measure management's quality through income growth relative to the industry and the 3-year cum dividend equity returns relative to the industry.

60 KESNER, Idalene F.; SHAPIRO, Debra L. and SHARMA, Anurag: "Brokering mergers: An agency theory perspective on the role of representatives" *Academy of Management Journal* 37, pp. 703-721

Agency problems between shareholders and managers are not a new concept in financial economics. Berle and Mean<sup>61</sup> recognize the potential divergence of interests existing between owners and managers of a corporation when property is diffused. Managers' salary may be related to the company's size and not to the company's returns. (Lubatkin 1983, Schmidt y Fowler, 1990<sup>62</sup>). In addition, managers may look for a higher social position and power, not for shareholders' value maximization.

Jensen (1986)<sup>63</sup> describes conflicts between managers and shareholders. Besides neoclassical vision of mergers, Jensen describes one class of managers that is looking to protect their empire and profits. In a principal-agent relationship, managers are the agents of the shareholders (principals). Free cash flow is the excess cash once the company has invested in all positive NPV investments. The residual cash should be paid back to shareholders if managers are efficient and have their goals aligned with shareholders' value creation. If managers distribute the excess cash, they would reduce their power and would be subject to capital markets supervision when new financing is needed. Managers have incentives to increase company size over the optimal one. Competence in the product and factor market can act as a control mechanism. Finally, he recommends increasing leverage in companies with excess cash to control managers' behaviour. Under this theory, companies with high leverage power not exercised and free cash flows tend to make low benefit takeovers, even destroying value. Diversification strategies are usually included in this type, thus these strategies tend to underperform. The model predicts hostile takeovers, increase in leverage and break those empires in which synergies were not successful.

Some researchers have studied whether the free cash flow theory is supported across industries. Servaes<sup>64</sup> studies 700 firms that were taken over or went private during the period 1972-1987. The results do not support that target companies in hostile takeovers over invest prior to the acquisition. That is, the disciplinary role of takeovers is not supported. When doing subsets, Jensen's free cash flow theory is only supported by large firms and firms in the oil and gas industry. The caveats of this study are that firms may over invest in inventory and employees and, more important, the variable used may not capture the investment opportunity set companies have.

- *Roll's hubris hypothesis*: modern financial theories take into account that managers' goal may diverge from shareholders' ones. Richard Roll<sup>65</sup> uses the word "hubris"<sup>66</sup> to define

---

<sup>61</sup> BERLE, Adolf and MEANS, Gardiner C.: *The modern corporation and private property*. New York, Macmillan, 1933

<sup>62</sup> LUBATKIN, Michael: "Mergers and Performance of Acquiring Firms" *Academy of Management Review* 8, 1983 pp. 218-225.

SCHMIDT, Dennis R. and FOWLER, Karen L.: "Post-acquisition financial performance and executive compensation" *Strategic Management Journal* 11(7), November-December 1990, pp. 559-570.

<sup>63</sup> Idem page 25

<sup>64</sup> SERVAES, Henri: "Do takeover targets overinvest?" *Review of Financial Studies* 7(2), summer 1994, pp. 253-277

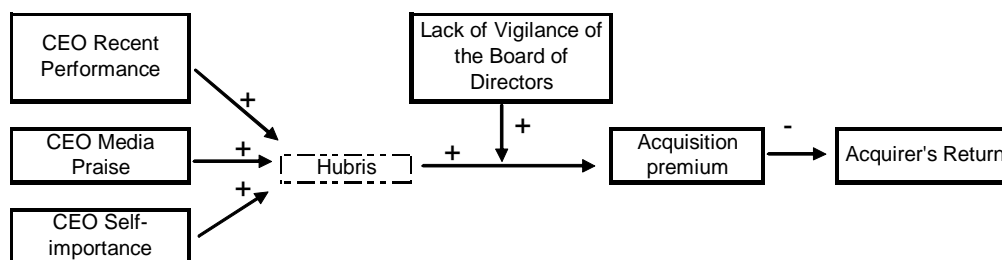
<sup>65</sup> Idem page 3.

<sup>66</sup> Hubris is a Greek word that means "animal spirits"

managers that have overconfidence in themselves. Based on that overconfidence, managers can make decisions even when the market is punishing the company stock's price for that, because the market is not efficient. The premium paid is a signal of the potential profits that the bidder may create through this action. The basis of this theory is that managers believe that markets are inefficient and do not understand their strategies. This theory is developed under the assumption of strong-form market efficiency. That is, stock prices contain all information and product markets and labour market are efficient. The predictions for takeovers are an overall decrease in the value of the bidding and target firms driven by a decrease in the bidding company, while the target would increase the value. Another premise of the hubris theory is that managers do bad takeovers, but it may be due to valuation mistakes or divergences with the goals of shareholders.

Clearly the Board of Directors has a passive role under the hubris hypothesis accepting CEOs' decisions. The Board of Directors is an organism created to control managers and mitigate those agency problems that exist between shareholders and managers. However, when the same person is the CEO and Chairman of the company the mechanism may be less efficient. Jensen<sup>67</sup> considers that when the internal control system does not work efficiently, mergers and acquisition are an external disciplinary system. That happens when a management team finds that substituting another company's management can create value. In order to obtain the acceptance of the offer, there has to be a premium over the target's market value. That is, the target's shareholders will keep some of the benefits of this restructuring. Under this theory, the market for corporate control through mergers and acquisitions would mitigate the hubris behaviour. Asymmetric information plays an important role protecting hubris behaviour in a not perfect market.

Further research on the hubris hypothesis is carried out by Hayward and Hambrick<sup>68</sup>. They argue that hubris is an essential piece that explains management behaviour in mergers and acquisitions. The authors develop a management behaviour model for large acquisitions:



<sup>67</sup> JENSEN, Michael C.: "The Takeover Controversy: Analysis and Evidence" *Midland Corporate Finance Journal* 4(2), summer 1986, pp.6-32.

<sup>68</sup> HAYWARD, Mathew L. and HAMBRICK, Donald C.: "Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris" *Administrative Science Quarterly* 42, 1997, pp. 103-127.



The higher the hubris is the lower the acquirer's return. The lack of vigilance of the Board of Directors allows managers to make decisions that may not increase value. The period studied is 1989-1992. They include all companies listed in the NYSE involved in a consolidation process in which the acquisition price was at least \$100 million. The authors argue that in big acquisitions there is ego in both management teams. A Managers' ego affects the price offer. Other factors that affect positively the price offered are: the recent performance, the CEO's media praise and the CEO's self-confidence. The lack of monitoring of the Board of Directors produces a higher premium too. The authors find a negative result of this behaviour. Hubris has a negative result in the context of large acquisitions. There are negative results at the time of the takeover. However, these negative results increase in the following year. The authors argue that the market underestimate the negative implications of the process. It may happen because the market is impressed by the amount of the deal and expects some benefits. The market is sceptical but it expects some flexibility from the bidder's CEO to run the new company.

- "*Glamour*" Companies: Rau and Vermaelen<sup>69</sup> argue that markets are inefficient and overreact to past information, overvaluing companies with good past returns and undervaluing companies with poor past returns. At the same time, managers and decision makers (larger shareholders and the Board of Directors) that have to approve the acquisition, obtain feedback from the market. In companies with low book to market ratios (glamour firms), managers have a higher probability to overestimate the ability to carry out the acquisition. Good past returns in glamour firms such as high stock return and cash flow and profits growth increase managers' self-confidence (hubris effect). This overconfidence makes glamour firms overpay for target companies. That translates in poor future performance.

- *Earnings per share (EPS) myopia hypothesis*: EPS has always been one of the management quality indicators. EPS has been used as a measure of health. One of the justifications for mergers and acquisitions in the 60s and 70s was an increase in EPS. This theory suggests that managers are more focused on EPS than in other variables because management believe that EPS drives stock price. This obsession affects to high premium paid for target's stock based on that increase in EPS. However, using this mechanism will limit a company's future prospects, Block<sup>70</sup>.

EPS is not an indicator of value created through mergers or acquisitions. Managers may have their remuneration associated to accounting profits. Then, there may be an incentive to carry out mergers and acquisitions when they help increase EPS. In addition, managers may not understand key drivers of stock prices. Managers may act myopically. That is, they are too focused on short-term accounting indicators such as EPS, they do not realize the future implications of this strategy.

---

<sup>69</sup> Idem page 10

<sup>70</sup> BLOCK, Stanley B.: "The EPS Myopia Hypothesis and Post merger Market Performance of Acquiring Firms" *Journal of Investing* 11(1), Spring de 2002, pp. 7-16.

Another common valuation metric is the PE ratio<sup>71</sup>. There are two different views of this ratio:

- PE ratio is inconsistent due to the heterogeneity of the result. The numerator is the price per share (PPS), which in an efficient capital market is the present value of the expected future cash flows. The denominator is EPS, which are the profits per share obtained last year (Mascareñas<sup>72</sup>).
- This ratio is a measure of the extrapolation of past performance in future expectations of growth in returns for stocks (Lakonishok et al<sup>73</sup>).

$$\text{PE ratio} = \text{PPS} / \text{EPS}^{74}$$

This formula can be modified based on the Gordon's Dividend Discount Model for a stable growth:

$$\text{Value of Equity} = \text{DPS}_1 / (k_e - g_n) \quad [1]$$

then,

$$\text{PE ratio} = P_0 / \text{EPS}_0 = \text{Payout ratio} \times (1 + g_n) / (k_e - g_n) \quad [2]$$

where  $g_n$  is the perpetual growth rate and  $k_e$  is the shareholders' required return

The Forward PE ratio would be:

$$\text{PE} = P_0 / \text{EPS}_1 = \text{Forward PE} = \text{Payout ratio} / (k_e - g_n) \quad [3]$$

The PE ratio is a positive function of the ratio of revenue payout as dividends and the growth rate; and a negative function of the company's risk. In addition, the payout ratio can be defined as:

$$\text{Payout ratio} = 1 - \text{Expected growth rate} / \text{ROE}^{75} = 1 - g_n / \text{ROE} \quad [4]$$

$$\text{PE} = P_0 / \text{EPS}_1 = \text{Forward PE} = (1 - g_n / \text{ROE}) / (k_e - g_n) \quad [5]$$

For companies with high growth the expression can be adapted as:

---

<sup>71</sup> PE Ratio is the relation between the price per share and the earnings per share.

<sup>72</sup> MASCAREÑAS, Juan: *Fusiones y Adquisiciones de Empresas*. Madrid, McGraw Hill, 3<sup>rd</sup> edition, 2000, pp. 20-21

<sup>73</sup> Idem page 8

<sup>74</sup> Formulation Appendix I

<sup>75</sup> ROE (Return on Equity) is the return shareholders obtain for each dollar invested in the company.

$$\text{Forward PE} = P_0 / \text{BPA}_1 = (1 - g / \text{ROE}_{\text{hg}}) \times (1 + g) \times [1 - (1 + g)^n / (1 + k_{\text{e,hg}})] / (k_{\text{e,hg}} - g) + (1 - g_n / \text{ROE}_{\text{ST}}) \times (1 + g)^n \times (1 + g_n) / [(k_{\text{e,st}} - g_n) (1 + k_{\text{e,hg}})^n] \quad [6]$$

where  $\text{ROE}_{\text{hg}}$  is the return of equity for the high growth stage and  $\text{ROE}_{\text{ST}}$  is the return on equity for the stable stage.  $g$  is the growth rate in the  $n$  first years,  $k_{\text{e,hg}}$  is the cost of equity in the high growth stage,  $k_{\text{e,st}}$  is the cost of equity in the stable growth and  $g_n$  is the growth after the first  $n$  years, that will be assumed to be perpetual.

When a company acquires another with a lower PE ratio, the consolidated EPS increases. Assuming investors make their investment strategies based on EPS, it would be the optimal managerial strategy. However, as it is reflected in the formulas [3], [5] and [6], PE ratio shows the expected growth rate. Companies with low PE ratios have less growth opportunities. Thus, this technique does not increase acquirers' value per se. If market values these actions positively a bubble might be created in the long run.

## **4. CONCLUSIONS**

Mergers and acquisitions is an activity that has attracted researchers' interest, not only in finance but also in other related knowledge areas. The questions are: why do mergers and acquisitions take place? Why do they do in waves? Why there is a clustering within industries? The main purpose of this paper is to show the theoretical arguments that support such actions.

Empirical evidence is not conclusive not only in the motivations of mergers and acquisitions but also in the results of mergers and acquisitions. In all the studies it seems to be clear that the target's shareholders obtain abnormal positive returns. Also, the combine returns for both bidding and target shareholders seem to be positive. However, for bidders alone evidence is not clear about the returns obtain. Rau and Vermaelen argue that value bidders obtain in both situations (mergers and tender offers) higher returns than glamour ones.

Focusing in corporate motivations for carrying out those transactions, there are three different views about mergers in the finance world:

- Mergers and acquisitions based on synergies between companies involved in them. This activity takes place to maximize shareholders' value. Thus, managers have aligned their goals along with shareholders.
- Mergers and acquisitions as a correcting mechanism in the market. Managers are fighting to achieve the corporations' control. In this arena, the market will punish any managerial divergence from shareholders' value maximization goal. The stock price of those companies will drop. As a consequence, those companies appear to be attractive targets for other companies. Rational managers will try to get the control of those attractive targets. Managers from the target companies may use defensive mechanisms to entrench and continue getting personal benefits from shareholders.
- Mergers and acquisitions as the exacerbation of divergence of goals between managers and shareholders. Shareholders only have one goal, getting rich through increasing the value of their investments. Managers have a variety of goals, and maximizing company's value is only one of them. Company's size or power may be more valuable for managers than maximizing shareholders' value.

In the last waves mergers and acquisitions are attracting public's attention due to the size of the deals. Models developed to explain the motivations for mergers and acquisitions are based on rational or irrational management behaviour. All of them add pieces of the real motivations around this phenomenon. The answer may be between models that design those instruments as market correction and models that claim the non-maximizing strategies driven by managers' own goals.

There is one more piece to add to this puzzle. This is the development of an efficient capital budgeting model. This is one of the weakest parts of modern finance. The theory says that estimating the future cash flows and discounting them at the adjusted risk rate decision makers obtain the expected value of the asset, for our purpose here the target company.

Studies in investments highlight the inefficiencies in capital markets. Those inefficiencies bias the estimated discount rates used in capital budgeting. The final output in the valuation process may highly differ from the expected one under perfect capital markets. It is necessary to realize of those inefficiencies and the problems that may cause to the overall output.

Future research in this area will help to find a more optimal solution to capital budgeting processes.

## REFERENCES

- ADLER, Michael and DUMAS, Bernard: "Optimal International Acquisitions," *Journal of Finance* 30(1), March 1975 pp 1-19
- AGGARWAL, Rajesh K. Y SAMWICK, Andrew A: "Why do Managers Diversify Their Firms? Agency Reconsidered" *Journal of Finance* 58(1), February 2003, pp. 71-118
- AGRAWAL, Anup; JAFFE, Jeffrey F and MANDELEKER, Gerhson N." The post-merger performance of acquiring firms: a re-examination of an anomaly" *Journal of Finance* 47 (4), September 1992, pp.1605-1621
- AGRAWAL, Anup and JAFFE, Jeffrey J.: "Do takeover targets underperform? Evidence from operating and stock returns?" *Journal of Financial and Quantitative Analysis* 38(4), December 2003, pp.721-746
- ANDRADE, Gregor and STAFFORD, Erik 1999: "Investigating the Economic Role of Mergers" *Journal of Corporate Finance* 10, 2004, pp. 1-36
- ASQUITH, Paul: " Merger bids, uncertainty, and stockholder returns" *Journal of Financial Economics* 11, 1983, pp. 51-83.
- ASQUIT, Paul; BRUNER, Robert F. and MULLINS, David W. Jr.:" The gains to bidding firms from mergers" *Journal of Financial Economics* 11, 1983, pp.121-139
- BARNEY, Jay B.:" Strategic Factor Markets: expectations, luck, and business strategy" *Management Science* 32(10), 1986, pp. 1231-1241
- BERLE, Adolf and MEANS, Gardiner C.: *The modern corporation and private property*. New York, Macmillan, 1933
- BERGER, Philip and OFEK, Eli: " Diversification's effect on firm value" *Journal of Financial Economics* 37, 1995, pp.39-65
- BLOCK, Stanley B.: " The EPS Myopia Hypothesis and Postmerger Market Performance of Acquiring Firms" *Journal of Investing* 11(1), Spring de 2002, pp. 7-16.
- BODIE, Zvi; KANE, Alex and MARCUS, Alan J. :*Investments*, New York, McGraw Hill International, 2002, pp. 563-605
- BODNAR, Gordon M.; TANG, Charles and WEINTROP, Joshep:" Both Sides of Corporate Diversification: The Value of Impacts of Geographic and Industrial Diversification" *National Bureau of Economic Research Working Paper* 6224, October 1997
- BRADLEY, Michael:" Interfirm tender offers and the market for corporate control" *Journal of Business* 53(4). 1980, pp.345-375
- CAMPA, Jose Manuel and KEDIA, Simi:" Explaining the diversification discount" *Journal of Finance* 57(4), August 2002, pp. 1731-1762
- DODD, Peter:" Merger proposals, management discretion and stockholder wealth" *Journal of Financial Economics* 8, 1980, pp. 105-137
- DODD, Peter and RUBACK, Richard:" Tender offers and shareholders returns: and empirical analysis" *Journal of Financial Economics* 5, 1977, pp. 351-373
- DONALDSON, Gordon:" Corporate Restructuring of the 1980s-and its import for the 1990s " *Journal of Applied Corporate Finance* 6(4), winter 1994
- EZZAMEL, Mahmoud: "Discussion of International Diversification and Firm Value" *Journal of Business, Finance & Accounting* 25(9-10), November-December 1998, pp.1284-1285
- FAMA, Eugene and FRENCH, Kenneth:" The cross section of expected stock returns" *Journal of Finance* 47(2), June 1992, pp 427-465
- GRAHAM, John R.; LEMMON, Michael L, and WOLF, Jack G.: "Does corporate diversification destroy value?" *Journal of Finance* 57(2), April 2002, pp. 695-720
- HASPESLAGH, Philippe and JEMISON, David B.: *Managing acquisitions: creating value through corporate renewal* New York, The Free Press 1991
- HAUGEN, Robert A. and LANGETIEG, Terence C.:" An empirical test for synergism in merger" *Journal of Finance* 30(4), September 1975, pp.1003-1014
- HAYWARD, Mathew L. and HAMBRICK, Donald C.: "Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris" *Administrative Science Quarterly* 42, 1997, pp. 103-127.

- JARRELL, Gregg A.; BRICKLEY, James A. and NETTER, Jeffrey M.: "The market for corporate control: the empirical evidence since 1980" *Journal of Economic Perspectives* 2 (1), winter 1988, pp. 49-68
- JENSEN, Michael C.: "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers" *American Economic Review* 76(2), May 1986, pp. 323-329
- : "The Takeover Controversy: Analysis and Evidence" *Midland Corporate Finance Journal* 4(2), summer 1986, pp.6-32
- : "The Eclipse of the Public Corporation" *Harvard Business Review* 67, September-October 1989, pp. 61-74
- : "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems" *Journal of Finance* 48 (3), July 1993, pp. 831-880
- KAPLAN, Steven N. and WEISBACH, Michael S.: "The success of acquisitions: evidence from divestitures" *Journal of Finance* 47(1), March 1992, pp. 107-138
- KAPLAN, Steven N. and STEIN, Jeremy C.: "The evolution of Buyout Pricing and Financial Structure in the 1980s" *Quarterly Journal of Economics* 108(2), May 1993, pp.313-357
- KESNER, Idalene F.; SHAPIRO, Debra L. and SHARMA, Anurag: "Brokering mergers: An agency theory perspective on the role of representatives" *Academy of Management Journal* 37, pp. 703-721
- KOHERS, Ninon and KOHERS, Theodor: "The Value Creation Potential of High-Tech Mergers" *Financial Analyst Journal* 56(3), May-June 2000, pp.40-50
- KUMMER, Donal R. and HOFFMEISTER, J. Ronald: "Valuation consequences of cash tender offers" *Journal of Finance* 33(2), May 1978, pp.505-516
- LAKONISHOK, Josef; SHLEIFER, Andrei and VISHNY, Robert W.: "Contrarian investment, extrapolation, and risk" *Journal of Finance* 49(5), December 1994, pp.1541-1578
- LUBATKIN, Michael: "Mergers and Performance of Acquiring Firms" *Academy of Management Review* 8, 1983 pp. 218-225
- MANDELKER, Gershon : "Risk and return: the case of merging firms" *Journal of Financial Economics* 1, 1974, pp. 303-335.
- MANNE, Henry G. "Mergers and the market for corporate control" *Journal of Political Economy* 73(2), pp. 110-120
- MARKOWITZ, Harry: "Portfolio Selection" *Journal of Finance* 7(1), March 1952, pp. 77-91
- MASCAREÑAS, Juan: *Fusiones y Adquisiciones de Empresas*. Madrid, McGraw Hill, 3<sup>rd</sup> edition, 2000, pp. 20-21
- MATSUSAKA, John G.: "Corporate Diversification, Value Maximization and Organizational Capabilities" *Journal of Business* 74(3), 2001, pp.409-431
- MELLE HERNANDEZ, Mónica: "Características diferenciales de la financiación entre las Pymes y las grandes empresas: Asimetrías Informativas, Restricciones Financieras y Plazos de Endeudamiento" *Papeles de Economía Española* 89/90, 2001, pp.140-166
- MORK, Randall; SHLEIFER, Andrei and VISHNY, Robert W.: "Do managerial objectives drive bad acquisitions?" *Journal of Finance* 45 (1), March 1990, pp.31-48
- MORCK, Randall and YEUNG, Bernard: "Why Firm diversify: Internalization vs Agency Behavior" forthcoming John HAND and Baruch LEV (ed.) *Intangible Assets* Oxford University Press.
- OPLER, Tim C. and WESTON, J. Fred: "The impact of takeovers on firm performance: evidence from the eighties" *Working paper UCLA*, 1993
- PARRINO, James D. and HARRIS, Robert S.: "Takeovers, management replacement, and post-acquisition operating performance: some evidence from the 1980s" *Bank of America Journal of Applied Corporate Finance* 11(4), Winter 1999, pp.88-97
- RAU, P. Raghavendra and VERMAELEN, Theo: "Glamour, value and the post acquisition performance of acquiring firms" *Journal of Financial Economics* 49, 1998, pp. 223-253
- ROLL, Richard: "The Hubris Hypothesis of Corporate Takeovers" *Journal of Business* 59 (2), April 1986, pp.197-216
- SAHLMAN, William A. and STEVENSON, Howard H.: "Capital Market Myopia" *Journal of Business Venturing* 1, 1985 pp. 7-30
- SCHIPPER, K. and THOMPSON, R.: "Evidence on the capitalized value of mergers activity for acquiring firm" *Journal of Financial Economics* 11, 1983, pp.85-119
- SCHMIDT, Dennis R. and FOWLER, Karen L.: "Post-acquisition financial performance and executive compensation" *Strategic Management Journal* 11(7), November-December 1990, pp. 559-570

- SERVAES, Henri: "Do takeover targets over invest?" *Review of Financial Studies* 7(2), summer 1994, pp. 253-277
- : "The Value of Diversification During the Conglomerate Merger Wave" *Journal of Finance* 51(4), 1996, pp. 1201-1225
- SHLEIFER, Andrei and VISHNY, Robert W.: "Value maximization and the acquisition process" *Journal of Economic Perspectives* 2(1), winter 1988, pp. 7-20
- : "Stock Market Driven Acquisitions" *National Bureau of Economic Research Working Paper* 8439, August 2001
- SIROWER, Mark: *The synergy trap: how companies lose the acquisition game*. New York, Free Press, 1997
- VILLALONGA, Belen:" Does diversification cause the "diversification discount"? *Working Paper*, Harvard University, 1999
- :" Diversification discount or premium? New evidence from the Business Information Tracking Series" *Journal of Finance* 59(2), April 2004, pp. 479-506



## APPENDIX I

### PE Ratio Formulation

Defining growth in year t as:

$$g_t = \frac{NI_t - NI_{t-1}}{NI_{t-1}}$$

$$NI_{t-1} = \text{Book Value of Equity}_{t-2} \times ROE_{t-1}$$

where  $NI_t$  is the Net Income in the year t,  $ROE_t$  is the Return on Equity in the year t

$$NI_t = (\text{Book Value of Equity}_{t-2} + \text{Retained Earnings}_{t-1}) \times ROE_t$$

Assuming that  $ROE_{t-2} = ROE_{t-1} = ROE$

$$g_t = [\text{Retained Earnings}_{t-1} / NI_{t-1}] \times ROE = \text{Retention Rate} \times ROE = b \times ROE$$

$$P_0 = \frac{DPS_1}{k_e - g_n} \longrightarrow \frac{P_0}{EPS_0} = \frac{\text{Payout Ratio} (1+g_n)}{k_e - g_n}$$

PE ratio can be built based on expected earnings

$$\frac{P_0}{EPS_1} = \text{Forward PE ratio} = \frac{\text{Payout Ratio}}{k_e - g_n}$$

$$\text{Payout Ratio} = 1 - g_n / ROE_n$$

$$\frac{P_0}{EPS_1} = \text{Forward PE Ratio} = \frac{1 - g_n / ROE_n}{k_e - g_n}$$

PE Ratio for a High Growth Firm:

$$P_0 = \frac{EPS_0 \times \text{Payout Ratio} \times (1+g) \left[ 1 - \frac{(1+g)^n}{(1+k_{e,hg})^n} \right]}{k_{e,hg} - g} + \frac{EPS_0 \times \text{Payout Ratio}_n \times (1+g)^n (1+g_n)}{(k_{e,st} - g_n) \times (1+k_{e,hg})^n}$$

$$\frac{P_0}{EPS_0} = \frac{\text{Payout Ratio} \times (1+g) \left[1 - \frac{(1+g)^n}{(1+k_{e,hg})^n}\right]}{k_{e,hg} - g} + \frac{\text{Payout Ratio}_n \times (1+g)^n (1+g_n)}{(k_{e,st} - g_n) \times (1+k_{e,hg})^n}$$

then,

$$\frac{P_0}{EPS_0} = \frac{\left[1 - \frac{g}{ROE_{hg}}\right] \times (1+g) \times \left[1 - \frac{(1+g)^n}{(1+k_{e,hg})^n}\right]}{k_{e,hg} - g} + \frac{\left[1 - \frac{g_n}{ROE_{st}}\right] \times (1+g)^n (1+g_n)}{(k_{e,st} - g_n) \times (1+k_{e,hg})^n}$$