

# Mergers and Acquisitions: Empirical Evidence in Chile

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# Outline

- Objectives
- Sample and Methodology
- Analysis of Result
- Conclusions

# Introduction

- The Objective of this study is to determine the impact of M&A on the wealth of bidders.
  - Considering only non-conglomerate
- There is abundant international empirical evidence on M&A both:
  - concerning the impact on wealth of stockholders (bidders and targets)
  - concerning the main motivations to carry them on.
- For the Chilean case there is no such research on both aspects.

# Sample and Methodology

- We consider Chilean companies that were involved in some process of merger, acquisition or control takeover, over the period 1993-2003.
- Stocks should have a minimum stock trade of 30 per cent over the estimation window, to run the market model.

# Sample and Methodology

- We run the market model using Dimson (1979) adjustment for non-synchronous trading.
- 16 non-conglomerate mergers were chosen for this study.
- We were not able to study changes in the target stockholders wealth since most of the target companies do not trade their stocks.

## List of Companies involved in the M&A

	Bidder	Target	Date
1	Sta. Isabel SA	Supermercados Multimarket	15/01/1996
2	Masisa	Tableros Nobel SA	30/04/1997
3	Banmedica SA	Intersanitas SA	12/08/1997
4	Masisa	Químicos Coronel y Aserraderos Aragón SA	16/01/1998
5	Embotelladoras Coca-Cola Polar SA	Embotelladora del Sol SA	27/02/1998
6	Emp. Eléctrica del Norte Grande SA	SEI Chile SA	09/03/1998
7	Compañía General de Electricidad S.A.	Empresa eléctrica Transnet S.A	31/01/2000
8	Aguas Andina (Emos)	Aguas Cordillera S.A.	31/05/2000
9	Santa Isabel.	Agas SA	16/10/2000
10	Enersis S.A.	Chilectra S.A./Compañía Eléctrica del Río Maipo S.A.	03/07/2001
11	S.A.C.I. Falabella.	The Home Depot International	25/10/2001
12	Compañía Cervecerías Unidas S.A.	Inversiones Trovador S.A.	13/05/2002
13	CAP S.A.	Sociedad Comercial Acindar Chile Limitada	13/09/2002
14	Empresas CMPC S.A.	Monte Aguila S.A	28/02/2003
15	Compañía General de Electricidad S.A.	Compañía Eléctrica del Río Maipú S.A	30/04/2003
16	S.A.C.I. Falabella	Sodimac	29/08/2003

## Events considered for the study

	Company	Quote Symbol	Type (a)	M/A (b)	Date ( c )
1	Sta. Isabel SA	STA ISABEL	NC-H	A	15/01/1996
2	Masisa	MASISA	NC-V	A	30/04/1997
3	Banmedica SA	BANMEDICA	NC-H	A	12/08/1997
4	Masisa	MASISA	NC-V	A	16/01/1998
5	Embotelladoras Coca-Cola Polar SA	KOPOLAR	NC-H	M	27/02/1998
6	Emp. Eléctrica del Norte Grande SA	EDEL NOR	NC-H	M	09/03/1998
7	Compañía General de Electricidad S.A.	CGE	NC-V	A	31/01/2000
8	Aguas Andina (Emos)	AGUAS	NC-H	A	31/05/2000
9	Santa Isabel.	STA ISABEL	NC-H	A	16/10/2000
10	Enersis S.A.	ENERSIS	NC-H	A	03/07/2001
11	S.A.C.I. Falabella.	FALABELLA	NC-H	A	25/10/2001
12	Compañía Cervecerías Unidas S.A.	CERVEZAS	NC-V	A	13/05/2002
13	CAP S.A.	CAP	NC-V	A	13/09/2002
14	Empresas CMPC S.A.	CMPC	NC-V	A	28/02/2003
15	Compañía General de Electricidad S.A.	CGE	NC-H	A	30/04/2003
16	S.A.C.I. Falabella	FALABELLA	NC-H	M	29/08/2003

(a): NC: Non-conglomerate; H: M&A of horizontal type, the firms operate in the same economic sector;  
V: M&A of vertical type, the firms operate in different stages of the chain production in an economic sector.

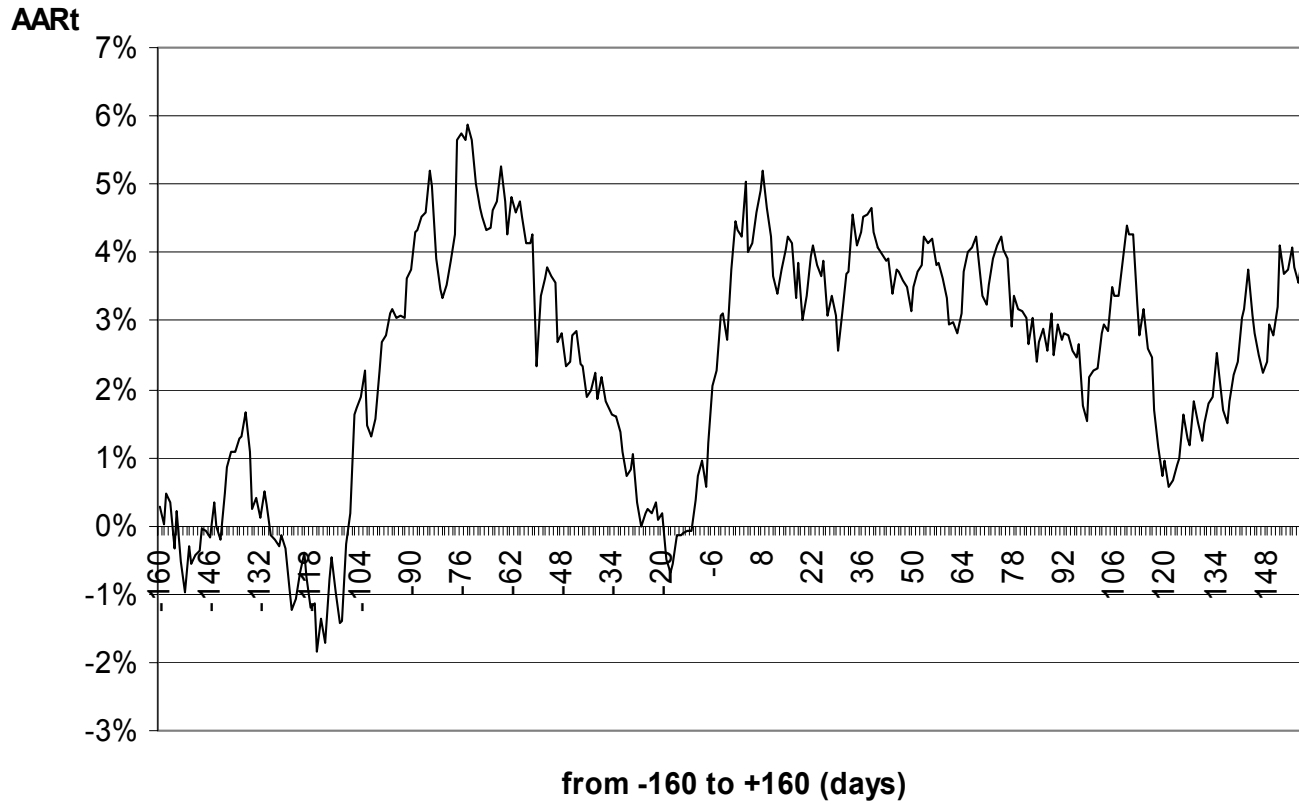
(b): A: Acquisition; M: Merger. (c): Announces date, that we denote as  $t=0$ .

# Analysis of Results

- 11 of the 16 announcements show positive cumulative abnormal return  $CAR(-1,+1)$ . This result is shown in panel A, table 1.
- the cumulative abnormal average return (CAAR) is 1.5 per cent, significant at a 95 per cent of confident level, (panel B, table1).



# Abnormal Average Returns (AAR<sub>t</sub>)



# Cumulative Abnormal Return (CARi)

Panel A: CARi (-1, +1) for each event.

Panel B: CAAR (-1, +1)

The t test is shown in parenthesis.

\* Statistically significant at 5 per cent level of confidence.

Panel A	
Event (company)	CARi (-1,+1)
Aguas	-0.97%
	[-0.277]
banmedica1	1.18%
	[0.489]
Cap	2.08%
	[0.589]
Cervezas	-0.63%
	[-0.283]
cge2	0.02%
	[0.008]
cge3	2.61%
	[1.088]
Cmpc	0.47%
	[0.319]
Edelnor	14.41%
	* [3.088]

Event (company)	CARi (-1,+1)
Enersis	1.08%
	[0.698]
falabella1	-2.51%
	[-0.871]
falabella2	-3.72%
	* [-2.596]
Kopolar	1.11%
	[0.556]
Masisa1	3.70%
	[1.196]
Masisa2	1.18%
	[0.414]
staisabel1	-0.01%
	[-0.003]
staisabel2	4.05%
	[1.220]

Panel B	
CAAR(-1,+1)	1.50%
Test t CAAR	*[2.15]

# Analysis of Results

- we study the origins of this potential gain for acquisitions.
  - The gain could result from a lower M&A ex-post discount rate or from higher expected cash flows from operational synergies.

## Analysis of changes in beta and Standard deviation

Event (company)	Betas ex-ante	Betas ex-post	S.D. ex-ante	S.D. ex-post
Aguas	0.82	0.74	0.02	0.02
Banmedica1	0.73	0.52	0.01	0.02
Cap	1.27	1.83	0.02	0.03
Cervezas	1.24	1.52	0.01	0.02
cge2	1.10	0.60	0.01	0.01
cge3	0.64	0.89	0.01	0.01
Cmpc	1.02	1.36	0.01	0.01
Edelnor	1.04	0.86	0.03	0.02
Enersis	1.66	1.78	0.01	0.02
falabella1(**)	n.a	n.a	n.a	n.a
falabella2	1.55	1.79	0.01	0.01
Kopolar	0.32	0.26	0.01	0.01
masisa1	1.60	1.20	0.02	0.02
masisa2	1.31	1.56	0.02	0.02
staisabel1	1.45	1.10	0.02	0.02
staisabel2	1.30	0.83	0.02	0.02
Average change	0.01			
Test Dif. Betas	0.34 (*)			
Test Dif. S.D.	0.62 (*)			

(\*) Wilcoxon signed test.

(\*\*)For this event was impossible to compare since it was an announcement made in August 29, 2003.

# Analysis of Results

- We do not find significant changes neither in betas nor in standard deviations.
- We compute some ratios to look at the firm operational efficiency.
  - Results show decrease only in Cost of sales (6.4 per cent).

## Change in the ratio Cost of Sales (CS) / Sales

Event (company)	Year to compare	
	-2	2
Aguas	39.32%	35.92%
banmedica2	72.96%	20.12%
Cge3	66.58%	68.56%
edelnor	90.28%	91.43%
enersis	70.32%	70.22%
falabella2	69.36%	69.25%
kopolar	63.62%	63.39%
masisa1	70.26%	61.22%
masisa2	67.78%	65.09%
staisabel1	80.65%	79.88%
staisabel2	79.88%	75.92%
<b>Average change</b>	<b>-6.34%</b>	
Test	2.31 (*)	

Event (company)	Year to compare	
	-1	1
Aguas	42.70%	31.06%
Banmedica1	73.78%	77.27%
Cap	86.57%	84.19%
Cervezas	49.06%	49.26%
Cge3	65.96%	67.69%
Edelnor	82.00%	68.14%
Enersis	67.75%	69.60%
falabella2	69.18%	68.38%
Kopolar	61.35%	62.23%
masisa1	66.95%	65.09%
masisa2	70.26%	64.11%
staisabel1	79.78%	79.06%
staisabel2	77.91%	74.63%
Average change	-2.5%	
Test	1.29 (*)	

(\*) Wilcoxon signed test.

## Change in the ratio

### Management and Marketing Expenses (MM) / Sales

	Years to compare	
	-2	2
Event (company)	-2	2
Aguas	23.14%	20.12%
banmedica2	20.47%	20.04%
Cge3	10.66%	10.21%
edelnor	5.14%	8.11%
enersis	10.78%	7.21%
falabella2	20.96%	19.76%
kopolar	25.16%	26.75%
masisa1	18.83%	15.17%
masisa2	16.89%	15.99%
staisabel1	14.80%	22.23%
staisabel2	22.23%	26.95%
Average change	0.32%	
Test	0.09 (*)	

	Year to compare	
	-1	1
Event (company)	-1	1
Aguas	29.20%	23.26%
Banmedica1	20.09%	20.10%
Cap	4.93%	4.53%
Cervezas	49.06%	49.26%
cge3	12.49%	10.35%
Edelnor	6.26%	8.43%
Enersis	12.15%	8.98%
falabella2	21.19%	19.87%
Kopolar	27.66%	27.56%
masisa1	14.86%	15.99%
masisa2	18.83%	15.86%
staisabel1	15.79%	18.51%
staisabel2	23.88%	26.05%
Average change	-0.59%	
Test	0.10 (*)	

(\*) Wilcoxon Signed test

# Conclusions

- We find a Cumulative Average Abnormal Return (CAAR) of 1.5% in the window -1 and +1.
- Considering a positive CAAR, we can also conclude that there is no competitive market for corporate control.
- Our results are consistent with Chilean M&A mainly motivated by synergetic reasons.