The Announcement Effect of Bond and Equity Issues:

Evidence from Chile.

Augusto Castillo

First Draft: May, 2003
This Version: January, 2004

Abstract

This paper analyzes the impact of security offering announcements on stock prices for a sample of 172 issues of securities in the Chilean financial market, during the 1993-2002 period. The sample is composed by 116 equity issues and 56 corporate bond issues. During the same period the SVS (Superintendencia de Valores y Seguros) authorized a total of 562 security issues in Chile, but the final sample was reduced to 172 issues after excluding those companies where not enough trading information was available to perform the study. The main objective of the paper is to verify if the announcement of security offerings has the same impact in Chile as in other countries such as the U.S., where these kind of studies have been performed. To my knowledge this is the first study addressing this issue with Chilean data. We will also try to identify variables that could help to explain differences in the reaction to the issue announcement across issues.

1. - Introduction.

This paper looks at the impact in the market value of the stocks of a company, generated by the announcement of debt or equity issues of that firm. The study focus on announcements made by Chilean companies that were listed in the local stock market at the time of the announcement.

Even though there is an extensive amount of research available with very compelling theories propose the effects that those announcements should have, and many authors have reviewed the empirical evidence in developed markets such as the American, there is no previous known study reviewing this empirical evidence for the Chilean financial market.

What effect should we expect the announcement of a security issued by a company to have on equity prices ? There is no single answer to this question since different authors have developed competing theories. From the point of view of the impact of the announcement of bond issues, and Following Eckbo (1986), we can group those theories in three:

(i) The zero impact hypotheses proposed by Modigliani and Miller (1958), and by Miller (1977) basically state that the leverage ratio has no effect on the firm's market value. This implies that the announcement of a bond issue, or the announcement of an equity issue should generate no abnormal returns.

(ii) The positive impact hypotheses, proposed among others by Modigliani and Miller (1963), Kraus and Litzenberger (1973), Brennan and Schwartz (1978), DeAngelo and Masulis (1980), Myers (1977), Jensen and Meckling (1976), Galai and Masulis (1976), Leland and Pyle (1977), and Heinkel (1982), state that debt has a positive impact in a firm's market value.

Modigliani and Miller (1963) assume that there is a tax shield generated by debt that makes the value of the company to increase with the proportion of debt over assets. Kraus and Litzenberger (1973), Brennan and Schwartz (1978), and De Angelo and Masulis (1980) assume there is a trade off between a tax advantage of debt and a cost of financial distress. Myers (1977) assumes a trade off between a tax advantage of debt and agency costs and adverse managerial effects of debt. Jensen and Meckling (1976) assume a tradeoff between agency costs of debt and agency costs of equity. Finally both Leland and Pyle (1977) and Heinkel (1982) present models with information asymmetries where managers posses superior information relative to investors. All these models imply that the announcement of a bond issue should generate a positive abnormal return, and by the same logic the announcement of an equity issue, that would reduce the proportion of assets financed with debt, should generate a negative abnormal return;

(iii) The negative impact hypotheses, proposed among others by Miller and Rock (1985), Myers and Majluf (1984), and Covitz and Harrison (1999). Miller and Rock (1985) present an asymmetric information model where a larger than expected external financing reveals a lower than expected generated cash flow. Myers and Majluf (1984) present an asymmetric information model where facing an issue of stocks or bonds the uninformed investors will ask for a discount to hedge against the risk of buying an overvalued security. Covitz and Harrison (1999) develop and test a recursive model of debt issuance and rating migration, where rating agencies reveal information over time. This adverse selection model assumes that firms possess private information and use it to time their bond issuance. As a result, debt issuance provides a negative signal of debt rating migration. They also predict that the signal strengthens with economic downturns. From these theories we conclude that the announcement of a risky debt issue should have a negative impact on a firm’s market value, and that the announcement of an equity issue should also have an even bigger negative impact on that company's market value.

Empirical evidence for the American Market generally shows that the announcement of equity and convertible debt issues results in stock price decreases, while the announcement of straight debt issues generates either stock price increases or no significant impact on stock prices. The evidence found by Asquith and Mullins (1986), Dann and Mikkelson (1984), Eckbo(1986), Linn and Pinegar (1988), Masulis and Korwar (1986), Mikkelson and Partch (1986), Schipper and Smith (1986), Szewczyk (1992), Jain (1992), Manuel, Brooks, and Schadler (1993), and Shyam-Sunder (1991) among others, can be summarized as follows:

- The announcement of equity issues generates more negative abnormal returns than the announcement of any other kind of securities. Those announcements generate most of the time negative and significant abnormal returns.
- Abnormal returns associated with the announcement of issues of convertible debt are also negative and significant.
- Abnormal returns associated with the announcement of issues of straight debt are either positive or negative, but in general they are not significantly different from zero.

Four studies provide empirical evidence about the association between bond rating and the stock price reaction to bond issues. Mikkelson and Partch (1986), Eckbo (1986), and Shyam-Sunder (1991) all conclude that there is no statistically significant difference in stock price reactions to debt issues across rating classes.

Castillo (2001) finds that announcement of offerings of Junk Bonds have either a negative and significant impact on stock returns (when convertible bonds are offered) or no significantly different from zero impact on stock returns (when straight bonds are issued).

There is not much evidence on the impact of offering announcements of debt and equity in Chile. Saens (1999) finds positive abnormal return to the announcement of American Depositary Receipts (ADR). These American Depositary Receipts correspond to equity offerings of Chilean companies in a foreign (the American) market. There is no other evidence available on the impact that local debt or equity offerings had in the value of the equity of companies trading in the Chilean market.

A study by Celis and Maturana (1998) look at the impact of Initial Public Offerings in Chile but they focus in the short and long term abnormal return presented by companies following an IPO. Since they look at companies that are issuing equity by the first time, they are not able of computing the market response to the announcement of those first issues.

In this paper I examine the impact of the announcement of issues of bonds and equity on the stock prices of the issuing firms for 100 issues made between 1993 and 2002. The firms in the sample correspond to companies listed in the Chilean stock markets at the moment of the announcement. The rest of this paper is organized as follows. Section 2 describes the main characteristics of the issues of debt and equity observed in the Chilean market during the period, and describes how the sample of issues to be employed in the study was selected. Section 3 presents an outline of the methodologies applied to perform the event study. The empirical results are shown in section 4, while section 5 concludes the paper.

2.- Characteristics of Issues of Debt and Equity in Chile, and Sample Design.

2.1 Characteristics of Debt and Equity Offerings in Chile.

Bond and equity offerings of public companies have to be previously approved by the Superintendencia de Valores y Seguros (SVS from now on), a government organization.

2.1.1 Bond Offerings

During the 1993-2002 period a total of 154 bond issues of public companies were approved by the SVS, in the Chilean market. The number of offerings increased by the end of the period, with more than 51% of those offerings concentrated in the last two years, as shown by Figure 1. Figure 2 shows the total amount of offerings in Chilean UF year by year. Again the offerings in terms of amount of money issued shows an enormous increment in the second half of the period, with the last two years accounting for more than 58% of the total amount of UF issued over the entire 10 years period. Table 1 shows number of issues per year, amount issued per year, and average size of the issues per year. There we see that the average size of the issues are really small during the 1995-1996 period, and in general bigger during the second half of the period.

2.1.2 Equity Offerings

During the 1993-2002 period a total of 408 equity issues of public companies were approved by the SVS, in the Chilean market. The number of offerings per year shows a small increase during 1996 and 1997, and an important reduction during the 2000-2002 period, as shown by Figure 3. Figure 4 shows the total amount of offerings (in Chilean UF) year by year. The only clear pattern observed here is an increase in the total amount of equity issued per year in the 1996-1999 period, compared to the 1993-1995 period, followed by a significant reduction of equity issued during the 2001-2002 period. Table 2 shows the number of equity issues per year, the amount of equity issued per year (in

Chilean UF) , and the average size of the issues per year(in Chilean UF). There we see that the average size of the issues show no clear tendency during the period.

If we look at the aggregated amount of issues of equity and debt during the 1993-2002 period, we appreciate a clear tendency to increases in the total amount issued year by year. We also appreciate that years with small amounts of equity issued are usually those with big amounts of debt issued. The same happens the other way around, suggesting a clear substitution effect between these two sources of funds for the companies.

2.2 Criteria to select the sample

The final sample considered in this study is composed by 56 bond offerings and 116 equity offerings. The steps followed to select the sample were the following:

(i) We defined the event to be studied as the announcement made by the SVS of the approval of the issue.

(ii) We verified if the companies issuing were traded in the local stock exchange at the time the issue was approved.

(iii) An event window and an estimation window were defined and we verified that enough trading information were available for those companies in each of the windows.

All the issues that satisfy those conditions were included in the final sample.

2.3 Characteristics of the sample

Tables 3 and 4 summarize information regarding number of issues, amount of money issued, and average size of the issues of securities. In Table 3 we see that bond offerings included in the final sample show similar characteristics in terms of time distribution and average size as the total sample of bond offerings described in table 1. In Table 4 we see that the average size of the equity issues of the final sample is much bigger than the average size of the issues in the original sample of equity issues, described in Table 2.

3. – Methodology.

3.1. –Measuring Abnormal Returns.

The effect of the announcement can be estimated as the deviation of the return of each security from its normal return on the dates around the event. For each company i and period t we have

$$e_{it} = R_{it} - E[R_{it} \mid X_t] \qquad (1)$$

where e_{it} is the abnormal return of company i in period t, R_{it} is the return of that firm in that period, E[R_{it} | X_t] is the normal or expected return for company i in period t, and X_t corresponds to the conditioning information for the model of normal performance.

The normal return can be modeled in different ways[1]. Two of the most commonly used models are (i) the Constant Mean Return Model, where X_t corresponds to the average return of the security over the estimation window, and (ii) the Market Model, where X_t corresponds to the return of the market portfolio in period t, and a stable linear relationship is assumed to exist between the market portfolio return and the return of the security.

The Constant Mean Return Model is represented by

$$R_{it} = m_i + e_{it} \qquad (2)$$

$$E[e_{it}] = 0 \qquad Var[e_{it}] = s^2_{ei}$$

where m_i corresponds to the mean return of security i, and e_{it} represents the deviation from the mean for security i in period t. As Brown and Warner (1985)

[1] For a detailed description of the alternative methods to model normal returns see Campbell, Lo and Mackinlay (1997).

show, this is probably the simplest model for normal returns, but it usually gives results that are very similar to the ones generated by more sophisticated models over short time intervals.

The Market Model has the following linear specification

$$R_{it} = a_i + b_i R_{mt} + e_{it} \qquad (3)$$

$$E[e_{it}] = 0 \qquad Var[e_{it}] = s_{ei}^2$$

where R_{it} and R_{mt} are the the return on period t of security i and the return of the market portfolio on that same period, and e_{it} corresponds to the disturbance term. The parameters of the Market Model are $a_i, b_i, and s_{ei}^2$. The Market Model removes the portion of the returns that are related to the movements of the market. This reduces the variance of abnormal returns, and therefore increases the ability of the model to detect event effects, relative to the Constant Mean Return Model.

The normal return has also been modeled using more constrained models such as the Capital Asset Pricing Model (CAPM)[2] and the Arbitrage Pricing Theory model (APT)[3]. The CAPM was extensively used in the 1970's, but the validity of both this model and of the restrictions we need to impose are not universally accepted today. On the other hand a properly chosen APT model does not impose false restrictions on mean returns, but complicates the implementation of an event study and does not offer much advantage relative to the unrestricted market model.

Brown and Warner (1980) compare the different methodologies used in event studies to measure security price performance, and conclude that beyond a simple one factor market model, there is no evidence that more complicated

[2] Sharpe (1964) and Lintner (1965) developed the CAPM.

methodologies convey any benefit. In fact they conclude that those more sophisticated methodologies can make the researcher worse off[4]. Brown and Warner (1985) confirm the conclusions using daily instead of monthly returns.

Considering the arguments given above, in this paper I assume that the Market Model properly describes the normal return of securities. I also assume here that the CRSP value-weighted index is a reasonable proxy for the market portfolio. Even though they are not reported here, very similar results were obtained when using the S&P500 index as the market portfolio.

3.2. – Estimation of the Market Model and the Dimson's Model Parameters. Computation of Abnormal Returns.

3.2.1.- The Market Model:

In this section I follow closely the event study methodology described by Campbell, Lo, and Mackinlay (1997). Some notation must be defined here. Let t = 0 be the event date, T_1 = -190 (190 trading days before the event) to T_2 = -11 (11 trading days before the event) be the estimation window, and T_2 +1 = -10 (10 trading days before the event) to T_3 = +10 (10 trading days after the event) be the event window. Define $L_{21} = T_2 - T_1$, and $L_{32} = T_3 - T_2$ as the lengths of the estimation window and the event window respectively[5]. Figure 5 shows the estimation period and the event window schematically.

We start by estimating the Market Model parameters over the estimation period. The returns from the estimation window can be represented with the regression system

$$R_i = a_i + b_i R_m + e_i \qquad (4)$$

[3] Ross (1976) developed the APT.

[4] Brown and Warner (1980) compare the mean adjusted return model, the market adjusted return model, the market model, the Fama-MacBeth model, and the control portfolio model.

[5] In this paper L21 = 180 trading days, and L32 = 21 trading days.

where R_i is the vector of company i returns during the estimation window period, a_i represents a vector composed by the intercept parameter a_i, b_i is the slope parameter for firm i, and R_m is a vector of market return observations.

The parameters are estimated by ordinary least squares (OLS). Brown and Warner (1985) explored how potential problems such as (i) non-normality of returns and excess returns, (ii) bias in OLS estimates of market model parameters in the presence of non-synchronous trading, (iii) autocorrelation in daily excess returns, and (iv) variance increases on the days around an event, affected the event study methodologies. They compared the OLS market model to other alternatives such as the Scholes - Williams (1977) and the Dimson (1979) methodologies. Their results reinforced the conclusion of previous work with monthly data: methodologies based on the OLS market model and using standard parametric tests are well specified under a variety of conditions, and alternative methodologies convey no clear-cut benefit in an event study. In this paper we will use the traditional market model methodology, but since the Dimson (1979) methodology seems to be particularly recommended in illiquid markets where absence of every day's trading can be a serious problem, we will also use this alternative methodology.

Using the OLS parameter estimates we can now compute the vector $\hat{e}_i^*$ of abnormal returns over the event window as

$$\hat{e}_i^* = R_i^* - \hat{a}_i - \hat{b}_i R_m^* \quad (5)$$

where R_i^* corresponds to a vector of event window returns, $\hat{a}_i$ *and* $\hat{b}_i$ represent the previously estimated parameters, and R_m^* is a vector of market return observations. Tables 5a and 5b report a summary of the $\hat{a}_i$ *and* $\hat{b}_i$ parameter estimates for the firms in the final sample of bond and equity issues, and their significance.

3.2.2.- The Dimson Model:

A usual problem in illiquid markets such as the Chilean, is that only a small fraction of stocks would trade every day. Computing betas for the market model in such a case presents a serious drawback, since estimated betas of infrequently traded stocks would be biased downwards. Dimson (1979) developed a methodology that allowed him to solve the problem and to obtain unbiased betas. His methodology is inspired in the notion that, when a stock that has not traded lately trades again, the price of the last trade will capture at the same time both past and present true returns.

The methodology requires running the following regression to compute the parameters using the estimation window data:

$$R_{it} = a_i + \sum_{k=-n}^{n} b_{i,k} R_{m,t+k} + e_{it} \qquad (6)$$

where the dependent variable is the return of a given stock at a given day and the independent variables are not only the contemporaneous market return (as with the market model) but also some leads and lags of the market return.[6] Equation (6) would replace equation (4) from the previous section. Once the 2n+1 betas of the regression are computed, the procedure requires to compute the unbiased beta estimate for each stock in the following way:

$$b_i = \sum_{k=-n}^{n} b_{i,k} \qquad (7)$$

where the beta of each stock is obtained as the sum of the betas computed as described in equation (6). Using the alphas from equation (6) and the betas from equation (7) we can compute the normal return of each stock during the event window, and obtain the abnormal returns on each day of the event window using equation (4) in the same way it was used when we were applying the traditional market model.

3.3. – Aggregation of Abnormal Returns.

In order to be able to draw inferences for the event, the abnormal returns must be aggregated both across securities and through time[7]. To aggregate across securities we define the (L_{32} x 1) vector of average abnormal returns AR as

$$AR = \frac{1}{N}\sum_{i=1}^{N}\hat{e}_i^* \tag{8}$$

where N is the number of securities in the sample. The variance of AR, under the assumption of no correlation of excess returns across securities, is computed as

$$Var[AR] = V = \frac{1}{N^2}\sum_{i=1}^{N}V_i \tag{9}$$

where V_i represents the conditional covariance matrix of $\hat{e}_i^*$. We can now aggregate the average abnormal returns through time. Define $CAR(t_1,t_2)$ as the cumulative average abnormal return from t_1 to t_2, where $T_2 + 1 \le t_1 \le t_2 \le T_3$. Then we have

$$CAR(t_1,t_2) = g'AR \tag{10}$$

where $CAR_i(t_1,t_2)$ would follow a normal distribution process with mean zero and variance given by

$$Var[CAR(t_1,t_2)] = \bar{s}^2(t_1,t_2) = g'Vg \tag{11}$$

In both (8) and (9),*g* represents a (L_{32} x 1) vector with ones in positions t_1 - T_2 to t_2 - T_2 and zeros elsewhere. We can now test the null hypothesis of zero cumulative abnormal returns using t_{CAR} where

$$t_{CAR}(t_1,t_2) = \frac{CAR(t_1,t_2)}{\bar{s}^2(t_1,t_2)^{1/2}} \overset{a}{\sim} N(0,1) \tag{12}$$

---

[6] The exact number of leads and lags to be considered, that we will denote as n here, must be determined using an econometric procedure.

[7] The aggregation presented here assumes that there is no overlapping in the event windows of the included securities. This would result in independent abnormal returns and cumulative abnormal returns across securities. We will correct for clustering in section 4.2.1.

3.4. – Correcting for Clustering:

The methodology described in the previous section assumed that abnormal returns are uncorrelated across securities which is a reasonable assumption when there is no overlapping among the event windows. The sample in this study does present some degree of overlapping of the windows, so we have to correct for clustering to check if the results change. Both Schipper and Thompson (1983), and Malatesta and Thompson (1985) propose to handle clustering by analyzing the abnormal returns on a security by security basis. Their approach has the advantage of being able to handle partial clustering, where the event dates are not exactly the same across firms, but there is some overlap among the event windows. The procedure requires calculation of the cumulative abnormal returns (CAR) and their significance (t_{CAR}) company by company, and the computation of the average t_{CAR} for the companies in the sample to test the hypothesis that this average t-statistic is zero. If the hypothesis is rejected we conclude that abnormal returns do exist

3.5. – A Non Parametric Test.

The methodology and tests for abnormal returns applied up to here were parametric. The disadvantage of the parametric tests is that they are based in the assumption that we know the underlying model that determines the normal return that a given security should present, and therefore we are really measuring properly the abnormal returns of those securities during the event window.

In this section I describe a non parametric rank test proposed by Corrado (1989). This rank test solve the problem faced by parametric tests and at the same time is well specified even when the distribution of abnormal returns is skewed.

To implement the rank test we need for each security in the sample to rank the L_{32} = 21 abnormal returns in the event window from 1 to 21. Under the null hypothesis of no abnormal returns during the event day, the expected rank for the abnormal return on that day is $(L_{32}+1)/2 = 11$. The tests statistic for the null hypothesis of no abnormal return on event day zero is

$$J_4 = \frac{1}{N}\sum_{i=1}^{N}(K_{i0} - \frac{L_2+1}{2}) / S(L_2) \tag{13}$$

with

$$S(L_2) = \sqrt{\frac{1}{L_2}\sum_{t=T_2+1}^{T_3}(\frac{1}{N}\sum_{i=1}^{N}(K_{it} - \frac{L_2+1}{2}))^2} \tag{14}$$

where K_{it} represents the rank of the abnormal return of security i on day t. Tests of the null hypothesis can be implemented using the result that the asymptotic null distribution of J_4 is standard normal.

4. - Empirical Results

4.1. – Analysis of Abnormal Returns and Cumulative Abnormal Returns Using the Traditional Market Model:

Table 5 shows the impact of the bond issue announcements using the traditional market model. The effect of the announcement is negative but not significant for both AR and CAR over the event window. This result is consistent with most of the empirical evidence available from studies in the US market and other developed markets.

Table 6 shows the impact of the equity issue announcements using the traditional market model. The effect of the announcement is negative and not significant if we look at the daily AR over the event window, but the CAR over the sub-period from day 0 to day 2 is negative and significant[8]. Again the results are consistent

[8] Given that we are using the day the SVS authorized the issue as day 0 in the event window, it makes sence to expect that the market would be informed at day 0 some times and at days 1 or 2 in other cases.

with most of the empirical evidence from previous studies in developed countries.

4.2. – Analysis of Abnormal Returns and Cumulative Abnormal Returns Using the Dimson Model:

Table 7 shows the impact of the bond issue announcements using the Dimson model. Again, the effect of the announcement is negative but not significant for both AR and CAR over the event window. Table 8 shows the impact of the equity issue announcements using the Dimson model. Again, the effect of the announcement is negative and not significant if we look at the daily AR over the event window, but the CAR over the sub-period from day 0 to day 2 is negative and significant. The results with both methodologies are very similar not only for the bond issues sample but also for the equity issues sample.

4.3. - Correcting for Clustering:

To be done.

Preliminary results show that 70 out of the 116 equity issue announcements (60% of them) presented negative abnormal returns on day 0. From day -10 to day 10 the CAR is negative in 69 of the announcements (59% of them). For the bond issue announcements, 32 out of the 56 (57% of them) presented negative abnormal returns on day 0. . From day -10 to day 10 the CAR is negative in 34 of the announcements (61% of them).

4.4. – A Non Parametric Test. Will be done by June 2004.

4.5. – Cross Section Analysis of Abnormal Returns Will be done by June 2004.

5. - Summary and Conclusions Will be done by June 2004.

References

Asquith, P., and D.W. Mullins, 1986, "Equity Issues and Offering Dilution", Journal of Financial Economics 15, 61-89.

Brennan, M.J., and E.S. Schwartz, 1978, "Corporate Income Taxes, Valuation, and the Problem of Optimal Capital Structure", Journal of Business 51, 103-114.

Brown, S., and J.B. Warner, 1980, "Measuring security Price Performance", Journal of Financial Economics 8, 205-258.

Brown, S., and J.B. Warner, 1985, "Using Daily Stock Returns. The Case of Event Studies", Journal of Financial Economics 14, 3-31.

Campbell, J., A. Lo, and C. MacKinlay, 1997, "The Econometrics of Financial Markets, Chapter 4: Event Study Analysis", Princeton University Press.

Castillo, A., 2001, "The Announcement Effect of Junk Bond Issues: An Analysis of the 1976-1989 Period", Estudios de Administración, Volúmen 8, Número 2, 41-73.

Celis, C., and G. Maturana, 1998, "Initial Public Offerings in Chile", Abante, Volúmen 1, Número 1, 7-31.

Corrado, C., 1989, "A Nonparametric Test for Abnormal Security Price Performance in Event Studies", Journal of Financial Economics 23, 385-395.

Covitz, D., and P. Harrison, 1999, "The Timing of Debt Issuance and Rating Migration: Theory and Evidence", The Federal Reserve, Washington D.C.

Dann, L., and W.H. Mikkelson,1984, "Convertible Debt Issuance, Capital Structure Change and Financing-Related Information: Some new Evidence", Journal of Financial Economics 13, 157-186.

De Angelo, H., and R.W. Masulis, 1980, "Optimal Capital Structure Under Corporate and Personal Taxation", Journal of Financial Economics 8, 3-30.

Dimson, E., 1979, "Risk Measurement when Shares are Subject to Infrequent Trading", Journal of Financial economics, VII, 197-226.

Eckbo, B.E., 1986, "Valuation Effects of Corporate Debt Offerings", Journal of Financial Economics 15, 119-151.

Galai, D., and R.W. Masulis, 1976, "The Option Pricing Model and the Risk Factor of Stock", Journal of Financial Economics 3, 53-81.

Heinkel, R., 1982, "A Theory of Capital Structure Relevance Under Imperfect Information", Journal of Finance 37, 1141-1150.

Jain, P.C., 1992, "Equity Issues and Changes in Expectations of Earnings by Financial Analysts", Review of Financial Studies, Volume 5, Issue 4, 669-683.

Jensen, M.C., and W. Meckling, 1976, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", Journal of Financial Economics 3, 306-360.

Kraus, A., and R. Litzenberger, 1973, "A State Preference Model of Optimal Financial Leverage", Journal of Finance 28, 911-921.

Leland, H., and D. Pyle, 1977, "Information Asymmetries, Financial Structure and Financial Intermediaries", Journal of Finance 32, 371-387.

Linn, S., and J.M. Pinegar, 1988, "The effect of Issuing Preferred Stock on Common and Preferred Stockholder Wealth", Journal of Financial Economics 22, 155-184.

Malatesta, P., and R. Thompson, 1985, "Partially Anticipated Events: A Model of Stock Price Reactions with an Application to Corporate Acquisitions", Journal of Financial Economics 14, 237-250.

Manuel, T.A., L.D. Brooks, and F.P. Schadler, 1993, "Common Stock Price Effects of Security Issues Conditioned by Current Earnings and Dividend Announcements", Journal of Business, Volume 66, Issue 4, 571-593.

Masulis, R.W., and A.N. Korwar, 1986, "Seasoned Equity Offerings: An Empirical Investigation", Journal of Financial Economics 15, 91-118.

Mikkelson, W.H., and M. Partch, 1986, "Valuation Effects of Security Offerings and the Issuance Process", Journal of Financial Economics 15, 31-60.

Miller, M.H., 1977, “Debt and Taxes”, Journal of Finance 32, 261-275.

Miller, M.H., and K. Rock, 1985, “Dividend Policy Under Asymmetric Information”, Journal of Finance 40, 1031-1051.

Modigliani, F., and M. Miller, 1958, “The Cost of Capital, Corporation Finance, and the Theory of Investment”, American Economic Review 48, 261-297.

Modigliani, F., and M. Miller, 1963, “Corporate Income Taxes and The Cost of Capital: A Correction”, American Economic Review, 433-443.

Myers, S.C., 1977, “Determinants of Corporate Borrowing”, Journal of Financial Economics 5, 147-175.

Myers, S.C., and N. Majluf, 1984, “Corporate Financing and Investment Decisions when Firms have Information that Investors do not have”, Journal of Financial Economics 13, 187-221.

Parisi, F., and D. Pérez, 2000, “Cambios en el rating de Bonos y su Efecto en los Precios Accionarios: El Caso Chileno.”, Abante, Volumen 3, Número 2, 249-273.

Saens, R., 1999, "Premia in Emerging Market ADR Prices: Evidence from Chile, Abante, Volúmen 2, Número 1, 51-70.

Schipper, K., and A. Smith, 1986, “A Comparison of Equity Carve-Outs and Seasoned Equity Offerings: Share Price Effects and Corporate Restructuring”, Journal of Financial Economics 15, 153-186.

Schipper, K., and R. Thompson, 1983, “The Impact of Merger Related Regulations Using Exact Test Statistics”, Journal of Accounting Research 21, 184-221.

Sharpe, W., 1964, “Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk”, Journal of Finance 19, 425-442.

Sholes, M., and J Williams, 1977, “Estimating Betas from Non – Synchronous Data”, Journal of Financial Economics, V, 309-327.

Shyam-Sunder L., 1991, “The Stock Price Effect of Risky Versus Safe Debt”, Journal of Financial and Quantitative Analysis, Volume 26, Issue 4, 549-558.

Szewcyk, S.H., 1992, “The Intra-Industry Transfer of Information Inferred from Announcements of Corporate Security Offerings”, Journal of Finance, Volume 47, Issue 5, 1935-1945.

Table 1
Bond Offerings in The Chilean Market*, 1993-2002

Year	Number of Issues	Total Amount**	Average Size of Issues**
1993	5	10.949,8	2.190,0
1994	12	26.230,3	2.185,9
1995	6	3.580,0	596,7
1996	5	6.332,0	1.266,4
1997	7	2.271,0	324,4
1998	7	31.262,3	4.466,0
1999	12	48.261,6	4.021,8
2000	21	57.330,7	2.730,0
2001	42	127.276,2	3.030,4
2002	37	135.207,6	3.654,3
Total Period	154,00	448.701,5	2.913,6

* Source: Superintendencia de Valores y Seguros de Chile (SVS)
** In thousands of UF

Table 2
Equity Offerings in The Chilean Market*, 1993-2002

Year	Number of Issues	Total Amount**	Average Size of Issues**
1993	43	51.644,1	1.201,0
1994	43	49.529,9	1.151,9
1995	48	52.370,9	1.091,1
1996	52	83.294,2	1.601,8
1997	52	75.840,4	1.458,5
1998	43	74.719,2	1.737,7
1999	44	102.819,1	2.336,8
2000	33	62.576,0	1.896,2
2001	25	15.800,8	632,0
2002	25	28.272,5	1.130,9
Total	**408**	**596.867,2**	**1.462,9**

* Source: Superintendencia de Valores y Seguros de Chile (SVS)
** In thousands of UF

Table 3
Bond Offerings Considered in the Sample*, 1993-2002

Year	Number of Issues	Total Amount**	Average Size of Issues**
1993	1	8.243,3	8.243,3
1994	5	12.533,0	2.506,6
1995	1	900,0	900,0
1996	1	2.500,0	2.500,0
1997	0	0,0	0,0
1998	2	9.200,0	4.600,0
1999	6	18.232,6	3.038,8
2000	13	38.857,2	2.989,0
2001	15	48.804,7	3.253,6
2002	12	44.270,1	3.689,2
Total Period	56	183.540,8	3.277,5

* Source: Own elaboration
** In thousands of UF

Table 4
Equity Offerings Considered in the Sample*, 1993-2002

Year	Number of Issues	Total Amount**	Average Size of Issues**
1993	12	22.276,4	1.856,4
1994	10	18.514,2	1.851,4
1995	16	29.489,7	1.843,1
1996	11	28.757,8	2.614,3
1997	11	15.121,8	1.374,7
1998	13	30.786,0	2.368,2
1999	16	78.565,6	4.910,4
2000	15	57.598,0	3.839,9
2001	6	10.314,5	1.719,1
2002	6	25.842,7	4.307,1
Total Period	116	317.266,8	2.735,1

* Source: Own elaboration
** In thousands of UF

Table 5

Abnormal Returns Around the Bond Issue Announcements

(The Traditional Market Model)

Day	AR(%)	t statistic	CAR(%)	t statistic
-10	0,17%	0,84	0,17%	0,84
-9	-0,08%	-0,40	0,09%	0,31
-8	0,18%	0,89	0,27%	0,77
-7	-0,17%	-0,84	0,10%	0,25
-6	-0,06%	-0,30	0,04%	0,09
-5	-0,17%	-0,86	-0,13%	-0,27
-4	0,15%	0,72	0,01%	0,02
-3	-0,12%	-0,59	-0,11%	-0,19
-2	0,25%	1,23	0,14%	0,23
-1	-0,09%	-0,43	0,05%	0,08
0	-0,23%	-1,15	-0,18%	-0,27
1	-0,13%	-0,66	-0,31%	-0,45
2	0,19%	0,93	-0,13%	-0,17
3	0,24%	1,17	0,11%	0,15
4	-0,12%	-0,57	0,00%	0,00
5	-0,21%	-1,05	-0,22%	-0,27
6	-0,02%	-0,09	-0,24%	-0,28
7	-0,30%	-1,48	-0,54%	-0,62
8	0,07%	0,34	-0,47%	-0,53
9	-0,10%	-0,47	-0,56%	-0,62
10	0,13%	0,66	-0,43%	-0,46
Interval (Days)		**CAR(%)**		**t statistic**
-10 to -3		-0,11%		-0,19
-2 to 0		-0,07%		-0,20
0 to 2		-0,18%		-0,51
3 to 10		-0,30%		-0,53
-10 to 10		-0,43%		-0,46

* Significant at 5% level (two-tailed test)

Table 6
Abnormal Returns Around the Equity Issue Announcements
(The Traditional Market Model)

Day	**AR(%)**	***t statistic***	**CAR(%)**	***t statistic***
-10	0,04%	0,19	0,04%	0,19
-9	-0,03%	-0,14	0,01%	0,04
-8	-0,28%	-1,27	-0,27%	-0,70
-7	-0,22%	-0,98	-0,48%	-1,10
-6	0,22%	0,99	-0,27%	-0,54
-5	-0,12%	-0,57	-0,39%	-0,73
-4	0,00%	0,01	-0,39%	-0,67
-3	-0,12%	-0,53	-0,50%	-0,81
-2	-0,17%	-0,76	-0,67%	-1,02
-1	0,19%	0,86	-0,48%	-0,69
0	-0,21%	-0,98	-0,70%	-0,96
1	-0,20%	-0,93	-0,90%	-1,18
2	-0,36%	-1,64	-1,26%	-1,59
3	0,03%	0,13	-1,23%	-1,50
4	-0,02%	-0,07	-1,25%	-1,47
5	-0,29%	-1,30	-1,53%	-1,75
6	0,32%	1,44	-1,22%	-1,34
7	-0,16%	-0,74	-1,38%	-1,48
8	0,02%	0,09	-1,36%	-1,42
9	-0,12%	-0,56	-1,48%	-1,51
10	-0,17%	-0,79	-1,66%	-1,65

Interval (Days)	**CAR(%)**		**t statistic**
-10 to -3	0,47%		0,87
-2 to 0	-0,19%		-0,51
0 to 2	-0,78%	*	-2,05
3 to 10	-0,40%		-0,57
-10 to 10	-1,66%		-1,65

* Significant at 5% level (two-tailed test)

Table 7

Abnormal Returns Around the Bond Issue Announcements

(Dimson Model)

Day	AR(%)	t statistic	CAR(%)	t statistic
-10	0,14%	0,67	0,14%	0,67
-9	-0,07%	-0,33	0,07%	0,24
-8	0,20%	0,99	0,27%	0,77
-7	-0,17%	-0,83	0,10%	0,25
-6	-0,04%	-0,18	0,06%	0,14
-5	-0,15%	-0,72	-0,08%	-0,17
-4	0,15%	0,75	0,07%	0,13
-3	-0,10%	-0,50	-0,03%	-0,06
-2	0,30%	1,46	0,26%	0,43
-1	-0,05%	-0,25	0,21%	0,33
0	-0,26%	-1,28	-0,05%	-0,07
1	-0,12%	-0,61	-0,17%	-0,24
2	0,20%	1,00	0,03%	0,04
3	0,27%	1,31	0,30%	0,39
4	-0,08%	-0,39	0,22%	0,28
5	-0,25%	-1,24	-0,03%	-0,04
6	-0,03%	-0,17	-0,07%	-0,08
7	-0,35%	-1,70	-0,42%	-0,48
8	0,04%	0,18	-0,38%	-0,42
9	-0,12%	-0,61	-0,50%	-0,55
10	0,13%	0,66	-0,37%	-0,39
Interval (Days)		**CAR(%)**		**t statistic**
-10 to -3		-0,03%		-0,06
-2 to 0		-0,01%		-0,04
0 to 2		-0,18%		-0,51
3 to 10		-0,40%		-0,69
-10 to 10		-0,37%		-0,39

* Significant at 5% level (two-tailed test)

Table 8

Abnormal Returns Around the Equity Issue Announcements

(Dimson Model)

Day	**AR(%)**	***t statistic***	**CAR(%)**	***t statistic***
-10	0,05%	0,23	0,05%	0,23
-9	-0,01%	-0,05	0,04%	0,12
-8	-0,29%	-1,33	-0,26%	-0,67
-7	-0,25%	-1,14	-0,51%	-1,15
-6	0,20%	0,90	-0,31%	-0,62
-5	-0,12%	-0,53	-0,43%	-0,79
-4	0,02%	0,10	-0,40%	-0,69
-3	-0,11%	-0,48	-0,51%	-0,82
-2	-0,17%	-0,75	-0,68%	-1,02
-1	0,21%	0,93	-0,47%	-0,67
0	-0,24%	-1,07	-0,71%	-0,97
1	-0,23%	-1,04	-0,94%	-1,23
2	-0,36%	-1,63	-1,30%	-1,63
3	0,05%	0,24	-1,24%	-1,51
4	-0,02%	-0,09	-1,26%	-1,48
5	-0,29%	-1,31	-1,55%	-1,76
6	0,35%	1,58	-1,20%	-1,32
7	-0,14%	-0,63	-1,34%	-1,43
8	0,09%	0,41	-1,25%	-1,30
9	-0,13%	-0,58	-1,38%	-1,40
10	-0,21%	-0,96	-1,59%	-1,57

Interval (Days)	**CAR(%)**		**t statistic**
-10 to -3	0,47%		0,87
-2 to 0	-0,20%		-0,52
0 to 2	-0,83%	*	-2,16
3 to 10	-0,30%		-0,47
-10 to 10	-1,59%		-1,57

* Significant at 5% level (two-tailed test)

Figure 1
Number of Bond Offerings Per Year, 1993-2002

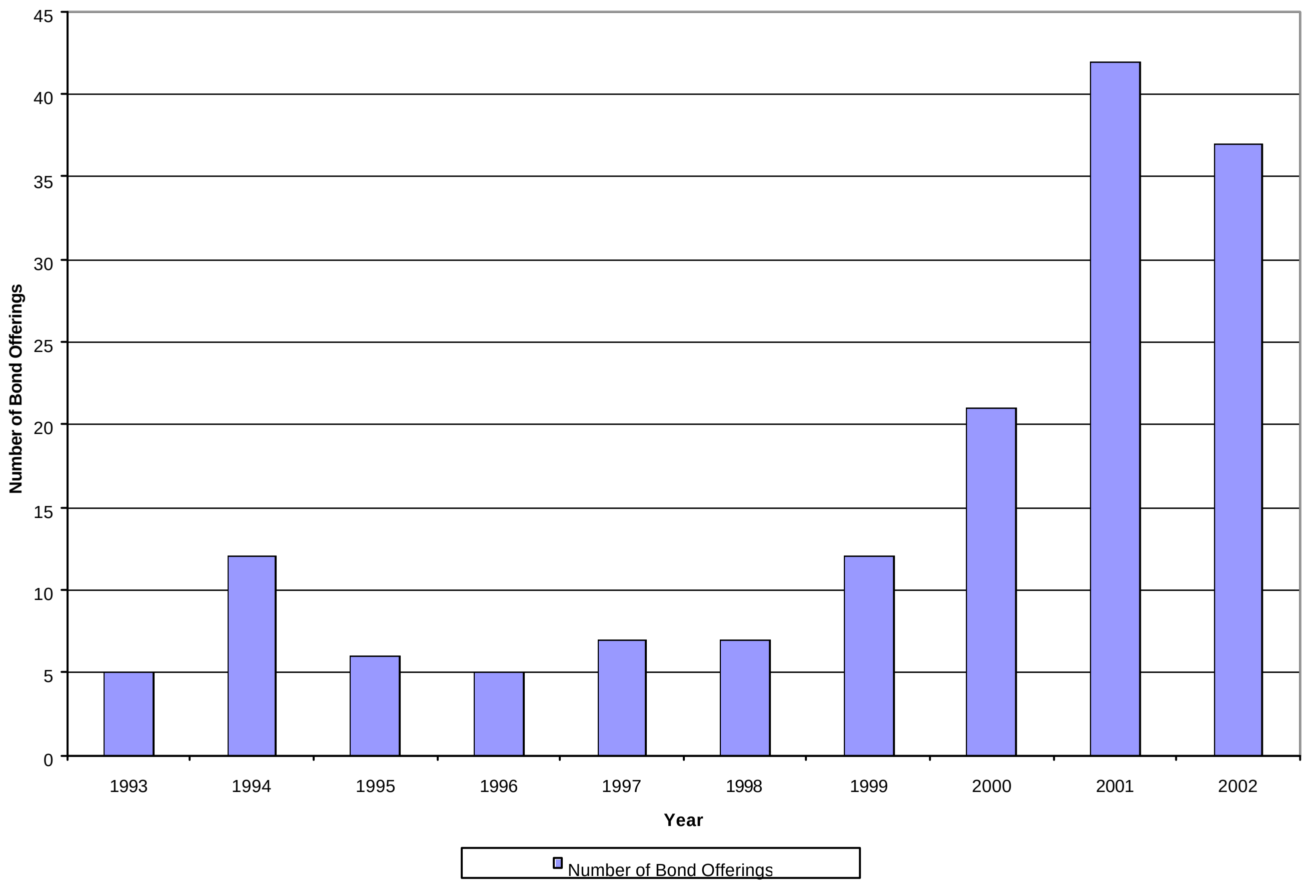

Figure 2
Total Amount of Bond Offerings Per Year, in UF, 1993-2002

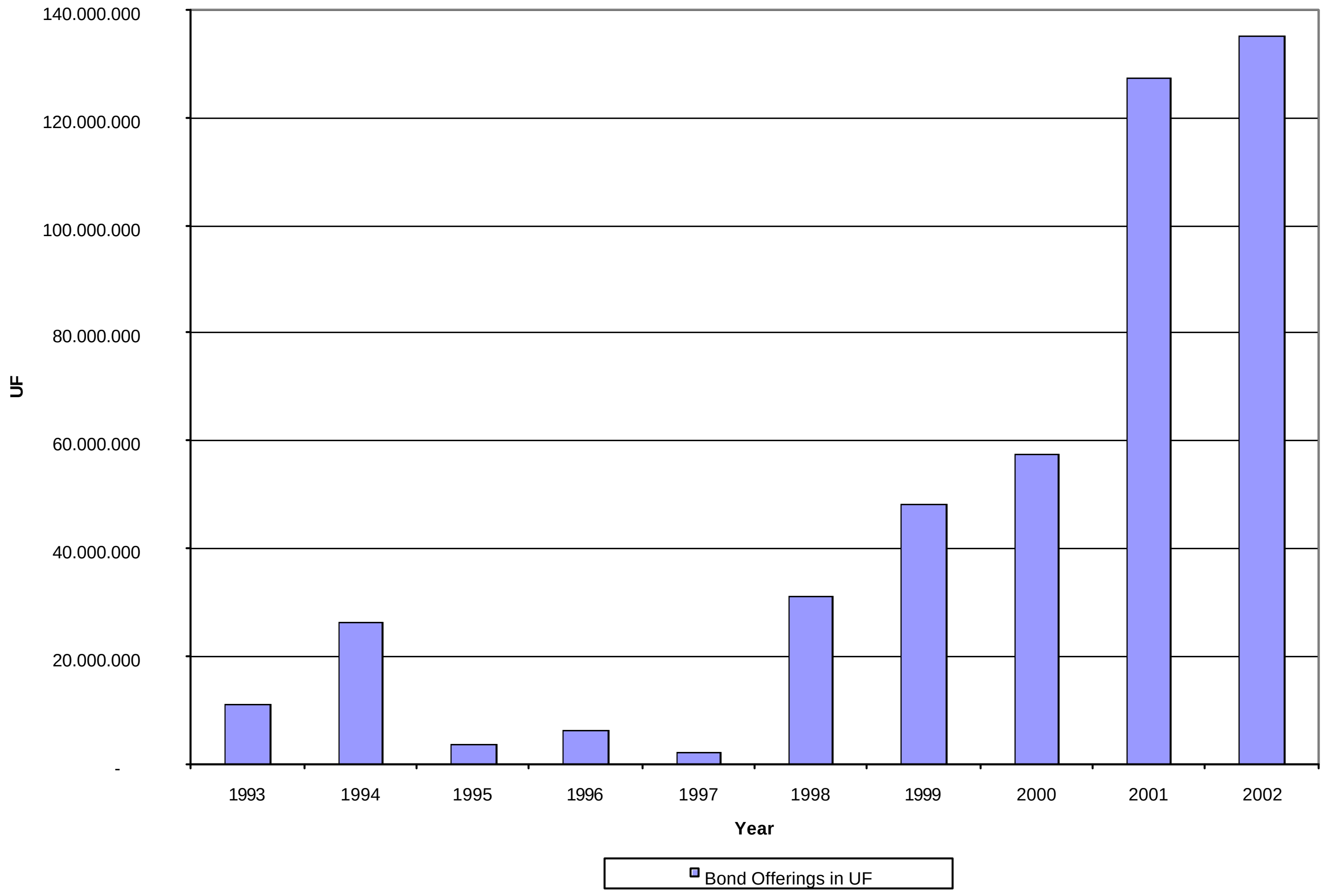

Figure 3
Number of Equity Offerings Per Year, 1993-2002

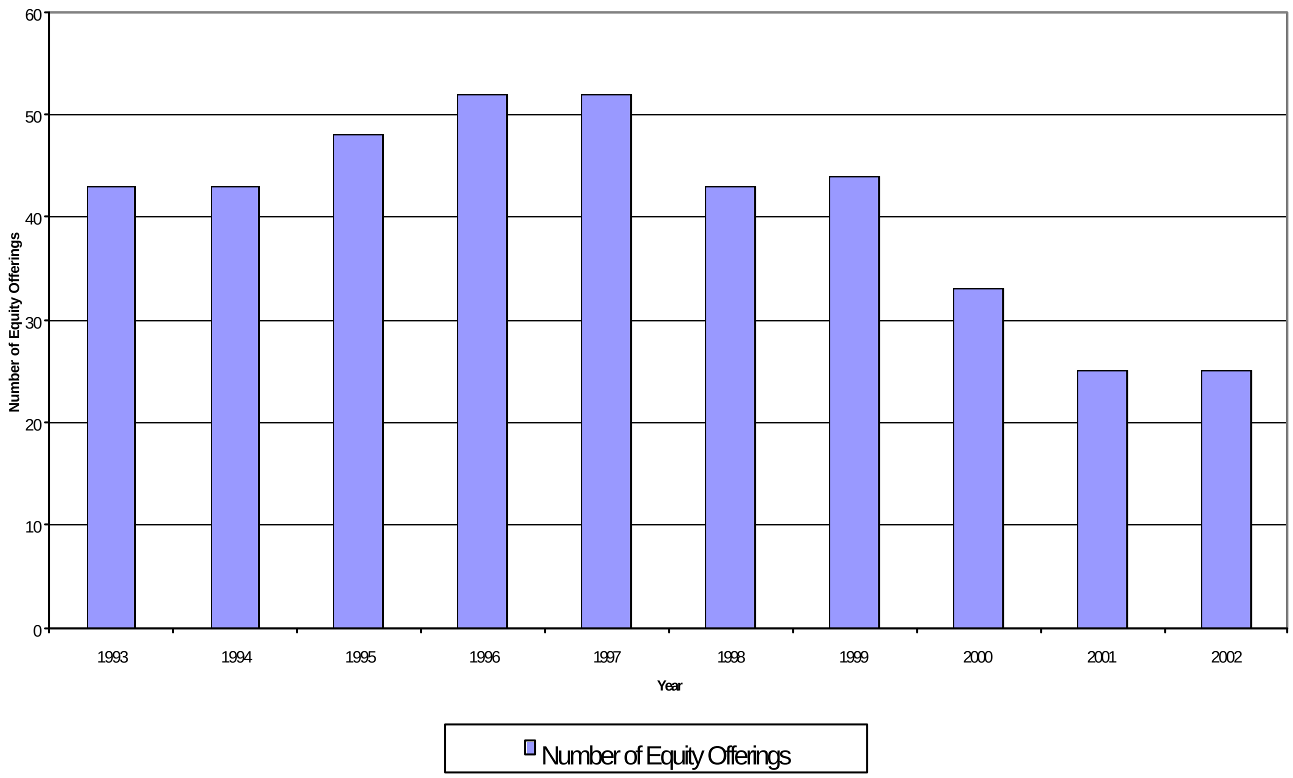

Figure 4
Value of Equity Offerings Per Year, 1993-2002