FIN 423 -- Corp Fin'l Policy & Control: Selling Seasoned Equity

- Underwritten Offerings
- Shelf Registration
- Rights Offerings
- Dividend Reinvestment Plans
- Private Placements

Why Sell Seasoned Equity*?*

1. Raise Cash for profitable NPV > 0 projects
2. Management thinks the stock is overvalued
3. Firm has too much leverage, so firm wants to retire some debt
   - ▸ expected bankruptcy costs and/or agency costs have risen unexpectedly

Why Sell Seasoned Equity? (cont.)

4. Regulatory constraints:

(a) banks, S&L's, etc. have minimum equity capital requirements imposed by FDIC, FSLIC, etc. to reduce the probability that the banks will become insolvent and raise the cost of deposit insurance programs to taxpayers

(b) regulated utilities (gas & electric, telephone) often are told what capital structure they must have as part of the process of setting regulated product prices

Why Sell Seasoned Equity? (cont.)

5. Corporate control motivations:

(a) selling stock to a diffuse group of outsiders will weaken the control of outside stockholders

(b) selling stock to a single large blockholder will create a new 'monitor' for management (or a friendly 'white knight' to shelter management from unfriendly raiders)

What Happens When New Equity Is Issued?

1. Shares outstanding rise
2. Cash goes into the firm
3. Public float rises
4. Number of shareholders rises

Seasoned Equity Offerings vs. Secondary Distributions:

- 3 & 4 are the same as for secondary distributions (where a block of stock already held is sold to a number of different shareholders)
- 1 & 2 are different
  - evidence from Scholes [1972] and Mikkelson and Partch [1985] shows that there is a small (2-3%) drop in the stock price when an insider registers a secondary distribution; no additional effect when the sale occurs

Comparison with Secondary Distributions (cont.):

- it seems that the identity of the seller, and the adverse information revealed by the fact that the sale is planned, explain the effect when the firm decides to sell equity, it is analogous to an insider deciding to sell
  - (i.e., not likely to be good news)
  - the firm may not have negative information about the value of the stock, but it certainly won't think that the stock is underpriced

Evidence on Effects of Seasoned Equity Offerings

1. Masulis and Korwar [1986] find -2.5% announcement effect for 424 issues
2. Dann and Mikkelson [1984] find -1.6% for 36 issues (they mainly focus on offerings of convertible debt)
3. Asquith and Mullins [1986] analyze 531 registered primary & secondary distributions for NYSE or AMEX listed stocks

Evidence on Effects of Seasoned Equity Offerings: A&M

3. Asquith and Mullins [1986] analyze 531 registered primary & secondary distributions for NYSE or AMEX listed stocks
   - no other simultaneous financing
   - registered & underwritten
   - common stock only
   - 266 industrials
     - (128 primary; 85 secondary; 53 combination)
   - 265 utilities (all but 1 primary)

Evidence on Effects of Seasoned Equity Offerings: A&M

3. Asquith and Mullins [1986]
- 2 day announcement effect = -2.7%
  - (t = -14.8; 80% negative)
- AM define dilution effect = loss in firm value/offer proceeds
  - avg = -31% => firm only keeps 69% of proceeds
  - but there is infinite dilution from secondaries!

Evidence on Effects of Seasoned Equity Offerings: A&M

3. Asquith and Mullins [1986]
- Table 5: 33% abnormal price rise in the 2 years before offer (flat afterwards)
- Table 9: 2-day announcement effect for utilities = -.9% (t =-7.8)
- Table 11: utility issues show no timing
  - negative 10% per year abnormal return for 2 years before & after issue!!!

Interpretation of Asquith & Mullins

1. There is more (adverse) information in the announcement of an industrial offering than for a utility
   - industrials have more discretion on how to use proceeds
   - there is more potential for asymmetric information about the value of existing assets in industrials
   - rate regulation process reveals more information about utilities, and restricts the profits, losses and lines of business for a utility

Interpretation of Asquith & Mullins (cont.)

2. There is no information about managers' ability to time market movements in their company's stock price (contrary to AM assertions), but companies do tend to sell stock after it has risen
   - sample selection bias!

3. The CRSP excess returns tape must provide a poor measure of abnormal returns for utilities in this sample period, since abnormal returns are -10% per year for 4 years surrounding announcements

Interpretation of Asquith & Mullins (cont.)

4. Is it a mistake for managers to decide to sell equity (even if they know it will cause the stock price to drop)?
   - It depends on what the alternative is (e.g., the cost of bond financing, or foregoing the activity that would be paid for with the cash that is to be raised)

Shelf Registration

Allows large firms (stock value > $ 150 million, with investment grade bonds) to register stock or bonds, then issue them anytime in the next 2 years

Allows management flexibility in when to issue securities (no waiting period between filing with the S.E.C. and sale)
- Asymmetric information problem likely to be worse
  - probably why shelf registrations are used more for bonds than stocks

Shelf Registration (cont.)

Firm doesn't have to name an investment banker in the registration statement
- gives firm more leverage in bargaining with investment bankers for lower fees
- different bankers can be used for different parts of the issue, in principle
- Bhagat's [1984, MCFJ] evidence shows that issuance costs are about 29%
- lower for shelf registered equity

Rights Offerings

Suppose that at date t a firm issues a 'right' to buy one share of stock for each share currently held at an exercise price of $X per share, on or before date T. This right can be sold to other investors and exercised by them.

This right is equivalent to an American call option C(S, X, r, t, σ^2), except for the uncertain number of new shares that will be created by the rights offering
(i.e., this is a short-term warrant.)

Rights Offerings (cont.)

At the date the stock goes 'ex-rights' (i.e., the stockholders on date t-1 receive the right, and holders on date t do not),

$$S(t-1) = S(t) + C(t) + \varepsilon(t)$$

where S(t) and C(t) are the value of the stock and the right respectively on date t and $\varepsilon(t)$ represents the random change in the value of the stock plus rights from date t-1 to t.

Rights Offerings (cont.)

We know from option pricing theory that C(t) > max[(S(t)-X),0]
so that the right is worth at least S(t) - X at each point in time.

At maturity, this is an equality, and the rights will be exercised (i.e., the firm will sell stock) if S(T) > X.

If the rights have value, the stock price will fall, depending on the size of the discount offered through the rights:

$S(T+1) = (V + P)/(N + M) < S(t-1)$

Rights Offerings (cont.)

$S(T+1) = (V + P)/(N + M) < S(t-1)$

where:

V = pre-rights value of the firm, [S(t-1) × N]

P = proceeds from rights offering, (X × M)

N = shares outstanding before offering

M = shares sold due to rights.

Rights Offerings (cont.)

Note that, apart from transactions costs and taxes, an investor should be indifferent between selling rights in the market or holding and exercising them.

The drop in stock price [S(t) < S(t-1)] is due to the value of the rights, C(t).

If they have no value, then there will be no stock price effect (analogous to an 'ex-dividend' drop in stock prices), and no shares may be sold.

Rights Offerings: Example

Imagine a simple situation where the stock is riskless $\sigma^2 = 0$, and the interest rate is zero, r = 0, S(t) = 12, and X = 10:

C(t) = 1
S(t) = 11 = S(T)
N = 1 million
M = 1 million
V = $12 million
P = $10 million

Rights Offerings: Example (cont.)

It is easy to see from an alternative situation that old shareholders should not care how big a discount, S(t) > X, is offered in a rights offering.

- Suppose that X=0, but all other parameters stay the same as the previous example
- Then, the 'rights offering' is equivalent to a 2:1 stock split!
  - The number of shares outstanding doubles and the price falls in half.
  - Except for the costs of printing, registering and mailing the new stock certificates, there is no real effect on the firm.

Rights Offerings: Example (cont.)

If there is an 'information effect,' when will it occur?
- At the time that the rights offering is first announced.

What happens if the rights are issued at par [S(t) = X]?
- The rights have value if the stock price is random ($\sigma^2 > 0$).
- The further the option is 'in-the-money,' [S(t) > X], the greater the likelihood that the options will be exercised when they expire (t=T).

Rights Offerings: Example (cont.)

If the firm wants a high likelihood that it will raise a desired amount of cash from its rights offering, it should set the exercise price well below the current stock price

- e.g., twice the standard deviation of the stock return over the interval of the offering (T-t)
- monthly stock returns have standard deviations of about .04 to .06 for most NYSE firms, so a six week offering period implies a discount of 10 to 15 percent.

Comparison of Rights vs Underwritten Offerings

1. Costs of rights offering are lower
   (Smith [1977], Table 1, 1971-75):

Type of offering	Cost (% of proceeds)	Cases
underwritten (firm commitment)	6.2%	484
rights & standby underwriting	6.1%	56
rights	2.5%	38

Comparison of Rights vs Underwritten Offerings (cont.)

2. Smith [1977], Table 2, 853 rights offerings 1926-75:
   - price (CAR) rises during the year before the offering month (9%)
   - drops 1.3% during months -1 and 0
   - then flat after

QUESTION: Why don't more firms use rights offerings?

Rights offerings are made pro rata to existing shareholders

- some firms even have 'preemptive rights' provisions in their corporate charters
- i.e., current shareholders must be offered the opportunity to buy stock first

QUESTION: Why don't more firms use rights offerings? (cont.)

- Corporate control and liquidity of stock will not be affected
- What if current shareholders don't want more stock?
- Underwritten offerings are made to (mostly) new shareholders
  - higher marketing costs
  - more diffuse shareholders
  - more liquidity, but less corporate control

When Are Rights Offerings Optimal?

Hansen and Pinkerton [1982] argue that Smith's [1977] analysis is affected by sample selection bias:

- firms with diffuse ownership select underwritten offerings because benefits > costs for them
- firms that use rights offerings tend to have strong ownership concentration (e.g., Illinois Bell was over 99% owned by A.T.T.)

When Are Rights Offerings Optimal? Ownership Concentration

Costs of implementing a rights offering are lower with concentrated ownership:

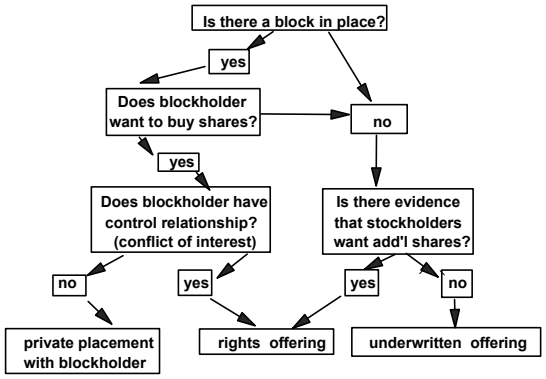
- both costs of forecasting its success, and costs of administration
- like a private placement, so why not just sell to large blockholder(s)?
  - have to worry about litigation from minority stockholders (charging underpricing to large blockholder)

Comparison of Rights vs Underwritten Offerings (cont.)

Problem: some firms (like A.T.T.) use both rights and underwriting at about the same time

- there must be some 'noise' in the system
  - e.g., bored CFO's or investment bankers who want to try the latest financial gimmick

Decision Tree for Seasoned Equity Offerings



Dividend Reinvestment Plans

Scholes and Wolfson [1989] argue that stock purchase plans at discounts up to 5 percent that are linked to dividend reinvestment plans are an efficient way for firms to sell new stock to existing shareholders

- but not linked to the previous level of shareholdings (as in a rights offering)

Dividend Reinvestment Plans: Which Firms Use Them?

- If some people follow SW strategy, the public float increases without bearing the costs of announcing a registered offering or hiring an investment banker
- Firm could also cut common and preferred dividends, but this might be interpreted as a very negative signal (drop in stock price)
- Most of the SW firms were banks and public utilities (high dividend yields, relatively high debt/equity ratios, low risk assets, and regulatory control over capital structure)

Dividend Reinvestment Plans: Examples

- in November 1989, Chase Manhattan Bank and Chemical Bank began 5% discount stock purchase plans (first purchase date 12/15/89)
- effective 2/15/90, the discounts were decreased to 2.5-3%
- discounts were eliminated effective 3/15/90

Private Placements of Equity

Wruck [1989] shows that stock prices rise 4.5% on average when a private placement of equity is announced (128 cases, 1979-85)

- in most cases (73), a large unregistered block is sold at a discount (13.5% below market)
- buyer commits to hold stock 2 or 3 years, therefore committing to act as a monitor/advisor to increase firm value

Private Placements of Equity (cont.)

- it appears that the 'self-dealing' problem is greatest for moderate range of prior ownership structure (5-25%)
- selling a controlling block or selling to management (without shareholder approval) has an incremental negative effect on the stock price
  - (entrenchment?)

Private Placements of Equity (cont.)

- It looks like the private placement of equity is more of a corporate control transaction than a 'normal' securities offering
  - i.e., sell stock for cash
- The seller certainly doesn't think that the stock is underpriced

Selling Seasoned Equity: Summary

1. Who do you sell to?
   - current holders (rights)
   - new investors (underwritten)
   - a new blockholder (private placement)
2. How does the market react?
   - at time of announcement (not issuance)
   - seems to reflect adverse information
3. If you decide to sell equity (instead of debt or internally generated funds), choose the cheapest method