# L2: Stock Market
# -Going public

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# Overview

- Forms of Business Organization
- Stock market—IPO
    - Understanding the process of IPO
    - Understanding IPO underpricing
    - Understanding IPO long-term underperformance

Sources: SC Chap. 8 Stock Markets; Extra handouts on underpricing and long-term underperformance.

# Sole Proprietorship

Under this organization method, an individual owns and manages the business

- **Advantages**
  - Easiest to start
  - Least regulated
  - Single owner keeps all the profits
  - Taxed once as personal income
- **Disadvantages**
  - Limited to life of owner
  - Equity capital limited to owner's personal wealth
  - Unlimited liability
  - Difficult to sell ownership interest

# Partnership

Under this organization method, a *group* of individuals collectively own and manage the business.

- A partnership has roughly the same advantages and disadvantages as a sole proprietorship.
- **Advantages**
  - Two or more owners
  - More capital available
  - Relatively easy to start
  - Income taxed once as personal income
- **Disadvantages**
  - Unlimited liability
    - General partnership
    - Limited partnership
  - Partnership dissolves when one partner dies or wishes to sell
  - Difficult to transfer ownership

# Corporation

- **Advantages**
  - Limited liability
  - Unlimited life
  - Separation of ownership and management
  - Transfer of ownership is easy
  - Easier to raise capital
- **Disadvantages**
  - Separation of ownership and management (and the resulting potential for agency costs)
  - Double taxation (income taxed at the corporate rate and then dividends taxed at personal rate)*

# Dividend tax in China

- Tax is 20% for dividend payout.
- Starting from 2013/1/1, 20% for holding less than 1 month, 10% for 1 month to 1 year, and 5% for more than 1 year.
- Starting from 2015/9/8, 0% for holding more than 1year.

http://mt.sohu.com/20150910/n420802207.shtml

# Pros and cons of going public

- Visibility
- Valuation
- Capital raising
- Ownership and control
- Costs of being public

**Figure 1: Summary of the different types of IPO costs, with illustrative examples and average costs**

| Going public | Being public |
|---|---|
| Directly attributable to the offering (netted against proceeds)<br>• Underwriter discount, which based on public registration statements, result in fees equal to 5%-7% of gross proceeds<br>• Legal, accounting and printing fees associated with drafting the registration statement and comfort letter<br>• Road show expenses<br>• In addition to underwriter fees, on average companies incur $3.7 million of costs directly attributable to their IPO | One-time costs to convert the organization to a public company (expensed as incurred)<br>• Costs to implement new financial reporting systems and processes<br>• Initial costs to document internal controls and comply with SOX<br>• Costs to identify and recruit a new board of directors<br>• Costs to implement new executive and employee compensation plans<br>• Typically, we estimate companies incur more than $1 million of one-time costs to convert their organization to a public company |
| Other incremental organizational costs (expensed as incurred)<br>• Tax and legal entity restructuring costs in anticipation of the IPO<br>• Additional audit, interim/quarterly review costs, advisory accounting and other costs to make the financial statements S-X compliant<br>• Valuation reports<br>• Costs to draft new articles of incorporation, audit committee charter, by-laws, and other agreements<br>• Based on our survey results, on average companies incur more than $1 million of one-time costs as a result of going public | Recurring incremental costs of being a public company (expensed as incurred)<br>• Incremental internal staffing costs (accounting, tax, legal, human resources, technology, internal audit, and investor relations)<br>• Professional fees for legal and accounting advice<br>• Based on our survey results, on average companies incur $1.5 million of recurring costs as a result of being public |

[1] PwC partnered with Oxford Economics on all survey data discussed in this document.

Source: [http://www.pwc.com/en_us/us/transaction-services/publications/assets/pwc-cost-of-ipo.pdf](http://www.pwc.com/en_us/us/transaction-services/publications/assets/pwc-cost-of-ipo.pdf)

# IPO: Role of investment bank

- An investment bank takes the roles of underwriting and placement.
- Underwriter takes up the balance of shares not subscribed by the public.
  - best efforts underwriting or "standby" commitment. firm commitment underwriting
- Placement agent conducts “book-building” exercise.
  - Runs road shows to garner interest in IPO from institutional investors and brokers. After the exercise, the agent determines an issue price and offer size.
- Investment bank provides analyst coverage.
  - Usually starts after “quiet period” (40 days after IPO)

# Example: Roadshow

- Alibaba IPO roadshow PPT

- http://video.sina.com.cn/p/tech/i/v/2014-09-09/115364111771.html

# IPO procedure-Step 1

- **Before the IPO:** ownership of Twitter is partitioned into N equal shares. Now Twitter decides to go public.
  - For the founders of Twitter, the upside of this is that Twitter becomes a richer company, and they can use the new money to develop the company into an even better and profitable company.
  - The downside is that their stake in this more valuable company goes down.

Example and numbers are from http://www.quora.com/How-does-IPO-pricing-work-What-happens-behind-the-scenes-when-a-stock-has-priced-its-IPO-but-they-are-debating-what-the-opening-trade-should-be

# Step 2 Choice of Underwriters

- Underwriters competes for the IPO. Pitching

- When clients are thinking about an IPO, they have a bake-off in which they invite all the major investment banks to come pitch their services.
  - For an IPO with a considerable sized offering, they will need multiple bookrunners who will each syndicate a smaller portion of the offering as their seniority decreases.

- Goldman Sachs led the IPO. Morgan Stanley, J.P. Morgan, Merrill Lynch, Deutsche Bank
  - They will be pitching to the same institutional buyers on the roadshow irrespective of which banks they pick. However, institutional buyers are much more trusting of a company's story when being pitched by GS and MS, with whom they've had a great relationship with for decades. So usually at least one, if not both of those banks, are a lock for the senior syndicate positions.

# Step 3 Book-building

- By November 5, 2013, institutional investors must submit their requests on how many shares they wish to buy. I call these "requests" and not "bids" because they can take many forms, ranging from the simple ("I want to buy 1 million shares, no matter the price") to the complicated ("If the offering price is between a and b, I want to buy X shares; if the offering price is between b and c, I want to buy Y shares; but in the event that Z occurs I do not want to buy any shares").

- Who are these institutional investors? They are the "important" clients of the underwriting banks: the top pension funds, mutual funds, hedge funds, high net worth individuals, and long standing clients.

# Step 4 Set offer price

- On November 6, 2013, around 4:00pm: Twitter sets its IPO price at $26. At this point, Twitter knows that it will raise exactly $26 x 70 million = $1.8 billion in cash from this offering. We say that this offering price values the company at $26 x (475 million + 70 million) = $14.2 billion (The only way you can say what a company is worth is by seeing how much someone else would pay for it, or at least how much he would pay for a share of it.)

# Step 5 Allocate shares

- On November 7, 2013, around 8:30am: The IPO underwriters look at all the requests from (4) and decide how to allocate shares to the institutional investors. This is not as simple as giving each institutional investor what they requested if their conditions were met.
  - First, the total number of shares requested by all institutional investors is likely much, much more than 70 million (and most institutional investors know that demand for shares greatly exceeds their supply, so they will tend to request a much higher number of shares than they actually want).
  - Second, this is the only chance the offering company and the underwriters have to control what kind of shareholders have a stake in the company. They know the reputations/styles of the institutional investors, and they take this information into consideration when choosing how to allocate the available shares.

# Step 6 Set opening price

- On November 7, 2013, before market open: All of the 70 million shares are in the hands of the initial institutional investors, who now owe Twitter $26 for each share they were granted.

- On November 7, 2013, at market open (9:30am): Orders start coming to the NYSE from all over the world, from both retail investors and institutional investors (both the ones who were lucky enough to be part of the initial offering and the ones who were not). Each order is either a bid ("I want to buy TWTR") or an offer ("I want to sell TWTR"), with the latter presumably only coming from those institutional investors who already have the stock to sell. Each order includes both a price and a size: for example, "I am willing to pay $45 per share for 100 shares of TWTR" or simply "45 x 100".

# Step 7 Trading

- On November 7, 2013, at 10:50am: Twitter begins trading at $45.10. In particular, the public is willing to pay $45.10 per share of Twitter, and we say this opening price values the company at $45.10 x (475 million + 70 million) = $24.6 billion. Twitter instantaneously increases in value by $10 billion.
- On November 7, 2013, at market close (4:00pm): Twitter closes at $44.90.

# Success of an IPO

- The success of an IPO is measured:
  - If the price during discovery falls below the initial offering price ($26 for Twitter), this looks embarrassing and the underwriters will shore up demand by purchasing shares.
  - Similarly, if the price goes berserk once trading begins, the DMM is blamed for not setting the price appropriately. The fact that the closing price ($44.90) is close to the opening price ($45.10) in this case is a sign of stability, and that the underwriters and the DMM performed their job well.

# Who lose?

- Note that for **Twitter as a company**, the exciting day was November 6, not November 7. On November 6, Twitter set the offering price, and thus knew it would raise $26 x 70 million = $1.8 billion in cash. The opening price ($45.10) is irrelevant here.
- But for **the employees of Twitter**, especially the founders and early employees, the exciting day was November 7: they already owned shares before any of the IPO process happened, whether they obtained these shares as founders or in the form of employee compensation. But they were in limbo regarding just how much this intangible stake in the company was worth until 10:50am, at which time they gleefully realized they now had $45.10 x n in their pockets, where n is the number of shares they owned.

# Who profit?

- So who profited from the surge from the offering price of $26 to the opening price of $45.10? Not Twitter. Instead, its employees and the institutional investors  just received a huge return. Considering this, was $26 too low of an offering price? Perhaps. If Twitter had instead set the opening price at $45, and assuming that demand from investors was the same, Twitter could have raised nearly twice as much money for themselves.
- However, the goal of an IPO is not just to make as much money as possible; it is also to build a foundation of happy shareholders, and a shareholder is happy if he gets a nice return from his IPO investment. Normally companies try to set the offering price so that the initial investors earn something like 10 percent on IPO day, so in that regard the 73 percent return the initial investors received is on the high side.

# IPO valuation method

**Table 4**

Valuation Methods Used by Lead Underwriters

| *Valuation Method* | *Number of IPOs* |
|---|---|
| Discounted free cash flow | 49 |
| Dividend discount model | 24 |
| Multiples | 40 |
| ■ Price/earnings | 37 |
| Peer group | 34 |
| Stock market | 14 |
| Growth shares | 2 |
| ■ Price/cash flow | 17 |
| Peer group | 15 |
| Stock market | 8 |
| Growth shares | 3 |
| ■ EnterpriseValue/EBITDA (peer group) | 8 |
| ■ EnterpriseValue/sales | 3 |
| Peer group | 3 |
| Stock market | 1 |
| ■ Price/book (peer group) | 1 |
| ■ Dividend yield (peer group) | 2 |
| ■ P/E-to-growth (peer group) | 1 |

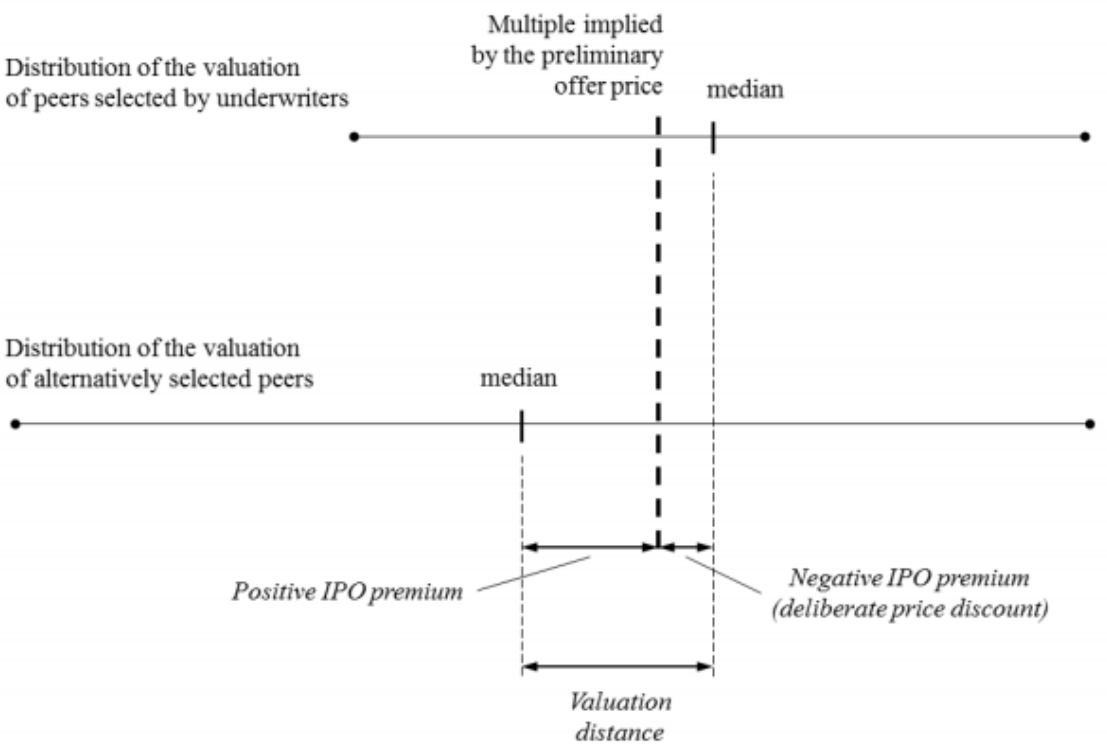
Deloof, Marc, Wouter De Maeseneire, and Koen Inghelbrecht. "How do investment banks value initial public offerings (IPOs)?." *Journal of Business Finance & Accounting* 36, no. 1-2 (2009): 130-160.

# IPO peer selection

- Specifically, when taking a company public, underwriters tend to left-truncate the sample of peers, by omitting those with the poorest valuation multiples. Underwriters adopt such behavior to obtain higher IPO valuations that still look conservative.

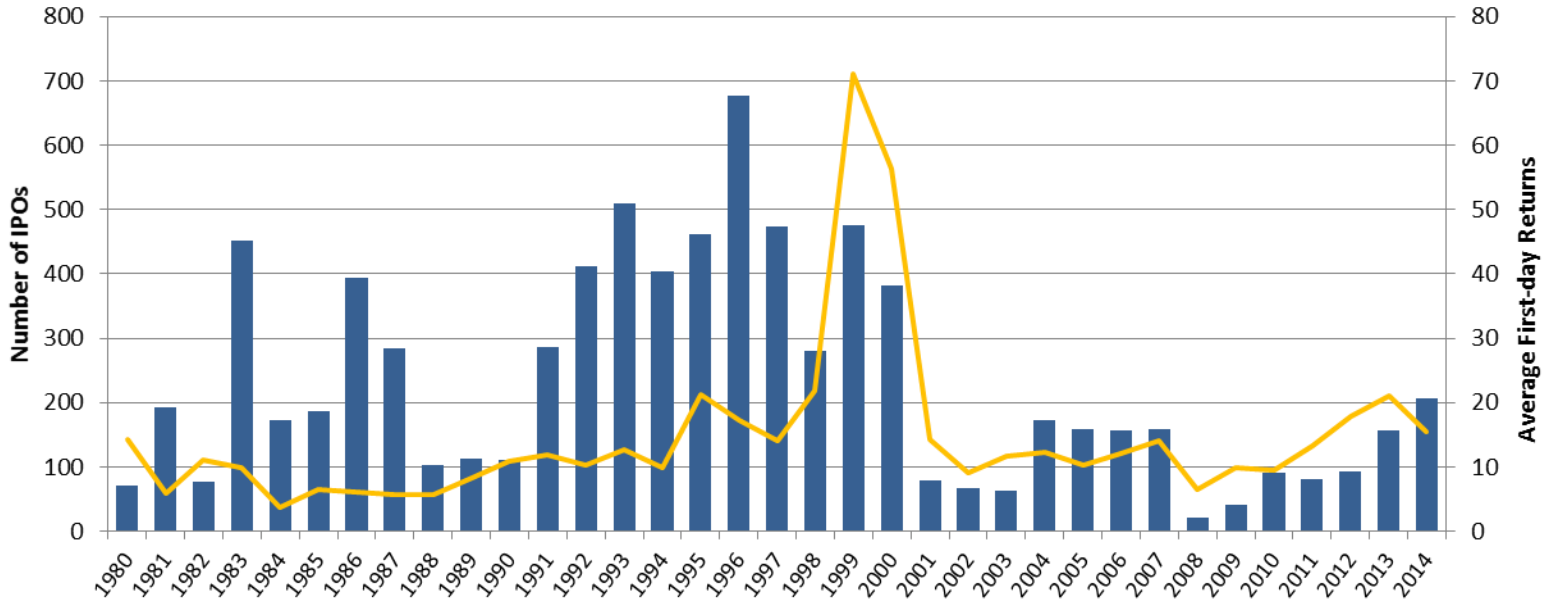
Paleari, Stefano, Andrea Signori, and Silvio Vismara. "How do underwriters select peers when valuing IPOs?." *Financial Management* 43, no. 4 (2014): 731-755.

# IPO peer selection



# Well-known facts about IPOs

- Hot and cold markets.
  - Number of IPOs follow hot and cold markets. Firms try to time the market to sell their equity stakes to the public when valuations are high.
- Underpricing of IPOs.
  - Typical first day returns of IPOs is positive.
  - The IPO firm effectively left money on the table since they could have priced their offering at a high price and raised more money.
- Long-run underperformance.
  - IPOs perform poorer than their peers post-IPO.

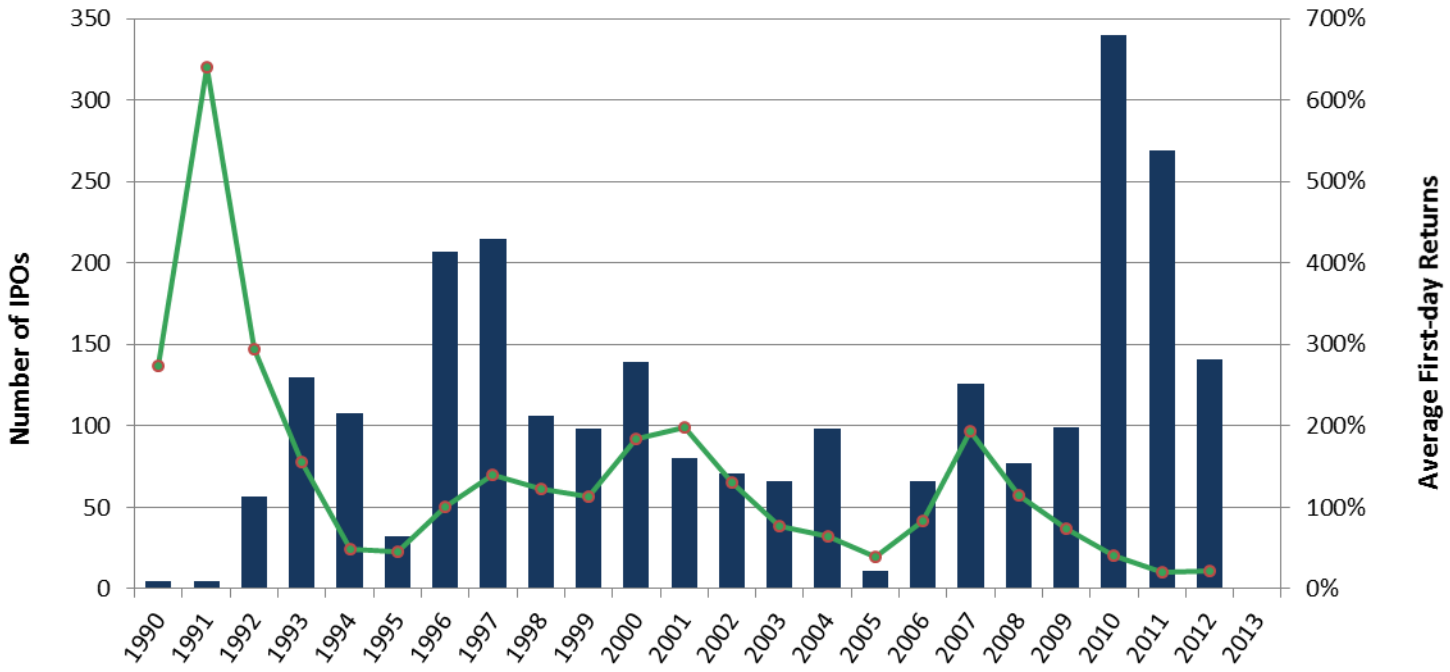



Number of Offerings (bars) and Average First-day Returns (yellow) on US IPOs, 1980-2014

Source: Jay Ritter, University of Florida.

The number of IPOs excludes closed-end funds, REITs, SPACs, natural resource limited partnerships, ADRs, bank and S&L IPOs, IPOs with an offer price below $5 per share, unit offers, small best efforts deals, and IPOs that are not CRSP-listed within six months of the IPO.

Number of Offerings and Average First-day Returns on Chinese IPOs, 1990-2013
(There were no IPOs in 2013, due to a CSRC moratorium starting in October 2012)




Source: Jia, Xie, and Zhang (2014)

# Question 1 IPO underpricing

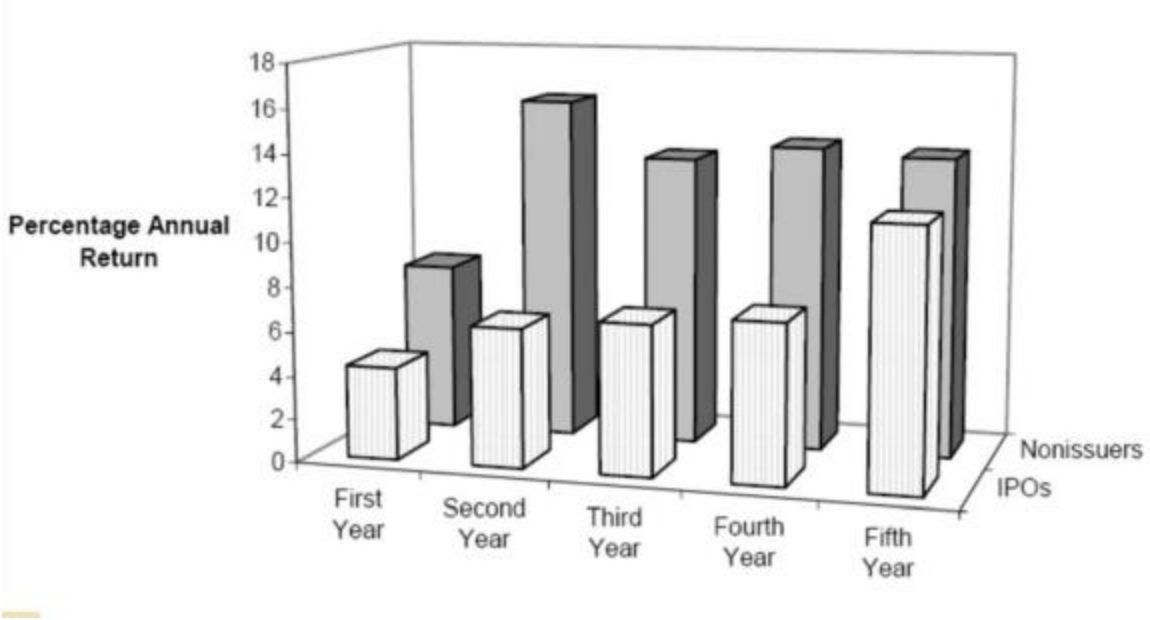
- “a good taste in investors’ mouths” (asymmetric information, firms>investors)
- Market feedback (asymmetric information, investors>firms)
- Winner’s curse (asymmetric information, investors>firms)

# Why are IPOs underpriced?

- Lawsuit avoidance/signaling hypothesis
  - People who made money are less like to examine the prospectus for false statements.
  - Firms signal they are “good” by underpricing. Leaves a good taste in the mouth.
- Irrational investors explanation (Winner’s Curse)
  - Overoptimistic investors pay too much for the IPO on the first day of trading. Consistent with evidence of poor future long run performance.
- Firms may want underpricing
  - Want to share money left on the table with their “friends”.
  - Want investment bank to supply bullish analyst coverage.
- Market feedback hypothesis
  - To induce investors with positive information to reveal their performance, the bank underprices the IPO. This incentivizes investors to provide positive information. Evidence is that IPOs revised upwards are typically more underpriced.

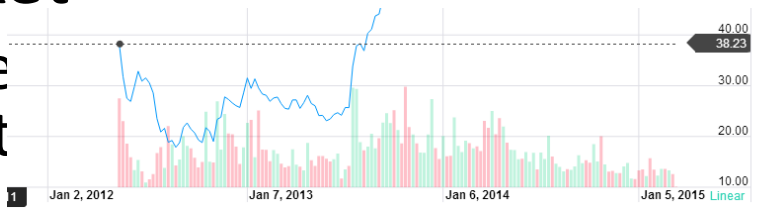
# Long run performance of IPOs

- IPO firms usually underperform peer firms in the industry.



# Why long run underperformance?

- Convergence of opinion.
  - Only optimistic investors buy on the first day. Pessimistic investors cannot short. Subsequently, the views of the pessimists get incorporated and the price drops.
- Passing of a fad
  - Investors slowly realize the potential of the firm was overstated. E.g., the technology bubble.
- Firms timing the IPO market
  - Firms try to time the marke
    times when their equity is t
    Facebook.



# Extra reading

**Initial Public Offerings**

Jay R. Ritter
Cordell Professor of Finance
University of Florida
Gainesville FL 32611-7168
(352) 846-2837
jritter@dale.cba.ufl.edu
http://bear.cba.ufl.edu/ritter

*Warren Gorham & Lamont Handbook of Modern Finance*

Edited by Dennis Logue and James Seward

reprinted (with modifications) in
*Contemporary Finance Digest*
Vol. 2, No. 1 (Spring 1998), pp. 5-30

This is the modified version.

# Can we benefit from these phoneme?

# Another way to look at underpricing

| | First-day Underpricing | | | Opening-day Underpricing | | |
|---|---|---|---|---|---|---|
| Time | 2012-2015 | 2012-2013 | 2014-2015 | 2012-2015 | 2012-2013 | 2014-2015 |
| Samples | 475 | 157 | 318 | 475 | 157 | 318 |
| Mean | 39.20% | 29.94% | 43.77% | 203.39% | 29.94% | 289.03% |
| Median | 20.01% | 17.06% | 44.00% | 122.69% | 17.00% | 131.97% |
| S.D. | 0.424 | 0.737 | 0.025 | 2.791 | 0.737 | 3.026 |
| Maximum | 626.74% | 626.74% | 46.19% | 2183.28% | 626.74% | 2183.28% |
| Minimum | -26.33% | -26.33% | 13.75% | -26.33% | -26.33% | 13.75% |

# Is it profitable to trade IPO shares?

- funds targeting only on subscribing and flipping the **IPO shares (打新基金)?**

- **Individual investment**

# What if we hold the funds for just one year?

| | Samples | FTIPO | SSE Comp. | SZSE Comp. | Equity funds | Bond funds | Mixed funds |
|---|---|---|---|---|---|---|---|
| 2012.01-2012.12 | 29 | 10.30 | 3.17 | 5.29 | 4.9 | 7.04 | 3.78 |
| 2014.01-2014.12 | 150 | 32.24 | 52.87 | 35.62 | 28.93 | 17.82 | 18.61 |
| 2015.01-2015.10 | 150 | 57.24 | 5.89 | 2.22 | 20.06 | 8.49 | 25.12 |

- As this kind of funds always buy IPO shares and sell them for another shares for a short period of time, and in 2013 no new shares were issued
- We calculate the average returns for one year holding period
- FTIPO still perform better than the others
- So we can conclude that IPO underpricing will bring investors with excess profits
- And if we buy FTIPO, we get a more favorable profit, no matter whether we hold it for a long time

# A great alternative

| | Success rate (%) | IPO share returns (%) | Expected returns per IPO (%) | No. of batches of IPO | Individual's expected returns (%) | FTIPO's expected returns (%) |
|---|---|---|---|---|---|---|
| **2012** | 1.84 | 29.94 | 0.55 | 10 | 5.64 | 10.3 |
| **2014** | 1.06 | 164.7 | 1.75 | 9 | 16.9 | 32.2 |
| **2015** | 0.56 | 369.6 | 2.07 | 8 | 17.8 | 57.2 |

- Funds' returns are higher than individuals
- Funds have more capital and easier access to IPO subscription
- Investing in FTIPO is a good alternative way

# Listing Rules in China

- Securities Law of The Peoples Republic of China (1999, 2005, 2013, 2014)

- Relevant institutions:
  - Investment Banks, Accounting Firms, Property valuation Firms, Law firms

# Different approach

- Market-based approach, underwriters and investors, especially institutional investors, play the lead role in determining IPO offer prices and the securities regulator's primary responsibility is to establish the necessary supporting institutions such as the rule of law that facilitate the market's pricing of IPO shares.

- Government-based approach, a country's securities regulator directly sets IPO offer prices based on IPO firms' financial performance indicators.

# Pros and Cons

- Many important market supporting institutions such as reputable and independent underwriters and institutional investors either do not exist or are very weak in weak investor protection countries and therefore there is a high perceived risk that IPO offerings could be over priced under a market-based approach

- Government regulators may not necessarily be as motivated and informed about general market and specific firm conditions as private investors (Jackson and Roe 2009).

# CSRC

- As a major initiative of economic reform, two stock exchanges were established in mainland China, in Shanghai and Shenzhen, in 1990 and 1991, respectively. The Chinese authorities played a dominant role in the early stages of the stock market development. The China Securities Regulatory Commission (hereafter, CSRC) decided who should be listed and how issue prices should be determined.

# Which firm to be listed?

- Before mid-1999, China used a quota system for IPOs. The quota was determined by the State Council and was allocated among ministries and provincial governments by the CSRC.
- The quotas were not allowed to be sold or traded. Sectors outside of the strategic focus of the State were simply not included in the program. The quota system was formally abolished in mid-1999 and investment banks have assumed greater responsibility in identifying and developing listing candidates. The CSRC's role at this point is to ensure that issuers are in full compliance with all laws and regulations.

# Auction mechanism of IPO shares

- In 1994, two kinds of auction mechanisms were introduced. Under the first auction mechanism, an issuer set an initial price and investors were required to bid for the price and quantity. The final offer price was set at the level where the accumulative quantities demanded by investors equaled the total number of new shares available.
- Under the second auction mechanism, the IPO price was fixed and investors were invited to bid for the quantity of shares. In case of oversubscription, pro-rata rule applies.

# IPO Pricing Regime change

- Regime 1, 1990-February 11, 1999;
- Regime 2, February 12, 1999-November 6, 2001;
- Regime 3, November 7, 2001-December 31, 2004.
- Regime 4, After 2004, mixed

- During the three regimes the way IPO offer prices were determined changed significantly while the other key features of IPO regulation (e.g., eligibility, timing, offer size) were kept relatively stable and still heavily regulated.

# Regime 1

- During Regime 1 IPO offer prices were largely determined by the CSRC. Specifically, IPO offer prices were determined as the product of an EPS and a relatively fixed PE multiple over the range of 12-15.

- Although the PE multiple was relatively fixed throughout this sub-period, the definition of EPS used in the offer price formula varied over time. Over the period January 1, 1997-March 17, 1998, the EPS was the average EPS over the three years prior to the IPO year. On March 17, 1998 the CSRC issued a new regulation CSRC (1998) that required the definition of EPS to be the forecasted EPS in the IPO year.

# Regime 2

- In December 1998, China passed the nation's first comprehensive Securities Law that signaled a significant shift of the IPO offer price determination process from a government-based approach to a market-based approach.

- The new Securities Law stipulates that an IPO's offer price be negotiated between the issuer and the underwriter and then authorized by the CSRC (Article 28 of the 1999 Securities Law).

# Regime 3

- Regime 3 represents a reversal from the market-based approach to the government-based approach.
- The starting date of Regime 3 is not very clear because the CSRC never issued any explicit regulation stipulating the starting date of Regime 3.
- Consistent with the government-based approach, starting from November 7, 2001, IPO offer prices were determined based on the EPS in the year prior to the IPO year using a PE multiple capped at 20 and fluctuated in a narrow band.

# What did we observe in government-based period?

- Low IPO price! Why?
- CSRC is averse to the risk of IPO share overpricing because China's institutional investor clientele is underdeveloped and a significant portion of IPO subscribers are small retail investors.
- On the other hand, retail investors would be less likely to complain about underpriced IPOs. Therefore, the CSRC has a natural incentive to depress IPO offer prices.

# What did we observe in market-based period?

- In July 1999, the CSRC introduced a cumulative auction method for determining IPO pricing. Under this method, underwriters set a price range and seek investor bids within that range.

- This resulted in some overheated IPOs with very high P/E ratios in 2000.

- Fujian Mindong Electric Power Ltd. Co. (stock code 000993) was listed in Shenzhen Stock Exchange with a record high P/E ratio of 88.69 times on July 31, 2000. (PE=12.9 2016/2/26, SHSE; PE=20 for NYSE)

# Next regime?

- Market based approach in advance level (listing and pricing)---registration approach

- Available in next 2 years, reform was just approved by law as of 2015/12/27, effective from March 1, 2016)

# Requirement

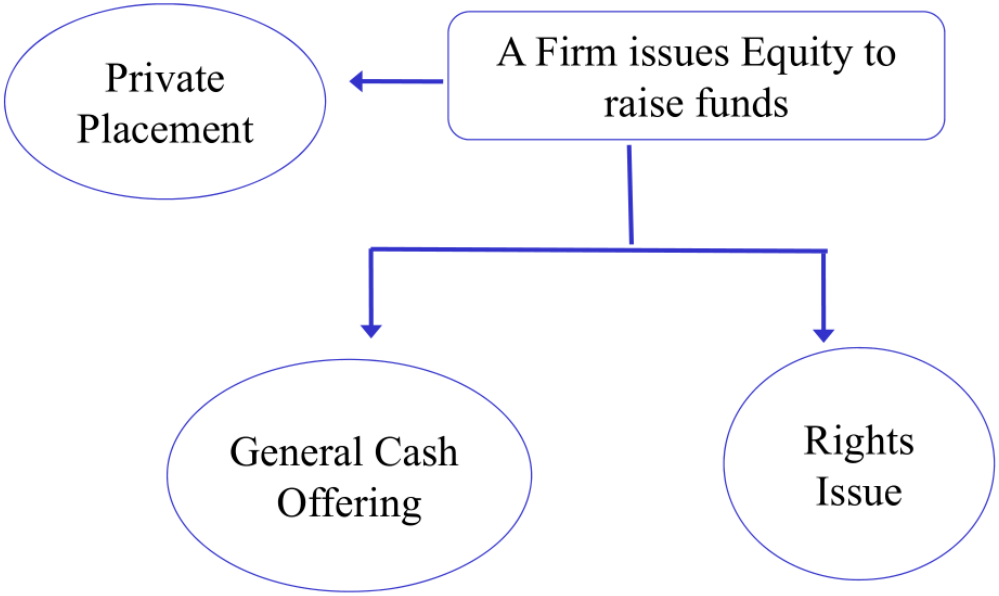
Highlights (As of Nov 2009)

| | Main board, SME board | GEM board |
|---|---|---|
| **Profitability and cash flows** | Profits for the last three years with an aggregate amount of not less than RMB30 million; and, cumulative cash flows from operating activities for the last three years exceeding RMB50 million, or cumulative operating income for the last three years exceeding RMB300 million. | Profits for the last two years on a rising trend, with an aggregate amount of not less than RMB10 million; or, profit for the latest year of not less than RMB5 million; operating income for the latest year of not less than RMB50 million; and operating income growth for the last two years of not lower than 30%. |
| **Scale** | Minimum share capital of RMB30 million before issuance, and minimum share capital of RMB50 million after issuance. | Minimum net assets of RMB20 million at the end of the latest year, and minimum share capital of RMB30 million after issuance. |
| **Asset quality** | No cumulative loss.<br><br>Intangible assets (excluding land use rights, marine cultivation rights and mining rights) not exceeding 20% of the net assets at the end of the latest year. | No cumulative loss. |

Source: http://www.pwccn.com/home/eng/ipo_cmsg_a_share.html

# Seasoned equity offering

**Issue Methods**



# Underpricing of SEO

- close-to-offer (negative), offer-to-close(positive)
- 1.15% from 1980 to 1989
- 2.92% from 1990 to 1998
- Underwriters gross spreads and other direct issue expense averaged 5.32% and 1.33%

- Offer price rounding to nearest eighth is a common practice. Even dollars. cluster at integer price; closing bid quote
- Manipulative trading, worsen the winner's curse problem

# Theories

- Uncertainty and asymmetric information
  - Winner's curse
  - Time lag to incorporate potential change
- Price pressure
  - Announcement date or issue date
- Manipulative short selling
  - Rule 10b-21 restricts such behavior
- under-valued companies tend to avoid issuing stock, preferring to postpone planned investments if no other source of financing materializes in the short term. As a result, those SEOs that are offered to the market tend to be overpriced (hence the term adverse selection).

# General Cash Offers

- When a public company makes a general cash offer, the sale of its securities is open to all investors.
- The company essentially follows the same procedure as it did with its IPO.
- It must hire an underwriter and arrange for the issue to be sold under a firm commitment arrangement or a best-efforts basis.

# Private Sales of Securities

- A private placement is the sale of securities to a limited number of investors without a public offering.
- Private placements avoid many of the costs associated with a public offering and are less expensive to arrange.
- This may not be important for large issues where costs are a small proportion of the amount of money raised.
- However, avoiding such costs is very important to companies making smaller issues.

# Rights Offering

- Issue of new stock to existing shareholders on a privileged-subscription basis.
- Firm distributes to its shareholders rights to subscribe for additional shares at a specified price.

Shareholders can one of the following:

1. ***Exercise*** their rights and subscribe for the shares.
2. ***Sell*** the rights to interested investors if they do not want to buy new shares.
3. ***Do nothing*** and let the right expire.

- Rights Issues
  - By directly offering a new share issue to its shareholders, a company hopes to save on issuing and underwriting expenses.
  - For shareholders, a rights issue allows them to retain their proportional shareholding and thus their voting position on the company's major business decisions.
    - If you owned 10% of the company's shares before the issue and you exercise your rights, then you will own 10% of the company's shares after the issue.

# Types of rights offer

- Roughly two-thirds of these rights offerings were “standby” rights issues—that is, using an underwriter as a “backstop” to purchase unsubscribed shares—while the remaining third were uninsured or “pure” rights.
- Take the case of a standby rights offer, in which the underwriter guarantees the proceeds on any unsubscribed portion of the offer and sells the unsubscribed shares to its clients.

# Comparison

| | Firm commitments | | Standby rights | | Uninsured rights | |
|---|---|---|---|---|---|---|
| Flotation costs | Industrial | Utility | Industrial | Utility | Industrial | Utility |
| Number of observations | 351 | 639 | 42 | 89 | 26 | 23 |
| Flotation costs/gross proceeds (%) | 6.09 | 4.23 | 4.03 | 2.44 | 1.82 | 0.51 |
| | (5.53) | (3.82) | (3.32) | (2.07) | (0.94) | (0.22) |

Table 1 **The Percentage Rights Offers of All SEOs**

| | Industrial Issuers | | | | Utility Issuers | | | | Financial Issuers | |
|---|---|---|---|---|---|---|---|---|---|---|
| Period | Total | Standbys | Pure Rights | All Rights | Total | Standbys | Pure Rights | All Rights | Total | All Rights |
| 1935-55[a] | 677 | 30.7% | 13.7% | 44.5% | 525 | 41.3% | 24.6% | 65.9% | - | - |
| 1963-81[b] | 473 | 9.1% | 6.1% | 15.2% | 776 | 11.9% | 3.6% | 15.5% | - | - |
| 1980-08[c] | 5,890 | - | - | 2.5% | 1,067 | - | - | 0.9% | 1,456 | 16.8% |

a. Source: Stevenson (1957), who lists common stock issues with proceeds over $1 million appearing in Sullivan and Cromwell Issuer Summaries 1933-1950 and in The Commercial and Financial Chronicle 1950-1955.

b. Source: Eckbo and Masulis (1992), who base their sample on the *Wall Street Journal* Index, the *Investment Dealer's Digest*, and Moody's Industrials and Utilities Manuals. Their sample excludes simultaneous offers of debt/preferred stock/warrants, combination primary/secondary stock offerings, cancelled or postponed offers, and non-U.S. issues.

c. Source: Thomson Financial (SDC). The SEO issue dates are between 1/1/1980 and 6/28/2008. The sample is restricted to SEOs of common stock by U.S. domiciled companies, and it excludes combination primary/secondary offerings. SDC does not provide sufficient information to separate uninsured rights offerings from rights with standby underwriting.

# Why rights offering disappear?

- As the expected shareholder takeup falls—because individual shareholders who face wealth constraints and demand diversification often choose not to participate in further equity issues—the possibility for wealth transfers between existing and new shareholders caused by issuing mispriced equity leads companies to consider standby (or underwritten) rights offerings or fully marketed firm commitment offerings.

- In either of these methods, the use of a reputable underwriter is seen as limiting adverse selection costs by certifying the value of the shares.

- In sum, issuers who expect current shareholder takeup to be high should use rights because, in a rights offer that is heavily subscribed by current shareholders, the issuer avoids most adverse selection costs.

- But in cases where current shareholder takeup is expected to be low, a pure rights offer carries potentially large adverse selection costs because most of the issue must be sold to outside investors (as shareholders trade their rights) without any accompanying quality certification to ease investor concern with overpricing.

# Market Reaction

**Average Market Reaction (AR%) to Security Offerings in the U.S. and Internationally**

This table uses information from Table 16 in Eckbo, Masulis, and Norli (2007). AR is computed across studies that estimate abnormal stock returns over the two-day period (−1, 0) relative to the first public announcement of the security issue. The reported AR weighs each underlying study with its sample size. Aggregate sample size (across all studies comprising the average) and the total sample period are shown in parentheses. Superscript* indicates that the average AR statistical significance at the 1% level.

| Type of offering | U.S. | Foreign |
|---|---|---|
| **A. SEOs** | | |
| Uninsured rights | -0.59 | -0.7 |
| | (53; 1963–81) | (484; 1980–99) |
| Standby rights | -1.33* | -1.32* |
| | (349; 1963–98) | (1,201; 1980–99) |
| Private placements | 2.45* | 3.12* |
| | (2,830; 1979–00) | (691; 1974–99) |
| Firm commitments | -2.22* | 1.10* |
| | (15,017; 1963–01) | (1,064; 1974–97) |

# SEO in China

- Private placement: 2613
- Public offer: 186
- Rights offer: 1009 (pure: 203 ; standby: 806)

# Example: Ivanhoe Mines Rights offering

IVANHOE MINES
NEW HORIZONS

June 8, 2012

**Ivanhoe Mines files final prospectus for rights offering**

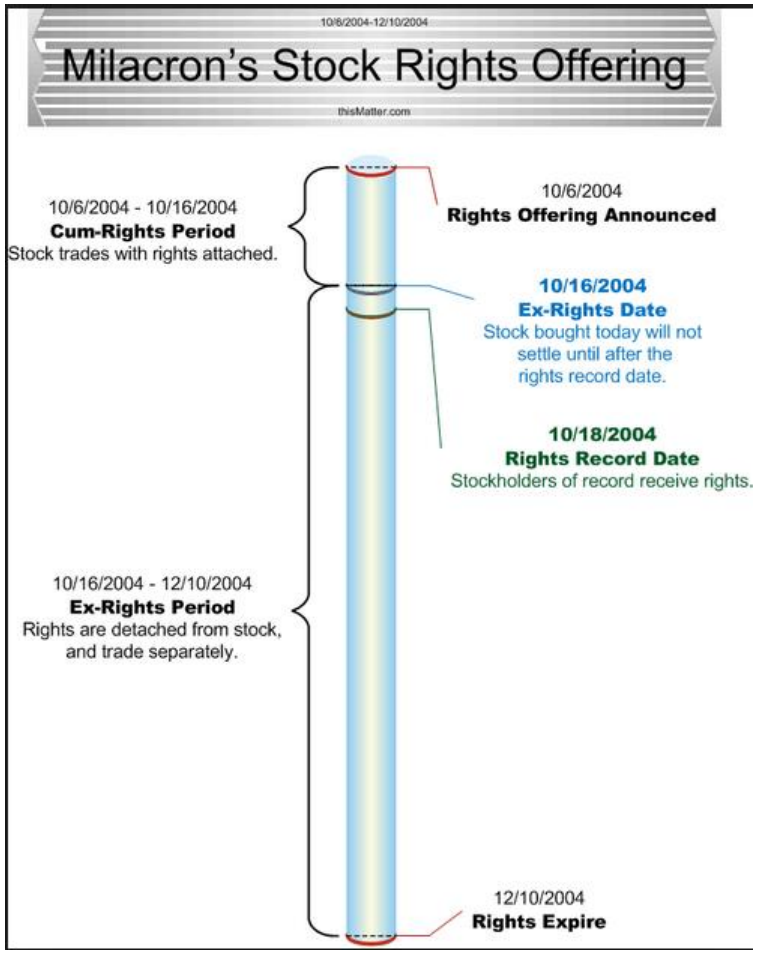
VANCOUVER, CANADA – Ivanhoe Mines announced today that the company has filed the final prospectus outlining the details of a rights offering in which all existing shareholders, subject to applicable law, may participate on an equal, proportional basis in purchasing additional common shares. The offering is expected to raise approximately US$1.8 billion in gross proceeds.

The rights offering is part of the comprehensive financing plan to continue the development of the Oyu Tolgoi Project, and was the subject of a memorandum of agreement with majority shareholder Rio Tinto on April 18, 2012. Certain terms of that agreement were amended on May 23, 2012.

Key terms contained in the final prospectus for the rights offering include:

- Each Ivanhoe Mines shareholder will receive one transferable right for each share of common stock owned as of June 19, 2012, the record date for the rights offering.
- Every 20 rights will entitle the holder to purchase seven common shares of Ivanhoe Mines.
- Each holder may choose a subscription price of either US$7.00 per share or CDN$7.17 per share. The US and Canadian subscription prices represent a discount of approximately 32% to the closing prices of US$10.31 on the NYSE and CDN$10.62 on the TSX on June 7, 2012.
- Approximately 260 million common shares are expected to be issued under the rights offering, which would represent approximately 35% of Ivanhoe's current outstanding shares.
- A rights-offering prospectus and rights certificate will be mailed to each shareholder of record on

Source: http://www.turquoisehill.com/i/pdf/IVN-rights-offering-final-prospectus-June-8-2012.pdf


10/6/2004-12/10/2004
Milacron's Stock Rights Offering
thisMatter.com
10/6/2004 - 10/16/2004
Cum-Rights Period
Stock trades with rights attached.
10/6/2004
Rights Offering Announced
10/16/2004
Ex-Rights Date
Stock bought today will not settle until after the rights record date.
10/18/2004
Rights Record Date
Stockholders of record receive rights.
10/16/2004 - 12/10/2004
Ex-Rights Period
Rights are detached from stock, and trade separately.
12/10/2004
Rights Expire

# Important dates in timeline

- Cum rights date: The date that the shares have rights attached to it
  - Anyone who owns the shares just prior to the ex rights date is entitled to receive the rights to buy the new discounted shares.
  - E.g., this is a 1 for 2 rights issue—for an investor holding 2 shares, 1 right will be issued that can be exchanged for one new share priced at $5.42.
- Ex rights date
  - Anyone who buys the shares on this date or after is no longer entitled the rights.
  - Price of stock should fall to the theoretical ex-rights price (defined in next slide) based on the price of the mother share at the most recent close of trading.
- Period for trading of rights.
  - After ex-rights date, rights can be traded between investors for this period. After this period the rights are exchanged for new shares at the discounted price and the new shares are officially listed.

# Theoretical ex-rights price

- On 6 Oct. evening, Milacron announced the rights issue. Ex-rights date is set at 16 Oct. So, if you own 2 shares of Milacron just prior to 16 Oct, you will get a right to buy 1 new share at $5.42.
- This means on 16 Oct you will effectively have three shares. $P is the price of Milacron at the close of the market before 16 Oct.
- Since all three shares are the same, on 16 Oct, the price of Milacron should fall to (P+P+5.42)/3 = (9.25+9.25+5.42)/3= $7.97, assuming the price is 9.25 before the closing. This is the theoretical ex-rights price.
- Why should the price fall? Because on the ex-rights date, investors buying Milacron no longer have rights to buy new discounted shares.
- The theoretical ex-rights price is usually reported at the start of the offering, based on the most recent closing price before the cum rights period.

# Value of rights during trading period

- A Right allows an investor to purchase of one Milacron share at the discounted price of $5.42. So these rights have value.
- The window for trading rights is indicated in the announcement. Usually about a week.
- If an existing shareholder of Milacron does not want to buy new shares, she can sell the rights in the stock market to other investors.
- What is the value of a traded right in the period where rights are traded? E.g. when Milacron share price is $8.11, then the value of R is:
  - $8.11= R+ $5.42
  - R=$2.69.