Literature survey:

**Equity Issues and their Impact on Stockholders’ Wealth**

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This study surveys the most important facts about the effects of changes in equity financing on stockholders’ wealth. The literature extensively examines primarily the initial public offerings and seasoned offerings, but the topic is much richer and the survey looks at the equity issues from several other perspectives. Recent studies provide evidence focusing on special cases of secondary equity sales where firm does not receive any proceeds from the sale of the equity, as well as sales of the equity in the market for corporate control. Specifically, we also review the effects of investments of large investors, mergers and acquisitions accomplished by stock issues, secondary sales of large holdings by governments in privatization programs, as well as the stock repurchases viewed as negative equity issues.

The survey is organized as follows. First section presents the theoretical literature related to announcements of equity offerings. Several hypotheses have been offered to explain stock price reactions phenomena accompanying new equity offerings. The theory provides implications regarding the stock price reactions in related events, such as stock repurchases, large block sales and purchases. The second section examines the empirical findings related to initial public offerings. We will discuss several studies testing recent theoretical models trying to explain the new issues underpricing puzzle. We look at the long run performance of firms going public as well. The third section surveys evidence on seasoned equity offerings by public corporations and their impact on shareholders wealth from short and long run perspective. Informational content of seasoned offers as well as relationship of the evidence to the theoretical predictions will be discussed. The fourth section examines the studies of special events involving equity sales. Seasoned stock issue may be used as a mean of payment by the corporation active in the market for corporate control. Several other studies focused on impact of large secondary block sales. Last decades provided rich opportunity to explore the effects of privatization. What are the effects of stock repurchases? This question will be answered by reviewing the studies focusing at this important topic. Concluding fifth section presents brief remarks and summarizes the most important facts on equity sales.
1. Theoretical foundations.

A. Introduction

The decision to issue equity is one of the most researched issues in corporate finance. The broadest set of hypotheses being also cornerstones of finance theory provides explanations for a large portion of the observed and documented effects following equity sales. Recent evidence motivated researchers to develop theories explaining seemingly anomalous findings and thus contributed to our better understanding of capital markets.

Market reactions to equity issues are among the most researched event studies that are now easily performed by an access to large stock price databases. The competing theories predicting the announcement day price effect can be grouped into three categories: (a) no price effect - consistent with the efficient market hypotheses and securities viewed as close substitutes; (b) negative price effect - consistent with information effects associated with the sale of overpriced equity by informed sellers, leverage-related capital structure hypotheses based upon redistribution of firm value among classes of security holders, and downward sloping demand for firm’s shares; (c) positive price effect - consistent with favorable information associated with investment, and reduction in the expected costs of financial distress and agency costs.

Recent studies have documented significant negative abnormal returns associated with announcements of new financings. The literature reports an average 3% drop in stock price for industrial firms issuing seasoned common stock. Most theoretical explanations for this phenomenon focus on the negative information conveyed to the market by the announcement of a new equity issue. Most recent findings indicate anomaly contradicting efficient market hypothesis. Long run underperformance of firms going public as well as seasoned issues makes a challenge to financial economists. What are the effects of stock repurchases? Does it matter whether the firms issue stock or pay in cash for their acquisitions? Are there any long run effects? Do our findings for equity sales hold in general, or there are any significant exceptions? A number of theories have been put forth to answer these questions. Theoretical models can be classified into several broad categories. Under the asymmetric information hypotheses, an equity issuance signals overvaluation of existing assets.
(Myers and Majluf, 1984, Myers 1984), or bad news about a firm’s future cash flows (Miller and Rock, 1985). A variant of the asymmetric information hypothesis, *growth hypotheses*, argues that with uncertainty regarding the value of growth opportunities, equity issue announcements can cause positive and negative stock price reactions (Ambarish, John, and Williams 1987; Cooney and Kalay 1993). The *managerial opportunism hypotheses* contends that managers raise capital primarily to increase the size of the firm and hence their own compensation (Jensen 1986; Stulz 1990) thus predicting negative stock price effects. Fourth, the *downward sloping demand curve hypothesis* states that stock prices decline upon announcement of an equity issue because the demand for common stock is not perfectly elastic (Scholes 1972). Finally, the *leverage hypotheses* assume that new equity issue causes an unanticipated decrease in financial leverage reducing firm’s tax shields (Modigliani and Miller 1963, DeAngelo and Masulis 1980) and/or transferring wealth from shareholders to bondholders due to change in riskiness of stakeholders’ claims.

**B. Information Asymmetry Hypotheses**

In one of the most frequently quoted papers in corporate finance, Myers and Majluf (1984) examine corporate financing and investment decisions under the assumption that management has better information about the value of the firm than do the outside investors. They show that, in the best interests of existing stockholders, the better-informed management can rationally forgo positive net present value projects. If the firm’s assets-in-place are significantly undervalued by the market, the dilution suffered by existing stockholders can be greater than any gains they receive from undertaking the positive NPV projects and management will reject equity issue and eventually also the project that for some reason requires equity financing. A decision to issue new equity and investment in the project, on the other hand, could signal an overvaluation of assets-in-place. The under/over-valuation of assets creates an adverse selection problem. Thus, equity issue announcements result in a negative impact on the stock price. Their theory also implies that firms will prefer to issue more senior securities that are less underpriced. Firms with insufficient slack to cover possible future investment opportunities would issue in periods where managers have no information advantage.

*Myers (1984)* presented the pecking order story suggesting that firms have good reasons to avoid having to finance real investment by issuing common stock or other risky securities. They do not want to run
the risk of falling into the dilemma of either passing by positive-NPV projects or issuing stock at a price they think is too low. Firms set dividend payout ratios so that equity investment requirements can be met by internally generated funds. Restraining themselves enough to keep the debt safe, firms avoid costs of financial distress and maintain reserve borrowing power, so they can issue safe debt to finance profitable projects. The profitable firm in an industry generating relatively slow growth may end up with high equity ratio, and unprofitable firm in the same industry will end up with a relatively high debt ratio, possibly creating significant costs of financial distress and willing to rebalance its capital structure by issuing equity when information asymmetry is low. The pecking order theory implies that firms will fund their investments with slack, than debt and finally equity.

Miller and Rock (1985) assume that managers know more about a firm’s future cash flows than shareholders, but there is no such informational asymmetry about both the level of planned investment and the value of the firm’s assets conditional on current cash flow. In their model, the unanticipated decision to issue equity signals bad news about a firm’s future cash flows to finance its planned investment, thereby again eliciting a negative price response. Their model is based on the notion of the firm’s cash-flow identity stating that sources must equal sources of funds. Therefore, an announcement of a new security sale must be matched either by an increase in new investment expenditure, a reduction in some liability (such as debt retirement or share repurchase), an increased dividend or a reduction in expected net operating cash flow. They hypothesize that investors draw inferences about implied changes in expected net operating cash flows from corporate dividend announcements. Since new external financings are assumed to contain no information about the level of the firm’s planed investment, the stock price response is unrelated to the investment’s profitability. Equity issues that are used to retire existing debt are zero net external financings and do not convey information about the magnitude of the firm’s current internal cash flow. Evidence is generally consistent with modified hypothesis considering security sales so that unexpected equity issue is associated with smaller-than-expected cash flows from operations, and thus negative stock price reaction.

The adverse selection problem and timing of new securities issues has been the point of the Lucas and McDonald (1990) signalling hypothesis. They presented an asymmetric information, infinite horizon model of the equity issue decision predicting that equity issues are on average preceded by an abnormal rise in the
market and the abnormal positive return on the stock, and that the stock price drops at the announcement of an issues. The idea behind the model is as follows. If the managers act in the best interest of shareholders and that equity issue is necessary to finance projects, then if waiting is not too costly, undervalued firms will delay issuing until the undervaluation is corrected. On the other hand, overvalued firms issue immediately. This timing behavior implies that overvalued firms will have average performance prior to their equity issue announcement since they issue immediately upon receiving a project. Undervalued firms will wait to issue so that they experience a price hike just before the equity issue when undervaluation vanished. Given these two price paths, equity issuers on average have positive abnormal returns preceding the issue. Due to the overvaluation at the time of announcement of the equity issue, the stock price may drop. As long as some firms find delay less costly than signaling, the price dynamics here predicted should be observed.

C. Growth Hypotheses

In a frictionless market without information asymmetries or agency problems, managers raise capital to invest in positive NPV projects, thus announcement date stock returns should reflect perfectly the expected (positive) value of the investment opportunity. Even in markets with information asymmetry, the information effects from the investment opportunity could overshadow those from existing assets, thereby stock prices can react positively to equity issues. Cooney and Kalay (1993) argue that Myers and Majluf’s result is a direct outcome of their assumption that all potential projects facing the firm have a nonnegative NPV. They present a refinement of Myers and Majluf model by allowing for the realistic possibility of potential projects having also negative NPV. Model predicts positive as well as negative stock price responses consistent with recent empirical evidence. The news of increases of most types of capital expenditures are welcomed by the market. Myers and Majluf fail to pick up the ‘good’ news associated with this announcement. Before the announcement the market anticipates a valuable project. Since this expectation is already reflected in the preannouncement price, any residual good news from the announcement of a new project is overwhelmed by the bad news of the equity issue. On the other hand, rejection of the project, reflected in a decision not to issue equity, is perceived as positive information about the firm, because managers would reject a valuable project only if the market significantly undervalues the existing assets of the firm. Rejection of this valuable project reveals the undervaluation to the market, resulting in a stock price increase upon announcement. In the
Cooney and Kalay refinement model, rejection of the project does not necessarily imply an undervaluation of the existing assets of the firm, but rather a negative NPV project. Likewise, when the firm announces an equity issue, the information could be positive if the market now anticipates a valuable new project for the firm. This result is consistent with recent empirical studies that have found an overall positive announcement return for private equity issues or for firms with high market-to-book value.

The model of Ambarish, Kose and Williams (1987) also predicts a relation between growth opportunities and equity offering announcement effects within an asymmetric information framework. In their model, dividends and net investment can both be used as signals of firm value. In equilibrium, the announcement effects of net new issues will depend on whether asymmetric information arises mainly from assets in place or from investment opportunities. Announcement effects are negative in the former case and positive when issuing firm has growth opportunities.

**D. The Managerial Opportunism Hypothesis**

The seminal work of Jensen and Meckling (1976) has possible agency cost implication for the new equity issue. If the managers sell equity claims on the corporation which are identical to theirs, agency costs are generated by the divergence between their interests and those of the outside investors. After ownership dilution, managers will then bear only a fraction the costs of any non-pecuniary benefits they take out in maximizing their own utility. Managers increase prerequisite consumption such as new corporate jets, new office buildings, or more leisure time benefiting managers at the expense of all shareholders. In equilibrium, firm value decreases because investors expect such a behavior of managers and will pay only fair price, thus all agency costs bear entrepreneurs selling their equity stakes. Same applies for new outside equity financing. Therefore equity sales increase agency costs of equity and decrease value of the firm. The reduction in the market value of the firm engendered by the agency relationship is often called ‘residual loss’ and represents the total agency costs created by the sale of outside equity.

Managerial ownership appears important also in the signalling context hypotheses. The model of Leland and Pyle (1977) hypothesizes that portion of firm’s shares retained by management signals quality of
the firm. The willingness of managers to invest in their own firm provides as a credible signal to the uninformed outside investors about the true value of the project.

Managers suffer costs of less-than-perfect diversification of their investments in order to signal quality of their firm and get better price for their shares. Managerial ownership matters and will be reflected by the stock price reactions after the announcement of equity issue.

Jensen (1986) relies on agency arguments in predicting market reactions to equity offerings. Managers are the agents of shareholders, and because both parties are self-interested, there are serious conflicts between them over the choice of the best corporate strategy. Agency costs are the total costs that arise in such arrangements. They consist of the costs of monitoring and bonding managerial behavior and the efficiency losses that are incurred because the conflicts of interest can never be resolved perfectly. Thus, the market’s reaction to the announcement of an equity offering will depend on its assessment of the probability that the funds raised will be invested in positive net present value projects.

According to Jensen’s free cash flow theory, managers have incentives to increase the assets under their control even if doing so causes a reduction in firm value. Managers sometimes grow firm size beyond the optimum level because larger firms generate larger pecuniary and non-pecuniary benefits for their managers. Moreover, the tendency of firms to reward middle managers through promotion rather than year-to-year bonuses also creates an organizational bias toward growth to supply the new positions. Conflicts of interest between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow. Jensen’s theory offers a seeming paradox. Increases in financial flexibility resulting from a new equity issue that give managers control over free cash flow may actually cause the value of the firm to decline. This result occurs because it is difficult to assure that managers will use their discretion over resources to follow the interests of shareholders. Theory explains how debt for stock exchanges reduces the organizational inefficiencies fostered by substantial free cash flow thus having positive price impact.

Similar hypothesis based on agency problems was developed by Stulz (1990). In his model, financing policy matters because it reduces the agency costs of managerial discretion. These costs exist when managers value investment more than shareholders do and have information that investors do not have. Managerial discretion has two costs: an overinvestment cost that arises because management invests too much just to
grow the firm and an underinvestment cost caused by management’s lack of credibility when it claims it cannot fund positive NPV projects with internal resources. An equity issue that increases resources under management’s control reduces the underinvestment cost but worsens the overinvestment cost. Therefore, for firms where managers can credibly signal good investment - growth opportunities, the equity issue will have positive price effect due to the reduction of the underinvestment costs.

**E. Price Pressure Hypothesis**

Scholes (1972) model proposes that stock prices may drop at the announcement of an equity issue because there is downward sloping demand for specific security. This notion was supported by views of many financial practitioners arguing that increasing the supply of a given security causes its price to fall. Model contradicts the efficient market hypothesis implying that there is horizontal demand curve for the securities and securities are close substitutes. Scholes’ hypothesis is based on the assumption of an incomplete capital market with restricted short sales. Under these conditions, perfect substitutes for a firm’s securities do not exist in the market. In the absence of perfect substitutes, firms face downward sloping demand curves for their securities.

Scholes’ hypothesis predicts that an increase in quantity caused by a new issue of common stock results in a permanent decrease in the stock price, and that the absolute value of the percentage price decline is positively related to the size of the issue.

**F. Leverage Hypotheses**

The tax advantage of debt hypothesis assumes that new equity issues cause an unanticipated decrease in financial leverage. Because of the tax advantages of debt financing, a decrease in financial leverage causes the stock price to decline, and the absolute value of the percentage decline is directly related to the size of the issue. Stock issues intended to retire existing debt have an even larger negative effect than issues intended to finance new investment, since they have a greater effect on financial leverage. These hypotheses were originated by the paper of Modigliani and Miller (1963).
On the other hand the theory of DeAngelo and Masulis (1980) argue that if an optimal capital structure exists than, with symmetric information about the firm’s cash flows, the adjustment towards this optimum should increase the value of the firm and thus have a positive announcement effect. This model predicts an optimal level of capital structure and views debt as a substitute for other tax shields such as depreciation. However, this theory does not explain why a firm might not have the optimal financial leverage prior to a new equity issue.

The hypothesis based on wealth transfer from shareholders to bondholders was developed by Galai and Masulis (1976). Given a fixed investment policy, an unexpected decrease in leverage makes a firm’s debt less risky. Assuming that firm value remains unchanged, equity issue reduces the value of shareholders’ claims to the benefit of debtholders. This redistribution effect can be clearly understood if we view the firm’s common stock as a call option on the assets of the firm. New equity issue causes the volatility of the shareholders returns to decrease. In the ‘bad’ states of the world in the future, the debtholders will take over the assets and the shareholders’ option is worthless. In the ‘good’ states of the world, the shareholders exercise their right. Thus the decrease in volatility of cash flows reduces the value of the shareholders’ call option. The redistribution hypothesis predicts negative announcement effect of new equity issue. The magnitude of the effect is positively correlated with the size of the issue and will be larger for capital structure changes than for those intended for new investments.

G. Underpricing Hypotheses

One of the puzzling phenomena in finance is the underpricing of the common stock issued by the firms going public (hereafter referred to as IPOs - initial public offerings). Ibbotson, Sindelar, and Ritter (1988) report an average initial return of 16.37%. Returns of this magnitude, which have been confirmed in many other studies, cannot be explained as compensation for risk because of the short periods. One of the intuitively appealing explanations has been provided by Rock (1986). In Rock’s model, uninformed investors who subscribe to a new issue face adverse selection because some potential subscribers have superior information. Informed investors do not subscribe to a new issue that they suspect is overpriced, leaving the entire issue to uninformed investors. However, when the issue is expected to earn a high return, they subscribe to a large
number of shares and the oversubscribed issue must then be rationed. In order for uninformed investors to earn a zero risk-adjusted and ration-adjusted return, the typical share must be offered at a discount.

The model of Grinblatt and Hwang (1989) provides an explanation where the underpricing is a consequence of the action of rational agents and their model can be regarded as a generalization of Leland and Pyle (1977). GH model a situation where the underpricing is an equilibrium outcome. An issuer is assumed to have better information about his firm’s future cash flows than outside investors. To overcome the asymmetric information problem, the issuer signals the true value of the firm by offering shares at a discount and by retaining some of the shares of the new issue in his personal portfolio. If the variance as well as the expected future cash flows are unknown, two signals are needed to credibly convey the firm’s value to the market - issuer’s fractional holdings and the issue’s offering price. Investment professionals often argue that the investors’ interest generated by a low-priced new issue tends to subsequently result in higher-priced shares than without underpricing. This belief turns out to be perfectly rational in the context of the GH hypothesis.

One of the implications of the model states that the firm value and the degree of underpricing are positively related, given the variance of the firm’s cash flows and the issuer’s fractional holdings. Under this and other signalling hypotheses we expect that firms with greater IPOs underpricing are: a) more likely to subsequently issue seasoned equity; b) likely to issue larger amounts of equity in their seasoned equity offering (hereafter SEOs); c) likely to issue seasoned equity more quickly after the IPOs; and d) likely to experience a smaller price drops when the SEOs is announced.

Benveniste and Spindt (1989) explain why prices only partially adjust to demand in an IPOs. Why underwriters do not increase offering price when they see issue is oversubscribed? This theory of underwriting explains the existence of underwriters as institutions that improve the economic efficiency of the IPOs market. The ‘certification role’ of the underwriter may overcome the information asymmetry, when issuing firms have incentives to misrepresent themselves as high quality firms. On the other hand, investment bankers access investors to collect information and eventually reduce IPOs underpricing. In practice, underwriters solicit indications of interest from investors as part of their efforts to get as much information as possible into offer price.
In the model, the underpricing arises naturally as a cost of compensating investors with positive information about the value of the stock for truthful disclosure of their private information. An IPOs price change between the time of prospectus filling and offer date reflects information gathered from investors. Good information is likely to be disclosed through high demand for the issue. Profits to investors are generated by a tradeoff between increased allocation and underpricing.

The analysis yields several implications besides the underpricing of the new issues such as the fact that underwriter’s regular investors revealing their private information will be given distributional priority. There appears to be a pricing and allocation schedule in which demand exceeds the available allocation. Underwriters prefer to compensate investors for truthfully revealing information by allocating a smaller number of highly-underpriced shares rather than a larger amount of slightly-underpriced shares.

2. Initial Public Offerings

A. Underpricing

Over the past two decades, several empirical studies have reported that initial public offerings achieve sizable average returns over very short periods, suggesting that the offerings may be underpriced. One of the first studies documenting price performance of common stock new issues dates back to Ibbotson (1975). Ibbotson’s findings induced now extensive literature on this topic, researching for possible theoretical explanations as well as further ‘market irregularities’. Examination of the initial and aftermarket performance on IPOs offered to the public during the 60’s provided evidence that initial performance is positive, averaging at 11.4%. The distribution of returns is skewed so that investor in single new issue has approximately same chance for gain or loss. The positive initial performance could be caused either by too low price of the offering or the investors systematically overvalue new issues.

Ibbotson provided an explanation for underpricing ‘phenomenon’ based on the legal constraint that new issues must be offered at a fixed price and can not exceed the maximum price filed two weeks in advance of the actual offering. In the case of strong demand it is not possible to sell any part of the issue above the fixed offering price, though underwriters may after the offering brake syndicate and sell for lower price.
Therefore underwriters face one-sided risks that may be borne. In the case of ‘firm commitment’ underwritings that clearly dominate ‘best effort’ deals, the underwriter purchases all of the issue from the issuer and consequently bears all of the risks in selling the issue. Another explanation, popular on Wall Street but violating an efficient market framework, states that underpricing ‘leaves a good taste in investors’ mouths’ so that future underwritings from the same issuer could be sold at attractive prices. Underwriters collusion, side payments from investors to underwriters for oversubscribed issues may further partially explain the positive initial returns. Ibbotson did not solve the ‘mystery’, but initiated broad research.

Stock issues that have risen from their offering prices to higher than average premia in the aftermarket are commonly referred to as “hot issues”. Same year as the first Ibbotson’s study on underpricing was published study of Ibbotson and Jaffe (1975) focusing on the prediction of ‘hot issue’ markets. These markets are defined as periods in which the average first month performance of new issues is abnormally high. If equal dollar purchases of the offerings were made, 16.83% return relative to the market would have been earned on the average. Study implies that the first month returns are serially correlated and do not follow a random walk. Investors might profit from predictability of new issue premia by avoiding the offerings in periods following some ‘cold issue’ when the initial returns are nonpositive. Also issuers may obtain a higher offering price relative to the efficient price when they issue in cold issue market.

Several studies on IPOs underpricing appeared in one ‘93 JFE issue. While many of the studies examined the underpricing, the process whereby the offer price is set remained black box. Prediction of the initial returns was focus of the Weiss-Hanley (1993) study. She finds that relation of the final offer price to the range of anticipated offer prices disclosed in the preliminary prospectus is proxying for the level of underpricing. For a sample of IPOs issued from ‘83 to ‘87, Hanley finds 20.7% mean initial return for firms going public at a price above the anticipated range. Offerings that decrease the offer price to below the lowest anticipated price quoted in the preliminary prospectus have returns not significantly different from zero. Issues offered within the anticipated range, have an average initial return of 10%.

The case of Microsoft’s IPOs when original anticipated maximum price was raised from $19 to $21 and closed at $27.75 the first trading day, can provide a demonstration that information gathered during the ‘road show’ affect the pricing and allocation of new issues. Issuers with final offer price exceeding the limits of
the offer range have greater initial returns, and are also more likely to increase the number of shares issued.
The high level of initial returns associated with issues with positive revisions in their final offer prices has been
termed the ‘partial adjustment’ phenomenon by Ibbotson, Sindelar, and Ritter (1988). Underwriters instead of
raising the final offer price to the market value on the initial trading day only partially adjust the price upwards.
These results are consistent with the pricing and allocation schedule proposed by Benveniste and Spindt
(1989). Their model suggests that underwriters compensate investors for truthful revelation of their private
information, but this is still less costly to the issuer than no information gathering.

The study also looked at the long run performance of the IPOs and found insignificant relation
between the revision in offer price and the degree of overpricing in the long run. Unlike short run underpricing,
unrelatedness of the long run performance to the offer price revisions and underpricing contradicts theory
developed by Grinblatt and Hwang (1989) implying that good firms IPOs will be more underpriced signalling
the true value of their assets and investment opportunities.

Another paper published in JFE in 1993 on the topic of IPOs was written by Jegadeesh, Weinstein
and Welch (1993). They tested the implications of the signalling hypotheses suggesting that firms underprice
their IPOs so that they can subsequently issue seasoned equity at more favorable prices (first notion in
Ibbotson 1975, Grinblatt and Hwang 1989). If high-quality firms underprice to separate themselves from low-
quality firms, they should be able to raise additional capital under more favorable terms in the future. The
expected benefits at the time of subsequent seasoned offering must offset the signalling costs for high-quality
firms but not for ‘lemons’ (reads: low quality firms).

Although the empirical findings of the study are consistent with the implication of the signaling
hypotheses about the positive relation between underpricing and the probability and size of subsequent
seasoned offerings, the economic significance appears weak. Firms with larger first day returns appear to have
larger subsequent issues and reissue equity with 50% higher probability than firm that were overpriced at the
time of offering. Troubling fact is that only 23.9% of the firms with the largest underpricing subsequently
reissue equity indicating that the return on the date of the IPOs does not play a unique role in predicting future
seasoned issues. Contrary to the basic implication of the signaling hypothesis, issuers do not have to rely on
the costly underpricing mechanism to signal information relevant for future equity issues. The lack of a strong
association between IPOs underpricing and subsequent seasoned issues calls into question the explanatory power of the signaling hypothesis.

Several other papers challenged the presumption underlying previous research that positive average initial returns result from deliberate underpricing. Competing explanations for the apparent systematic underpricing of IPOs look at the puzzle from the perspective of the underwriter’s price stabilization. Investigation performed by Ruud (1993) indicates that the distribution of returns with positive mean initial return reflects the existence of a partially unobserved negative tail. Most IPOs with zero one-day returns subsequently fall in price, suggesting that underwriter price support accounts for the skewed distribution and hence the underpricing phenomenon. Termination of the price stabilization within one week results in subsequent negative returns. Only 8% of IPOs with zero one-day return exhibit price increase in the subsequent week, while 47% report negative one-week returns of 5% or greater. Gradual withdrawal of the support leads to negative one-two week returns in 69% cases.

Clearly, positive one-day returns are consequence of the price stabilization when stock prices are allowed to rise but are prevented from falling significantly until the issue is fully sold. Initial returns distribution and price support result in observed post-issue returns such that the minimum return IPOs drop dramatically within the first week, while the maximum return remains virtually unchanged from one day to four weeks. This underwriter price support explanation for high IPOs initial returns are consistent with Ritter’s (1991) evidence that underpricing of IPOs is a short run phenomenon.

Weiss-Hanley, Kumar and Seguin (1993) demonstrated that stabilization has a significant impact on the after-market price of IPOs. They also find that stabilization truncates the distribution of post-issue prices at a floor price, lowering the risk of adverse price moves and hence, in a competitive dealer market, reducing the bid-ask spread. Previous studies of returns to investors ignored the effect of stabilization on reported returns. The study examined sample of 1523 NASDAQ IPOs between 1982 to 1987 and finds evidence that stabilization significantly affects quoted spreads that are narrower when transactions' prices are close to the offer price during the first trading days. Moreover, when stabilization is assumed to be suspended, market prices decline by approximately 2.5% over the following five days. These findings as well as those by Ruud (1993) are important from public policy perspective. Systematic and deliberate manipulation of prices by
underwriter is completely legal, but hurts investors who engage in what they believe are open market transactions with prices set by unencumbered market forces.

**B. Long Run Underperformance**

The underpricing of IPOs as documented in previous section appears to be a short-run phenomenon. Issuing firms during 1975-1984 substantially underperformed a sample of matching firms in subsequent 3 years. This evidence provided Ritter (1991) in his study on the long run performance of IPOs. The study presented another anomalous fact that investors in firms going public do not earn normal rate of return as predicted by efficient market hypothesis. Substantial underperformance year to year and across industries reveals patterns consistent with a market in which: a) investors are periodically overoptimistic about the earnings potential of young growth firms and b) firms take advantage of these ‘windows of opportunity’ to sell overpriced equity. The two anomalies - the short-run underpricing and ‘hot issue’ market phenomenon are tied with another puzzle that investors do not earn normal return on their investment in the long-run because IPOs appear to be overpriced at the time of the issue. Ritter reports 34.47% average 3-year holding period return for IPOs, but industry-size matched stocks earned average return of 61.86%. Possible explanations range from risk mismeasurement to ‘bad luck’, fads and overoptimism. Though quantitative measurement is sensitive to benchmarks used, IPOs underperformed relative to all commonly used indexes. There is also strong monotone relation between age and aftermarket performance which is consistent with the notions that risky issues require higher returns and age proxies for risk. Ritter (1991) reports 23% underpricing and 3-year wealth relative of 0.66 for firms going public within 1 year of incorporation, but for well established firms (more than 20 years old) the average initial return is only 5.4% with wealth relative 0.961 which indicates performance comparable to the matching peers.

The long-run under-performance was subsequently investigated by Loughran and Ritter (1995) in their publicized paper on ‘the new issues puzzle’. They examined the pool of 4753 IPOs during 1970 to 1990. Several previous studies documented that firms underperform in subsequent 5 to 6 years when underperformance narrows. ‘Issue puzzle’ study reports 5-year mean holding period return of 16% for IPOs and 66.4% for size-matched firms. Authors measure the underperformance using the ‘wealth relative’. This
measure indicates that an investor would had to invest 43.8% more money in IPOs than if nonissuers of the same size were purchased at the same time, in order to achieve the same terminal wealth level five years later.

Study reports special time pattern of underperformance. Performance of IPOs is comparable with the performance of their size matched peers during first six months, but IPOs severely underperform during the next 18 months and by the fifth year, the underperformance is narrowing substantially. Even adjustment for the difference between offering price, often available only to a group of large institutional investors, and the first post-issue market price yields similar results. Adjustment narrows wealth relative to 70%, but this still indicates that required investment would had to be 30% higher in IPOs to achieve same terminal wealth. Again, the use of alternative benchmarks proved the robustness of the results.

Very interesting study testing financial patterns of firms going public and the pecking order model was performed by Helwege and Liang (1996). They examined financing patterns of firms that went public. Results indicate that probability of obtaining external funds is unrelated to the shortfall in internally generated funds, although firms with cash surpluses avoid external financing. Firms that access the capital markets do not follow the pecking order when choosing the type of security to offer, and this finding contradicts adverse selection hypothesis.

3. Seasoned Equity Offerings

a) Effects of Equity Issue Announcements.

In one of the most comprehensive studies on the topic of public corporation equity issues, Asquith and Mullins (1986) provide an evidence that the announcement of equity offerings reduces stock prices significantly. Their study analyzed 531 registered common stock offerings by utilities and industrials between 1963 to 1981. Firms commonly issue new equity only in small volumes relative to their market value. The average ratio of the issue to the preannouncement aggregate equity value is 12.5% for primary Issues. The average two day announcement period excess return for the primary issues is -3.0%. This negative stock price reaction representing the loss in firm value on the single announcement day is on average 31% of the funds
raised in the primary offering. This loss is often termed dilution. Striking fact is that almost 25% of the primary issues produce offering dilution greater than 50%. These results imply that a substantial portion of the proceeds of an equity issue, in effect, comes out of the pockets of old shareholders.

Authors also looked at the timing of the issues. For the period of two years until ten days preceding the issue, the average cumulative return of the stock of industrial firms adjusted for the performance of the stock market was 33%. This finding is consistent with model of Lucas and McDonald. Despite the fact that equity is sold following an increase in the general level of stock prices, the results reveal no ability of firms to actually time the market. A larger announcement day price reduction is experienced by stocks that have performed poorly prior to the announcement. Regression results for industrial issues indicate that announcement day price reduction is negatively related to the size of the offering but the results cannot be reliably explained by changes in capital structure associated with new equity. For the industrial primary offerings, a $100 million increase in the size of an equity issue results in an additional reduction of $7.7 million in firm value. The findings are consistent both with the signaling hypothesis where equity issues are conveying negative information to the investors about the true value of the firm as well as with the price pressure hypothesis reasoning that there is downward sloping demand for securities.

Investigation of the stock price effects of security offerings by Mikkelson and Partch (1986) found that the type of security is the only significant determinant of the price response. The changes in share price are unrelated to characteristics of offerings such as the net amount of new financing, relative size, and the quality rating of debt issues. Completed offerings are associated with a positive average excess return between the announcement and a negative average return at the issuance. On the other hand, for the canceled offerings are the average returns negative between the announcement and the cancellation, and positive at the cancellation. The stated reason for the issuance also affects the price reaction. Study documented a greater decrease in share price in response to common stock offerings to refinance debt than those financing capital expenditures. The most important factor in stock price reaction is type of the security. Offerings of common stock and convertible debt are met with a less favorable price response.

Evidence is consistent with Myers and Majluf (1984) and the argument that announcements of common stock and convertible security offerings convey that share price is too high. Negative price response is documented to all types of unexpected new financings what is consistent with Miller and Rock (1985)
model leading market participants to lower their assessment of firm’s earning prospects. The only positive response is to credit agreements that can be viewed as a credible certification of issuer by the informed lender. The negative response to straight debt, private debt and preferred stock is not statistically and economically significant.

Effects of issuing preferred stock on the wealth of stockholders were analyzed by Linn and Pinegar (1988). This study is new by pointing out the patterns in the preferred stock issuing behavior. Firms in different industries choose to issue different types of stock and market reaction depends on the firm’s industry. Utilities appear to issue straight fixed-rate preferreds associated with economically negligible announcement return of 0.2%. Financials sell over half of the adjustable rate preferreds with positive stock price reaction of 1.5%. Industrials, as might be expected from previous discussion, realize negative abnormal reaction of -2.0% upon announcement of most commonly used convertible fixed-rate issues. Information effects explain the cross-sectional results for industrial firms, but tax benefits and regulatory conditions are likely explanations for utilities and financial corporations.

Are firms able to game the market by raising dividends and subsequently issuing stock? This question was addressed in the study by Loderer and Mauer (1992). If managers know the positive stock price reaction to dividends increases, they might be tempted to do so and obtain a higher price in a stock offering. Do we observe coordination of stock price reaction to dividend and offering announcements? Though it might seem an insane decision to waste money on simultaneously selling stock and paying taxed dividends, it is not uncommon to observe this absurd behavior. Literature even provides signaling hypotheses for why firms do these transactions. The main idea of models is clear. Firms signal high quality projects by dividend increase to obtain higher offering price. The empirical analysis shows little evidence on timing stock offering announcements right after dividend declarations to benefit from the attendant information disclosure. The dividend policy of issuing firms is indistinguishable from that of nonissuing firms. Though firms announce offerings after rather than before dividend declarations, the median time between these announcements is one month. The most important finding is that joint dividend and stock-offering announcement effects are not less negative than the simple offering announcement effects experienced by non-dividend-paying firms.
Equity issue may alter ownership structure, cash flow rights and voting rights. Paper of Shum, Davidson and Glascock (1995) provides an evidence that both the voting rights and the compensation for loss of voting rights are important determinants of the market’s reaction. The immediate impact of the announcement of a dual class stock issue is statistically insignificant. However, the key point is voting and cash flow rights. Firms providing inferior voting rights to dual class common stock, experience insignificant gains for first class stockholders. Those firms where the current stockholders give superior rights with same cash flow rights to the new class of stock experience significant 2% wealth losses at the announcement date. However, the old stockholders receive positive abnormal returns of 1.8% when the dual class has superior voting rights but restricted cash flows. This evidence suggests that voting rights are important and that extra cash flow can compensate shareholders for reduced voting power.

Sofar we reviewed the evidence indicating that there is strong and significant negative reaction to equity issues. What can be said about general validity of these market reactions, may be inferred from studies examining positive market reactions to special types of equity issues. There are several exceptions from negative price reactions to new equity issues. These cases might be the ones that confirm the rule that new equity issues are in general bad news for investors followed by negative stock price reaction. Hertzel and Smith (1993) examined market discounts and shareholder gains for placing equity privately. Their study documented that private placements of equity are associated with positive abnormal returns. Private issues sell at substantial discounts that reflect information costs borne by private investors and abnormal returns reflect favorable information about firm value. Results of the study examining 106 private placements in the 80’s reveal the 19.3% cumulative abnormal return in the 40 day window around the announcement date. These findings are consistent to Myers and Majluf underinvestment problem, where private placement provides solution and signals undervaluation. Several other studies in the area of private placements reported significant discounts ranging from 30% to 50%. The illiquidity associated with the unregistered stock could provide only a partial explanation for such sizable discounts. Discounts in this study are positively related to proxies for the costs and expected benefits of becoming informed. Allowing for the possibility that, at some cost, private placement investors can assess firm value through their negotiations with management, the tested hypothesis implies that private placement mitigates underinvestment problem and reduces wealth transfers to new shareholders that would result from public issues. Private placements will be preferred if doing so enables
existing shareholders to retain a larger fraction of the firm by disclosing private information during negotiations. The results show that private sales of equity have significant information effects and these are more important than ownership structure effects. While some placements have the potential to be important ownership structure events, a number of them appear to be passive investments.

Another study documenting a significant exception from negative stock price reactions to new equity issues was performed by Pettway, Kaneko and Young (1995). Market reactions to new capital sales by Japanese banks are significantly positive. However, equity issues are simultaneously offered with new convertible bonds and the issues are often denominated in multiple currencies. This multicurrency multisection issues result in an abnormal positive returns of 6.46%. Issue features are found to be correlated with abnormal performance and authors conclude that the effect complies with the notion of imperfections in world capital markets and an existence of unsatisfied clientele in international security sales of creditworthy firms.

b) Long Run Performance of SEOs

The early remark on the possible underperformance of seasoned equity issues was documented by Asquith and Mullins (1986). They report 6% underperformance of the sample of industrial firms in the two years following the issue. Notion on possible poor performance of SEOs as well as prior well documented underperformance of firms going public motivated Loughran and Ritter (1995) to investigate the long-run performance of public corporations after an equity issue. The intuition behind their story states that if firms going public are able to sell overvalued equity, then the same should hold also for public firms. The magnitude of the underperformance is economically important: based upon the realized returns, an investor would have had to invest 44% more money in the issuers than in nonissuers of the same size to have the same wealth five years after the offering date. Surprisingly, the SEOs underperform as severely as firms going public. In other words, during the five years after the issue, investors have received average returns of only 7% per year for companies conducting a seasoned equity offer. Moreover, if firms conducting SEOs are overpriced to such an extent, a 33% drop would be required to eliminate this overvaluation. If the market fully reacted to the information implied by an equity issue announcement, the average drop would be 33% and not 3%.
Poor postissuing performance is not predicted by asymmetric information models for the timing of issues such as that of Lucas and McDonald (1990). The evidence is consistent with a market in which companies announce stock issues when their stock is grossly overvalued, the market does not revalue the stock appropriately, and the stock is still substantially overvalued when the issue occurs. In addition, the poor performance of firms conducting SEOs is not attributable to differences in betas, nor is it a manifestation of long-term reversals because among firms with previous substantial runup (72% mean), average issuer has a five-year return of 26% compared with 98% for non-issuers. Underperformance is also related to the degree of issuing activity. Firms issuing during years when there is little issuing activity do not underperform much at all. Loughran, Ritter results remain one of the interesting and puzzling facts contradicting efficient market hypothesis. This study induced a development of theoretical explanation termed ‘windows of opportunity hypothesis’. Do the firms time the market and issue equity when they are overvalued? The final answer may appear from further research.

The findings documented by Loughran and Ritter were confirmed by another independent study on offerings during 1975-1989 on the sample of 1247 US firms making primary seasoned offerings. Spiess and Affleck-Graves (1995) report 10% median five-year holding-period return that contrasts with 42.3% return of size-industry matched nonissuing firms. Such a large difference in returns cannot be explained by mismeasurement of the relative risks. Even controlling for industry effects and book-to-market-size adjustment shows little evidence that the underperformance is caused by fads. Also this study concludes that firms are able to take advantage of firm-specific information to issue equity when the firm’s stock is overvalued. The motto of Loughran and Ritter that ‘investing in firms issuing stock is hazardous to your wealth’ can be taken as granted.

The striking finding of previous two studies inspired researchers to test explanatory power of the timing model together with other competing hypotheses. The study of Jung, Kim and Stulz (1996) focused on investigation of the ability of the pecking-order model, the agency model, and the timing model to justify firm’s decisions whether to issue equity or debt. Results fail to find support for the timing model, but show strong support for the agency model. Without agency costs of managerial discretion, one would not expect firms without valuable investment opportunities and debt capacity to issue equity, but this is what happens in reality.
The behavior of firms issuing equity when they have debt capacity is inconsistent with the pecking-order model or asymmetric information models. Controlling for other firm and issue characteristics, firms without valuable investment opportunities have a more negative stock price reaction to equity issues than growth firms. This finding is consistent with prediction of agency model that equity issues are negative news for shareholders, since they enhance managerial discretion when managers’ objectives differ from shareholders' objectives. Authors provide other evidence that no-growth firms issuing equity invest more than similar firms issuing debt, and that the worst stock price reactions occur for firms without valuable investment opportunities issuing equity to finance capital expenditures.

The search for windows of opportunity for seasoned equity offerings continued in the work of Bayless and Chaplinsky (1996). They find that the price reaction to equity issue announcements in periods of high-equity-issue volume is 200 basis points lower on average than in ‘cold-market’ periods. The idea corresponds with the early notion of cold-hot markets studied by Ibbotson and Jaffe (1975). Windows of opportunity are here defined as time periods when information costs are reduced for all firms. Results indicate that otherwise identical firms experience smaller abnormal returns in hot markets. Importantly, the observed differences in abnormal returns are not attributable to differences in market or macroeconomic conditions. The 200 basis points difference implies that a typical hot market issuer would forego approximately $13 million of value if firm issued in a cold market instead.

What is the economic importance of this difference can be judged by the comparison to the direct costs of underwritten equity which range between 4 and 5 percent of gross proceeds. Typical issuer selling $30 million of new equity thus incurs direct issue costs up to $1.5 million contrasting with the potential loss by mistiming the offering. One explanation for windows is Myers’ (1984) view that asymmetric information results in information costs that are of sufficient magnitude to induce firms to follow ‘pecking order rule’. In searching for ways to reduce information costs, Myers and Majluf (1984) suggest that firms may be able to time their equity issues for periods when the level of information asymmetry is low. The evidence is consistent with time-varying asymmetric information and supports the existence of windows of opportunity for equity issues that result at least partially from reduced levels of asymmetric information.
4) Special cases of equity issues

A) Common Stock Repurchases

If the market negatively reacts to the announcements of new equity issues, we should expect that reverse processes appear in the case of stock repurchases. Complex study examining the effects of a common stock repurchase on the values of the repurchasing firm’s common stock, debt and preferred stock was published by Dann (1981). Firm may repurchase its own common stock through a tender offer, negotiated transaction with a group of large shareholders or via open market repurchases. Open market repurchase is performed over a long period in order to avoid misuse of private information of exact timing of repurchase trades. In a tender offer, firm specifies the number of shares it is offering to purchase, tender offer price and the time period an offer is open. What is affected by the repurchase? Composition of assets, firm’s financing mix, ownership structure and distribution of cash to shareholders taxed differently than dividend, are among the most important attributes that may directly or indirectly affect the change in firm value.

Several explanations and predicted effects of common stock repurchase were offered. Let’s briefly remind the competing theories. The tax hypothesis implies that investors save on personal taxes otherwise incurred in case of dividend payments. However, other literature shows that the effects of taxes are far less obvious than might seem from tax differentials. Announcement of stock repurchase may on the other hand reveal information about management’s view of firm’s future prospects. However, the nature of the information in the signal must be determined in order to predict the sign of price reaction. A third hypothesis is that an unanticipated repurchase of stock represents a wealth transfer from debtholders to stockholders. This expropriation hypothesis implies that the stock price increases and price of senior securities decreases, consistent with an increase in the firm’s riskiness.

Dann examined 300 repurchases over the 1962-1976 period. On average, firms sought to acquire 15.3% of their shares and offered 22% premium over the market price. Two day announcement return on common stock is statistically and economically significant 15.4%. Clearly, repurchases are important events in the life of firms undertaking them. Potential discrimination against competing hypotheses could provide

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1 See Black and Scholes (1974) The effects of dividend yield and dividend policy on common stock prices and returns, JFE 1, Miller and Scholes (1978) Dividends and taxes, JFE 6
examination of returns to senior securities. In fact, the returns to preferred (0.76%) and convertibles (3.5%) are positive, but the straight debt holders experience only slight 0.33% loss. The overall change in firm value is on average +8.9%. The ratio of common stock value change to firm value change is almost 95%, indicating that most of the gains capture common stockholders. Moreover, these positive value changes in common shares are permanent.

Overall, the results comply with the hypothesis that repurchase of common stock reveals favorable information about the firm’s future prospects. Senior claimants on average do not lose, thus contradicting wealth transfer hypothesis. Tax saving hypothesis could be also rejected, because permanent stock price increases would require change in the firm’s payout policy. In fact, only a handful of all sample firms repurchased stock again. However, if disclosure of new information is the principal explanation of the firm value increments arising from repurchases, we still have to answer two questions. What is the nature of the information, and why managers choose to convey the information by costly repurchase?

Previous studies such as Masulis (1980) indicated same patterns for tender offer stock repurchases that appeared in Dann’s study. The sample of 199 offers over the period 1963-1978 shows that firms, on average, sought 16% of the outstanding shares and 23% tender offer premium was announced. Masulis documented 17% mean announcement two-day return for common stock. Consistent with the hypothesis of personal tax savings of stock repurchases over cash dividends, firms seeking to purchase an above average percentage of outstanding shares experienced the announcement period return of 23.5% exceeding the 12% return for firms repurchasing smaller portions of their stock. Announcement day returns appear to be partially influenced by debt tax shields as predicted by leverage hypothesis. For the firms with more than 50% debt financing, the stock price increased by 21.9% exceeding 17.1% return of the less leveraged group. Masulis’ findings also suggest that convertible securities mirror the common stock price, but there is insignificant change in value of nonconvertible debt and preferred stock. At offer expiration date only stocks of oversubscribed offers with pro rata repurchase declined in price. Moreover, of this group, over one third exhibit a post-offer price lower than the pre-announcement price.
Additional verification of the Dann’s study provided Vermaelen (1981). The main contribution of his paper is the empirical finding that firms engage in signalling activities. Most of the repurchasing firms are small firms, predominantly held by insiders, who commit themselves not to tender their shares. Thus, managers are able to credibly signal the high value of the firm to the market because they would carry a significant burden if the firm repurchased overvalued stock. The results are consistent with the hypothesis that firms offer premia for their own shares mainly in order to signal positive information. The tender offer repurchases are followed by abnormal increases in earnings per share that validates the signalling hypothesis and partially answers the question put forth by Dann. The market uses the premium, the target fraction and the fraction of insider holdings as signals in order to price securities around the announcement date. Although it is impossible to exclude the existence of small tax or expropriation effects, the information theory seems to explain 60% of the variance of the abnormal returns and all above mentioned signals are significant.

The question of whether the value of a firm is affected by stock repurchases and/or exchanges modifying the firm’s debt-equity ratio was analyzed by the experiment of McConnell and Schlarbaum (1981). The exchange offers in which income bonds are issued in exchange for preferred stock provide an ideal ‘conditions’ for isolating the tax effects of debt financing from the bankruptcy-costs. In case of income bonds, there is no potential for bankruptcy since interest payments are not enforceable when firm has insufficient earnings, but interest payments are tax deductable.

Let’s remind MM (1963) corporate tax model suggesting that the value of a firm is a positive function of its debt-equity ratio because of tax deductibility of interest payments. On the other hand, Miller (1977) has shown that introduction of personal taxes might lead to the irrelevance of firm’s debt-equity ratio. Introduction of bankruptcy costs implies that there will exist an optimum debt-equity ratio for each firm. The data qualitatively confirmed figures of previous studies from other perspective. Preferred stock repurchase offers financed by income bonds result in 2.2% two-day announcement return for common stock and 2.5% return for preferred stock. Nonetheless, the estimated abnormal returns are not consistent with those predicted by the corporate tax incentive hypothesis. Though, on average, there is a positive, albeit small, incentive for stockholders to undertake the exchange offers, the gains are not consistent with predictions of MM (1963). In general authors find the results to correspond more with Miller’s tax theory.
The section on repurchases will be rounded by connecting repurchases to other payout policies. If common stock repurchases positively influence firm value, why do they not dominate cash dividends for making distributions to shareholders? The study of Barclay and Smith (1988) provided arguments that the costs associated with open-market-repurchase programs create barriers for their operational implementation. When a firm repurchases shares in the secondary market, managers have an opportunity to use inside information to benefit at shareholders’ expense. Evidence also suggests that bid-ask spreads on average widen from 1.65% to 1.95% when firms engage in a repurchase. Since these costs do not arise with cash dividend payments, tax considerations alone are not sufficient to make repurchases a dominant alternative to dividends. Moreover, out-of-pocket expenses for intra-firm tender offers involve costs for SEC fillings and hiring an investment banker what limits their use to large distributions. Stock repurchases will be considered with respect to underlying costs of other payout programs. Moreover, the stock repurchases affect the firm via ownership changes examined in the next section.

b) Secondary sales and significant ownership changes

Let me remind again the study of Asquith and Mullins (1986). Their complex study also examined the effects of secondary sales of stock from a group of current shareholders. The secondary sales differ from primary in one critical fact that the number of shares outstanding remains the same and the firm receives no proceeds from the sale of the stock. The study reported the average two-day announcement period excess return of -2.0% for these secondary sales. The reduction in equity value associated with the announcement of a secondary sale is a large fraction of the size of the issue. The average reduction in firm value is 78% of the proceeds of the sale, and in almost 30% of the secondary issues, firm value fell by more than the proceeds of the sale. Though the secondaries are usually smaller fraction of the firm value, the larger reductions observed for secondary distributions compared with primary offerings suggest that secondary issues may be viewed as relatively more pessimistic signals.

In a corporation with many small owners, presence of a large minority shareholder provides a partial solution to the free-rider problem of monitoring the management performance. Shleifer and Vishny (1986) modeled a situation where increased ownership concentration increases the firm value. Without the strong
shareholder it pays to nobody to incur all monitoring costs that are usually larger than tiny fraction of profits from potential improvements. Large individual and corporate investors monitor the management and sometimes initiate a takeover or invite third parties to do so. The value is created in the process of bidding up for the rights to manage corporate resources. Given the efficient market for corporate control, the best corporate strategy will be implemented. Increased single-investor ownership implies existence of more extensive, improvements-intensive monitoring and higher probability of value increasing projects either via tender offers, proxy fights or ‘jaw-boning’.

An empirical analysis of the interfirm equity investment process carried out by Mikkelson and Ruback (1985) measured the effects on stock prices of corporate investment in another company’s equity securities. The sample is drawn from SEC filings during the years 1978 through 1980 and includes 473 filings, out of which 337 are not associated with outstanding takeover proposals. All investors are required to disclose purchases of more than 5% equity stakes. All of the investments represent a potentially important change in the security ownership structure of the target firm. The possible outcomes of the investment positions include a completed takeover by investor or third party, repurchase of the investment position by the target firm - targeted repurchase, and a sale of shares in the market or to a third party. When the outcome is a completed takeover, the total abnormal return is zero for acquiring and 17.7% for target firms. This premium is slightly lower than 20% authors report for target firms that are acquired by a company that does not initially disclose a takeover attempt at the time of ‘toehold’ purchase.

The outcomes with the most favorable total valuation effect for the acquiring firms are a sale of shares in the market or to a third party and a targeted repurchase. Frequent acquiring firms, often called corporate raiders, rarely attempt to acquire control of a target firm and a greater proportion of their investments terminate with a targeted repurchase or in the sale of shares. Regardless of the investment outcome, including a targeted repurchase, the investments typically increase stockholder wealth for the target firm. The highest return, an increase of 7.74%, occurred when the filler stated some possibility of a control change. The returns were 3.24% if the investor reported purchase for investment purposes only. The negative price effect of the targeted repurchase announcement is more than offset on average by the positive price effects of preceding events. The evidence indicates that the average price response is positive for both the filing and target firms.
suggesting that investments representing 5% or more of a company’s shares are expected to benefit both the acquiring and target firm’s shareholders.

The studies on mergers and acquisitions reviewed by Jensen and Ruback (1983) clearly indicate that the market for corporate control benefits shareholders. Secondary purchase of majority equity stake in target firm generates positive total gains. On average, target firm shareholders take most of the benefits but bidding firm shareholders do not lose. Target firms in successful takeovers experience 20% abnormal returns in mergers and 30% in tender offers. Bidding firms realize significant abnormal gains of 4% in tenders and zero in mergers. Thus, secondary sales associated with important ownership changes are value creating projects. Potential explanations for these gains include synergy effects from reductions in production or distribution costs, realization of economies of scale, more efficient production or organizational technology, and reduction of agency costs by bringing assets under common ownership.

The equity sales in mergers and takeovers differ. Travlos (1987) investigated the variation of returns to bidding and target shareholders caused by the different method of payment. Mergers are usually common stock exchange offers whereas tender offers are usually cash offers. His results indicate losses of 1.5% for the bidding firm’s shareholders in stock exchange offers and insignificant gains in cash offers. The difference can be explained with the signaling hypothesis suggesting that acquisitions financed with exchange of common stock conveys the negative information about overvaluation of firms assets. Travlos' results show a much smaller negative price change in stock exchange offers than abnormal returns of new stock offerings. This is consistent with a positive takeover announcement effect, which is partially offset by a negative common stock issue effect. Data provide no consistent results for the wealth-transfer hypothesis, since bondholders do not gain nor lose at the announcement of takeover bids. Study also indicates existence of a competitive market for corporate control where the bidding firm is forced to pay a fair price and does not realize significant positive gains.

Previous studies (including Loughran and Ritter’s Issues Puzzle) have shown that companies sell stock at opportune times, meaning that investors at such times do not earn ‘normal’ rate of return. Mergers furnished by stock payments may signal same information suggesting overvaluation of bidding firm’s stock. This question
has been studied by Loughran and Vijh (1997). The just finished study considered nearly 1000 mergers and acquisitions over the period 1970 to 1989. Their findings are as breathtaking as the studies on long-run underperformance of IPOs and SEOs. Over a five year period, stocks of all acquirers earned 88% holding period return performing slightly worse than their peers in neutral benchmark producing 95% return. However, the companies that made cash acquisitions saw their stocks rise an exuberant 113% in the five years following the merger. Those that used stock rose a meager 61%. Mergers may be viewed as a combinations of two events - a sale of stock, and an acquisition. The inference from this study is that share-using acquirers are signaling that their stock is high. On top of that all, acquisitions via hostile cash tenders earned 146% 5-year holding period return to bidding firm stockholders, while friendly cash offers earned only 98%, though still outperforming their matching peers. The 48% margin is explained by the notion that it’s easier to realize gains by removing poor managers, as in hostile deals, than by pursuing the supposed synergies envisioned by friendly combiners.

The Loughran’s study produced again ironic implications for target shareholders. Takeover premiums were the same, on average 30%, regardless of whether a merger was friendly or hostile or paid for with stock or cash, but after the closing, the returns of each merger type steadily diverged throughout the five years. The bottom line is that acquirers who use stock tend to be those with overvalued shares, and target shareholders should cash out. The underperformance of stock-exchange mergers is consistent with signalling and managerial opportunism hypothesis.

c) Effects of Privatization

Past decades have been characterized by a massive privatization programs all over the world. Baroness Thatcher launched this wave of sales of state-owned enterprises in the early 80’s. Governments rushed to sell their equity stakes to private investors in hopes to improve economic performance by the discipline of private ownership. The celebrated study of Megginson, Nash, and Randenborgh (1994) documented dramatic performance improvements, increase in capital investment spending, operating efficiency, and surprising increases in work forces of privatized firms. The study examined postprivatization financial and operating performance of 61 companies during the period 1961 to 1990. While the governments’ goal is increased operating efficiency and underlying own political benefits, the switch from state ownership to private investors
had also other predictable impacts on a firm’s financial policies. Dividend payout increases from 23% to 46% of profits. Dividend payments are a classic response to an atomized ownership structure effectively bonding managers to pay out the free cash flow and not to squander it for value destroying projects. Privatized firms decreased their total leverage by 2.4%, but their long-term debt to equity ratio dropped by 53% mainly due to government’s withdrawal of debt guarantees. Privatized firms experience 5.2%-point increases in capital investment spending, 2.5 percentage point increases in profit margins, and 24% increases in output. Overall, privatizations seem to increase social welfare by improved operating and financial performance, and by maintaining total employment of formerly state-owned firms.

The long term performance of privatized firms examined by Nash, Netter, Megginson (1997) would be clearly of interest by governments denationalizing ‘strategic’ corporations. Analysis of 168 share issue privatizations during 1981 to 1996 documents significantly positive market-adjusted returns. The mean five year holding period gross return is 168.6% where 69% of the returns are positive. Assuming that privatized firms are as risky as the market due to their huge capitalization, authors document that denationalized firms outperformed market by 101% in 5 years after their sale. These results contrast with the significantly negative long term returns accruing to investors who purchase the seasoned or unseasoned equity documented by studies of Loughran, Ritter and Spiess, Affleck-Graves. There are obvious differences between private equity sales and privatizations. Share issue privatizations (SIPs) are usually secondary offerings and privatized firm usually receives no direct proceeds from the sale. SIPs significantly change the ownership of the firm. Remind ordinary equity offerings where, on average, additional 15% of firm’s outstanding shares are sold without any fundamental impact on ownership structure. The evidence confirms that private corporate managers pursue different objectives than governments in privatization programs.

5. Summary

Equity sales are clearly important events in the life of corporations. The underlying theoretical models appear to explain large portion of equity sales effects. The evidence indicates that stock price drops after seasoned equity issues and large secondary block sales are rational responses to the negative information conveyed by these sales. Adverse selection problem and agency costs signalling hypotheses appear to have strong
explanatory power. There are several special cases of equity issue announcements having positive market reaction. Private placement appears to reveal undervaluation of firm’s assets and growth opportunities when positive information is generated by a new inside investor. Contrasting with equity issues, stock repurchases are welcomed by the investors reflecting managerial views about increased future cash flows. Though leverage hypotheses may explain portion of the gains, the costly signal in information asymmetry models appears to be dominant. The existing evidence does not support wealth redistribution hypotheses because debtholders on average do not lose significantly.

Announcements of transactions concentrating firm ownership or improving the ability of shareholders to monitor management are associated with positive abnormal returns. Mergers and acquisitions benefit shareholders and society. However, the stock exchange completed mergers seem to be negative NPV projects resulting in poor long run performance. Here is the evidence again consistent with agency models and free cash flow theory explaining self-serving projects pursued by managers to grow the firm and generate larger pecuniary and non-pecuniary benefits. Long run underperformance of firms going public as well as seasoned offerings appears to be an example of windows of opportunity when firms are able to issue overvalued stock. The patterns observed in the U.S. has been documented in other countries too.²

IPOs underpricing phenomenon has been examined in several studies and seems to be influenced by the underwriter's price support of the issue. Signalling hypotheses predicting discretionary underpricing were mostly challenged by evidence contradicting the implications of these theories. Last but not least important finding is tremendous success of privatization programs all over the world. Governments sell state-owned enterprises in order to improve efficiency by the discipline of capital markets and private investors. Privatized firms perform well from the long run perspective, increase sales, profit margins and even employment. Alignment of the interests of managers with those of investors seems to work also in this case.

Several puzzles remain for future research and one of the largest will be solved by answering the question why long run investors in seasoned and unseasoned equity issues do not earn normal rates of return. Efficient market hypothesis survived decades of attacks and given this track it is likely it will find an answer to all seeming anomalies, possibly with the help of our favorite statement of some optimality of these phenomenons. Thank you for your attention.

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