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**The Future of Securities
Regulation**

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Summary

The U.S. system of security law was designed more than 70 years ago to regain investors' trust after a major financial crisis. Today we face a similar problem. But while in the 1930s the prevailing perception was that investors had been defrauded by offerings of dubious quality securities, in the new millennium, investors' perception is that they have been defrauded by managers who are not accountable to anyone. For this reason, I propose a series of reforms that center around corporate governance, while shifting the focus from the protection of unsophisticated investors in the purchasing of new securities issues to the investment in mutual funds, pension funds, and other forms of asset management.

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The backbone of U.S. security law was introduced in the 1930s to restore the public's trust in securities market, which had been undermined by the excesses of the 1920s and the crash of 1929 and the early 1930s. The intellectual foundation of this legislation, inspired by the work of Louis Brandeis and written mostly by James Landis, was the protection of small investors against the abuses perpetrated by knowledgeable insiders in the issuance and the trading of securities.

Seventy-five years later, we face a similar problem trying to restore trust in securities market, but starting from very different initial conditions. The fundamental trust problem we are facing today is not the result of offering "speculative schemes which have no more basis than so many feet of 'blue sky'" (*Hall v. Geiger-Jones Co.*, 242 U.S. 539 (1917)), but of frauds and mistakes committed by managers who are accountable to none. The 2007-08 financial crisis is perceived as a manifestation of excessive risk taking by managers who were enriching themselves via short-term bonuses, while destroying the long-term value of their companies (ACCA, 2008). The stunning collapse of major financial institutions is perceived as a lack of proper risk management and accountability by corporate boards (Minow, 2008).

Furthermore, the increase in institutional ownership, from less than 10% in the 1930s to more than 70% today, shifts the focus from the protection of unsophisticated investors vis-à-vis the underwriting of securities to the investment in mutual funds, pension funds, and other forms of asset management.

Finally, the massive increase in the use of financial markets for retirement purposes has made the securities market much more important politically. In 1975, the value of privately-held pension assets represented only 18% of the GDP and 70% was represented by defined benefit plans, which did not directly expose workers to financial market risk; today, pension assets represent 60% of the GDP, 70% of which is in defined contribution plans and thus exposed to financial market risk. As a result, the efficiency of individual investment choices and the costs they bear is not just an issue of fairness, but a primary public finance consideration. Without wise investments, the vast majority of Americans will not have enough to support themselves in retirement.

What is the appropriate security regulation for this changed world? To answer this question I start by reviewing the theoretical role for regulation: why and when

competition in the marketplace is insufficient in protecting investors. I then compare the theoretical predictions with the experience of unregulated markets and their relative successes and failures.

From this analysis, I derive three main areas of intervention. First, a reform of corporate governance aimed at empowering institutional investors to nominate their own directors to the board. This reform will make it worthwhile for directors to develop a reputation of acting in the interest of shareholders and hence to make corporate managers accountable. However, to minimize the risk that institutional investors pursue a self-interested agenda, institutional investors should be themselves independent. To achieve this goal, I propose a new Glass-Steagall Act, which instead of separating commercial and investment banking will separate mutual fund management from investment and commercial banking.

The second goal should be the protection of unsophisticated individuals with regard to their investments. The minimum this protection entails is enhanced disclosure. At the time of purchase, investors should be provided with a dollar estimate of all the expenses that will be charged to their investment, including the amount paid in trading commissions, itemized as commissions paid for trading and those paid for services. Similarly, at the time of the purchase, brokers should disclose the fee they receive on the different products they sell, including the “soft dollar” they receive in the form of higher trading costs. The same strict standards should apply to both brokerage accounts and money management accounts.

Yet, given the importance of this industry to the retirement of most Americans, simple disclosure might not be sufficient. Therefore, regulation should encourage competition by restricting practices that take advantage of individual’s gullibility, such as teaser rates in flexible rate mortgages.

The third goal should be that of reducing the regulatory gap between public markets and private markets. The recent trend of migration from the former to the latter suggests that this differential is excessive. This migration should be stopped not only by deregulating the public market, but also by introducing some disclosure standards in the private one. In the public market, the empowerment of institutional investors will make it possible to transform some of the mandatory regulation into optional rules, following the

British comply-or-explain system. On the private market front, there are compelling reasons to mandate a delayed disclosure provision in which private companies and unregistered funds report information and performance with a 1 to 2 year delay. This delay has the benefit of reducing the competitive cost of disclosure, while at the same time allowing for a serious statistical analysis of this market, which will improve allocation of savings.

The rest of the paper proceeds as follows. Section 1 summarizes the theoretical justification for regulation. Section 2 describes the major trends in security markets since the passage of the 1930s security laws. Section 3 tries to assess the efficiency of the markets that have been exempt from security regulation vis-à-vis those regulated. Sections 4, 5, and 6 outline the road map for reform of security regulations that incorporate the new demand for protection in a changed environment.

1. Why do we need regulation?

Since the 1930s, financial economics has made significant progress in analyzing when regulation is needed because the necessary protections are not be offered by the market. In what follows, I provide a brief review of the strongest arguments in favor of regulation. Of course, these benefits are not achieved without significant costs, which will be considered when we look at the empirical evidence.

1.1 Disclosure

A very comprehensive analysis of the theory and evidence on the effect of corporate disclosure is contained in Leuz and Wysocki (2008). In what follows, I touch on only some of the most important points.

Grossman and Hart (1980) show that a firm will voluntarily disclose all its information if, and only *if*, three assumptions are satisfied: 1) investors know that firms have that information (for example, they know it has collected the level of revenues for that year); 2) firms cannot lie (albeit they can refuse to disclose their information); 3) disclosure is costless.

If one of these assumptions is violated, voluntary disclosure will be less than complete. Hence, there is a basis to argue in favor of mandatory disclosure. Grossman and Hart's (1980) result only shows that in presence of disclosure costs, firms will not

fully reveal their information. Whether it is optimal to force them to disclose depends very much on the source of these disclosure costs and their magnitude with regard to the benefits of disclosure.

If the costs are simply the clerical costs of disclosing, then the analysis boils down to a comparison between the magnitude of these cost and the benefits of disclosure. Since information has a public good component, we can expect that in general, firms will provide less disclosure than is socially optimal. While firms internalize the benefits they can derive from disclosure, they will not internalize the full value of social benefits. General Motor's disclosure helps investors evaluate Ford, but GM will never internalize this benefit. Given the falling clerical cost of disclosure and its great potential benefit, it is easy to make the case for mandatory disclosure.

The case is more complex if we consider other disclosure costs such as the dissemination of proprietary information, which might hurt a firm's competitive position. In the presence of these costs, firms will not fully reveal their information, but it is far from clear (from a social welfare point of view) whether they should. While a hypothetical social planner does not internalize the competitive position of each individual firm, he does internalize the incentive to invest in R&D. If mandatory disclosure discourages R&D investments, it is clearly not socially desirable.

An additional argument in favor of mandatory disclosure is based on the superior enforcement power of this approach. While a regulatory authority can more easily verify the veracity of the numbers disclosed, a private intermediary can only do so by filing a lawsuit, an avenue which is very slow and expensive.

Even when firms reveal all relevant information in a truthful manner, an argument in favor of regulation can be built on the timing of this revelation. When the timing of the release matters (as is the case in financial markets), firms can trade early access to information in exchange for some other favors. For example, before the introduction of "full disclosure" regulation, U.S. firms were allowed to announce their earnings in a conference call with few analysts of their choosing. Since the chosen analysts benefit from this position, there is a significant risk they will repay the privilege by providing favorable future earnings forecasts for the firm.

The same incestuous “quid pro quo” can occur between journalists and firms. The fewer public sources available, the more a journalist will depend on privileged access to write good stories. Firms, then, will tend to concede or withdraw that access depending on the spin of the articles written by a certain journalist or newspaper. For example, the Financial Times correspondent from California lamented at a conference that Hewlett Packard was routinely excluding him from the interviews released by Carly Fiorina because of his previous negative articles about her. Consistent with this claim, Dyck and Zingales (2003) show that newspapers’ report of earnings are more biased towards companies when journalists have less access to source of information alternative to the company itself.

Hence, regulation that controls the timing of and the access to information can improve the objectivity of analysts and journalists, contributing to the credibility of the financial system as a whole.

1.2 Standardization Issues

A more subtle benefit of regulation in the disclosure arena is the standardization it entails. Even assuming that firms cannot lie in their disclosure, they have several different ways to present the evidence. Each firm will naturally choose the format that is the most favorable to its data, impairing investors’ ability to make comparisons across firms. For example, in the unregulated U.S. private equity industry, funds disclose their performance in terms of internal rate of return (IRR) of their portfolio, but there are different ways to aggregate the IRR of individual investments into the IRR of a portfolio. These methods lead to significantly different results, depending on the timing of the more successful investments. By making a direct comparison among funds more difficult, these differences in standards impair the process of capital allocation toward the more talented managers. Interestingly, this problem persists in spite of the relative sophistication of the players in this industry (endowments, pension funds, and very wealthy individuals). The reason is that each investor gets only a small benefit from a more standardized disclosure, which makes private equity funds or hedge funds more comparable: the greater benefit (i.e., comparability) accrues to all market participants, regardless of their effort in pressuring the funds to disclose more. Thus, everybody prefers to use their bargaining

power to extract other concessions from the funds, leading to a suboptimal level of standardization.

1.3 Systemic Considerations

While liquidity issues do not necessarily belong to the realm of security regulation, there are both historical and practical reasons to include them. First of all, the 1933 Securities Act gives authority to the Federal Reserve to fix the level of collateral for security purchases on margin. In so doing, it makes margin requirements part of security regulation. Second, liquidity greatly affects the functioning of the security markets and thus cannot be ignored when it comes to regulation aimed at improving the functioning of these markets. In what follows, I analyze the three main reasons why there is some basis for government intervention in the realm of liquidity.

1.3.1 Liquidity Externalities

When individual firms choose their financing they take for granted the level of liquidity of the market. But, as Shleifer and Vishny (1992) and Kiyotaki and Moore (1997) show, in a world where firms are wealth-constrained, the liquidity of the market depends on firms' financial structure. The more in debt firms are, the less able they are to bid for existing assets and the less liquid the market is. In such a world, small shocks to fundamentals can cause a vicious circle: with drops in prices, which cause defaults, which in turn cause drops in prices, and so on.

Anticipating this problem, some firms would find it prudent to remain liquid (and/or with low leverage) to take advantage of these market downturns and buy assets at fire sale prices. However, there are two reasons, why this private provision of liquidity might not be sufficient. First, by keeping a reserve of liquidity, a firm generates a positive externality in all its industry (a higher price of assets in case of a downturn). This externality is not fully captured by the firm maintaining the liquidity and thus there will be underprovision of liquidity. The second reason, which applies in particular to the banking industry, regards the ex ante effects of the expectation of some form of government help and/or relief in a downturn. By alleviating the drop in prices, such

interventions would reduce the return of keeping a reserve of liquidity. The mere expectation of this possibility can cause an underprovision of liquidity.

1.3.2 Imperfect commitment in the provision of insurance

A related, but different, justification for regulation is provided by Holmstrom and Tirole (1998). In the presence of aggregate uncertainty they show that the private sector fails to provide sufficient liquidity because it cannot fully insure against the aggregate shock: each private firm could default, destroying the value of the insurance it provides. The government can obviate this problem because it has the ability to offer claims against future labor income.

1.3.3 Too big to fail

Another classic justification for ex ante regulation is as a means to reduce the moral hazard created by ex post intervention. If certain financial institutions are too big (i.e., too important to the national economy) to be allowed to fail, then the moral hazard ex ante is very pronounced and needs to be mitigated by some form of regulation.

1.4 Unsophisticated Investors

The word ‘credit’ comes from the Latin *credere*, which means to trust. If trust, as Arrow (1972) states, is essential to any economic activity, it is particularly important in financing. Following Guiso et al. (2008), we can consider trust as the posterior beliefs about the integrity of the system. Such a belief comes in part from the observed data, but in part from people’s priors. Generic trust towards other people can predict the trust towards the stock market and the investment in the stock market (Guiso et al. (2008)). To the extent that government intervention can affect this level of generalized trust, it can improve stock market participation.

1.4.1 Psychological arguments

One way a government can affect people’s trust is through a rigorous enforcement of existing rules. We know from psychology that salient events tend to weight heavily in people’s mind. Thus, while highly publicized individual cases of fraud can have a

negative effect on trust, highly publicized cases of enforcement can have a positive effect. In a cross-section of countries, Aghion et al. (2008) show that higher mistrust leads to a higher demand for government intervention. But a similar relationship also exists in the time series. After every major crisis, the demand for government intervention increases. For example, after the 1929 crisis, there was a large demand for intervention. The same is true after the Enron and WorldCom scandals. And the same is true today. Lack of intervention is perceived as indifference, while some intervention can engender hope that the system will improve and so raise the level of trust. It is hard to prove causality, but the passage of Sarbanes Oxley was followed by an increase in the general trust towards the stock market (Hochberg et al., 2009).

Besides these psychological arguments for regulation, there are also several economic reasons why the presence of unsophisticated investors should lead to some form of regulation.

1.4.2 Too many to fail

In a democratic society, when many people make the same mistake, the temptation to change the rules ex post and help them out becomes irresistible. We have witnessed this problem during the 2008 presidential race, where the candidates started to compete for more and aggressive bailouts to aid banks and home owners. Once an issue becomes a national problem, it is impossible for the political system not to intervene and the anticipation of this intervention creates a serious moral hazard problem, which can be limited only by some ex ante regulation.

1.4.3 Deviation from Rationality

Thus far, we have maintained the assumption, standard in the economic literature, that economic agents are rational and make choices that maximize their own welfare, but a growing body of research, however, has challenged this assumption. Mandrian and Shea (2001), for instance, show that people are much more likely to participate in a retirement plan when the default rule is that they are enrolled rather than when the default rule is that they are not enrolled, even if they are free to switch. Given the life altering effect of this decision, it is hard to rationalize the effect of such a tiny shift in the cost of

the decision.

Using this evidence, Thaler and Sustein (2003) argue in favor of a strategic choice of default options aimed at maximizing social welfare. If these options are simply a default, which the parties involved can change at no cost, their strategy comes at no real cost to individual freedom. For this reason, they label it “libertarian paternalism”. Surprisingly enough, even this very bland form of paternalism seems to impact final outcomes (Thaler and Bernartzi (2003)).

1.4.4 Directing competition

An interesting question, which these authors do not address, is how far do you want to push this paternalism. Default rules, for instance, have an enormous effect in framing competition among firms, especially in markets with high search cost. Consider a regulation requiring mutual funds to report the total amount of fees charged to investors on the first page of their prospectuses. Even if funds can opt out of this rule at no cost, this type of disclosure is likely to make fees salient to investors, forcing funds to compete along this dimension. Which dimension should the regulator choose to emphasize? While it is probably safe to assume that the goal of a regulator should be to maximize competition because competition is welfare enhancing, if competition is multi-dimensional, it is unclear what dimension a regulator should prefer. And if this problem arises when the disclosure form is optional, it becomes even more complex if the regulator imposes a fixed disclosure format.

In the presence of unsophisticated investors, the scope for regulation can be even larger if we consider the possible distortions on competition. Laibson and Gabaix (2006), for instance, have a model that shows that when consumers or investors exhibit some behavioral bias, competition might not fix it, but exacerbate it. Consider, for instance, laser printers: If consumers underestimate the future costs of cartridges, producers have an interest in raising this cost. Competition will only have the effect of reducing the upfront cost of printers, but not eliminate the distortion that additional cartridges are priced above their marginal cost, generating an under consumption of cartridges. It does not pay for a producer to change strategy and advertise its lower cost on future cartridges, because it would appeal only to the most rational consumers, who are the most price

sensitive and the ones who will buy its product only if they consume a lot of cartridges. By deviating from the distorted marketing policy, the producer would lose the most profitable consumers, without gaining much on the overall number of consumers. It is precisely this cross-subsidization from the biased consumers to the rational ones that sustains this bad equilibrium. As Campbell (2006) shows, a similar problem occurs also in the mortgage supply market.

In this context a regulatory ban on tied sales or on a particular type of mortgage can be Pareto improving. For example, if regulation was to prevent teaser rates on flexible rate mortgages, it is not obvious what cost it will entail, though it could improve household financing choices as discussed in Campbell (2006). This is a novel justification for regulation that is likely to become a very important one in the future.

1.5 Corporate Governance

In the area of corporate governance, we are so far away from the pure contractualistic model that it is pointless to discuss where government intervention could help with respect to pure private contracting. It is more relevant to discuss what reforms are needed to overcome the current situation, where managers are unaccountable.

In the current “director centric” regime, shareholders have very little saying. State anti-takeover statutes and poison pills have made hostile takeovers all but impossible. State competition in corporate law is also of little help, since shareholders have only a subordinate vote on reincorporation (they cannot propose a reincorporation, they can only vote on one proposed by managers). As a result, Delaware finds it more profitable to cater to managers’ interests than to those of the shareholders (Bebchuk et al., 2002). Finally, shareholders have no say in the choice regarding the slate of directors standing up for election; it is decided by the incumbent board. In this context, the objective should not be how to regulate, but how to reform the current situation in a way to make managers more accountable.

1.5. Who Should Regulate

Even after we agree on the need for regulation, it remains the question of who should regulate. Choi and Guzman (1998), Mahoney (1997) and Romano (1998) all argue

in favor of a devolution, a system where the SEC regulatory monopoly is replaced by regulatory competition either among U.S. states or across countries. While this competition among legislatures, similar to the one prevailing in corporate law, might seem appealing, it faces some serious limitations. Since the regulatory regime is chosen by the managers and not by shareholders, this choice can be affected by severe agency problems. Furthermore, there is a divergence between the optimal and the social choice of disclosure due to externalities, i.e., information that would hurt the issuer by helping its competitors (Fox, 2001).

Most interestingly, Coates (2001) argues that if this devolution was so appealing to companies, it would have received a huge amount of lobbying support. In fact, there is no evidence in favor of it. Coates explains this by citing the instability of such a regulatory regime (which would cost the issuers more than a moderately bad, but stable regulatory regime) and with the fact that the main advantage of a competitive system is the flexibility it provides in order to fit the needs of different companies. Yet—Coates argues—this flexibility is already present in the United States: all the exemptions to regulation created an unregulated private market that provides a great amount of flexibility to U.S. companies. I will return on this point momentarily.

2. The Status of Securities Markets

2.1 Institutionalization

According to Cox (1963), roughly one million Americans owned stock at the beginning of the 20th century. The success of the Liberty Bonds placement and the aggressive use of door-to-door distribution techniques in the aftermath of WWI (Mahoney, 2001), lead to an increase in the number of shareholders to 5 million by 1927, equal to roughly 7% of the population. The boom at the end of the 1920s' fueled an acceleration in the diffusion of stock ownership, doubling the number of investors. By the 1930s, roughly 14% of American households owned equity. As a result, in 1930 90% of publicly traded equity was owned by individuals (Hawley and Williams (2000)).

By and large, this very rapid diffusion of stock ownership was not driven by the realization of the benefits of stock ownership, but by the prospect of rapid enrichment triggered by the dramatic surge in stock prices. At a time when 12% of the population

was functionally illiterate and 50% had less than an 8th grade education (Bryson (1936)), the situation was ripe for abuses. Thus, it is not surprising that several scandals emerged like the famous scheme invented by Tom Ponzi (and that to this day still bears his name) and the several others that fill the accounts of the 1920s (Thel, 1990).

The dramatic decline in stock prices that ensued and the highly publicized Pecora Commission Hearings (where the investigation into the alleged abuses was broadcast on the radio) created a diffuse climate of mistrust, which led to a sharp decline in stock ownership. As recent neuroeconomics studies suggest (Knutson et al, 2008; Kuhnen and Knutson, 2007), the decision to invest in stock has a strong emotional component and this component tends to be more important for the less educated people. Guiso et al. (2008), for instance, show that the level of trust affects the degree of stock market participation only for the less educated people. It follows that a reduction in trust led to a dramatic reduction in stock market participation. This reduction is illustrated by the participation numbers of the 1930s-40s; although, there are no good data (that I know of) for the late 1930s and early 1940s, by 1950 the number of stockholders was only 5 million corresponding to 5% of the population. It was to overcome this mistrust that the Government decided to intervene. Section 2 of the Securities Exchange Act captures the congressional view that stock prices reflected the action of speculators and manipulators, who took advantage of the gullible (Thel, 1990).

In the seventy-five years since the Securities Act, the situation could not have changed more. In 1950, more than 90% of U.S. equity was owned directly by households. By 2007, this figure has dropped to less than 30% (Figure 1). Most of this share is represented by management and insiders, who in the typical company collectively own 24% of the equity (Holderness, 2007). At the same time, the percentage of U.S. equity owned by institutions has risen from less than 10% to more than 60% (Figure 2). If we take into consideration that institutions account for more than a proportional share of trading, we can assert that almost all of the daily trading in the U.S. stock is done by institutions.

2.2 The Rise of Private Security Markets

The Securities Act “was designed to provide investors with full disclosure of material information concerning public offerings of securities in commerce, to protect investors against fraud and, through the imposition of specified civil liabilities, to promote ethical standards of honesty and fair dealing.”¹ These goals were pursued by making it unlawful to offer and sell a security without registering with the SEC. Yet, Congress recognized that it was inefficient to require the registration of securities offerings “where the public benefits are too remote.”² Thus, Section 4(2) of the Securities Act exempts “transactions by an issuer not involving any public offering” from registration.³ As aptly described by Sjostrom (forthcoming), however, Congress did not define what a public offering was.

This problem was partially resolved by the Supreme Court in the 1953 *SEC v. Ralston Purina Co.* case which established that “a transaction not involving any public offering”⁴ is “[a]n offering to those who are shown to be able to fend for themselves...”⁵ What the Supreme Court did not clarify, is who are the sophisticated investors “able to fend for themselves.”

This task was, in turn, executed by the SEC, with the definition of “accredited investor.” SEC Rule 501(a) defines an “accredited investor” as “[any] natural person whose individual net worth, or joint net worth with that person’s spouse, at the time of his purchase exceeds \$1,000,000;” “[any] natural person who had an individual income in excess of \$200,000 in each of the two most recent years or joint income with that person’s spouse in excess of \$300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year;” and the executive officers and directors of the issuer.

According to SEC Rule 506, an offering is exempted from security regulation if it is limited to accredited investors and no more than 35 non-accredited investors. Furthermore, each non-accredited investor in the offering has to be sophisticated, i.e., has “such knowledge and experience in financial and business matters that he is capable of

¹ Ernst & Ernst v. Hochfelder, 425 U.S. 185, 195 (1976) (citing H.R. REP. NO. 85, 73d Cong., 1st Sess. 1-5 (1933)), cited in Sjostrom (forthcoming).

² H.R. Rep. No. 85, 73d Cong., 1st Sess. 5, 7, 15-16 (1933).

³ 15 U.S.C.A. § 77d(2). As adopted in 1933, what is now § 4(2) of the Securities Act was the second clause of § 4(1) of the Securities Act.

⁴ SEC v. Ralston Purina Co., 200 F.2d. 85, 93 (8th Cir. 1952).

⁵ SEC v. Ralston Purina, 345 U.S. at 127.

evaluating the merits and risks of the prospective investment,” either in his own right or with the aid of one or more “purchaser representatives” (Sjostrom, forthcoming).

In the last twenty-five years, this exemption has made possible the development of a private equity market. At less than 5 billion dollars in 1980, this market raised more than 250 billion dollars in 2006 (Figure 3), providing the source of financing for the venture capital and buyout industry. However, this exemption does not provide any scope for security underwriters. The Securities Act prohibits not only the offer, but also the resale of any unregistered security unless the seller is “any person other than an issuer, underwriter, or dealer.”⁶ To help underwriters determine whether they could trade a security, the SEC adopted Rule 144 in 1972, which imposes some holding periods for resale: six months if the issuer already filed under the Exchange Act, one year otherwise.

In 1990 the SEC adopted Rule 144A which provides a safe harbor from the registration requirements for resale of “non-fungible” restricted securities to “qualified institutional buyers” (QIBs) and is designed to facilitate “a more liquid and efficient resale market for unregistered securities.”. QIBs are institutions managing investment portfolios of \$100 million or more. Unlike Rule 144, Rule 144A imposes no holding period, thereby increasing the liquidity of these securities.

Since its adoption, Rule 144A has become a very common means by which issuers access the institutional capital markets (such as mutual funds, pension funds and asset managers). Annual issues of Rule 144A non-convertible debt have increased from \$3.39 billion in 1990 to \$235.17 billion in 1998 (Livingston and Zhou, 2002). For international issuers, the volume of 144A debt has grown from \$378 million in 1991 to \$12.1 billion in 1997. More importantly, as a proportion of the total debt issued by international firms, 144A issues have grown from 11 percent of the total debt issued in 1991 to 65 percent in 1997 (Chaplinsky and Ramchand, 2002).

Although both equities and bonds can be issued under Rule 144A, in the first ten years, the majority of Rule 144A issues were non-convertible debt. For example, of the \$262 billion of Rule 144A securities issued in 1997, \$40.7 billion was equity; \$11.2 billion convertible bonds; and \$210.1 billion (or 80%) non-convertible debt (Bethel and Sirri, 1998).

⁶ 15 U.S.C.A. § 77d(1).

The reason for this difference is that companies whose equity is publicly traded in a U.S. market cannot issue equity under rule 144A. In recent years, however, and especially after Sarbanes-Oxley, the market for 144A equity offerings increased dramatically. Initially, it was fueled only by foreign issuers, who preferred to tap the United States market without paying the disclosure and compliance costs (Zingales, 2006). In 2002, Rule 144A offerings were \$40 billion, representing only 22% of all the equity raised in the United States. In 2006, they had risen to more than \$160 billion representing more than 50% of the equity raised in the United States (Tang (2007) and (Figure 4)). In particular, foreign companies raised \$10.5 billion in publicly registered offerings, but under Rule 144A \$133 billion equity private placements.

The importance of the Rule 144A for equity offerings, however, has not remained limited to foreign issuers. In May 2007, the 144A market broke new ground when Oaktree Capital Management LLC, a leading private U.S. hedge fund advisory firm, sold a 15% equity stake in itself for \$880 million in a deal structured as a private placement under Rule 144A (Sjostrom (forthcoming)). Had Oaktree's offering been structured as an IPO, it would have been the sixth largest IPO by a domestic issuer in 2007. According to Lambe (2007), the founders of Oaktree stated "that they were happy to sacrifice a little public market liquidity, and even take a slightly lower valuation, in return for a less onerous regulatory environment and the benefits of remaining private."

What made the offering possible, however, was the contemporaneous creation of GSTRUE, Goldman Sachs Tradable Unregistered Equity OTC Market for listing unregistered 144A securities. By providing a platform for trading the unregistered security, GSTRUE reduced the cost of non-registering with the SEC.

Goldman is not alone in seeing big opportunities in the market for unregistered securities. In July 2007, Nasdaq, which already had a platform for listing private placements, extended its capability to include trading. In August 2007, Citigroup Inc., Lehman Brothers Holdings Inc., Merrill Lynch & Co., Morgan Stanley and Bank of New York Mellon Corp. established the Open Platform for Unregistered Securities. The firms say OPUS-5 "will provide trade reservation, shareholder tracking and transfer management for privately offered equity securities." Since then the subprime

mortgage crisis has reduced the interest for equity offerings. But the market for non-registered securities is likely to become increasingly important after the crisis.

2.3 The enhanced role played by capital markets

Even at the peak of the 1920s euphoria, only one American household in eight owned stock. Today, one in two does. If the past trend (Figure 6) is any indication of the future one, this percentage is bound to increase substantially in the future.

The purpose of stock investment has also changed dramatically. From a speculative activity, stock investing has become one of the major means of asset accumulation to finance future retirement needs. As Figure 7 shows, in 1975 pension assets accounted for only 18% of GDP; in 2005, they accounted for more than 60%. It is not surprising that stock market information abounds both in TV programs and newspaper articles, and that the stock market has become an integral part of the life (and the welfare) of most Americans.

Not only is the average American more exposed to stock market fluctuations, he is also asked to make more financial decisions, which will significantly impact his future life. In 1975, almost 70% of all pension contributions were “defined benefits,” where the employee was offered a predetermined retirement income, shielding him from any decision and most risk (Figure 8). In 2005, less than 20% of the overall contribution was going to a defined benefit plan, with the rest going to defined contribution plans or 401k plans. In both these latter cases, the ultimate investment decision stays with the employee, who also bears the full risk.

This enormous increase in the exposure to financial market risk was not joined by an increase in financial education. For example, Lusardi and Mitchell (2006) show that only 18 percent of Americans can correctly compute the compound interest over two years. Of those who got that interest question wrong, 43 percent undertook a simple interest calculation, thereby ignoring the interest accruing on both principal and interest. Similarly, Hilgert and Hogarth (2002) show that only 50% of Americans know that mutual funds do not pay a guaranteed rate of return and only 56 percent know that “over the long-term, stocks have the highest rate of return on money invested.”

This enormous mismatch between the financial literacy needed to make the most basic (and necessary) financial planning and the actual literacy possessed by most Americans creates three problems. The first problem is the classic one, studied by the 1930s reformers, of asymmetry of information and knowledge. Whenever financially illiterate investors have to make important decisions, the risk of abuses is high and, in the view of the 1930s legislators, this called for intense regulation.

We could be tempted to dismiss these fears on the basis that competition is the strongest form of protection for investors. This faith, however, has weakened in recent years. As Gabaix and Laibson (2006) show, in the presence of some limitations in the rationality of consumers, competition will not lead to better protection of investors.

The last problem associated with the enlarged importance of the stock market in the welfare of the average American is the political pressure to intervene. A significant drop in the stock market has become a major public policy issue, making it almost impossible for the Chairman of the Federal Reserve not to intervene with interest rate cuts to try to sustain the level of the stock market. While this problem seems unrelated with the need for security regulation, it is not. The anticipation of this intervention creates a serious moral hazard problem, which can be limited only by some ex ante regulation.

3. Shortcomings of the current system

3.1 Evidence that the public market is too heavily regulated

The explosion of the private equity market in the last twenty-five years suggests that for some firms, especially small firms in R&D intensive sectors, disclosure costs are substantial. Given the very high hurdle rates venture capitalists and buyout specialists use in their valuation, there must be very substantive costs for these firms to access the public market. Some of these costs can simply reflect the benefits of staying private, such as the more concentrated ownership structure (Jensen, 1989). But this is not the entire story. When Oaktree's founders chose to go "public" on GSTRUE, it was not to retain a concentrated ownership (they could have done it also in an IPO), but to enjoy "a less onerous regulatory environment and the benefits of remaining private."

Most worrisome, this preference of businesses to remain (or return) private has been increasing in recent years (Zingales, 2006). It is hard to say if this change is due to increasing disclosure and compliance costs or decreasing costs of private ownership. Both aspects are likely to be true and both point in the direction of an excess gap in the cost between public and private ownership.

This trend is also confirmed by the 144A market for foreign issuers. As previously mentioned, foreign issuers have progressively abandoned public listing in the United States in favor of 144A offerings. Once again, it is difficult to disentangle whether this decision is due to increasing disclosure and compliance costs or to decreasing benefits of a U.S. listing vis-à-vis a foreign one. The fact that the biggest competitor of the NYSE is not London or Hong Kong, but the 144A market in the United States, however, suggests the first hypothesis has some validity (Zingales, 2006).

Bushee and Leuz (2006), who analyze the economic consequences of a regulatory change that requires over-the-counter bulletin board firms to comply with reporting requirements under the 1934 Securities Exchange Act, find that the imposition of these disclosure requirements results in significant costs for smaller firms, forcing them off the over the counter bulletin board.

All this evidence suggests that regulation has its costs, but regulation has its benefits too. The same study by Bushee and Leuz (2006) finds that newly compliant firms exhibit significant increases in liquidity, consistent with improved disclosure which reduces information asymmetry. Benefits of regulation are also identified by the literature on cross listing. Both Doidge, Karolyi and Stulz (2007) and Hail and Leuz (2006) find that firms that cross-list in the United States benefit from this cross-listing because of the higher valuation (Doidge, Karolyi and Stulz (2007)) or their lower cost of capital (Hail and Leuz (2006)).

Similarly, Livingston and Zhou (2002) find that Rule 144A bond issues have higher yields than publicly issued bonds after adjusting for risk. Yield premiums are higher if the issuer does not file periodic financial statements with the SEC, suggesting that disclosure reduces the cost of capital.

While it is difficult to determine empirically whether the cost of regulation exceeds the benefits, the delisting of foreign firms, the reduced share of international

IPOs captured by the U.S. market, and the increasing tendency of companies to remain private all point in the direction of an increase in the cost of public ownership vis-à-vis its benefits for an increasing number of firms.

3.2 Evidence that the private market is too lightly regulated

3.2.1 The CDS Market

During the last ten years the market for credit default swaps (CDS) grew unregulated from almost zero to more than \$44 trillion (more than twice the size of the U.S. stock market) (Zingales, 2008a). More importantly, the level of collateral posted for these contracts was very low or non-existent, generating the possibility of a systemic failure. If in the middle of the hurricane season, all of a sudden all Florida homeowners lost the insurance for their house, there would be an enormous run to buy new insurance. Given that in the short term, insurance capacity is limited, the prices will through to the roof. If some homeowners could not afford these prices, their mortgages will automatically default, triggering foreclosures and a real estate crisis. This is one of the reasons why the insurance market is regulated.

The same would be true if a large CDS player, like AIG, defaulted. Large commercial banks have massive exposure to CDS (Zingales, 2008a). Most of their positions are hedged; hence the net exposure is much smaller. Nevertheless, if a major player defaults, all the other ones will find themselves un-hedged, triggering a run to buy insurance, with consequences not dissimilar from the case described above. In spite of its potential systemic effects, the market for CDS is completely unregulated.

3.2.2 The CDO market

In recent years one of the primary types of securities issued in the 144A market were collateralized debt obligations (CDO) and collateralized mortgage obligations (CMO). To price these instruments a good knowledge of the underlying components of these structured products. Unfortunately, as Benmelech and Dlugoszb (2008) argue, this knowledge is not currently provided, making it difficult to price these assets correctly.

Since it is in the interest of the buyer to know what he is buying, one might wonder why this information was not requested by the buyers to begin with. A possible

explanation is that this information is useful not only to the buyer, but also to the market in general. Only if all these securities are transparent their market will be liquid. Each buyer, however, takes the liquidity of the market as given and thus does not fully internalize the benefits of this information. Not internalizing them, buyers will not demand this information, even if its aggregate benefits exceed the cost of producing it.

3.2.3 The Hedge funds

The lack of transparency affects also the hedge fund market. Not knowing what securities hedge funds invest in makes it very difficult to determine whether their performance is due to ability, excessive risk taking, or luck. This lack of transparency engenders also the suspicion that some hedge funds play strategies that are illegal or borderline illegal, engaging in insider trading and front running. Finally, lack of transparency makes it extremely difficult to evaluate the systemic effects of hedge funds. Brunnermeier and Nagel (2004), for instance, conclude that hedge funds are procyclical, riding the tech bubble, but they have to rely on long position only, making their conclusions only tentative.

3.2.4 Negative effects of lack of transparency in the private equity market

Two of the most convincing indicators of the efficiency of the public equity market are the inability of mutual funds to beat the market on average and the lack of persistence in their performance. The first indicator also seems to suggest that the private equity market is efficient, since Kaplan and Schoar (2005) find that, after fees, private equity funds are on par with the market. But Kaplan and Schoar (2005) also find a significant persistence in the performance of the best funds. They explain this persistence in performance with the existence of a scarce talent factor, which is earning a rent. However, it is not clear, why these talents should not charge higher fees and clear the market, their inability to do so raises doubts on the efficiency of this market.

Furthermore, that many of the most successful funds are closed to investors raises an important concern. If the best performing funds are not available, then the averages calculated in Kaplan and Schoar (2005) do not represent an attainable return. Taking into consideration the funds that are not open to investors, a portfolio randomly allocated

among private equity funds will perform significantly worse than the S&P with at least similar levels of risk. If this is the case, the private equity market attracts a vast amount to resources that are wasted, since they are invested at a return inferior to their opportunity cost.

The lack of transparency and public scrutiny in the private equity market can also be the cause of abuses and inefficient contracting. As it is clearly stated in some of the Harvard cases (e.g, Sahlman and Janower, 1995), some venture capitalists receive compensation not only from their investors (in the form of a management fee and carried interest), but also from the companies they invest in. Some of these compensations are contingent on their using the Venture Capital Fund's money to finance the company (Sahlman and Janower, 1995). These types of contracts do not seem to achieve any useful purpose except making the venture capitalist richer, yet create serious moral hazard problems. Therefore, one would expect them to be contractually banned and, in fact, an increasing number of private equity fund bylaws expressly prohibit them. Nevertheless, this ban is not universal. It is difficult for institutions to impose these restrictions on very successful VCs. One could conclude that this is simply one extra form of compensation for the VC. But the fact that this compensation is extracted in a very inefficient way casts doubt on this interpretation and, more generally, on this market where disclosure is not mandatory.

Finally, in the private equity market there are different ways to aggregate the IRR of individual investments into the IRR of a portfolio. These methods lead to significantly different results, depending on the timing of the more successful investments. By making a direct comparison among funds more difficult, these differences in standards biases the process of capital allocation toward the more talented managers. Interestingly, this problem persists in spite of the relative sophistication of the players in this industry (endowments, pension funds, and very wealthy individuals).

3.4 A Road Map for a Reform of Security Regulation

In 1933, security regulation was introduced to restore trust in financial markets and bring back to public securities investors who had been scarred and scared by the large losses suffered in the early 1930s. Seventy-five years later, we find ourselves in a similar

situation. In order to restore trust in the public securities market that most people have lost, a new wave of security regulation should be passed. The world, however, has changed and the focus of this new security regulation should also change. The type of concerns that afflicted investors in the 1920s (lack of transparency and market manipulation) are not at the forefront of their concerns today. In part, this is the result of the success of the 1930s legislation in addressing those problems. However, this is also in part the result of the changes in the security industry described in Section 2. For this reason, the same goal--restoring trust—should be achieved with different means. In light of the theoretical discussion in Section 1 and the empirical evidence in Section 2 and 3, the reform of security regulation should proceed in three directions: improvement in corporate governance; protection of unsophisticated investors; and reduction of the regulation gap between public and private markets.

4. Corporate Governance

While in the 1920s the prevailing perception was that investors had been defrauded by offerings of securities of dubious quality and by market manipulators, in the new millennium investors' perception is that they have been defrauded by managers who are not accountable to anyone. Scandals like Enron, WorldCom, Tyco and Adelphia were egregious examples of lax corporate governance and managerial enrichment at shareholders' expense. In the same way, the 2007-8 financial crisis is perceived as a manifestation of excessive risk taking by managers who were enriching themselves with short term bonuses, while destroying the long term value of their companies (ACCA, 2008). And the stunning collapse of major financial institutions is perceived as the result of lack of proper risk management and accountability by corporate boards (Minow, 2008).

In 1933, the political response to the generalized mistrust toward the stock market was the 1933 Securities Act and the 1934 Securities and Exchange Act, which increased disclosure and reduced the opportunity for stock market manipulation, and the Glass Steagall act, which reduced the conflict of interest between investors and security underwriters by separating commercial banks and investment banks. Regardless of

whether the original perception was correct, its existence justified a political response to reassure investors.

4.1 The need for a political response

In the current scenario disclosure is not the issue and public concerns will not be relieved only by increasing disclosure. While popular, actions directly aimed at curbing managerial compensations would be completely useless if not counterproductive, just as the 1992 Clinton initiative to curb managerial compensation had the opposite effect. The maximum fixed compensation that was tax deductible became the standard, and the variable components exploded.

The real issue is the lack of accountability of managers to shareholders, centered in the way corporate boards are elected. For example what if the U.S. political system meant that candidates standing up for election could only be proposed by the current executive and could be elected even if they do not obtain the majority of the votes? Unfortunately, this Soviet-like system is the current election system of U.S. corporate boards. This is the primary reason for the lack of accountability and it is the place where reform should start.

4.2 The Need to Grant Shareholders Access to Proxy

Disclosure is insufficient to address this governance issue because of the well-known collective action problem. However, the increased institutionalization of equity ownership provides a simple way to alleviate this problem: allowing shareholders access to the proxy ballot. A year ago in response to the SEC proposal to grant shareholders' access to proxy, the law firm Wachtell, Lipton, Rosen, Katz, famous for its anti-shareholders' right stand, wrote "No real-world crisis has shown that the current system needs radical revision. Five years after Enron and WorldCom, the capital markets are well into a cycle of unprecedented vigor" (Wachtell et al, 2007). Unfortunately, the crisis has arrived and this crisis *does* show that the current system is in need of revisions.

In the current system, except in the case of hostile takeovers (which are extremely rare now) boards are self-perpetuating entities that are not accountable to anyone. As long as future board members can only be nominated by the current board, where the executives hold large sway, the reputation incentives, which Fama and Jensen (1983)

theorize should align directors' incentives with those of shareholders. Board members owe their loyalty to management who directly or indirectly appoint them and have no incentive to dissent, since dissention runs the risk of being punished with exclusion. Even independent directors, often acclaimed as the solution to all the problems, are subject to the same pressure. To break this state of affairs it is necessary to allow institutional investors to propose their own slate of directors. The possibility of being elected (and turned down) in a real election will naturally make board members accountable to shareholders, indirectly also making the executives accountable.

This very simple proposal has been criticized along three dimensions (Wachtell et al, 2007). The first is that it will Balkanize boards, creating a tension between directors and producing little inefficient parliaments. Unlike parliaments, however, corporate boards' primary function is not to redistribute resources but to create them. Unlike parliaments, corporate boards have to compete in the marketplace and live under the constant monitoring of the stock market, which promptly punishes inefficient decision-making. Thus, the problem in corporate boards is the opposite to that of parliaments: social pressure to conform that can lead to what Jarvis (1972) define as groupthink, a well-known phenomenon that leads groups to make mistakes none of the individual participants would have made alone.

The second objection is that empowering shareholders will lead to excessive short-termism by corporate boards. According to this self-serving view, executives have the long-term interest of their corporation at heart, while shareholders, who can trade in and out, are only interested in the short term results. While popular, I do not know of any empirical support for this view. To the contrary, Aghion, Van Reenan and Zingales (2008) show that higher institutional investors' ownership increases innovation (measured as cite-weighted patents). To the contrary, the primary reason for a short-term bias in corporate America is precisely the lack of accountability for corporate boards. Dictatorial regimes, like the Chinese one, are extremely sensitive to the popular mood because this is the only form of political feedback and the only way in which political dissatisfaction can manifest itself and possibly subvert the existing power structure. In the same way, corporate boards captured by managers are extremely sensitive to stock prices,

because that is the only way in which shareholders' dissent can manifest itself and possibly overturn the CEO. The role of the board is not to blindly follow stock prices, but to create value for shareholders, exploiting the informational advantage they have. In other words, a board that is legitimated can more easily resist an unjustified stock market pressure than a board that is not.

The third objection is that allowing shareholders to nominate directors can empower shareholders who do not have the interest of the corporation at heart, but place some different self-serving agenda as a priority. This is a distinct possibility. If the GM pension fund, for instance, have some say in the election of banks' directors it could appoint directors who have the interest of GM more at heart than the interest of their bank. Although this is true, it is not different from the current scenario where several board members are executives in other companies. Furthermore, this risk can be minimized, if not eliminated, by restricting the set of investors who have access to proxy. For example, we can restrict the ability to nominate directors to institutional investors who satisfy some criteria of independence and can prove to have held the stock for a minimum amount of time. Last but not least, this possibility has been in place in the U.K. for a long time and has been recently introduced in Italy. While we can argue about its effectiveness, there is no evidence that the stated concerns have any foundation (Zingales, 2008b).

4.3 A Glass Steagall Act for Institutional Investors

An important component of the New Deal legislation was the Glass-Steagall Act, which separated investment and commercial banking. The purpose of this act was to eliminate the conflict of interest between the intermediaries financing companies and the ones placing these securities in the hands of investors. The fear was that commercial banks would dump on investors the bonds of companies that they knew (because they were the main lenders) were about to default. While some scholars doubt that this was a serious conflict of interest (Kroszner and Rajan, 1994) and that such a law was necessary to resolve it (Kroszner and Rajan, 1997), at the time it was considered essential to restoring the trust of the market in security underwriting.

In the current situation, where the major problem is corporate governance, the most pernicious conflict of interest is the one tying money managers and corporate managers. To the extent money managers are tied to investment and commercial banks, they depend on corporate managers for business and so they are unlikely to take a critical position in the corporate governance arena. Even the mutual funds companies that are independent, such as Vanguard or Fidelity, market their services to corporate pension funds and thus are unlikely to confront the managers who appoint the person in charge to decide which family to choose. Cohen and Schmidt (2008) show evidence that mutual funds even tilt their portfolio in favor of the sponsors of these plans in order to please them.

To eliminate these conflicts, two steps are in order. The first one is to remove the control over the decision of 401(k) and defined contribution plans from the hands of corporate managers. It would suffice that these choices be made by an elected representative of the beneficiaries, rather than by a corporate manager.

The second, more difficult, problem deals with the separation of the investment banking activity from the money managing activity, especially the mutual fund activity. Besides freeing portfolio managers from their need to cater to corporate managers, this separation would be beneficial from two other points of view. It would reduce the conflict of interest in the distribution sector, further enhancing investor protection at the entry phase. Under the current regime brokers generally sell to customers some financial products created by their own company and some financial products that are created by other companies. As I will discuss in the next section, the protection of unsophisticated investors requires that the broker discloses up front the differences in commissions he receives from the different companies. However, if the program is an internal one, the commission can be easily disguised. For example, the broker can receive a discretionary bonus at the end of the year which is linked to the amount of investment he diverted to in-house funds, without ever making this benefit explicit. Hence, full transparency does require a separation between distribution and money management activity.

Finally, the separation between investment banking activity and money management activity would eliminate potential risks of insider trading. Currently, these risks are contained with internal Chinese walls. But as the very experience of China

suggests, Chinese walls often fail in their intent as a result of human fragility. The formal separation will eliminate even these problems.

5. Protection of unsophisticated investors

For the vast majority of individuals, owning individual stock instead of mutual funds provides no benefits, while it might have some real costs. It provides no benefits because with the enormous number of specialized mutual funds and ETFs an individual can invest in any sector he wants and can hedge any need he might have, without resorting to individual securities. The level of idiosyncratic risk at which an individual can be exposed by buying single stocks is very high and dangerous. For well-educated individuals, who consciously assume this risk, this is not a problem. But for the large fraction of Americans, who cannot tell that whether a single stock is more risky than a mutual fund, this is a problem.

While the goal to prevent unsophisticated households from investing directly in security markets is a laudable one, it is probably not achievable, at least not at reasonable costs. One possibility would be to introduce a test to qualify individuals for the direct purchase of securities. Individuals who do not pass the test will only be able to invest through mutual funds. The problem with this solution is twofold. First, on the one hand it would be unfair to keep the Exchange Traded Funds (ETF) off the table. On the other hand, many ETF, which use leverage, are much more risky than individual securities. Thus, any dividing line would be very arbitrary. Second, if the test is not truly discriminating, then it is not worth having. If it is discriminating and it prevents willing buyers from participating in the market, the finance industry will create many securities targeted to bypass this restriction. Hence, such regulation would be both costly and ineffective.

At the end of the day, the more effective (and least costly) solution would be to have regulation that dissuades (rather than prevent) unsophisticated households from investing directly in security markets. As the investment prospectus of any mutual fund contains the statement “past performance is not an indication of future performance,” any broker contract should contain a statement to the effect that buying securities directly is dangerous and should be avoided by all, but the most sophisticated investors.

While the effectiveness of this approach might be limited, its implementation has several advantages. First, it would make it more difficult for brokers to bully investors into purchasing securities he or she might not be comfortable purchasing. Second, it would make it politically feasible to lighten some of the more burdensome regulation, attracting more companies to the security market. If “widows and orphans” are discouraged from investing in the market directly, there is no justification for security regulation specifically aimed at protecting them. Finally, it would focus regulatory attention where attention should be focused, i.e., on the mutual fund industry and, more generally, the asset management industry, where unsophisticated investors access financial markets.

All the attention that the 1933 security legislation put into protecting investors from abuses in underwriting and trading securities should be directed to protect investors in their access to financial markets. In this case the degree of protection should be even stronger. While most investors in the 1930s were relatively rich and thus presumably well educated and better able to fend for themselves, the expansion of 401(k) and defined contribution plans have forced millions of uneducated and unsophisticated investors to make financial decisions.

5.1 The problems in the mutual fund industry

This lack of sophistication creates three problems in the mutual fund industry. The first problem is what Jackson (2008) calls the “trilateral dilemma”: mutual funds get paid to divert their trade toward some brokers (not necessarily the cheapest ones) and pension consultants, who advise employer sponsors on the selection of investment options, get paid by financial service firms offering 401(k) programs.

The second is the total level of the fees. The SEC (2000) finds that the average mutual fund expense ratio rose from 1.14% of assets in 1979 to 1.36% in 1999, despite the growth in average fund size. Even very homogenous products, such as funds that track the S&P 500, have a high dispersion in fees. The 75th percentile by cost is 3.1 times that of the 25th percentile (Hortacsu and Syverson, 2003). If we exclude sales loads and other sale-related fees, the fees in this category of funds vary between 8 and 85 basis points. This induces some commentators (e.g., Mahoney (2004)) to raise the question whether the real scandal is the total size of the fees.

In general, we think that competition takes care of this problem. But in the mutual fund industry there are three reasons why this is not necessarily the case. First, roughly 40 percent of funds are sold through employer-sponsored retirement plans. Employers generally pick one or two fund families to offer to their employees. Hence, funds happily use 12b-1 fees (i.e., shareholders' money) to compete for employers' business, knowing that employees will then become captive customers. Second, in mutual funds ordinary investors cannot benefit from the monitoring performed by smart investors. When the managers of normal corporations misbehave, smart investors cannot withdraw their money, hence they sell the company's stock. This creates downward pressure in the stock price. Lower stock prices affect managers directly (through their holdings of stock and options) and indirectly (affecting the probability of takeovers). In mutual funds nothing like that happens. When managers misbehave, smart investors withdraw their money and ordinary uninformed investors stay in. Paradoxically, this gives mutual fund managers the perverse incentive to behave even more opportunistically. Once they have lost their price-sensitive clientele, they can start increasing fees without losing assets under management. The Steadman Fund, also called the dead-men fund, is a very famous example of this situation (Goldberg 1999). In spite of grossly underperforming the market every year, this fund continues to increase its management fee, because it knows the investors it has left are not paying attention to the change (possibly many are estates of deceased people, hence its nickname).

The third is the possibility of abuses which cannot be easily deterred by lawsuits because mutual fund companies manage a disproportionate amount of assets with respect to their net wealth and hence they can cause damages far in excess of their capital. Zitzewitz (2003) estimates the cost of market timing to buy-and-hold investors is about \$5 billion a year. Late trading is adding another \$400 million to that figure. Given the magnitude of the losses, investors' hope of recovering them through lawsuits is limited.

5.2 Possible solutions

The case to mandate better disclosure is simple. However, given the unsophisticated nature of mutual fund investors, even the format of this disclosure and the timing can make a difference. Investors should be provided—before they make their

purchase—a dollar estimate of all the expenses charged to their investment, including the amount paid in trading commissions, broken down in commissions paid for trading and commissions paid for services. Since the clerical cost of these disclosures is small, it is very difficult to argue against making them mandatory.

Similarly, at the time of the purchase, brokers should disclose the fee they receive on the different products they sell, including the “soft dollar” they receive in the form of higher trading costs.

While the case for mandatory disclosure is simple, the case for other forms of regulation is not. Given the size of the assets under management, it is difficult to fight potential frauds and abuses through higher capital requirements and mandatory insurance. They would be too expensive and would create big barriers to entry. Hence, there is the need to increase the amount of monitoring.

Competition among different enforcement authorities can help monitor the funds more closely. When the SEC had become too complacent, possibly due to the effect of regulatory capture, it was the General Attorney from New York State, Eliot Spitzer, who took the lead in the fight against frauds.

A more delicate topic is whether to take a more paternalistic view toward investors who seem to behave in an uninformed or irrational way. At the very least, there is a strong case to apply some version of the “libertarian paternalism” à la Thaler and Sustein (2003), by introducing default options that favor low-cost indexed funds. For example, it could be required that every 401(k) plan contains at least one low-cost index fund, which should be the default option for investors, unless they specify otherwise.

6. Reduce the public-private cost gap

As I discussed in Sections 2 and 3, the 1933-34 security regulation *de facto* lead to a two-tier system with a heavily regulated public market and a completely unregulated private one. This system is neither the result of a rational design, nor the natural outcome of competitive pressures, as free competition in security regulation à la Romano (1998) would deliver. Rather, it is the result of progressive holes in the original architecture of the New Deal Legislation that have been opened by industry lobbying. These holes are

not necessarily bad, since they do create flexibility in the system, but there should be no presumption of optimality.

Hence, in rethinking this structure we need to address two questions: 1) is a two-tier (or multiple tiers) system optimal? 2) is the distinction between these tiers set at the optimal level?

The answer to the first question is probably affirmative. On the one hand, disclosure is costly and there is no reason why all companies should be forced to have the same level of disclosure. On the other hand, there are benefits of a fairly standardized system. Having a ten-tier market will probably confuse investors and reduce the liquidity of each of these markets. The multitude of tiers will also increase the signaling effect that belonging to a superior tier has. The use of a higher regulated tier as a signal of quality would force a lot of companies into inefficiently high regulation to separate themselves from the rest. Thus, while there is not a strong theoretical argument in favor of a two versus a three or four tier system, the current division in two segments seems reasonable.

What needs to be rethought is the distance between these tiers. The analysis in Section 3 suggests that this distance might be too far, since the unregulated market is constantly gaining ground over the regulated one. The same analysis, however, suggests that this distance should not be reduced by only decreasing regulation in the upper tier, but also by increasing some regulation in the lower one.

6.1 Some New Rules for the Private Market

Enhanced prospectuses

The experience with the CDO and RMBS market, where trillion of dollars in securities were issued in the 144A market without the proper amount of transparency, forces us to rethink the current regulation. While QIBs are able to fend for themselves in this market, they are unlikely to internalize the systemic effects these securities might have. As a result, a case can be made for some form of mandatory disclosure even in this market. But since disclosure is not costless, the problem is where to draw the line. A regulation based on the amount of security offered would be useless because it can be easily overcome by breaking an issue in separate tranches of smaller size. The problem of

the mortgage-backed security was not the size of each individual offering, but the aggregate size of mortgage backed securities.

The only solution is to empower a regulatory authority, be it the SEC or the Fed, to mandate enhanced disclosure when a set of securities become sufficiently important to have potential systemic effects.

Forced transparency of “systemic” markets

Following the same logic, the SEC or the Fed should have the right to move to an organized exchange derivative contracts that reach a sufficient size to have potential systemic effects.

As previously discussed, the CDS market was able to grow—unregulated—to a size twice the entire U.S. stock market, creating important systemic effects (Zingales, 2008b). More importantly, the level of collateral posted for these contracts was very low or non-existent, generating the possibility of a systemic failure. As the Federal Reserve has the right to establish margin requirements for stock purchases, it should also have the right to set the margin requirements for these contracts.

Standardization in reporting and delayed transparency

As discussed in Section 3, the lack of information in the private equity market can lead to misallocation of resources. These shortcomings can be easily addressed at very little cost for the issuers. The first requirement would be to standardize reporting for private equity funds and hedge funds above a certain size. A common set of standards, like how to calculate the internal rate of return, how much information disclose on the past investments, etc., can be imposed with very little cost to the issuer, but great benefits to the investors. In particular, it would be useful if the buyout fund specified the financial structure of the companies they invest in to compute the amount of risk they assume.

A more delicate question is how much disclosure to impose on private equity funds and hedge funds with regard to the composition of their portfolio. The reason why it is delicate is that there are significant competitive issues at stake. Portfolio strategies are the main source of comparative advantage for a hedge fund and better funds will be heavily penalized if forced to report them.

For this reason, I propose a delayed disclosure in which private companies and unregistered funds disclose their portfolio composition and their performance with a 1 to 2 year delay. This delay will eliminate any competitive concern, since the half life of portfolio strategy is very short on Wall Street, while still providing the benefit of a serious statistical analysis of this market, which will improve allocation.

This delayed disclosure should be imposed to all the funds (above a minimum size) that raise capital in the United States. For very large funds, there will be a need for contemporaneous disclosure only to the regulatory authorities, which will keep them confidential, for systemic considerations.

6.2 Deregulation of the Public Market

The several changes proposed above will make it easier to lighten the regulatory burden for publicly-traded companies. Since the prospectuses will be aimed at institutions and not to individual investors, they can be substantially reduced in size, without compromising substance. There is no reason, for instance, to remind institutional investors of all the risks of investing in the initial public offering of a small company. The *caveat emptor* should apply. This and similar simplifications could cut down on the size of the prospectuses and the costs of disclosure, giving the opportunity to improve the quality of the substantive disclosure.

The presumption of operating in a market of sophisticated investors will also allow companies more flexibility. For example, companies could be allowed to opt out of the current litigation system in favor of an arbitration system at the IPO as proposed by the Committee on Capital Market Regulation (2006).

Finally, the shareholders' empowerment proposed in Section 5 would make a lot of the existing regulation redundant, at least in its mandatory form. For example, the presence of institutional investors' representative on the board would make it possible to transform many mandatory provisions, including Sarbanes-Oxley, into "British-style" comply-or-explain provisions.

5. Conclusions

In 1933, security regulation was introduced to restore trust in financial markets after the dramatic losses suffered in the early 1930s. Seventy-five years later, we find ourselves in a similar situation. In order to restore the trust in the public securities market that most people have lost, a new set of rules should be passed. However, the nature of these rules should be very different from that of the 1930s. While in the 1920s, the prevailing perception was that investors had been defrauded by offerings of dubious quality securities, in the new millennium, investors' perception is that they have been defrauded by managers who are not accountable to anyone.

The first set of new rules, thus, should reform the current corporate governance regime, empowering institutional investors to nominate their own directors to the board. To protect the independence of these institutional investors, it is necessary to pass a sort of Glass-Steagall Act that separates investment and commercial banking from mutual fund management.

The second set of reforms should be aimed at protecting unsophisticated investors when they approach financial markets. Institutional investors should be discouraged from investing in individual security, but should be heavily protected in their investment in mutual funds not only through aggressive disclosure, but also with rule aimed at enhancing competition among funds and reducing their fees.

The third set of reforms should be aimed at reducing (while not eliminating) the current regulatory gap between public and private equity markets, reducing regulation in the public market some while increasing regulation in the private ones.

References

- Aghion Philippe, Tomm Algom, Pierre Cahuc, and Andrei Shleifer, 2008, "Regulation and Distrust,"
- Aghion, Philippe, John Van Reenan, Luigi Zingales, 2008, "Innovation and Institutional Investors", University of Chicago Working Paper.
- ACCA, 2008, "Climbing out of the Credit Crunch" The Association of Chartered Certified Accountants, September 2008.
- Benmelech, Efraim and Jennifer Dlugoszb, 2008, "The Alchemy of CDO Credit Ratings", Harvard University Working Paper.
- Bebchuk, Lucian, Alma Cohen, and Allen Ferrell, 2002, "Does the Evidence Favor State Competition in Corporate Law"? CAL. L. REV. 90: 1775.
- Brunnermeier, Marcus and Stefan Nagel, 2004, "Hedge Funds and the Technology Bubble", *Journal of Finance*, 2004, 59(5), 2013-2040.
- Bushee, Brian J. and Leuz, Christian, "Economic Consequences of SEC Disclosure Regulation: Evidence from the OTC Bulletin Board" *Journal of Accounting and Economics* 39 (2005): 233-264.
- Choi, Stephen J. and Andrew T. Guzman, 1998, "Portable Reciprocity: Rethinking the International Reach of Securities Regulation", 71 S. Cal. L. Rev. 903, 907.
- Coates, John C. "Private vs. Political Choice of Securities Regulation: A Political Cost/Benefit Analysis," 41 *Virginia Journal of International Law* 531 (2001).
- Cohen, Lauren and Breno Schmidt, 2008, "Attracting Flows by Attracting Big Clients" *Journal of Finance*, forthcoming.
- Committee on Capital Market Regulation, 2006, "Report".
- Cox E., 1963, *Trends in the distribution of stock ownership*, Philadelphia: University of Pennsylvania Press
- Doidge, Craig, G. Andrew Karolyi, and René M. Stulz, 2007, "Has New York become less competitive in global markets? Evaluating foreign listing choices over time" Working Paper.
- Dyck, A. and Zingales L., 2003, "Asset prices and the media", University of Chicago working paper.

- Fama, Eugene, and Michael Jensen, 1983a “Separation of Ownership and Control,” *Journal of Law and Economics*, 26 (2): 301-325.
- Fama, Eugene, and Michael Jensen, 1983b “Agency Problems and Residual Claims,” *Journal of Law and Economics*, 26 (2): 327-349.
- Fox, Merritt B, 1999, “Retaining Mandatory Securities Disclosure: Why Issuer Choice Is Not Investor Empowerment”, *Virginia Law Review*, Vol. 85, No. 7, (Oct., 1999), pp. 1335-1419
- Gabaix, Xavier and David Laibson, 2006, “Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets.” *Quarterly Journal of Economics* 121 (2), pp. 505-540.
- Goldberg, Steven T., 1999, “The World's Worst Funds, Revisited - Steadman Funds” *Kiplinger's Personal Finance Magazine*, May, 1999
- Grossman, S.J. and O.D. Hart , 1980, “Disclosure laws and takeover bids.” *Journal of Finance* XXXV no. 2:, pp. 323–334 May.
- Grossman S., 1981, “The information role of warranties and private disclosure about product quality”, *Journal of Law and Economics*, XXIV, pp. 461-83.
- Grossman S. and Hart O., 1986, “The costs and the benefits of ownership: a theory of vertical and lateral integration”, *Journal of Political Economy*, pp. 691-719.
- Guiso, L, P. Sapienza, and L. Zingales, forthcoming, “Trusting the Stock Market, *Journal of Finance*.
- Hawley J. P. and Williams A. T., 2000, *The rise of fiduciary capitalism: how institutional investors can make corporate America more democratic*, Philadelphia: University of Pennsylvania Press.
- Hail, Luzi and Leuz, Christian, "International Differences in the Cost of Equity Capital: Do Legal Institutions and Securities Regulation Matter?" *Journal of Accounting Research* 44 (2006), 485-531.
- Hail, Luzi and Leuz, Christian, "Cost of Capital Effects and Changes in Growth Expectations around U.S. Cross-Listings" (October 2006). ECGI - Finance Working Paper No. 46/2004
- Healey T., 2004, “The best safeguard against financial scandal”, *Financial Times*, March 12, 2004.
- Hochberg, Yale, Paola Sapienza, Annette Vissing-Jorgensen, 2009, “A Lobbying Approach to Evaluating the Sarbanes-Oxley Act of 2002”, *Journal of Accounting Research*

Hortaçsu A. and Syverson C., 2003, "Product differentiation, search costs, and competition in the mutual fund industry: a case study of S&P 500 Index funds", working paper.

Jackson, Howell E., 2008, "The Trilateral Dilemma in Financial Regulation" in *Improving the Effectiveness of Financial Education and Savings Programs* (Anna Maria Lusardi, ed.) (University of Chicago Press 2008)

Janis, Irving L., 1972, *Victims of Groupthink*. Boston. Houghton Mifflin Company.

Jiang G., Mahoney P. G. and Mei J., 2005, "Market manipulation: a comprehensive study of stock pools", *Journal of Financial Economics*, [Volume 77, Issue 1](#), July 2005, pp. 147-170.

Kaplan S. and Schoar A., 2005, "Private equity performance: returns, persistence and capital flows", *The Journal of Finance*, LX, 4, August 2005, pp.1797-1823.

Kroszner, Randall and Raghuram G. Rajan, 1994, "Is the Glass-Steagall Act Justified? A Study of the U. S. Experience with Universal Banking before 1933," *American Economic Review*, September, 810-32, with Raghuram G. Rajan.

Kroszner, Randall and Raghuram G. Rajan, 1997, "Organization Structure and Credibility: Evidence from Commercial Bank Securities Activities before the Glass-Steagall Act," *Journal of Monetary Economics*, August 1997, 475-516.

Knutson, Brian, Camelia M Kuhnen, G Elliott Wimmer, and Piotr Winkielman. 2008. "Nucleus accumbens activation mediates the influence of reward cues on financial risk taking," *NeuroReport*, (5).

Kuhnen, Camelia M, and Brian Knutson. 2007. "The impact of affect on beliefs, preferences and financial decisions,"

Lambe G., 2007, "Public versus private equity markets", *The Banker*, September 2007, pp. 40-44.

Landis J. M., 1959, "The legislative history of the Securities Act of 1933", *George Washington Law Review*, No. 29.

Lerner J., 2001, *"Venture capital and private equity: a course overview"*, 2001 Update, John Wiley & Sons Inc.

Leuz, Christian and Peter Wysocki, 2008, Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research, working paper.

Livingston, Miles and Lei Zhou, 2002, "The impact of Rule 144A debt offerings upon bond yields and underwriter fees", *Financial Management*, Vol. 31, No. 4, Winter, pp. 5-27.

Lusardi A. and Mitchell O., 2007, "Financial literacy and retirement preparedness: evidence and implications for financial education", *Business Economics*, January 2007, vol. 42(1), pp. 35-44.

Mahoney, Paul G., 1997, The Exchange as Regulator. *Virginia Law Review*, Vol. 83, No. 7, 1997.

Mahoney P. G., 2001, "The political economy of the Securities Act of 1933", *Journal of Legal Studies*, vol. 30, January 2001.

Mahoney P. G., 2004, "Manager-investor conflicts in mutual funds", *Journal of Economic Perspectives*.

Madrian B. and Shea D., 2001, "The power of suggestion: inertia in 401(k) participation and savings behavior", *Quarterly Journal of Economics*, November 2001, 116(4), p. 1149-87.

Mikaila A., History in the making: the evolution of the 144a market, OGFJ California: Mikaila Adams Associate Editors.

Minow, Nell, 2008, Hearing on the Bankruptcy of Lehman Brothers, COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM, October 6, 2008.

NASDAQ, 2007, NASDAQ's electronic trading platform for the 144A private placement market is approved by the SEC - The PORTAL market trading system will begin operating on August 15, Aug 1, 2007.

Rajan R. and Zingales L., 2003, Saving Capitalism from the Capitalists, New York: Random House.

Romano, Roberta 1998, "Empowering investors: A market approach to securities regulation", *The Yale Law Journal*; June 107, 8.

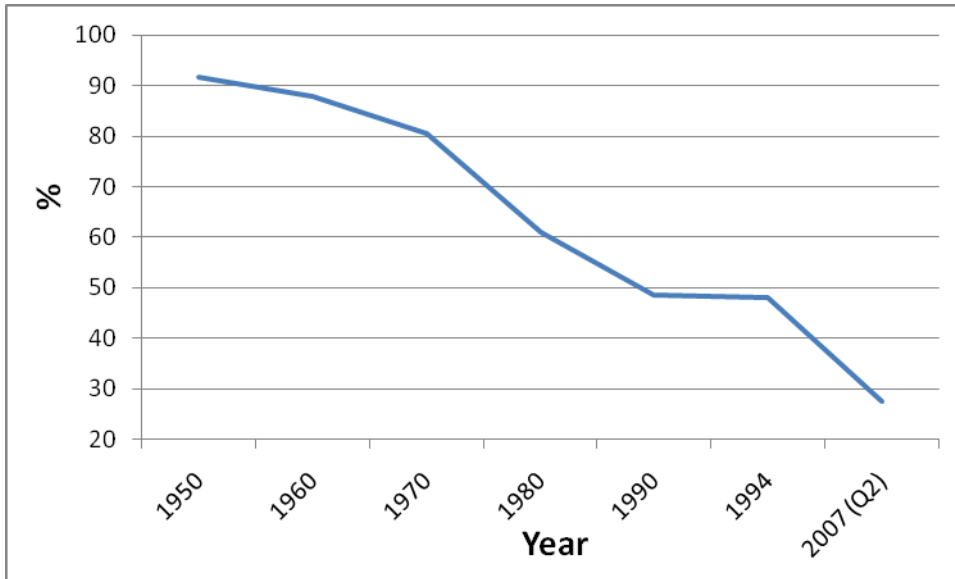
Sahlman, William A. and Andrew Janower , 1995, Centex Telemanagement, Inc. Case No. 9-286-059. Harvard Business School Publishing.

Sirri E. R. and Tufano P., 1998, "Costly search and mutual fund flows", *Journal of Finance*, 53:5, pp. 1589-1622.

Sjostrom W. K., 2007, "The birth of Rule 144A equity offerings", *UCLA Law Review*, Forthcoming.

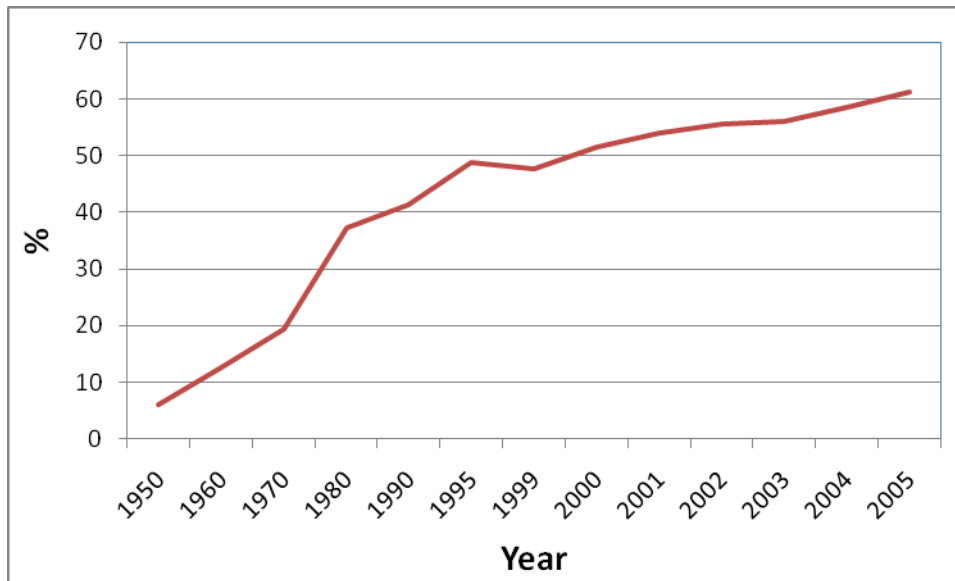
- Tang V. W., 2007, "Economic consequences of mandatory disclosure regulation: evidence from Rule 144A equity private placements", working paper.
- Thaler T. and Bernartzi S., 2003, "Save more tomorrow: using behavioral economics to increase employee saving", *Journal of Political Economy*.
- Thaler T. and Sunstein C., 2003, "Libertarian paternalism", *The American Economic Review*, Vol. 93:2, pp. 175-179.
- Thel S., 1990, "The original conception of Section 10(b) of the Securities Exchange Act", *Stanford Law Review*, Vol. 42, No. 2, January 1990, pp. 385-464.
- Wachtell, Lipton, Rosen, Katz, 2007, „Comment on SEC Proposals With Respect to Shareholder Proxy Access” September 19, 2007.
- Willet E. R., 1968. Fundamentals of securities markets, New York: Appleton-Century-Crofts.
- Zingales L., 2006, "Is the U.S. capital market losing its competitive edge?", IGM Working Paper.
- Zingales, Luigi, 2008a, Testimony on "Causes and Effects of the Lehman Brothers Bankruptcy" Before the Committee on Oversight and Government Reform, United States House of Representatives, October 6, 2008.
- Zingales, Luigi, 2008b, "Italy leads in protecting minority investors", Financial Times, April 13 2008
- Zitzewitz E., 2003, "How widespread is late trading in mutual funds?", Stanford Graduate School of Business research paper #1817.

Figure 1: Percentage of total market value of US equity directly held by households



Source: Benjamin M. Friedman, "Economic Implications of Changing Share Ownership." *Journal of Portfolio Management*, 22 (Spring 1996) integrated with Board of Governors of the Federal Reserve System, Flow of Funds Accounts (2007) for the data post 1996.

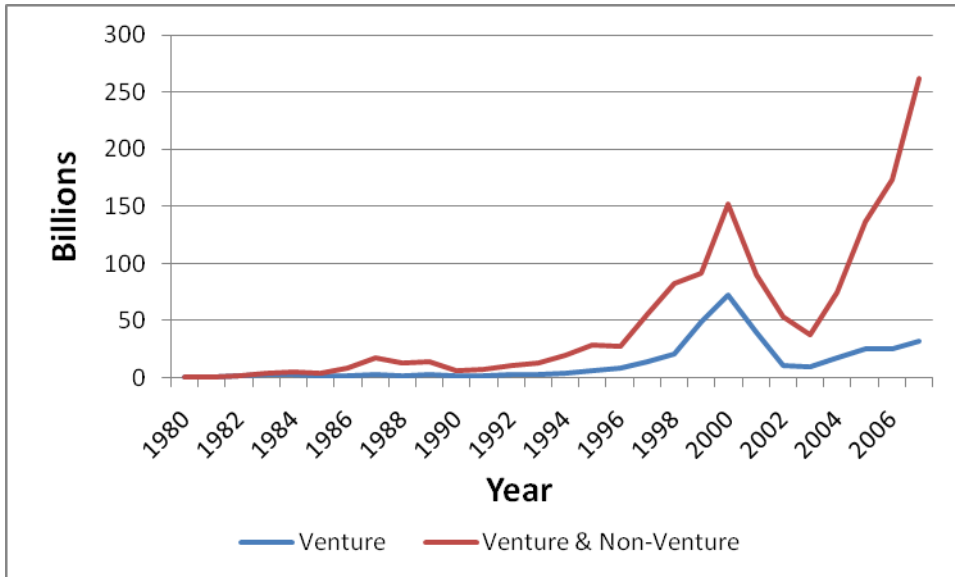
Figure 2: Percentage of total market value held by institutions



Source: The Conference Board Governance Center

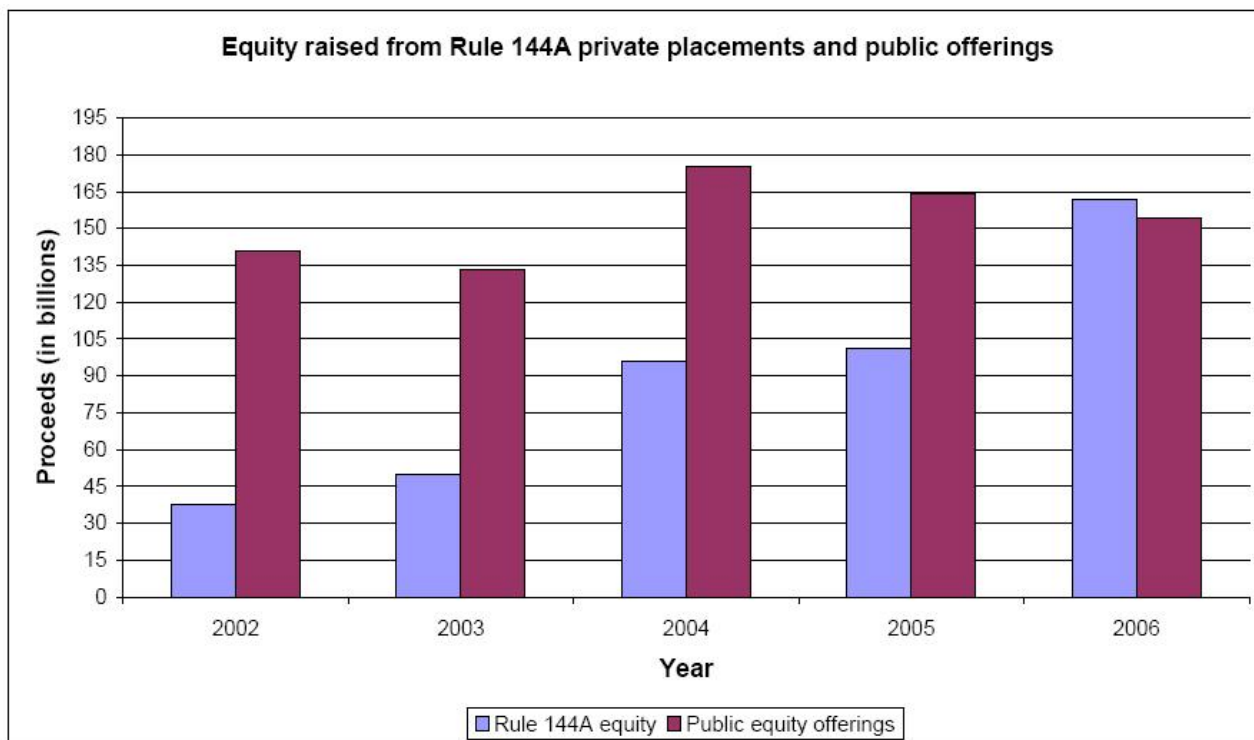
Institutional investors = pension funds, investment companies, insurance companies, banks and foundations

Figure 3: Growth in the private equity market



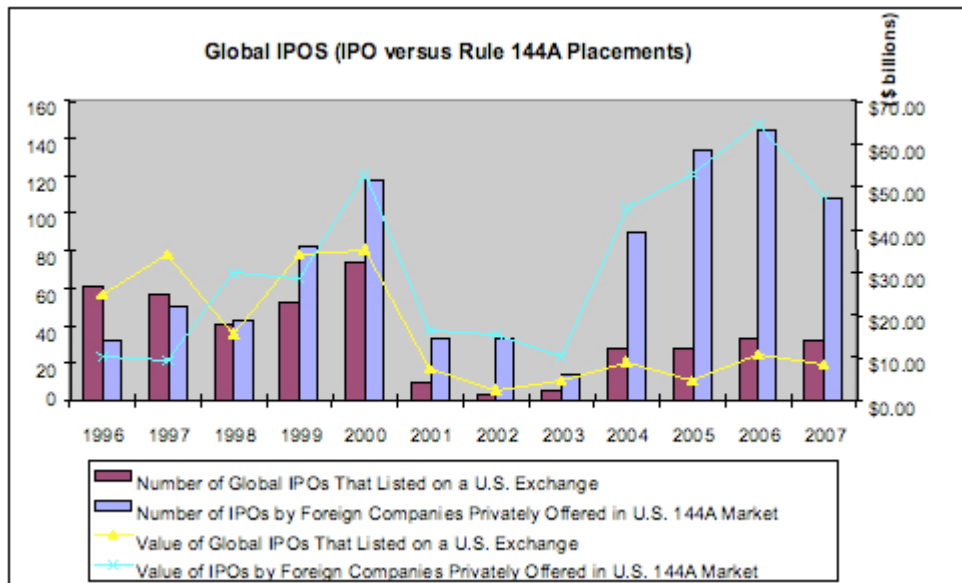
Source: Private Equity Analyst. Capital Commitments to U.S. GPs

Figure 4: Equity raised from Rule 144A private placements and public offerings



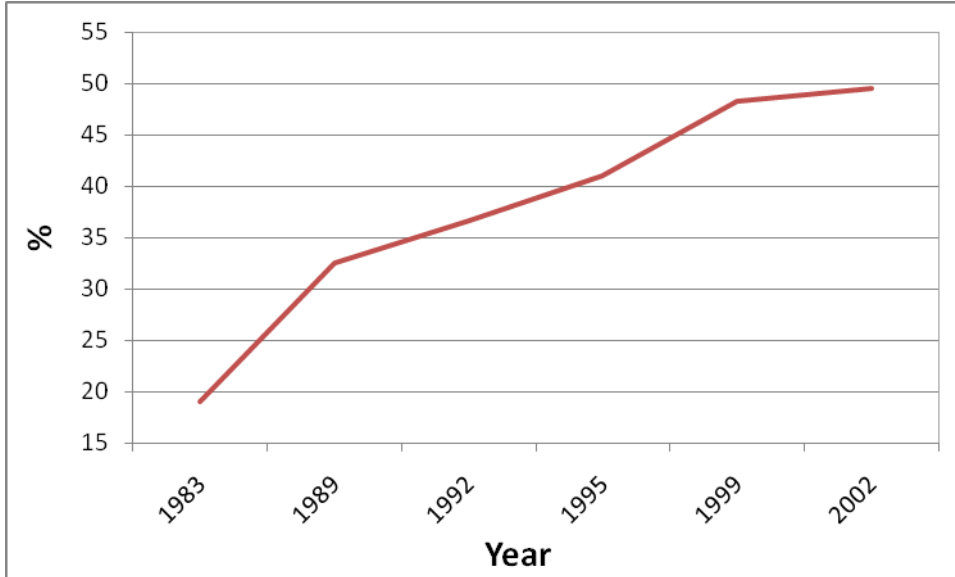
Source: Tang (2007).

Figure 5: Increased share of 144A over global IPOs



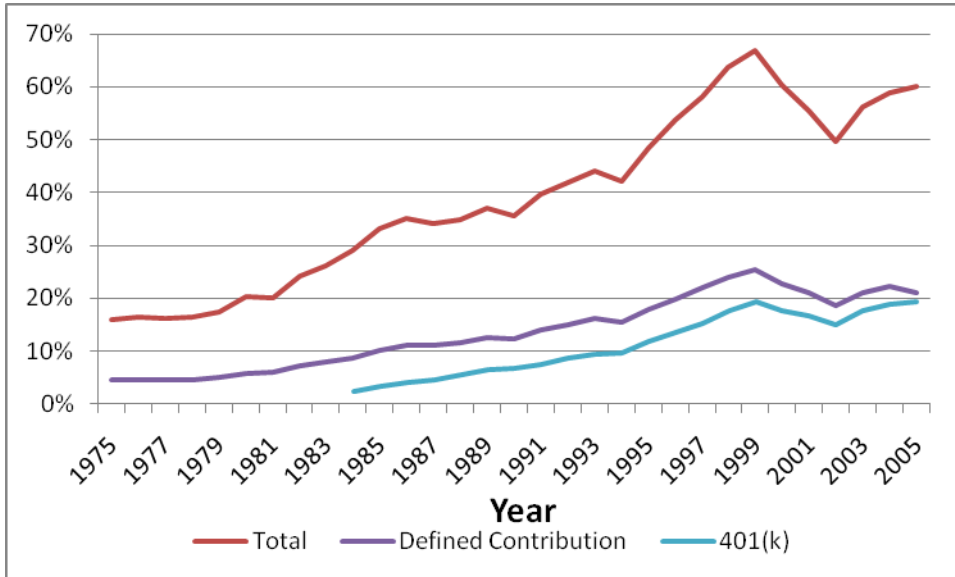
Source: Steven M. Davidoff , Do Retail Investors Matter Anymore? The New York Times January 17, 2008.

Figure 6: Percentage of US households owning equities



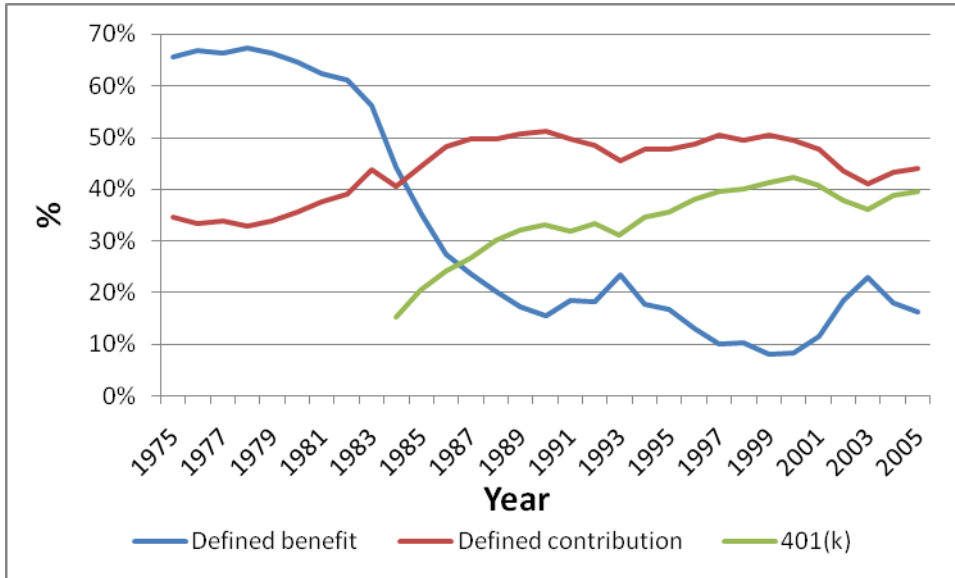
Source: Survey of Consumer Finances (Board of Governors of the Federal Reserve System) and ICI/SIA 1999 and 2002 equity ownership surveys

Figure 7: Total pension plan assets over GDP



Source: U.S. Department of Labor and U.S. Department of Commerce: Bureau of Economic Analysis. The total is the sum of defined contribution plans, defined benefit plans, and 401(k) plans.

Figure 8: Relative importance of defined benefit plans, defined contribution plans, and 401(k) plans contributions over the total annual contribution to retirement plans



Source: U.S. Department of Labor

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