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A NOTE: ON BUSINESS MYOPIA AND MARKET ORGANIZATION

by

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A Note
On Business Myopia and Market Organization

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Myopia in This Volume

The issue of myopia or shortsightedness in business investment decision has received increasing attention in the business press, as well as in academic articles, during recent years. In this volume, Dahmén, Glete and Dosi touch upon the issue in the context of comparing the efficiency of bank-group oriented financial markets with decentralized markets of the Anglo-Saxon type. One dimension in which the former institutional setting is often claimed to be superior is in the incentive for management to take a long-term perspective.

Holmström refers in his paper to specific agency problems potentially causing myopia, when managers have private information about future returns on investment, and the market value of their human capital depends on these returns. Eliasson's view of the firm as "a competent team" supports the notion that the value of management's human capital or "competence" is to a large extent firm-specific. Accordingly, investment in such human capital may be "too low" if returns on it are uncertain due to the threat of takeovers or if stock market participants, as Eliasson argues, are poor at valuing "organizational competence".

The papers in this section do not directly discuss myopia but the general arguments developed in them have specific applications on this issue. Day's argument that economic agents by necessity make decisions under bounded rationality implies, first, that the institutional setting for decision making is an important determinant of deviations from the standard rational expectations equilibrium benchmark commonly used in economic modelling, and, second, that organizational structures, rules of behavior, law, and policy-making are to a large

extent consequences of the information problems facing agents. Accordingly, with respect to myopia, we need to ask both whether non-optimizing decision rules causing myopia are more likely to occur in a particular institutional framework, and whether there are particular laws and regulations that cause or resolve the myopia problem.

Lindh's review and analysis of the literature on learning about rational expectations support Day's view that transactions and information costs are serious impediments for achieving rational expectations equilibria where all agents behave as if they know the economic structure, including information sets and rules for expectations formation.

Lindh's analysis puts strong emphasis on the model specificity of the concepts of rational expectations equilibrium and bounded rationality. Equilibria are conditional on what information agents are endowed with. Thus, one must be very careful when one sets bounded rationality against rational expectations assumptions. In most learning models the former occurs when agents do not know the structure of their economic environment but must act on some assumptions about it. Rational expectations require that agents behave according to a model that also is correct, conditional on agents' behavior.

Applying Lindh's concepts on myopia, we face the question whether it occurs in rational expectations equilibrium or whether it occurs only under bounded rationality before agents have learned all they can about the economy.

In the following, arguments for the existence of myopia under alternative market organizations are reviewed and summarized. First, the choice of reference point for excessive myopia is discussed. In the concluding section, I consider the role of certain laws and regulation for the determination of corporate governance structures. Given a set of rules those in corporate control (incumbents) are able to determine the governance structure with or without threats of take-overs. I argue that split voting rights, as opposed to one share-one vote, lower the incumbent's costs of switching governance structure and that efficiency losses due to myopia are reduced. On the other hand, split voting rights enable the incumbent to secure private benefits at a lower opportunity cost.

The Choice of Reference Point for Myopia

Any argument for excessive myopia within a financial system must include an explicit or implicit reference point for the optimal time-horizon of managers. Two examples can illustrate this point. Volvo's chairman and former CEO, P.G. Gyllenhammar, has argued that stock-ownership and incentive contracts tied to profits are damaging for management's ability to make long-term decisions. At the same time, there has been talk about a negative 100 kronor "Gyllenhammar factor" in the evaluation of Volvo's shares. It is possible that Gyllenhammar is correct if markets cannot correctly evaluate the long-term prospects of the firm. On the other hand, it is possible that the "Gyllenhammar factor" reflects the stock-markets' well-founded skepticism about long-term decisions made by Volvo. These decisions constitute Gyllenhammar's reference point.

A similar type of "evidence" of short-termism that can be interpreted in different ways depending on reference point is that Japanese firms are better than American firms at overcoming slumps in their sales caused by lacking competitiveness in goods markets. They do this by investing in product development while taking losses for a number of years. This is evidence of a more long-term outlook of Japanese firms but we do not know whether resources could have been better utilized from stock-holders' perspective in another industry or firm. From current employees' perspectives, however, the Japanese model may offer better job-security.

The issue of short-termism is an issue of corporate control mechanisms and is usually associated with decentralized, stock-market oriented financial structures. If stock-markets have less weight as a control mechanism others have more weight. Thus, when discussing the reference point with which to compare managers' time horizon under a certain financial system it is not sufficient to compare with a socially optimal time-horizon if such can be defined. We must ask what the time horizon would be under another system with different control mechanisms.

Furthermore, even if there is evidence of myopia in one system it does not follow that another system would be superior. The "optimal" financial organization may be found by trading off different sources of inefficiency.

When discussing inefficiencies in financial markets the benchmark is often provided by modern finance theory. It describes markets for financial instruments as means for pricing, trading and sharing project risk in such a way that each investor obtains an optimal trade-off between risk and expected return on a portfolio of securities. Each project obtains a risk-premium in proportion to its contribution to total portfolio risk. Firms use each risk-premium to determine discount rates for projects. There is no distinction between privately optimal and socially optimal discount rates. An efficient market in this sense will price long-term projects according to the time-preferences of investors and the projects contribution to investors' portfolio risk. Allowing for some heterogeneity in both time-preferences and risk-aversion, it is reasonable to assume that an efficient market would not completely inhibit all firms from taking a long-term perspective.

An important assumption underlying the alignment between stock-holders' valuation and social valuation is that goods and factor markets are competitive or, if they are not, public policies restoring efficiency in goods and factor markets exist. If no such policies are conducted, then it is easy to imagine cases where stock-holders' valuation will induce managers to make investment decisions that are socially non-optimal and possibly too short-term.

To illustrate this point, assume that workers face costs of moving among jobs and regions in a country. In a competitive labor market more "unsteady" or short-term jobs would have to offer a wage premium to attract labor but in a unionized labor market wage differentials of this kind may not be acceptable. Alternatively, firms with local markets would perhaps be able to obtain local monopoly power relative to workers. In these cases, workers' job security preferences would not be reflected in wages and profits. As a result, stock-holders' project evaluation may not correctly reflect social costs of labor.

It is obvious that the "first-best" remedy to a labor market problem is not for firms to use a social discount rate and social cost accounting in project evaluation.

Such rates and costs become arbitrary since managers cannot know how to "price" the labor market imperfection even if their sense of social responsibility is strong. We would expect that social costs should be assigned by those best able to obtain information about people's evaluation of job-security, environmental hazards and other market imperfection. Following traditional micro theory the first best solution to, say, a labor market imperfection is for the public sector to use taxes and subsidies in labor markets to provide optimal social incentives, unless competition and efficient pricing can be obtained by institutional development and legal intervention.

If stock-holders' preferences for project evaluation are regarded as representative for the "social good", then the issue of short-termism is whether market prices correctly incorporate preferences and information, and whether managers' behavior is consistent with stock-holders' preferences by means of corporate control mechanisms. In order to draw policy conclusions based on an argument for short-termism caused by an information problem, within a certain institutional structure in financial markets, it is necessary to use alternative institutional structures as reference points. As Coase (1960) noted, once transactions costs in markets are recognized we must ask what system creates the smallest efficiency losses in the form of transactions costs and socially non-optimal decisions. Information asymmetries are a source of transactions costs and institutional structures, contractual arrangements, information acquisition, costly signalling by managers are examples of alternative means for overcoming such asymmetries. Thus, costs of short-termism within one type of financial system must be compared to other costs and inefficiencies in other financial systems. The efficient market as defined by traditional finance theory is unobtainable.

The relative role of banks or banking groups, bond markets and stock-markets in different countries is to a large extent determined by differences in regulation of activities in financial markets. Furthermore, the functioning of corporate control mechanisms within a stock-market dominated system depends on regulation of trade in shares and rights associated with shares. Regulation of insider trading, disclosure rules, hostile take-overs and voting rights influence managements' responsiveness

to the valuation in the market place. Thus, we must distinguish between inevitable sources of inefficiency due to transactions and information costs within a stock-market system and inefficiencies that can be remedied by specific market regulation or by abolishment thereof.

Management Myopia in Stock-Market Dominated Systems

A stock-market dominated system is characterized by substantial separation between management and ownership, while ownership shares are traded and valued in open markets. The first characteristic implies that information about investment projects, management activity, and, perhaps, management ability is asymmetric with management holding the information advantage.

Models of myopia have in common that the asymmetry of information cannot be overcome without substantial costs in the form of monitoring, signalling, and the like. The issue is then whether the asymmetry of information will be the cause of myopia in rational expectations equilibrium. Existing models referred to below are based on the assumption that model structure, information sets, and expectations formation rules are known by all agents. Thus, agents are not boundedly rational in the sense that they must learn about the economy. The models answer the question how myopia can exist if stock-market and participants are rational and know that the information asymmetry exists. Does myopia persist or is it a transitional phenomenon? Can an incentive contract that aligns incentives be contracted?

The literature on these issues is still quite thin with contributions by Narayanan (1985), Stein (1988 and 1989), Campbell and Marino (1990) and Jeon (1990). The authors approach the issue in different ways but they have in common the demonstration that myopic management behavior can occur in equilibrium even under the strong information assumptions of rational expectations. Most interesting is that stock-holders know that managers may behave myopically in equilibrium but myopia persists, nevertheless.

Stein (1988) considers myopia induced by a take-over threat in the short-term. Managers know that by delaying sales or investment activity into the future they will, by means of improved technology, be able to improve profitability to a greater extent than potential bidders. If in this situation stock-holders do not know whether low current sales and profits are due to managers waiting for the new improved technology or to exogenous "bad times" for the company, then the firm will be undervalued and a take-over target. Managers with superior knowledge wish to signal their belief in the future prospects of the firm by increasing current earnings. Thus, they may conduct wasteful sales or other activities to signal their belief in the future and avert take-overs. In the situation described by Stein inferior take-overs could be prevented by providing management with power to block unwanted bids.

The weakness in the argument is that it is possible to imagine contractual arrangements and other costless signalling mechanisms that would provide stock-holders with better information, as Stein notes. Furthermore, the set-up with a bidder offering synergistic effects while the incumbent has a potentially better project in the future seems somewhat forced. Models in two follow-up papers, Stein (1989), and Campbell and Marino (1990), seem to have more general applicability. Following Jeon's (1990) description of Stein's model the public observes earnings in period t (y_t) defined as

$$y_t = z_t + b_t - c(b_{t-1}) \quad (1)$$

where b_t is management's borrowing to influence earnings in t and $c(\cdot)$ describes the repayment function of loans. The term z_t is called the "natural" earnings consisting of two components in the following way:

$$z_t = w_t + u_t \quad (2)$$

where z_t is a permanent component following a random walk process

$$w_{t+1} = w_t + v_{t+1} \quad (3)$$

The transitory component of "natural" earnings are u_t in (2). The permanent component w_t is a function of management ability.

The information asymmetry implies here that ability (w_t) and borrowing (b_t) designed to influence current earnings cannot be directly observed. Stock-holders observe current earnings, y_t , from which they must infer future earnings and price the equity. Myopic behavior implies that managers borrow excessively relative to "natural" earnings ($b_t > 0$).

The interesting result of this model is that myopia may occur even if managers have stock-holder wealth maximization as their objective and expectations are based on knowledge of the model's structure.

Although the "first best" level of borrowing, b , is zero, managers will choose to borrow excessively during a period. This is understood by the stock-market and will actually be the best feasible action. Thus, we can say that the stock-market and managers agree on a myopic decision in a situation of asymmetric information.

The intuition behind this result is that high earnings reflect with some probability high "natural" earnings, when market participants cannot distinguish among permanent and transitory components of natural earnings z and excessive borrowing, b . Since managers cannot commit perfectly to not borrowing, the manager who does not borrow will be considered less able with a positive probability. This manager's firm will then be undervalued. Thus, value maximization involves excessive borrowing, and market participants know this.

Jeon notes that under certain conditions the opposite of myopia – "long-termism" or "hyperopia" – occurs. The relative variance of permanent and transitory components to natural earnings determine whether hyperopia or myopia occurs. According to Jeon, the former is a theoretical possibility when the permanent component of natural earnings, w_t , follows a very "wild" random walk making σ_v^2 very large relative to σ_u^2 in (2).

A credible precommitment not to borrow would resolve the problem of myopia or hyperopia in the model. One might therefore ask whether learning, reputation-effects, or contractual arrangements might lead to the first best solution that occurs, when stock-market participants know that there is no excess borrowing. In this

situation value-maximization by managers does not cause myopia.

Stein (1989) argued that the markets do not learn but Jeon (1990) shows how this result followed from disregarding expected strategic interaction when estimating the present value of cash flows. He shows that in the model described above, markets will actually learn management behavior over time and infer the excess borrowing component of earnings. Essentially, this market learns how borrowing behavior depends on the relative variances of temporary and permanent components of natural earnings. Thus, myopia is transient under the strong assumptions about knowledge of structures if the components of natural earnings follow stable processes.

Jeon's story of learning can be thought of in terms of a manager developing reputation for not using excessive borrowing or taking other actions to increase earnings even if it is for the sake of the stock-holders. As Rosen (1990) notes, top level management is usually senior managers with relatively short careers left and they seem to be very much tied to one corporation in their careers. Reputation in the sense discussed here may therefore not be a strong force for overcoming the principal agent problem. Under a take-over threat it might also be costly to try to develop a reputation if the manager for a period must deviate from stock-value maximization.

The logic of the Naranyan and the Campbell-Marino stories is similar to the one described. In Campbell-Marino (1990) managers face a choice among alternative investment project with different time patterns of cash-flows. Managers are myopic if they prefer a project with relatively near term cash flows even if its present value is lower. Market participants cannot observe the choice of investment project. Nor can they observe management ability. Earnings in any period depend on project choice, management ability, and transitory "noise".

If managers' compensation depends on the expected value of earnings through the labor market or the stock-market as in Jeon, myopia may occur. Managers take into account that others may misinterpret low earnings as lack of ability on their part when they choose the project with high pay-offs in the more distant future. Although market participants know this, their lack of specific information makes

myopic decisions consistent with rational expectations.

Campbell and Marino go one step further and show that there exists an optimal contract that would prevent myopia from occurring. Specifically, if managers would accept a contract with substantial negative pay-offs when earnings are bad in the early days of the project and high pay-offs in later periods when the project gives high cash flows, then myopic decisions can be avoided. Campbell and Marino argue that "limited liability" of managers prevent optimal contracts from being written. High risk-aversion of managers or enforcement problems for more complex contracts may explain such limited liability contracts.

The Campbell-Marino story points to the importance of incentive contracts for management in determining the incentives of managers. Holmström (1983), and Holmström and Ricart i Costa (1986) have analyzed management contracts in an intertemporal setting when managers are concerned with the value of their human capital and they have private information about future investment. It was noted in the introduction that myopia may exist under these assumptions.

Leaving a discussion of managerial incentive contracts aside, it should nevertheless be noted that in rational markets the design of such contracts are important for the incentive to behave myopically, and that stock-markets participants tend to assign a positive value to management contracts that tend to reduce myopia (see e.g. Tehranian, Travlos and Waagelein, 1987).

We can also conclude this section by noting that myopia will occur in any market organization when managers' incentives are closely tied to observed current earnings. Both Jeon and Campbell-Marino analyze the case when relatively well-informed managers' compensation in competitive labor markets is linked to earnings. Thus, the myopia problem does not disappear when the role of stock-markets is reduced unless the asymmetry of information persists.

Myopia and Efficiency in Bank Dominated Systems and The Role of Arm's Length Debt

Many observers have argued that bank dominated systems suffer less from asymmetric information between managers and suppliers of financial resources. Dahmén and Glete describe in this volume the Swedish system, in which a group of firms and a bank have long been closely linked with personal ties among boards and management, as a highly efficient, adaptable system. The German and Japanese systems are similar. Information about the competence and project selection of individual managers is easily spread within the group. As Eliasson (1991) notes, there is an efficient quasi-internal labor market for management competence within the group. The threat of hostile take-overs is low, and managers can choose time-horizons for projects in accordance with preferences within the group. Since monitoring within the group works well, managers' incentives can be aligned with the group's preferences by threats of dismissal or incentive contracts.

With the deregulation of financial markets in Europe and Japan, publicly owned, arm's length debt as opposed to bank-debt has increased in importance. Therefore, asymmetric information between suppliers of financial resources and management is becoming a concern. Inefficiencies caused by this shift towards arm's length debt must be weighed against inefficiencies of the bank-group.

Rajan (1990) refers to evidence that the increasing use of arm's length debt in Japan has led to a loosening of bank ties and an increasing number of firms being liquidity constrained by cash flows. He also develops an analytical framework for comparing the efficiency of a system with close ties between firms and a bank, and a system with more arm's length debt.

The main efficiency gain of a bank-dominated system is, as noted, that monitoring costs and, therefore, information asymmetries are relatively unimportant. There is also a cost associated with such a system caused by the potential information monopoly of the bank. The bank can use this monopoly power when the terms of relatively short-term loans are renegotiated.

Arm's length debt is not easily renegotiated. The lending public has no information advantage. The firm's reputation becomes a major determinant of the firms' ability to borrow. On the other hand, lenders cannot observe or control the quality of investment.

The firm facing the choice between bank-debt and arm's length debt must weigh the costs of renegotiation and potential monopoly power of the bank against the costs of information asymmetry. Self-selection among firms with different kinds of projects should be expected. We cannot go into the details of Rajan's model here but a few conclusions are noteworthy.

Rajan distinguishes between firms with different quality projects in the near term and the longer term. He notes that firms with uniformly (over time) high quality projects benefit from the opportunity to use arm's length market. These are firms with reputation that require less direct monitoring. Firms with uniformly low quality projects are not affected as they cannot obtain access to arm's length markets.

More interesting for the purposes here is a firm with low quality projects in the near term and higher quality projects in the longer term. If this kind of firm gains reduced access to credit, the financial market becomes more myopic. Within a pure bank oriented system the firm with good future prospects may be subject to substantial opportunism from the bank with information monopoly. On the other hand, when the arm's length market opens up the bank loses its monopoly power as the firm gains reputation. The ability of the firm to borrow may therefore be reduced in the early period.

In Rajan's analysis the quality of projects over time is exogenous. The desire to gain reputation in order to obtain access to the arm's length market may influence the quality and time-horizon of a firm's projects, however. Holmström notes in this volume that a new firm with little reputation must pay high interest rates. The firm facing high costs of debt has the incentive to choose relatively high risk projects due to limited liability. As time goes and reputation is obtained interest costs on debt fall. In order to guard the reputation the firm is induced to become conservative in its project choice. If we associate low risk-projects with a short time horizon and high risk-projects with a long horizon, then this reasoning would lead firms to become increasingly myopic when they become established while actually starting out hyperopic. This reasoning indicates that small new ventures take the longer time perspective while established large firms become myopic, when they

gain access to the arm's length financial market.

The Dynamics of Corporate Governance Structures

A complete analysis of myopic incentives under different financial arrangements should consider the complementary role of equity in bank-dominated systems, and the role of debt in stock-market dominated system. Furthermore, those in control of a firm are to some extent able to determine how stock-market oriented the firm should be by influencing the control structure. The increased use of covenants of different kinds in debt contracts in arm's length markets must also be considered as means by which asymmetric information problems are partially resolved.

If any generalization can be drawn from this review, it would be that a case for myopic behavior in stock-market oriented firms, as well as in firms with an important role for arm's length debt, can be made. Its empirical significance is hard to judge, however. A case for "managerialism" can be made in bank-oriented systems. Whether this managerialism leads to excessive long-termism or vice versa is difficult to assess. Anecdotal evidence from Japan and Sweden indicates that a case for long-termism is stronger but costs of managerialism may take many other forms. These costs might become modified by the increased importance of arm's length markets in these countries.

A major policy question is what laws and regulations determine whether financial markets become bank-dominated, stockmarket-dominated, or public debt dominated. Laws with respects to take-over defences, insider trading, voting rights of shares, and restrictions on bank-activity are examples of such laws but it is not clear how important each type of law is, and how they determine the control structure of firms.

An important research issue is whether markets are self-regulatory in the sense that contractual and institutional arrangements tend to minimize efficiency losses caused by information asymmetries. It is possible that certain voluntary contractual arrangements incorporated in corporate statutes are difficult to reverse. Severely

split voting rights is one example of a contractual arrangement that could limit or delay self-regulation. On these grounds an argument for legal restrictions on split voting rights could be made. On the other hand, the share of privately held corporations would increase if split voting rights were not allowed. Such corporations would, theoretically, not suffer from myopia but they would have more limited access to financial resources.

A formal analysis of the efficiency of one share-one vote versus split voting rights has been performed by Grossman and Hart (1980). An interpretation of their results in a dynamic context is that split voting rights lower the costs for the incumbent in control to change and adjust the control structure. For example, the costs of a friendly take-over are reduced. On the other hand, the incumbent may withdraw voting equity from the market and in other ways increase the costs to an outsider of obtaining control.

From an efficiency point of view these considerations imply that it is less costly with split voting rights for the incumbent to reduce the myopia induced by stock-market influences. On the other hand, if the incumbent enjoys private benefits, then it is more costly for outsiders to take over control and reduce efficiency losses of this kind.

Experiences from management and leveraged buy-outs in the 80s in the USA may be seen as evidence, that one share-one vote causes high costs for the incumbent to influence the control structure. Firms had to incur very heavy debt burdens in the process of buy-outs of voting stock. As a result, firms although privately controlled, after a buy-out had to focus on short term cash flows in order to reduce an excessive debt burden. According to some observers like Anders (1992), the process led to an increase in myopia in the short run, although the alignment of incentives between stockholders and management should lead to the opposite result in the longer run.

The conclusion of this discussion is that the potential benefits of a more flexible control structure under split voting rights can be realized only if incumbents work with economic objectives in mind, as opposed to, for example, power. Stronger mechanisms to protect shareholders from incumbents seeking private benefits are required.

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