

KEIO UNIVERSITY
MARKET QUALITY RESEARCH PROJECT
(A 21st Century Center of Excellence Project)

KUMQRP DISCUSSION PAPER SERIES

DP2004-010

Why do we need mandated rules of public disclosure
for banks?

Mikhail Frolov*

Abstract

This study reviews the theoretical and empirical research on disclosure and explores the problem of public disclosure in banking. The results of the study indicate that mandated disclosure rules for banks to be a consequence of the government policy of financial safety net, clarifying the nature of the recent recommendation of the Basel Committee to introduce mandatory disclosure requirements for banks as a part of a new Capital Accord. An explanation is also provided for the public controversies over the proposal.

* Postdoctoral Fellow, Faculty of Economics & Faculty of Business and Commerce,
Keio University The 21st Century Center of Excellence Program

Graduate School of Economics and Graduate School of Business and Commerce,
Keio University
2-15-45 Mita, Minato-ku, Tokyo 108-8345, Japan

Why do we need mandated rules of public disclosure for banks?

Mikhail Frolov*

October 1, 2004

Abstract

This study reviews the theoretical and empirical research on disclosure and explores the problem of public disclosure in banking. The results of the study indicate that mandated disclosure rules for banks to be a consequence of the government policy of financial safety net, clarifying the nature of the recent recommendation of the Basel Committee to introduce mandatory disclosure requirements for banks as a part of a new Capital Accord. An explanation is also provided for the public controversies over the proposal.

JEL Classification: G18, G21, G28.

Keywords: Public disclosure in banking, Mandatory disclosure rules, Banking supervision.

* postdoctoral research fellow, the 21st Century COE Joint Research Program, Faculty of Economics & Faculty of Business and Commerce, Keio University, e-mail: mfrolov@coe-econbus.keio.ac.jp . The study was conducted as a part of the Keio University Market Quality Research Project. The author appreciates valuable comments provided on an earlier draft by Prof. Takashi Kaneko of Keio University. The usual disclaimer applies.

“It is our experience that poor disclosure not only impinges market discipline but also prevents management making the right decisions. ... We therefore particularly welcome and support the Committee’s moves to reinforce this area of market discipline.”

Ian Linnell, Fitch IBCA (Linnell, 2001, p. 192)

“There is no reason at this stage for the authorities to step in and set a detailed agenda for disclosure since there is every reason to assume that the markets will set minimum disclosure standards of their own.”

Japanese Bankers Association (JBA 2001, p.21)

I. Introduction

The two conflicting opinions quoted above refer to a recent suggestion by the Basel Committee on Banking Supervision (BCBS). In 2001, the Committee proposed to introduce public disclosure requirements for banking organizations as an integral part of a new capital adequacy framework. The suggestion came as a part of the general shift of financial disclosure requirements from the disclosure of economic earnings and other information about present results to wider disclosure of information useful in assessing the amount, timing, and uncertainty of prospective earnings. In banking, an emphasis on enhanced bank transparency was brought about by the growing complexity of financial environment and increased diversity of information needs. Hence, the Committee, facing the challenge, envisioned the mandatory disclosure rules for banks as a core component necessary to assure the market’s monitoring of the capital adequacy of banks.

The disclosure recommendations of the Basel Committee relied on a number of its studies conducted in 1994-2000 (ECSC 1994; BCBS 1998, 1999, 2000). The research generally reflected the prevailing views of disclosure in the financial industry, as it was based on fact-finding surveys of disclosure practices in various countries and the information needs of market analysts and other information users. Nevertheless, the recommendations sparked much debate, when the second version of the New Accord was released for public comments in January 2001. Public responses to the proposed Accord revealed a deep division of opinion between the market participants and banking community on the necessity and extent of bank disclosure regulations. Acting on the responses, the BCBS tried to accommodate the expressed concerns and introduced important simplifications to the disclosure requirement section (“Pillar 3”) in the final

version of the new Accord. The banking community, however, remained unconvinced.¹

Despite the ensuing disagreement, the regulators' view of desirable disclosures in banking has finally prevailed, and in June 2004 the Basel Committee endorsed the official publication of the New Accord. The BCBS recommends that its members should develop and implement their national versions of the regulation by year-end 2006. Thus, there will be new discussions and debates. Certainly, the past experience of the Basel initiative implementation suggests that the choice in favor of explicit disclosure requirements for banks will ultimately prevail on the national level as well. But it is equally obvious that a successful attempt to fit the disclosure recommendations of the Committee to the specific legal, accounting, and regulatory environment of a nation will require constructive participation by the banks. Hence, the process will remain influenced by the disagreement in the financial community over the appropriateness of mandatory bank disclosures, and developing an understanding of the issue still commands considerable interest.

In this study we shall review theoretical and empirical studies related to the problem of public disclosure in banking. Our primary objective is to determine economic underpinnings for the suggested enhancement of mandatory disclosure rules. Gaining an understanding of the issue can help to explain why the financial community is so divided in its attitude to the proposal.

The rest of the paper is organized as follows. The next section looks at general results about the desirability of public information disclosure by firms. Section III analyzes the issue, given the specific environment of the banking industry. Section IV gives discussion of the literature's results and Section V concludes.

II. The economic and accounting research in disclosure

By now the disclosure-related literature has developed into a distinct branch of economic and accounting research. Following a taxonomy suggested by Verrecchia (2001), one can distinguish three major research problems confronted by the literature.

¹ In the second version, the BCBS's proposal contained prescriptions of core and supplementary disclosures given in tabular form and supplied with detailed recommendations about their content. The suggestion was welcomed on the user side, but met very strong objections from the banking community. As a result, when in April 2003 the BCBS presented the third (final) version of the Accord (BCBS 2003), Pillar 3 (the disclosure section) contained far less detailed recommendations than those in the background studies. Nonetheless, the banking community was not fully satisfied insisting that "*there are still many disclosure items that are excessively prescriptive or vaguely defined, so further simplification should be implemented.*" (JBA, 2003)

First, research seeks answers to the general question about whether information disclosure is economically efficient in general. Theorists suggest a twofold explanation for the per-se desirability of information disclosure.² On the one hand, Kunkel (1982) shows that in an economy including both production and exchange, information disclosure may be preferred because altered production plans lead to more efficient allocation of resources across time and firms. On the other hand, Diamond (1985) also suggests that in a pure exchange setting with costly acquisition of private information, the (costless) information disclosure is desirable because it will allow investors to economize on the acquisition of private information and make them better off, despite adverse risk-sharing effects.

The latter approach has been more popular, developing into theoretical constructs with testable predictions. In particular, the research shows that the existence of privately-held information can lead to investors demanding either a liquidity premium (Amihud and Mendelson, 1986; Diamond and Verrecchia, 1991) or a compensation for competitive disadvantage (Easley and O'Hara, 2004), and public disclosure can lower the cost of capital since it makes private information public and thus reduces the information-asymmetry component of the cost of capital. A number of empirical studies have supported the prediction of the negative relation between disclosure and the cost of capital³ thus establishing an important link between information disclosure and economic efficiency.

Another strand of the disclosure-related research focuses on the effect of information disclosure on the aggregate behavior of economic agents, and in particular on the behavior of financial market aggregates like stock prices and trading volume. The literature attempts to explain empirically observed phenomena in the association between information disclosure and market responses using plausible assumptions about diversity among market participants.⁴ Theorists have modeled the effects of disclosure when investors are diversely informed (e.g., Lintner, 1969; Kim and Verrecchia, 1991), when investors interpret disclosure in diverse ways (e.g., Dontoh and Ronen, 1993; Harris and Raviv, 1995), as well as when investors incorporate disclosure in their beliefs in diverse ways – both rational and heuristic (e.g., DeLong et al, 1990; Palomino, 1996;

² Early literature on disclosure suggested that since under the simultaneous assumptions of pure exchange and perfect market competition information disclosure may lead only to wealth redistribution among agents, this leaves no place for disclosure-based (weak) Pareto improvements (Verrecchia, 2001).

³ See, e.g., Frankel et al (1995), Welker (1995), Botosan (1997), Healy et al (1999), Lang and Lundholm (2000), Botosan and Plumlee (2002).

⁴ For an elaboration on this direction of research see, e.g., Verrecchia (2001).

Kyle and Wang, 1997).

This emphasis on investor diversity deepens our understanding of the mechanism of disclosed information being disseminated through the market and helps in order to arrive at a more correct assessment of the quality of disclosure made on the basis of observed market reactions. Another important implication of the research is that disclosing information may increase uncertainty of market pricing. Since frequent disclosures create speculative trading opportunities, steps to increase the frequency of disclosures taken by a firm may subsequently attract more investors with short-term horizon and increase the volatility of the firm's stock (Bushee and Noe, 2000). Alternatively, if the disclosed information is noisy by its nature, then investors will face uncertainty with the identification of the state nature (of the firm) realized, and this can cause the market to perceive a significantly more volatile signal process that it actually is (Lee, 1999).

Finally, the disclosure literature devotes much attention to the circumstances surrounding the decision to make private information public. A standard argument here is that management's decision about whether to disclose information or not is based on weighing expected costs and benefits of making the information public. The literature has suggested many ways how a firm or its management can benefit from improved disclosure. The most popular explanation turns to the problem of adverse selection under asymmetric information. As pointed by Myers and Majluf (1984), if a firm is about to issue equity or public debt to the market, it has an incentive to disclose its superior information. Since rational investors interpret withholding information on a financial asset as information that is unfavorable about the asset's value or quality, they will discount the asset unless the information is revealed, and the existing shareholders of the firm will be better off if they credibly disclose the information before the firm accesses the capital market. The hypothesis finds broad support in empirical studies. Direct evidence that firms increase the intensity of their disclosure efforts before offering public debt and equity has been obtained by Lang and Lundholm (1993, 1996), Frankel et al (1995), Healy et al (1999), etc. The list of other suggested explanations of voluntary information disclosure includes motives related to institutional factors and signaling to the market.⁵

⁵ As surveyed by Healy and Palepu (2001), the management of firms may also be interested in improved disclosure since it reduces the risk of premature resignation because of poor stock performance (e.g., studies by Palepu, 1986; DeAnglo, 1988; Warner et al, 1988, Morck et al, 1990) and the cost of litigation (Skinner, 1994), increases the value of the management's stock options (Noe, 1999; Aboody and Kasznik, 2000; Miller and Piotroski, 2000), and facilitates more signals to the market about the

The economic and accounting literature advances several arguments about why information disclosure may be costly for firms. Most frequently the research refers to the problem of proprietary costs. Verrecchia (1983), Darrough and Stoughton (1990), Newman and Sansing (1993) and many others hypothesize that firms' decision to disclose information to investors is influenced by concern that such disclosures can damage their competitive position in product markets. Another argument points to the costs associated with uncertainty about the quality of information being disclosed. The uncertainty works as a disclosure cost because it creates doubt in the minds of the uninformed and, thereby, reduces the benefits of information disclosure from ameliorating the adverse-selection problem. Although suggesting different types of uncertainty theoretical constructs by Dye (1985), Teoh and Hwang (1991), Nagar (1999), etc. show that firms (or managers) are better off if they conceal some discretionary information. Finally, the literature again resorts to the institutional factors to explain high (corporate and personal) costs of disclosing unfavorable or forward-looking information.

The hypotheses advanced in academic literature are generally robust with respect to the actual motives why firms' management and market participants favor (or oppose) disclosure. A study by PricewaterhouseCoopers (Eccles, 2001) reports that in an opinion poll of CEOs, traders, and analysts the most frequently stated benefit of improved corporate disclosure is the increased credibility of management. Other frequent (positive) responses also include increased number of long-term investors, improved access to new capital, increased analyst following, and increased share value. Still firms' management sees disclosure, on average, less favorably than the market participants, because the CEOs either do not expect the market to reward them for the improved disclosure ("the market looks only at earnings", "the market won't be satisfied even if given additional information", "nobody believes disclosed figures", etc.) or worry about additional cost they may incur if disclosed further ("share value would decline if bad result figures", "competitive disadvantage if competitors new the information", etc.).

The discussion shows that while information disclosure is socially desirable, the interplay between its benefits and costs may lead to partial or no disclosure, and one thereupon should ask whether the disclosure should be voluntary or mandatory. The explicit regulatory requirement for publicly traded firms to disclose their information was first set up in the 1930s in the United States. Historically, US legislators were primarily concerned with protecting ill-informed outside investors and insuring trade at

superior strategic management abilities of the COEs (Trueman, 1986).

fair prices. Since a firm's insiders are both better informed and able to control the release of information by the firm, they can conceal unfavorable news and trade at unfair prices thereby profiting at the expense of other investors. However, more recently the consensus began to break down as the discussion of the issue started to be infused with financial economics and its focus shifted to the issue of economic efficiency.⁶

As shown by Ross (1979), Grossman (1981), and Milgrom (1981), if lack of disclosure is taken to be bad news, this forces the informed insiders to reveal their information. Therefore, disclosure regulation should not be necessary since the disclosure is in the firm's best interest. If disclosure is costly for firms, they won't disclose all information and release it only to the point where the costs equal benefits. Still, as pointed out by Fishman and Hagerty (1998), the presence of cost *per se* does not imply that disclosure regulation is desirable, since it is quite possible that the firms' disclosure policies are socially optimal given the cost of disclosure.

From this perspective, disclosure regulation can be desirable only if voluntary disclosure falls short of the socially-optimal (efficient) level. A standard argument suggests that one can expect this in the presence of externalities. If a firm (its management) cannot capture all benefits of disclosure or incur additional costs through the market pricing mechanism, then it gets an incentive to make public less information than it should do at the socially-optimal level. The externality argument covers many situations with spillover effects: A firm is likely to recover not all costs of disclosure (e.g. as a decline in the cost of capital) if the released information serves also as a signal about other (similar) firms. The disclosure may have a negative spillover effect on the competitive position of the firm in the product market. Release of information about the firm's performance may serve as a negative signal about the quality of its management inflicting uncompensated personal costs on the CEOs. Solutions to the externality problem rely on the internalization of disclosure-related costs by free-riders – other parties who benefit from the spillover effects of disclosure. The general argument stands that mandatory-disclosure regulation is likely to dominate other solutions (e.g. private collective agreements) when it is difficult to identify the free-riders, or too costly to exclude them.⁷

Disclosure regulation is a relatively less developed topic in the economic and accounting literature. Admati and Pfleiderer (2000) explicitly model a situation when

⁶ For a discussion of the evolution of the US mandatory disclosure legislation see, e.g., Mahoney (1995).

⁷ Foster (1980) elaborates on the issue of externalities in financial reporting, and Breyer (1982) comprehensively discusses solutions to this type of market failure.

spillover effects cause voluntary disclosure by firms to be below (or in excess of) the social optimum, and, thereby, mandatory disclosure rules may have a welfare-improving role.⁸ The authors stress that if firms differ from each other in such parameters as the effective cost of disclosure or the productive benefit that can accrue to the firm if information asymmetries are resolved, then optimal disclosure requirements (e.g. on the precision of the disclosed information) should be designed for each firm individually. Since such regulation is practically infeasible, the “imprecise” disclosure requirements may induce their own welfare losses, and the desirability of disclosure regulation depends on the relative size of welfare improvements over the voluntary disclosure regime and welfare losses due to the imprecision of the regulation. These theoretical findings enjoy some limited support from empirical research. In a review of related studies, Kothari (2001) concludes that regulated financial reports provide new and relevant information to investors, and that the “informativeness” of the required accounting varies systematically with firm and country characteristics.⁹

In sum, the economic and accounting literature has asserted that in the view of informational asymmetry, (costless) disclosure of private information brings general gains in economic efficiency. The size of the gains and the ultimate effect on financial prices may vary considerably depending on the “informativeness” of disclosed information and on the ways the information is disseminated and used. In the presence of disclosure-related costs and the heterogeneity of economic agents, optimal disclosure implies neither release of all proprietary information, nor its uniform release. Regulatory disclosure requirements may be desirable if they bring information disclosure closer to the optimal level and the realized welfare gains are larger than associated costs.

III. Pros and cons of disclosure in banking

The problem of information disclosure is of considerable relevance to the banking industry: By the very nature of the banking business, the banks actively issue stocks and public debt to investors, and put the proceeds mostly in assets with value uncertain to the outside investors. The value of the bank assets is uncertain first because

⁸ Other studies that consider mandatory disclosure with various types of externalities also include: Dye, 1986, 1990; Fishman and Hagerty, 1990, etc.

⁹ Healy and Palepu (2001) point out that the empirical findings do not necessarily imply that reporting regulation is superior to voluntary disclosure, as this research does not compare the relative “informativeness” of regulated and unregulated financial information.

these are financial assets, which allow quick and easy trading and thus enable the banks silently to shift risk to the investors. Second, the bank assets are mostly opaque non-tradable loans, for the banks specialize in lending to borrowers of publicly unknown quality by gathering (“producing”) information about the borrowers and using it for their screening and monitoring.¹⁰ The opaque nature of bank assets makes the argument by Diamond (1985) about disclosure as a socially desirable way to economize on costly acquisition of information especially acute and explains why the issue of bank disclosure may be socially important.

Another likely avenue for welfare gains from bank disclosure is the reduction of the inherent instability of banking institutions. While investing in opaque illiquid loans, the banks use high leverage and finance their activities mostly with short-term debt (deposits). This creates the possibility of bank runs that may be a purely psychological phenomenon but still inflict social costs (Diamond and Dybvig, 1983). Since it is the depositors’ uncertainty about the financial condition of their bank that drives them to run, disclosing information about the bank can prevent the socially undesirable runs.¹¹

Finally, disclosure may exert a welfare-improving effect by limiting excessive risk-taking by banking institutions. Asset opacity is in the nature of the banking business, and it amplifies the banks’ incentive to moral hazard and creates conditions for their profiting at the expense of uninformed creditors. But better bank disclosure can curtail the moral hazard both ex ante and ex post. With the ex-ante effect, the funding cost of risky institutions gets higher as potential depositors and other creditors appreciate the banks’ (disclosed) financial condition. When ex post, the banks’ risk-taking is disciplined by costs inflicted by en mass withdrawals of deposits from the risky institutions or just a threat of a run on them (Calomiris and Khan 1991). The market discipline effect has received sound empirical support in Park (1995), Billet et al (1998), Martinez Peria and Schmukler (2001), and other studies. The empirical evidence can also be viewed in favor of improved bank disclosure, since effective market discipline depends on market participants’ having information about the risk and financial condition of banking organizations.

¹⁰ For instance, the empirical studies by Morgan (1997) and Flannery et al (2004) find that rating agencies and capital market participants view banks the riskier the higher their asset concentration on loans.

¹¹ Furthermore, if a bank run is driven not by psychology but by poor financial performance of the bank, it will lead to a socially desirable reallocation of banking capital to more efficient institutions (Jacklin and Bhattacharya, 1988; Chari and Jagannathan, 1988).

The peculiarities of the banking business, however, also explain why optimal bank disclosure can be incomplete. The first and most basic argument on this side is that one cannot remove the uncertainty about bank assets without making public proprietary information about borrowers and thereby endangering the very existence of the banking business. The proprietary information argument stands that a bank chooses the interest rate on loans based on information, which is purposely produced by the bank through the analysis of the borrowers, or obtained indirectly as a by-product of other activities (e.g. transaction services). The direct production of information about borrowers may be profitable to banks, because keeping the information private they have quasi-monopolistic rents and thus are able to set up the interest rate above the level that simply compensates them for the cost of the information production. With the indirect production, the information is again profitable because it appears without additional cost (as a positive spillover effect). In both cases, the information is proprietary, for making it open would enable competitors to economize on the production cost and leave the disclosing bank either with no profit or with net loss on the production of the information. This puts a limit on meaningful bank disclosure and explains why, as a rule, outside investors cannot be fully informed about the value of bank assets and why bank loans are hardly marketable.

The second argument stands that non-aggregated information about bank assets is noisy and its disclosure may lead to excessive funding costs for banks. Since the banking business relies on the diversification of loan exposure across many borrowers, it is difficult for bank outsiders to judge whether a single loss event they observe in a bank's loans indicates a generally mispriced portfolio or just an extreme realization in a correctly priced portfolio. Depending on how the event is interpreted, the assessment of the portfolio's value will change, and, as argued by Lee (1999), the information noise can cause the market to perceive more volatility.¹² Consequently, if disclosing, for instance, non-aggregated information about loan losses, the bank can face an unduly high risk premium required by the market on its equity and debt.

The third argument asserts that if bank riskiness is strongly driven by factors uncontrollable for the banks, then larger disclosure may lead to bank runs unrelated to actual differences in the banks' management performance, and thereby not necessarily to efficient allocation of bank capital. Cordella and Levy Yeyati (1997) advance a

¹² The banking community expresses a similar concern that analysts and other third parties could misconstrue public disclosure information as providing a meaningful insight into a bank's risk profile, without taking into account the other parameters. This could increase market volatility related to misunderstanding the frequency and volume of rating changes without reference to actual risk exposures. (IIF 2003)

formal model, in which bank runs create negative feedback as the cost of new funding increases for banks in distress. If the incidence of the runs reflects the banks' riskiness, then the runs have a disciplining effect on the banking industry, and bank disclosure is welfare-improving. If, however, the runs are driven by factors exogenous to bank risk-taking, they do not exert the disciplining effect but still induce the negative feedback on the probability of bank failure (and related social costs). Since the risk component beyond control is significant even for large and well-diversified banks, to enforce complete bank disclosure would be a socially inferior strategy.

The last two arguments suggest that banks with more advanced disclosure may face higher funding costs regardless of their risk-taking behavior. The market discipline argument, however, asserts that with improved disclosure risky banks will be charged with higher funding costs. A recent empirical study by Nier and Baumann (2003a) sheds some light on the controversy. The authors use a large cross-country panel data set of individual banks to investigate the effectiveness of market discipline in limiting excessive risk-taking by banks. In particular, they construct three proxies of the degree of disclosure (including a complex availability index of individual banks' financial ratios from an information vendor) and use them to explain the ratio of equity capital over liabilities, the ratio of non-performing loans to total loans, and the standard deviation of weekly equity prices. The study finds that, when controlling for risk and endogeneity of funding and disclosure decisions, the degree of disclosure is positively associated with the capital/liability ratio. Since differences in the riskiness are controlled for, the result suggests that the more advanced disclosure, the more capital banks must maintain. Although, the authors interpret it as evidence of working market discipline, alternatively one may hypothesize that market risk premiums of disclosing banks are larger merely because of increased information noise.^{13, 14}

The list of disclosure-related costs and benefits of banking organizations can

¹³ Flannery et al (2004) report evidence against this hypothesis. Comparing trading volume, return volatility, bid-ask spread, and adverse-selection component of bank stock to those of similar-sized nonbanking firms, they conclude market participants do not view banking organizations considerably more opaque than nonbanking firms.

¹⁴ The study also finds that improvements in disclosure precede declines in non-performing loans, and that the disclosure index is insignificant as a predictor of the equity price volatility. Robustness checks, however, show that the signs are strongly influenced by country-specific effects. In another study using a similar dataset (Nier and Baumann 2003b), the authors assert that disclosure of information reduces the volatility of equity returns for a given risk profile of the bank, but their empirical result, however, could be challenged on the grounds that they do not control for differences in the liquidity of markets where bank shares are traded.

be extended to include institutional factors, personal costs and benefits of the management and so on as discussed above for nonbanking firms. The additional arguments are all valid for the banking industry as well, but unlike the nonbanking firms, in practice the banks tend more to perceive the cost of disclosure outweighing its benefits, and they are typically cautious to go beyond minimal disclosure requirements or their regular disclosure practices.

Two explanations of the tendency have been advanced. First, based on a series of interviews with US bankers, SGD (2000) attributes the tendency to strategic concerns and uncertainty about costs and benefits of voluntary disclosure: “*Voluntary disclosure of any particular information runs the risk of being misinterpreted, ... [and it] often commits the firm to continue the disclosure because ceasing to disclose it could elicit a negative reaction.*” (p.20)¹⁵ “[Also a]s a practical matter ...it is difficult for a bank to assess *ex ante* the value the market places on a given voluntary disclosure, ... [and] the decision to disclose is further complicated by uncertainty about costs.” (p.9)

The second likely explanation links the tendency to the influence of financial safety net policies. Cordella and Levy Yeyati (1998) and Hyytinen and Takalo (2002) draw attention to the fact that the protection of the majority of bank creditors (depositors) is typical nowadays, but because the policy weakens the reaction of the market to assumed bank risk, regardless disclosure efforts by the banks, the reward to well-disclosing banks from the market becomes insufficient to compensate for disclosure-related costs. Since a firm decides whether or not to disclose by weighting the costs and benefits of making information public, the idea lends itself to explaining the fact why banks are generally reluctant to break new ground on public disclosure.

The lack of incentives to voluntary disclosure in banking brings attention to the issue of mandatory disclosure requirements. Over the past two decades, the banking disclosure regulation has been gradually strengthened in quantitative requirements and widened in scope of disclosed information. The change was driven by the growing complexity of financial environment and by the increased diversity of information needs. First, there was a general shift in the focus of financial disclosure requirements from the disclosure of economic earnings figures and other information about present results to wider disclosure of information that is useful in assessing the amount, timing, and uncertainty of prospective earnings (Beaver, 1989). The shift reflects understanding that information about current earnings and pricing is insufficient to assess future performance and that the diversity of investors makes it difficult to reach consensus on

¹⁵ The study illustrates on this point that disclosures introduced during the era of commercial estate problems are only now being dropped by some institutions.

the optimal form of financial reporting.

Second, banking regulators turned to greater reliance on market discipline as a means of limiting excessive risk taking by banking organizations (SGD 2000). On the one hand, the emphasis on market discipline, and thus on public disclosure, reflects the emerging view that the present scope regulatory oversight and safety net should be smaller and more discriminative in nature in order to curtail regulation-induced moral hazard. On the other hand, a general trend towards consolidation and globalization in banking leads to increased complexity of financial risks and would require too large expansion of supervision as a means of limiting risk-taking of large and complex banking organizations.

Although bank regulators view market discipline only as a complement to the regulatory oversight, they actively set up standards for bank disclosure and in some countries partially disclose information from the banks' regulatory reports.¹⁶ Furthermore, some regulators make public all formal enforcement actions imposed on banks. As shown empirically in Jordan et al (1999), the announcements convey important information to the market, and at the same time they lead to no significant contagion effect and pose no threat to systemic stability.

The mandatory disclosure has its strong and weak sides. On the strong side, the users of the disclosed information – securities analysts, rating agencies, and institutional investors – stress the importance of banking regulatory reports in preparing their evaluations, for the reports allow direct comparison among banks when comparability is lacking in annual reports (SGD 2000). On the weak side, it is stressed that the fixed format of the regulatory disclosures does not easily accommodate new issues as they develop. Another weakness is that in setting disclosure requirements the regulators cannot rely on market consensus on information needed: Disclosing banks and the users of information are deeply divided on where to demarcate a line between proprietary and non-proprietary information, and as a result it is typically unclear whether or not given disclosure requirements are good and efficient. Nevertheless, with the safety net protection in place the banks lack incentives to voluntarily disclose information, and the regulators have to set up some public disclosure regime despite the

¹⁶ For instance, US authorities make publicly available two categories of reports: (1) bank Call Reports subject to the reporting requirements of the Federal Financial Institutions Examination Council and (2) bank holding company Y reports subject to the reporting requirements of the Federal Reserve Board. Both are fixed-format financial reports typically including a balance sheet, income statement, statements of changes in equity capital and supporting schedules that present more details on assets, liabilities, off-balance-sheet items, risk-based capital, and so on (SGD 2000).

uncertainty about its quality.

To recapitulate, the above discussion shows that the inherent opacity of banking firms makes their disclosure socially desirable. Still, complete bank disclosure would be suboptimal, mostly because the banks would incur significant private costs if they made their proprietary information public. The specific regulatory environment of the banking industry is likely to be responsible for the observed reluctance of the banks to disclose voluntarily. In these circumstances, the mandatory disclosure requirements may play an important socially desirable role.

IV. Discussion

The review of the disclosure-related research shows that suggestions advanced in the literature on possible welfare effects of bank disclosure can be summarized into four arguments. On the positive side, it is suggested that (1) bank disclosure improves resource allocation, as it enables investors to select banks, which build the most efficient credit portfolios. (2) Bank disclosure also improves stability of the banking system, because it reduces the incidence of unjustified bank runs. On the negative side, however, (3) bank disclosure reduces lending incentives for banks, as it lowers their return on the production of information about borrowers. Finally, (4) bank disclosure increases instability of the banking system, because it raises the general probability of runs and that of runs unrelated to the banks' risk-taking.

The power of the arguments is strongly influenced by two factors – the characteristics of proprietary information in banking and the presence of financial safety net policies. First, any information about a bank's credit portfolio contains proprietary elements, but their weight may vary. In this regard, one may distinguish two types – aggregated information and non-aggregated information. The former type describes the properties of a bank's credit portfolio and contains proprietary information about its market strategy. The latter type characterizes individual borrowers and includes proprietary information about their pricing. A leakage of the non-aggregated information is painful for the bank, since its proprietary elements are costly to produce and can be easily exploited by competitors. Disclosure of the aggregated information, however, brings far less disadvantages, because the usefulness of its proprietary elements is usually short-lived.

At the same time, to assess the financial condition of a bank one preferably needs aggregated information about the bank's credit portfolio: Information about individual borrowers cannot be directly used for risk assessment on the level of the bank. To use it one should first aggregate the data. But it is unlikely that a bank-outsider can

do it better than the bank itself. Hence the investors' demand for bank disclosure usually focuses on the aggregated information and neglects the non-aggregated data.

Combining the two features, one can see that the proprietary nature of bank credit information does not necessarily lead to the absence of disclosure, because the banks are likely to disclose the non-aggregated data if they receive some reasonable reward. In other words, it is possible to optimally choose the level of disclosure so that it would give the outside investors sufficient information to select the most efficient banks, while creating negligible negative incentive for the production of information about the borrowers.¹⁷

Second, the presence of a credible government policy of financial safety net weakens the sensitivity of a bank's creditors to uncertainty about its financial condition. Deposit insurance and other types of public protection of bank creditors shield them from a direct loss of the deposited money in case of the bank's insolvency. As a result, there is no strong incentive for the depositors to run and withdraw the money at first signs of possible problems.¹⁸ At the same time, the disciplining effect due to the reaction of unprotected creditors of the bank is also weak – because these creditors usually hold just a small fraction of total claims on a bank.

Consequently, in the presence of a financial safety net, the reaction of a bank's creditors to its financial condition becomes too weak to discipline risky banks and provide relative benefits to sound banks. Hence, it leads to smaller relative rewards to well-disclosing banks and thus resulting in reduced voluntary disclosure of aggregated information. One can understand the reduction as a deviation away from the optimal level to a level, at which there is not enough information to select the most efficient banks.

The presence of a credible policy of financial safety net, however, eliminates the possibility of open bank runs. In addition, it leads to a further reduction of the

¹⁷ Furthermore, if the banks do not make public non-aggregated information, their disclosures bring minimal information noise and thus less contribute to the instability of the banking system.

¹⁸ Even if fully protected from the loss of money, the depositors are not completely indifferent to the bank's financial condition: Failure of the bank will temporarily shut down their access to payment services and create other indirect costs. For that reason, doubts about the bank's solvency will lead to a slow gradual outflow of the protected deposits unless the bank increases its effective interest rate on them. Hence, the market discipline effect can also be observed on the part of the publicly protected depositors. But the reaction is weak, because the indirect losses from the bank's insolvency do not reflect the true extent of losses on deposits. Therefore, such market discipline *per se* is insufficient to curtail excessive risk-taking by the banks.

information noise factor, because the investors have more time to filter noise out before they have to act on arriving information. Accordingly, the instability-related welfare effects of disclosure become far less important.

On balance, this shows that when explaining banking disclosure one may focus only on its welfare effects related to the allocative efficiency. In particular, following the literature, one may conclude that the suboptimality of banks' voluntary disclosure in the presence of a financial safety net suggests a place for a mandatory disclosure regime. The argument, however, turns out to be unexpectedly weak because it also follows that there is not a very strong demand for such information from the bank creditors either: The unprotected minority of the creditors will certainly use the information fully, but the protected majority is unlikely to take active steps on the basis of the information. Hence, one may ask *why to require public disclosure which is not very demanded by the public*. Or, if only the authorities are likely to effectively act on information about banks' financial condition, why not disclose this information to the authorities privately?

Our review above suggests that the economic literature has delivered no answer to this question based on general economic arguments. Instead, a rationale for mandatory public disclosures in this situation is derived from the special needs of the banking regulators. As noted in Section III, the growing complexity of financial risks taken by banking organizations is the ultimate trigger of the recent regulatory initiatives on banking disclosure. Facing the challenge of financial complexity, the regulators have found that their current capacity to monitor and process related information is no longer sufficient, but its further expansion would lead to inefficiency. Based on the view, the regulators suggest complementing their supervision with monitoring by the market (by the unprotected creditors). For that reason, they assert that the (unprotected) market participants need more information about banks.

The financial complexity argument *per se* does not necessarily imply there should be mandated disclosures for all banks: The growth in complexity has occurred only for a small number of large banks, but the business of the vast majority of small and medium size banks has not changed much. Hence, one may question the need to require public disclosure from all banks, including the simple businesses.

An answer to this concern arises from the properties of information about bank credit portfolios the investors need: The assessment of the credit quality of a bank's portfolio is probabilistic in nature, and therefore it requires a sufficiently large number of loss observations. But it is unfeasible to collect the required number from the experience of the bank only; instead, one needs to combine observations across many

banks. Furthermore, the accuracy of the assessment improves if the information is supplied uniformly and on a continuous basis. In other words, if the regulators want to use the monitoring of banks by the market, they should assure a uniform and continuous flow of information coming from all the banks.

In sum, the discussion suggests that one may understand mandatory disclosure rules for banks as a consequence of the government policy of financial safety net. The mandatory rules can bring the banks' disclosure to the socially desirable level. But it is unlikely that the expected improvement in the allocative efficiency of the banking system will be fully realized without further government intervention. In these circumstances, one can justify a system of mandatory public disclosures only as a necessary element of the government's prudential supervision of banks.

V. Concluding remarks

In this study we have reviewed theoretical and empirical studies related to the problem of public disclosure in banking. Our primary focus was to determine economic underpinnings for the suggested enhancement of mandatory disclosure rules and to understand why the financial community is divided in its attitude to the proposal.

The review has highlighted the prevailing understanding of the issue. We have found the economic research asserts that under asymmetric information, disclosure of private information brings general gains in economic efficiency. The size of the gains and the ultimate effect on financial prices may vary considerably depending on the content of disclosed information and on the ways the information is disseminated and used. In the presence of disclosure-related costs and the heterogeneity of economic agents, optimal disclosure implies neither release of all proprietary information, nor its uniform release. Regulatory disclosure requirements may be desirable if they bring information disclosure closer to the optimal level and the realized welfare gains larger than associated costs.

Building on the general understanding, we have so far explored the existing views of the positive and negative effects of disclosure in banking. We have seen that the inherent opacity of banking firms makes their disclosure socially desirable. Still, complete bank disclosure would be suboptimal, mostly because the banks would incur significant private costs if made their proprietary information public. The specific regulatory environment of the banking industry is likely to be responsible for the observed reluctance of the banks to disclose voluntarily.

The discussion of the advanced explanations of bank disclosure has helped to develop an insight into why we have mandatory disclosure rules in banking. In our view,

the mandated disclosures can be explained as a consequence of the government policy of financial safety net. Potentially, the mandatory rules bring the banks' disclosure to the socially desirable level, but it may require further government intervention to fully realize the expected improvement in the allocative efficiency of the banking system. Hence, one can justify a system of mandatory public disclosures only as a necessary element of the government's prudential supervision of banks.

In this study we have found that, ultimately, an economic justification of the recently proposed enhancement of mandated public disclosures cannot rest on an argument of general economic efficiency. Instead, it is likely to be limited to the specific issue of the operation efficiency of banking supervisors.

The observed sharp difference between investors and bankers in their attitude to the Basel recommendations reflects the fact that the two groups are asymmetrically affected by the government's financial safety net: The former represents the (mostly) unprotected minority of the bank creditors, and the latter decides its steps taking into account the likely average response of all the bank creditors – including both the unprotected minority and protected majority. It also follows that reaching a mutually-satisfying agreement between the two groups is rather difficult, and one of them has to prevail at the end.

References

- Aboody, D., Kasznik, R., 2000. CEO stock option awards and the timing of corporate voluntary disclosures. *Journal of Accounting and Economics* 29, pp. 73-100.
- Admati, A. R., Pfleiderer, P., 2000. Forcing firms to talk: Financial disclosure regulation and externalities. *Review of Financial Studies* 13 (3), pp. 479-519.
- Amihud, Y., Mendelson, H., 1986. Asset prices and bid-ask spread. *Journal of Financial Economics* 17 (2), pp. 223-249
- BCBS, 1998. *Enhancing bank Transparency*. Basel: Basel Committee on Banking Supervision (available at the BIS's HP).
- BCBS, 1999. *Sound practices for loan accounting and disclosure*. Basel: Basel Committee on Banking Supervision (available at the BIS's HP).
- BCBS, 2000. *Best practices for credit risk disclosure*. Basel: Basel Committee on Banking Supervision (available at the BIS's HP).
- BCBS, 2003. *The new Basel Capital Accord*. Basel: Basel Committee on Banking Supervision (available at the BIS's HP).
- Beaver, W. H., 1989. *Financial reporting: An accounting revolution*, 2nd ed. Englewood Cliffs, NJ: Prentice Hall.

- Billet, M. T., Garfinkel, J. A., O'Neal, E. S., 1998. The cost of market versus regulatory discipline in banking. *Journal of Financial Economics* 48, pp. 333-358.
- Botosan, C. A., 1997. Disclosure level and the cost of equity capital. *Accounting Review* 72 (3), pp. 323-349.
- Botosan, C. A., Plumlee, M. A., 2002. A reexamination of disclosure level and the expected cost of equity capital. *Journal of Accounting Research* 40 (1), pp. 21-40.
- Breyer, S., 1982. Regulation and its reform. Cambridge, MA: Harvard University Press.
- Bushee, B. J., Noe, C. F., 2000. Corporate disclosure practices, institutional investors, and stock return volatility. *Journal of Accounting Research* 38, supp., pp. 171-202.
- Calomiris, C. W., Khan, C. M., 1991. The role of demandable debt in structuring optimal bank arrangements. *American Economic Review* 48, pp. 333-513.
- Chari, V. V., Jagannathan, R., 1988. Bank panics, information, and rational expectations equilibrium. *Journal of Finance* 43, pp. 749-761.
- Cordella, T., Levy Yeyati, E., 1997. Public Disclosure and Bank Failures. *IMF Working Papers*, No 97/96. Washington, DC: International Monetary Fund.
- Cordella, T., Levy Yeyati, E., 1998. Financial Opening, Deposit Insurance, and Risk in a Model of Banking Competition. *IMF Working Papers*, No 98/97. Washington, DC: International Monetary Fund.
- Darrough, M. N., Stoughton, N. M., 1990. Financial disclosure policy in an entry game. *Journal of Accounting and Economics* 12, pp. 480-511.
- DeAnglo, L., 1988. Managerial competition, information costs, and corporate governance: The use of accounting performance measures in proxy contests. *Journal of Accounting and Economics* 12, pp. 219-244.
- DeLong J. B., Shleifer, A. S., Summers, L. H., Waldmann, R. J., 1990. Noise trader risk in financial markets. *Journal of Political Economy* 98, pp. 703-738.
- Diamond, D. W., 1985. Optimal release of information by firms. *Journal of Finance* 40 (4), pp. 1071-1094.
- Diamond, D. W., Dybvig, P., 1983. Bank runs, deposit insurance and liquidity. *Journal of Political Economy* 91, pp. 401-419.
- Diamond, D. W., Verrecchia, R. E., 1991. Disclosure, liquidity, and the cost of capital. *Journal of Finance* 46 (4), pp. 1325-1359.
- Dontoh, A., Ronen, J., 1993. Information content of accounting announcements. *Accounting Review* 68 (4), pp. 857-869.
- Dye, R. A., 1985. Disclosure of nonproprietary information. *Journal of Accounting Research* 23 (2), pp. 123-145.
- Dye, R. A., 1986. Proprietary and nonproprietary disclosures. *Journal of Business* 59 (2), pp. 331-366.
- Dye, R. A., 1990. Mandatory versus voluntary disclosures: The cases of financial and real externalities. *Accounting Review* 65 (1), pp. 1-24.
- ECSC, 1994. Discussion Paper on Public Disclosure of Market and Credit Risks by Financial Intermediaries. Basel: Euro-Currency Standing Committee.
- Easley, D., O'Hara, M., 2004. Information and the cost of capital. *Journal of Finance* 59 (4), pp. 1553-1583.
- Eccles, R. G., Herz, R. H., Keegan, E. M., Phillips, D. M. H., 2001. *The ValueReporting revolution: Moving beyond the earnings game*. N.Y.: John Wiley.
- Fishman, M. J., Hagerty, K. M., 1990. The optimal amount of discretion to allow in disclosure. *Quarterly Journal of Economics* 105 (2), pp. 427-444.

- Fishman, M. J., Hagerty, K. M., 1998. Mandatory disclosure. In: P. Newman (ed.), *The New Palgrave Dictionary of Economics and Law*, N.Y.: Macmillan Press, v. 2, pp. 605-608.
- Flannery, M. J., Kwan, S. H., Nimalendran, M., 2004. Market evidence on the opaqueness of banking firms' assets. *Journal of Financial Economics* 71 (3), pp. 419-460.
- Foster, G., 1980. Externalities and financial reporting. *Journal of Finance* 35 (2), pp. 521-533.
- Frankel, R., McNichols, M., Wilson, G. P., 1995. Discretionary disclosure and external financing. *Accounting Review* 70 (1), pp. 135-150.
- Grossman, S. J., 1981. The role of warranties and private disclosure about product quality. *Journal of Law and Economics* 24, pp. 461-483.
- Harris, M., Raviv, R., 1995. Differences of opinion make a horse race. *Review of Financial Studies* 6, pp. 473-506.
- Healy, P. M., Hutton, A., Palepu, K., 1999. Stock performance and intermediation changes surrounding sustained increases in disclosure. *Contemporary Accounting Research* 16, pp. 485-520.
- Healy, P. M., Palepu, K. G., 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31, pp. 405-440.
- Hyytinen, A., Takalo, T., 2002. Enhancing bank transparency: A re-assessment. *European Finance Review* 6 (3), pp. 429-445.
- IIF 2003. *IIF response to the third consultative paper of the Basel Committee on Banking Supervision*. Washington DC: Institute of International Finance (available at the BIS's HP).
- JBA, 2001, *Opinion Paper on the New Basel Capital Accord*. Tokyo: Japanese Bankers Association (available at the BIS's HP).
- JBA, 2003. *JBA's Position Regarding the Third Consultative Paper (CP3) On the New Basel Capital Accord*. Tokyo: Japanese Bankers Association (available at the BIS's HP).
- Jacklin, C. J., Bhattacharya, S., 1988. Distinguishing panics and information-based runs: Welfare and policy implications. *Journal of Political Economy* 96, pp. 568-592.
- Jordan, J. S., Peek, J., Rosengren, E. S., 1999. The impact of greater bank disclosure amidst a banking crisis. *Federal Reserve Bank of Boston Working Papers*, No. 99-1.
- Kim, O., Verrecchia, R. E., 1991. Trading volume and price reactions to public announcements. *Journal of Accounting Research* 30, pp. 273-309.
- Kothari, S. P., 2001. Capital markets research in accounting. *Journal of Accounting and Economics* 31, pp. 105-231.
- Kunkel, G., 1982. Sufficient conditions for public information to have social value in a production and exchange economy. *Journal of Finance* 37, pp. 1005-1013.
- Kyle, A. S., Wang, F. A., 1997. Speculation duopoly with agreement to disagree: Can overconfidence survive the market test? *Journal of Finance* 52, pp. 2073-2090.
- Lang, M., Lundholm, R., 1993. Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research* 31 (2), pp. 246-271.
- Lang, M., Lundholm, R., 1996. Corporate disclosure policy and analyst behavior. *Accounting Review* 71 (4), pp. 467-492.
- Lang, M., Lundholm, R., 2000. Voluntary disclosure and equity offerings: Reducing

- information asymmetry or hyping the stock? *Contemporary Accounting Research* 17 (3), pp. 632-662.
- Lee, K., 1999. Excess volatility of stock prices driven by a state-dependent information model. *Journal of Economic Theory and Econometrics* 5 (2), pp. 31-50.
- Linnell, I., 2001. A critical review of the new capital adequacy framework paper issued by the Basel Committee on Banking Supervision and its implications for the rating agency industry. *Journal of Banking and Finance* 25, pp. 187-196.
- Lintner, J., 1969. The aggregation of investor's diverse judgments and preferences in purely competitive security markets. *Journal of Financial and Quantitative Analysis* 4 (4), pp. 347-400.
- Mahoney, P. G., 1995. Mandatory disclosure as a solution to agency problems. *University of Chicago Law Review* 62, pp.1047-1112.
- Martinez Peria, M. S., Schmukler, S., 1998. Do depositors punish banks for bad behavior? Market discipline, deposit insurance, and banking crisis. *Journal of Finance* 56 (3), pp.1029-1051.
- Milgrom, P., 1981. Good news and bad news: Representation theorems and applications. *Bell Journal of Economics* 17 pp. 18-32.
- Miller, G., Piotroski, J., 2000. *Forward-Looking Earnings Statements: Determinants and Market Response*. Working Paper, Harvard University (July).
- Morck, R., Shleifer, A., Vishny, R., 1990. Do managerial objectives drive bad acquisitions? *Journal of Finance* 45, pp. 31-50.
- Morgan, D. P., 1997. Judging the risk of banks: What makes banks opaque? *Federal Reserve Bank of New York Research Paper*, No. 9805.
- Myers, S. C., Majluf, N. S., 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13, pp. 187-221.
- Nagar, V., 1999. The role of manager's human capital in discretionary disclosure. *Journal of Accounting Research* 37, supp., pp. 167-181.
- Newman, P., Sansing, R., 1993. Disclosure policies with multiple users. *Journal of Accounting Research* 31, pp. 92-112.
- Nier, E., Baumann, U., 2003a. *Market discipline, disclosure and moral hazard in banking*. A paper presented at a workshop held at the BIS in March 2003 (available at the BIS's HP).
- Nier, E., Baumann, U., 2003b. *Disclosure in banking: What matters most? Market discipline, disclosure and moral hazard in banking*. A paper presented at a conference held at the FRBNY in October 2003 (available at the FRBNY's HP).
- Noe, C., 1999. Voluntary disclosures and insider restrictions. *Journal of Accounting and Economics* 27, pp. 305-327.
- Palepu, K., 1986. Predicting takeover targets: A methodological and empirical analysis. *Journal of Accounting and Economics* 8, pp. 3-36.
- Palomino, F., 1996. Noise trading in small markets. *Journal of Finance* 51, pp. 1537-1550.
- Park, S., 1995. Market discipline by depositors: Evidence from reduced-form equations. *Quarterly Review of Economics and Finance* 35, pp. 497-514.
- Ross, S. A., 1979. Disclosure regulation in financial markets: Implications of modern finance theory and signaling theory. In: F. R. Edwards (ed.), *Issues in financial regulation*. N.Y. McGraw-Hill.
- SGD (Study Group on Disclosure), 2000. Improving public disclosure in banking. *FRB*

- Staff Study* No 173. Washington, DC: Board of Governors of the Federal Reserve System.
- Skinner, D., 1994. Why firms voluntarily disclose bad news. *Journal of Accounting Research* 32, pp. 38-61.
- Teoh, S. H., Hwang, C. Y., 1991. Nondisclosure and adverse disclosure as signals of firm value. *Review of Financial Studies* 4, pp. 283-313.
- Trueman, B., 1986. Why do managers voluntarily release earnings forecasts? *Journal of Accounting and Economics* 8, pp. 53-71.
- Verrecchia, R. E., 1983. Discretionary disclosure. *Journal of Accounting and Economics* 5, pp. 365-380.
- Verrecchia, R. E., 2001. Essays on disclosure. *Journal of Accounting and Economics* 32 (1-3), pp. 97-180.
- Warner, J., Watts, R., Wruck, K., 1988. Stock prices and top management changes. *Journal of Financial Economics* 20, pp. 461-493.
- Welker, M., 1995. Disclosure policy, information asymmetry, and liquidity in equity markets. *Contemporary Accounting Research* 11, pp. 801-827.