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Incentive Problems in Banking Supervision – The European Case

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Non-Technical Summary

Analysing banking supervision in a principal-agent framework helps to explain the existence of regulatory failure (Kane, 1989a). This paper discusses the incentive conflicts that arise in banking supervision in the EU in a principal-agent framework, where the regulator is the agent and the taxpayers is the principal.

The interests of the regulator (agent) deviate from those of the principal, the taxpayers, or in general the society. The reason for that is that the regulatory agent in addition to maintaining financial stability (the ultimate objective of the principal) may pursue private interests. Incomplete information, insufficient accountability of the regulatory agent and lack of enforceability of compliance result in an incentive problem. In the European context this incentive problem comprises two dimensions: The vertical dimension refers to the "traditional" principal-agent relationship in a national context. The horizontal dimension results from the fact that there exists EU-wide systemic risk potential. Thus, regulatory forbearance in the European context includes also disregarding of cross-border externalities, insufficient monitoring of foreign branches, and lack with regard to the exchange of information with other supervisors.

Since the first best solution, i.e. a contract between the regulator and the society that fully aligns incentives, is not achievable other solutions are needed. In this paper we stress the importance of improving accountability of the supervisory agent through market discipline based on enhanced disclosure of both the supervisory authority and the regulated banking industry. With respect to the supervisory authority, enhanced disclosure could comprise publication of reports on supervisory actions taken and their general results. Such reports should be published after some delay since any announcement of actions on specific occasions could impair confidence in the "target institution". In addition, publication of cost-benefit-analyses of regulatory actions (as already done by the FSA in the UK) may contribute to improving regulators' compliance culture by offering a objective way to discuss regulation.

Improving disclosure of information by the banking industry seems to be particular of importance with respect to risk taking strategies, risk exposures and risk management tools. Strengthening the disciplinary role of the market would alleviate the incentive problem in two ways: Directly, since regulatory agents would be keen to improve their regulatory performance in order to avoid the need for unwelcome disclosure. And indirectly, since market discipline with respect to the banking institutions strengthens the overall supervisory system by improving bank managers' incentives for prudent risk-taking, thereby, reducing the opportunities for regulatory forbearance.

In addition, an international monitoring agency for regulators, by providing gradings and the reasoning behind them, may help to identify suboptimal supervisory performance, thereby, improving accountability of regulators.

However, accomplishing accountability in practice remains a difficult task and improved market discipline can only complement a proper design of supervisory arrangements. Therefore, a reform of the current European supervisory framework is needed. A single European supervisory authority would solve the horizontal dimension of the incentive problem by internalising cross-border externalities in supervision. However, due to political constraints an improvement of the current system of co-operation and co-ordination of national regulators may be more advisable. In this context, the establishment of explicit arrangements and mechanisms of punishment to ensure compliance are crucial.

Incentive Problems in Banking Supervision – The European Case

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Abstract

This paper discusses the incentive conflicts that arise in banking supervision in the EU in a principal-agent framework, where the regulator is the agent and the taxpayers is the principal. The regulatory agent in addition to maintaining financial stability (the objective of the principal) may pursue private interests. Incomplete information, insufficient accountability of the agent and lack of enforceability of compliance result in an incentive problem. A reform of the European supervisory system complemented by strengthening market discipline based on improved disclosure of both the supervisor and the banks may help to solve the European incentive problem.

JEL-Classification: G28, G21

Keywords: *banking regulation and supervision, principal-agent, European Union*

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1 Introduction

It is a well-known fact in banking regulation that incomplete information and agency problems result in undesirable incentives and, thus, in inefficient outcomes. Principal-agent relationships are well-cited and have been extensively analysed between the bank regulator and the financial institution. So far less acknowledged in the literature is the relationship between the taxpayers as the principal and the banking supervisor as the agent. Against the background of the current European situation analysing this relationship is, however, particularly important.

In Europe the degree of integration of the market for banking and financial services has increased significantly (e.g., Enria and Vesala, 2003). This development may have increased interdependencies among financial institutions of different countries which in turn may have led to a rise in the potential of cross-border contagion, i.e. systemic risk at the European level. Indeed there is some evidence that the EU-wide systemic risk potential has increased (Schüler, 2003a, Schröder and Schüler, 2003). Thus, it is likely that a bank failure in one country will have adverse effects on the banking sectors in other European countries.

Despite these potential cross-border externalities banking supervision in the European Union (EU) is organised at a national level (Vives, 2001, Lannoo, 2002, Enria and Vesala, 2003). The 'home country' has full responsibility for prudential supervision of individual financial institutions. Also monitoring and safeguarding the stability of the financial system remains a national task. The Eurosystem has no direct responsibility, but merely the task of contributing to the national policies relating to prudential supervision and financial stability.[1] Consequently, it is the sole responsibility of the 'host country' to deal with the stability of its financial system and problems resulting from bank failure or distress.

This home country control principle may pose severe incentive problems (Mayes and Vesala, 2000). On the side of the host supervisors incentives to monitor foreign institutions and deliver input to the supervisory process may be limited since they are not ultimately responsible for supervising these institutions, although these institutions may pose a severe threat to the host financial system in the case of a failure. On the home supervisors' side, incentives to adequately monitor a foreign branch may be blunted if the bank is

[1] Article 105(5) of the Treaty states that the Eurosystem is to "contribute to the smooth conduct of policies pursued by competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system".

relatively small from the home country perspective. In this case a failure would not cause serious problems for the parent company and, hence, not for the home financial market. However, significance of this branch in a small host country may be large, thus, posing a systemic threat to that country's financial market in the case of distress.

In general the discrepancy between EU-wide systemic risk and national supervision may cause the problem that national supervisors disregard cross-border externalities resulting from integrated European banking markets.

Consequently, national supervisors may fulfil a suboptimal supervisory policy. This distortion of outcome constitutes a conflict between the interests of voters-taxpayers as principals and the narrower interests of the officials that the political system appoints to serve as their agents, i.e. the supervisors. This conflict of incentives results from the fact that voters and taxpayers have incomplete information about the actions of their national supervisors. Moreover, due to private interests the agent doesn't act in a welfare-maximising way.

The described current European situation, i.e. the existence of cross-border externalities, adds a new dimension to the principal-agent problem between the voters-taxpayers and the supervisor. This situation has raised several questions, including the following:

- What is the effect of an increasing EU-wide systemic risk potential on the supervisory effort if there exists only a contract between the principal and the agent at the national level?

- What is the effect of the Memoranda of Understanding (MoUs) and other forms of co-operation at the European level on the implicit contracts between the principals and the agents?

- What would be the optimal contract to achieve the efficient level of supervisory effort?

- What would be the effect of a centralisation of the contract relationship, i.e. if there would be a centralised EU supervisor having multiple principals?

The aim of this paper is to discuss the incentive conflicts that arise in the European context in a principal-agent framework and – based on this analysis – draw conclusions on how to best align incentives. We argue that strengthening market discipline based on improved disclosure of both supervisory authorities and regulated banking institutions may help to improve accountability of the supervisory agent and, thus, help to alleviate the incentive problem. However, improved market discipline can only complement a proper design of supervisory

arrangements. Therefore, a reform of the current European supervisory framework is called for. A single European supervisory authority would solve parts of the incentive problem by internalising cross-border externalities in supervision. However, due to political constraints an improvement of the current system of co-operation and co-ordination of national regulators may be more realistic.

The paper is organised as follows. The next section discusses the related literature. Section 3 describes the incentive problems arising from the current European situation within the context of a principal-agent framework. The implications for the European situation are given in Section 4. Solutions to the European principal-agent problem are discussed in Section 5. Section 6 summarises.

2 Related literature

Two strands of literatures are of particular interest with respect to our questions: the literature on cross-border externalities in banking and the literature on incentive problems in banking, i.e. the principal-agent literature.

With regard to the latter, there exist several principal-agent relationships within the banking industry (Lewis, 1997): Relatively well-cited are the following two relationships: First, the relationship between the bank loan officer (principal) and the loan applicant (agent), or in general the bank-customer relationship.[2] Second, the association between the bank regulator defined as the principal and the financial institution defined as the agent.[3]

So far less analysed is the principal-agent problem between the voters-taxpayers and the banking supervisor. There are a few papers by Edward J. Kane that relate mainly to deposit insurance: Incentive conflict that government officials face in operating a deposit insurance fund are examined in Kane (1989a). Kane (1990) analyses principal-agent problems in the resolution of the Savings & Loans Crisis in the U.S. The regulatory competition between government bodies and private self-regulatory organisations is studied by Kane (1991). He stresses that the benefits this competition achieves are reduced by principal-agent problems between taxpayers and government officials that lessen the contestability of the regulatory market. Kane (1997) proposes several measures of how to align public and private regulatory incentives, such as measures to unblock information flows or ethical requirements. A scheme of forfeitable

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[2] See Sharpe (1990), Diamond (1984), Nakamura (1993).

[3] See Baron and Besanko (1984), Dye (1986), Campell et al. (1992), Giammarino et al. (1993), Nagarajan and Sealey (1995), Sinn (2001).

deferred compensation for heads of deposit insurance enterprises in order to align the incentives is suggested by Kane (2002). Moreover, Lewis (1997) presents a model in which she analyses the incentives that regulators face when making decisions to take regulatory action focusing also on deposit insurance regulation. She finds that under the assumptions that the regulator is self-interested and taxpayers wish regulators to provide a safe banking system, there exist incentive incongruities so that regulators will not always follow the principal's written directive.

Regarding the literature on the externality problem in banking supervision, there are a few theoretical papers. The externality problem results from the situation that financial market integration has increased the EU-wide systemic risk potential. Thus, an individual bank failure in one country could trigger negative spillover effects in another country. To put it differently, home and host authorities do not internalise the overall benefits stemming from their own activities, since they may disregard the effects of their policies on other countries. Higher supervisory standards in one country have not only positive effects on the safety and soundness of the domestic banking system, they also make foreign banking markets where the domestic country's banks operate more stable by reducing the likelihood of bank failure in those markets. This may result in an underprovision of the public good supervision.

Dell'Ariccia and Marquez (2001) present a model where regulators are concerned with their banking system's stability and efficiency and with their banks' profitability. They show that in the presence of cross-border externalities in banking regulation a solution where regulators set their regulatory policy non-co-operatively is collectively inefficient.

Stolz (2002) analyses the optimal design of banking supervision in the presence of cross-border lending. She shows that supervisors will not take cross-border contagion effects into account, if they are accountable only to their own jurisdiction.

Kahn and Santos (2002) focus on the consequences of the allocation of the lender of last resort and the supervisory function for the degree of forbearance in closing distressed banks and for the level of diligence in the supervision of banks. They conclude that the integration of banking markets without the integration of supervisory functions increases forbearance and decreases diligence in supervision.

Holthausen and Ronde (2003) analyse co-operation between national authorities that are assumed to maximise the welfare of their own country in the supervision and regulation of a multinational bank. They show that first best closure

regulation cannot be implemented unless the interests of the countries are perfectly aligned.

To sum up, all these papers on the externality problem show that in the presence of spillover effects national supervisors fail to implement the optimum supervisory policy from a supranational perspective.

The aim of our paper is to incorporate the externality problem given by the current European situation into a principal-agent framework thereby focusing on the conflict of interest between voters-taxpayers as the principals and bank supervisors as their agents.

3 The principal-agent problem between taxpayers and supervisors

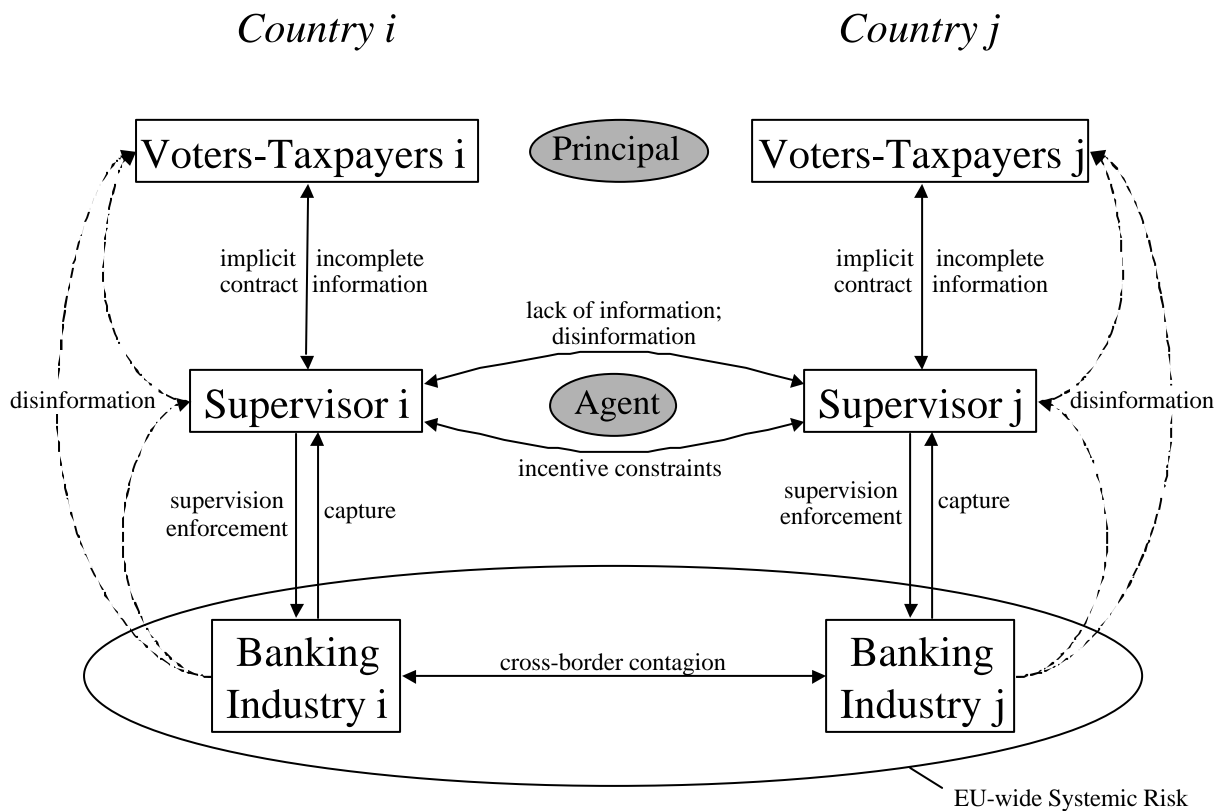
3.1 Players, incentives and information restrictions

To analyse the incentive problems that arise in the supervision of banking institutions in Europe we first define the players and describe their objective functions based on their (individual) incentives and the information available to them. There are three players (in each country): the banking industry, the voters-taxpayers and the regulator. Figure 1 summarises the relationships between the three players in a two-country setting.

The banking industry

There exists – as mentioned above – the well-researched principal-agent relationship between the banks and the regulator. Regulators are not able to observe the quality of the bank's assets. Consequently, banks may have an incentive to take excessive risks thereby shifting risk to depositors. This relationship is not of direct interest in the context of our paper, where the focus is on the principal-agent relationship that is established between the regulator and the taxpayers. Nevertheless, it is important for the analysis of the taxpayers-regulator relationship to know about the incentives of the banks and the information flows between the banking industry and the taxpayers and the regulators, respectively.

Figure 1: The European incentive problem



The objective of the banking industry is profit maximisation. Profits of banks (Π) are assumed to depend on the level of supervision or the supervisory effort (*e*) and the earnings from their loan portfolio (*r*).

In more detail, profits of banks in country i (Π^i) depend on both the regulatory policy or effort of the home supervisor (e_i) and of the foreign supervisors, that is the level of regulation imposed on their foreign competitors in country j (e_j): $\Pi^i(e_i, e_j, r)$. Regulatory measures are disliked by the banks since they impose a constraint on a bank's operations, and are, thus, costly to the bank (Dell'Ariccia and Marquez, 2001).[4] Such costs may also take a more explicit form since in most countries banks have to – at least partly – fund the budget of the supervisory agency. Thus, it can be assumed that bank profits are lower for

[4] Heinemann and Schüler (2003) find empirical evidence for the view that banks may press for lower supervisory standards since banks regard regulation as a cost burden. Note, however, that banks have of course an existential interest in financial stability and, thus, prefer good regulation to no regulation. An unregulated system would, moreover, scares off potential customers.

higher supervisory standards: $\frac{\partial \Pi^i(e_i, e_j, r)}{\partial e_i} < 0$. The interrelation between bank profits in country *i* and the supervisory effort in country *j* is not clear cut: On the one hand, a bank benefits when its competitors in other countries are more heavily regulated: $\frac{\partial \Pi^i(e_i, e_j, r)}{\partial e_j} > 0$. On the other hand, a bank operating via a subsidiary in that country would benefit from lower supervisory standards: $\frac{\partial \Pi^i(e_i, e_j, r)}{\partial e_j} < 0$. The dependence of the banks' profit on the level of regulation in other countries may be seen as a result of the integration of the European banking markets.

Bank profits increase with the earnings from their loan portfolio: $\frac{\partial \Pi^i(e_i, e_j, r)}{\partial r} > 0$. In order to maximise earnings, banks have an incentive to increase the risk of their portfolio, thereby shifting the risk implicitly to depositors or deposit insurance companies, respectively and, thus, ultimately to taxpayers. This is because the bank benefits directly from a high rate of return of risky loans if they do not default. If, however, the risky loans default and the bank eventually fails, the deposit insurance schemes are liable for the losses. This excessive risk taking is possible since the regulator, and of course society in general, is not able to observe the quality of the banks' portfolios. In addition, banks may try to disinform regulators and the general public, i.e. taxpayers to obscure the excessive risk taking (Kane, 1997). Disinformation aims at exploiting the information asymmetry by distorting the inferences and deductions that less informed parties make from the available data.

Moreover, the banking industry, i.e. the regulatees seek to influence and shape regulation to serve its interests (e.g., Kane, 1997, 2002).[5] This may be done by using lobbying pressure and side payments.[6]

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[5] Stigler (1971) introduced this notion of regulatory capture.

[6] Note that from that perspective the banking industry may also be regarded as a principal to the regulatory agent. By – at least partly – accounting for the interests of regulatees supervisors may be seen as serving two classes of principal: the regulated industry and taxpayers (Kane, 1997). Within the context of this paper we focus on the principal-agent relationship between taxpayers and regulators and do not explicitly regard the banking industry as a principal. However, by considering the influence of the banking industry on the supervisors we implicitly take this "second principal" into account.

Voters-taxpayers

National taxpayers are defined as the benevolent, social welfare-maximising principal (Lewis, 1997, Kane, 2002). Generally speaking, society that comprises taxpayers, voters and depositors is the principal. In what follows we make no notational distinction between those groups of society and use the expression voters-taxpayers or simply taxpayers, since national taxpayers would ultimately bear the cost burden of financial distress and a banking crisis.

The objective of the taxpayers is to maintain national financial stability (F).[7] Financial stability in country i is assumed to depend on the portfolio risk of the banks operating in the home country i and in the foreign country j: $F^i(\boldsymbol{s}_i, \boldsymbol{s}_j)$, with $\frac{\partial F^i(\boldsymbol{s}_i, \boldsymbol{s}_j)}{\partial \boldsymbol{s}_i} < 0$ and $\frac{\partial F^i(\boldsymbol{s}_i, \boldsymbol{s}_j)}{\partial \boldsymbol{s}_j} < 0$. The dependence of the stability in the home banking market from the portfolio risk of foreign banks – or generally the risk in the foreign banking market – constitutes the externality in European banking resulting from the EU-wide systemic risk potential.

As mentioned above, there exists a gap of information between taxpayers and banks concerning the portfolio risk. In addition, the banking industry disinforms taxpayers about the quality of their loan portfolio. Beyond the problem of information asymmetry and disinformation, individual depositors face high fixed costs of directly monitoring banks' risk taking, that in turn creates free-riding problems. For the individual taxpayer it is efficient to rely on trustworthy regulatory agents to monitor and discipline banking institutions on its behalf (Kane, 1997).

Thus, taxpayers appoint the supervisor as their agent to control banking risk and secure the safety and soundness of the national banking system. Banking market stability can be maintained by the regulators by providing sufficient supervisory effort (e).[8] Since the stability in country i is influenced by the banking risk in country j, taxpayers expect the regulator to take also these cross-border externalities into account.[9]

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[7] We disregard taxes, i.e. revenues from a possible taxation of bank profits that would benefit taxpayers. Thus the sole objective of voters-taxpayers is to ensure financial stability which is (besides consumer protection) the ultimate objective of banking supervision from a welfare maximising point of view.

[8] Note at this point that there are also costs associated with supervisory effort. Simply maximising e would in fact maintain financial stability, however, would at the same time increase costs to society. Thus, from the taxpayers perspective the aim of maintaining financial stability implies to optimise the level of supervisory effort.

[9] This implies that taxpayers know about the existence of the EU-wide systemic risk potential.

Taxpayers do neither observe the supervisory effort of the home regulator (e_i), nor that of the foreign regulators (e_j). Moreover, there is disinformational reporting by regulators (see below). This information gap between the taxpayer and the regulator constitutes the principal-agent relationship.

It becomes further difficult for the taxpayers to monitor their agent adequately, due to the above mentioned lack of information about the banks' portfolio risk. Taxpayers collect from regulated firms almost no information useful to monitor regulators (Kane, 1997).

Regulators

Regulators are appointed by taxpayers to serve as their agents and supervise the banking sector to safeguard financial stability.[10] Regulators can maintain financial stability by controlling banking risk. This implies that the risk in banking market of country *i* is influenced by the supervisory effort of the home regulator, and also – due to externalities in supervision – by the supervisory effort of the foreign regulator: $\sigma_i(e_i, e_j)$, with $\frac{\partial \sigma_i(e_i, e_j)}{e_i} < 0$ and $\frac{\partial \sigma_i(e_i, e_j)}{e_j} < 0$, i.e. higher supervisory effort decreases banks' portfolio risk and increases financial stability. Consequently, financial stability can be regarded as a function of the supervisory efforts at home and abroad: $F^i(e_i, e_j)$, with $\frac{\partial F^i(e_i, e_j)}{\partial e_i} > 0$ and $\frac{\partial F^i(e_i, e_j)}{\partial e_j} > 0$.

This is obvious in the case of branches in European banking: The home regulator is responsible for monitoring the foreign branch of a domestic banking institution, thereby influencing banking market risk and, hence, financial stability in the host country ($\frac{\partial F^j}{\partial \sigma_j} \frac{\partial \sigma_j}{\partial e_i} > 0$). In general, due to cross-border interbank lending and EU-wide systemic risk potential, the supervisory policy in one country, affecting directly the banks in that country, will have effects on the banking risk in other countries.

However, bank regulators may not pursue social welfare, i.e. aiming solely on maintaining financial stability, but may rather pursue self interest (Kane, 1990, Boot and Thakor, 1993). To put it differently, regulatory agents are not unconflicted or faithful, merely protecting the interests of taxpayers and

[10] Note that the notions "regulator" as well as "supervisor" do not necessarily relate to the actual person employed at a supervisory agency but rather to the supervisory institution.

resisting private incentives (Demirgüc-Kunt, 1991). In contrast, they can be assumed to be conflicted, tempted by private interests rather than, or in addition to, those of the taxpayers.

In choosing a certain level of supervisory effort, a welfare maximising regulator would solely aim on safeguarding stability in the banking market. That would include that in the case of distress of an individual institution the faithful regulator would take action to avert danger from the whole banking system, i.e. systemic consequences. Such supervisory action may include closing the bank after having compared the economic costs of allowing the institution to fail with those of allowing it to operate. Moreover, a welfare maximising regulator would not only take the systemic consequences in the home market into account, but also the cross-border effects.[11]

In contrast, self interested regulators pursue, at least to some extent, narrow private benefits – or, generally speaking, not the interests of society as a whole. Such self interesting behaviour that deviates from welfare maximising may have different origins and take different forms:[12]

As mentioned above, regulatees, i.e. the banking industry, seek to influence and shape regulation to serve its interests through, e.g., lobbying pressure and side payments. Thus, regulators may serve to a certain extent those interests.

The relationship between the regulators and the banking industry may create another incentive: Regulators may pursue a career in the banking industry after serving in the supervisory agency (Kane, 1991, Lewis, 1997).

Moreover, regulatory agents may have a desire to escape blame for poor performance by their agency (Goodhart, 1996, Mishkin, 2001). This is, why they may hide the problem of an insolvent bank and hope that the situation will improve. Kane (1989b) characterises this behaviour as "bureaucratic gambling".

Besides, regulators may protect their careers by acceding to pressures from the politicians, the people who strongly influence their careers (Mishkin, 2001).

Consequently, self-interested regulators, instead of imposing sufficient supervisory standards, may have an interest to engage in regulatory forbearance

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[11] Of course even a faithful regulator may not be able to take cross-border externalities into account due to lack of information. Such information problems between regulators are discussed in the next section.

[12] In general, self-interested behaviour of regulators may of course be derived from the theory of bureaucrats (Tullock, 1965, Niskanen, 1971).

and cover-up. This is especially true, when the distress of a banking institution is not yet publicly recognised (Kane, 2002).

Of course one can not expect the regulator to disregard financial stability at all. Otherwise regulators would have to fear sanctions from taxpayers or at least a loss of reputation if the banking sector would experience a crisis that is widely recognised. In that sense the objective to maintain financial stability derives also from the self interest of the agent.

However, despite this self interesting behaviour that is inherent to the agent, one can certainly not deprive regulators of not acting welfare oriented at all. Hence, the inclusion of banking market stability in the objective function of the regulator may also be seen as partly derived from an altruistic, welfare maximising behaviour.

To sum up, the objective function of supervisory agents includes financial stability, the profits of the banking industry and some form of a private welfare function of the regulator: $V = V(F^i(\mathbf{s}_i, \mathbf{s}_j), \Pi^i(e_i, e_j, r), P(e_i))$, where all arguments, F, Π and P, enter the objective function with a positive sign.

The profits of the banking industry are included since regulators are expected to serve to some extent the interest of the regulatees. The private welfare function (P) decreases with supervisory effort: $\frac{\partial P(e_i)}{\partial e_i} < 0$. This represents the incentive to engage in regulatory forbearance. Providing lower supervisory standards benefits the regulator. To put it differently, higher supervisory effort brings about private costs to the regulatory bureaucrat. Of course, this interrelation holds only up to a certain degree: Regulatory forbearance that jeopardises severely the stability of the banking market, resulting in a banking crisis, would be highly visible. This would mean a loss of reputation for the regulator and would, e.g., limit his future employment opportunities – in short, lessen his utility.[13]

Inherently within the principal-agent relationship asymmetric information exists favouring the agent. As mentioned above, supervisory performance can not be directly observed by the taxpayers. Moreover, the regulatory agent produces disinformation that makes it even harder for the taxpayers to monitor whether the level of supervisory effort is provided that satisfies their interests. Since there are often no strict disclosure requirements and truth-telling discipline it is

[13] Thus, to be formally correct one could think of a threshold $\bar{e}$ of supervisory effort that provides a minimum of financial stability. Only above this threshold the private welfare function *P* decreases with supervisory effort.

easy to disguise reasons for regulatory actions and specific flows of sectoral benefits (Kane, 1997). This problem of accountability is discussed in the next section.

3.2 Conflict of interests between taxpayers and regulators

Of course there should be a contract aligning the incentives of the agent to that of the principal (Jensen and Meckling, 1976). Certainly, in banking supervision there exists an implicit contract between regulatory agents and voters-taxpayers since regulators are usually accountable to politicians that are elected by the principals. However, even if one assumes benevolent welfare-maximising politicians fully acting in the interests of voters-taxpayers, information asymmetry and disinformation makes it extremely difficult to monitor the supervisory performance, thereby leaving regulators imperfectly accountable. Thus with incomplete information it is impossible for society to prevent regulators from shirking to some degree the regulatory duties which they are assigned (Kane, 1997).

The consequence is what Kane (1991) calls an "incentive breakdown". As can be seen from comparing the objective functions of the voters-taxpayers with that of the regulatory agent, the incentives of the supervisor deviate from those of the principal, the voters-taxpayers. In the European context this incentive problem has a "vertical" and a "horizontal" dimension.

The vertical dimension is represented by the vertical relationships in Figure 1. It refers to the "traditional" principal-agent relationship in a national context. This means that instead of, e.g., imposing sufficiently high capital requirements and closing down insolvent institutions, the supervisor engages in supervisory forbearance. Thus, the principal-agent problem constitutes an important impediment to successful prudential supervision of the banking system.

In addition, the incentive problem has also an international or horizontal dimension which is represented by the horizontal relationships in Figure 1. As a consequence, the incentive problem has a further implication in addition to regulatory forbearance: National regulatory agents do not take sufficiently cross-border externalities into account. This disregard of the externality problem may also be regarded as a special form of regulatory forbearance. Taxpayers are interested in a stable national financial system. Since the stability of one country is influenced by banking risk in other European countries ($\frac{\partial F^i(\boldsymbol{s}_i, \boldsymbol{s}_j)}{\partial \boldsymbol{s}_j} < 0$) taxpayers expect regulators to account for these interdependencies when choosing their supervisory effort. Regulators, in contrast, are only partly concerned with financial stability, but in addition pursue private interests.

Consequently, the supervisory effort may be suboptimal from a welfare-maximising perspective.

In the specific European context, self-interesting behaviour of national regulators is implied by the institutional setting, in particular the home country control principal. The host supervisor is not in charge of monitoring branches of foreign banks. Thus, potential threats from these branches to the stability of the domestic financial market may be disregarded, i.e. supervisory effort form the perspective of the host countries taxpayers is suboptimal. In this case "self-interest" stems from the lack of responsibility and power – and not from inherent incentives.

Regarding the home country supervisor the "classical" self-interest argument applies. The home supervisor is, according to the home country control principal responsible for monitoring the foreign branches of domestic banking institutions. However, he may have an incentive to engage in regulatory forbearance with regard to foreign branches. This is because taking action on a foreign branch would reveal low regulatory performance, thereby limiting the regulators private welfare function (P). In this situation the incentive to engage in regulatory forbearance may even be stronger when the foreign branch is relatively small from the perspective of the home country. This is because in the case of distress of the foreign branch the adverse consequences for the home financial market would be negligible. However, the foreign branch may be relatively large from the perspective of the host country, thus, posing a severe threat to the host country's financial stability.[14]

Self-interested behaviour by the regulatory agent induces an additional problem: Information problems between the home and the host regulator may be aggravated. In order to disguise poor regulatory performance the home regulator may produce disinformation not only to his principal but also to the host regulator. Thus, without good information it becomes difficult for the host regulator to assess the potential threat stemming from a branch of a foreign banking institution. Likewise, the host regulator may lack the incentive to keep the home authority informed, since it has limited formal responsibility (Enria and Vesala, 2003). For the home supervisor it would be useful to obtain information of general market surveillance that is collected by the host regulator. Such information would for example be helpful for tracing any idiosyncratic risk-taking compared with other institutions in that market. Generally speaking, disinformation between national regulators makes it almost impossible to

[14] Note that the additional incentive for regulatory forbearance does not directly constitute a conflict of interest between the home country's taxpayer and the home regulator, since the home taxpayer is also not directly concerned with the host country's financial stability.

appropriately consider potential cross-border externalities arising from EU-wide systemic risk.

To sum up, in the European context there are the following incentive problems (horizontal dimension) in addition to the "classical" conflicts of interest (vertical dimension) in the national principal-agent setting (Enria and Vesala, 2003): Firstly, supervisors may not take into account the externalities on the other country's financial system and economy as a whole. Secondly, the regulatory agents may not sufficiently monitor the cross-border activities of financial institutions. Thirdly, regulators may not deliver relevant information to the other supervisor.[15] These incentive constraints apply to both the host and the home country regulatory agent. The consequence of this incentive problem is a suboptimal level of supervisory effort.

4 Implications for the European situation

The above analysis in the principal-agent framework has revealed a number of interesting implications for the European situation and, hence, answers to some of the questions raised in the introduction.

An increasing EU-wide systemic risk potential does only insufficiently increase the supervisory effort. Cross-border externalities are not taken into account by national regulators appropriately. This is because, private interests affect the behaviour of the regulatory agent. This may be self-interest in the "classical" sense, such as pursuing support or side-payments from serving regulatees interests or enhancing future employment opportunities and, thus, escaping blame for poor supervisory performance. Or – in the European context – it may be "self-interest" arising from the institutional setting, in particular the home country principal, and from lack of responsibility. Thus, the fact that there exists only a contract between the principal and the agent at the national level is partly the reason for a suboptimal regulatory effort.

The incentive problem comprises also incentive conflicts with regard to the monitoring of the foreign activities of banking institutions between the home and host regulator. It should be emphasised that these particular incentive problems are not of great importance in the case of foreign subsidiaries, since subsidiaries are independent legal entities and, thus, are under the control of the

[15] Note that with respect to information in addition to this incentive constraints there may be a resource constraint that hampers effective functioning of the supervisory framework (Enria and Vesala, 2003). There may be a considerable burden for the home authority to obtain and process information for efficient consolidated supervision of the institutions for which they are responsible. Moreover, it may be difficult to identify beforehand the relevant information from a vast amount of information.

host country supervisor.[16] The problem is most eminent in the case of branches established abroad that are legally an integrated part of the parent bank and of course in the case of any other direct cross-border activities of banks which may affect the stability of the host country's banking market. Although the incentive problems stemming from the lack of responsibility are not given in the case of a foreign subsidiary there remain information problems in either case.

Furthermore it should be pointed out that the incentive conflicts between home and host supervisors are particularly severe in the case of small host countries. In that case the activities of the foreign bank are large enough to affect the stability of the host country's banking market. The home country regulator overall supervises only a small fraction of the banking market, however, has to deal with the whole consequences of a bank distress. Mayes and Vesala (2000) stress the importance of this dilemma for the Scandinavian countries. And this is de facto also a problem for many Eastern European countries that are going to join the EU.[17]

Do the current arrangements at the EU-level overcome the incentive problems?

It is sometimes argued that the existing bilateral and multilateral arrangements at the European level help to solve the problem of suboptimal supervision stemming from the principal-agent-problem by enhancing co-operation between national supervisors. In particular there are no legal obstacles to cross-border information exchange among authorities and Memoranda of Understanding (MoU), i.e. means of how to arrange bilateral co-operation in practice, are quite widespread. Besides, there are multilateral MoUs[18] and also committees such as the Banking Supervision Committee (BSC).[19] However, the question remains of whether these existing arrangements are able to align the incentives of the principals (taxpayers) with the agents (supervisory authorities).

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[16] Subsidiaries may fail independently of the parent company since they are separated as legal entities. Therefore, the subsidiary needs its own banking licence and must respect the regulatory framework of the host country (see, e.g., Dalen and Olsen, 2003).

[17] Note that in Poland, for example, in 2002 the capital funds and assets of the commercial banks controlled by foreign investors represented 78.4% and 67.2%, respectively, of those of the banking sector as a whole (NBP, 2003). The result of this situation is a reluctance of the supervisory authorities to allow banking activities in the form of foreign branches in fear of losing control of the stability of the national banking market (Markowski, 2003).

[18] In addition to MoUs among several national regulators, that often deal with specific multinational banking institutions, a MoU has been signed in March 2003 by the ECB, the national central banks and banking supervisory authorities of the EU.

[19] For a detailed description of these arrangements see, e.g., Schüler (2003b). For details concerning the MoUs see Enria and Vesala (2003).

The existing arrangements do not explicitly address the principal-agent relationship between taxpayers and supervisors. They do not, for example, alter the implicit contract between them. However, they may shift the incentives of the supervisors in the direction of those of the taxpayers, in the sense that regulators no longer disregard cross-border externalities and sufficiently exchange information with other national supervisors.

Since MoUs are normally not made public there is only limited information available on their content. Typically, bilateral MoUs include practical provisions with regard to the establishment of a branch, supervisory co-operation on an ongoing basis and co-operation in the field of on-site inspections of branches (European Commission, 2001). Thereby, the existing MoUs aim at clarifying procedures to foster co-operation between national supervisory authorities.

According to Enria and Vesala (2003) MoUs do not resolve the incentive problems with regard to the exchange of information between the home and the host regulator. They argue that the existing MoUs may be interpreted as incomplete relational contracts between the home and the host supervisor. Although procedures are specified and a general understanding is created, the substance of the relationship is left unspecified. Moreover, the fact that MoUs are not legal documents makes this incomplete relational contract unenforceable in courts of law. Thus, against the background of asymmetric information between supervisors of different countries, regulators may again choose to pursue private interests at the other party's expense.

In addition to the bilateral MoUs, that focus on branches and subsidiaries there exist multilateral MoUs and multilateral committees at the European level, such as the Banking Supervision Committee (BSC). These mechanisms for multilateral co-operation try to deal with EU-wide systemic risk in general, since branches and subsidiaries are not the only, and probably not even the most relevant, channel of cross-border spillover effects. Furthermore, these multilateral agreements comprise principals of co-operation in crisis management situations.

The same line of argumentation regarding the incentive constraints identified for the bilateral relations applies also to the multilateral forms of co-operation (Enria and Vesala, 2003). They constitute only incomplete relational contracts – ultimately, they are not binding – which leaves room for regulators to pursue private interests.

To sum up, the existing arrangements at the European level are not sufficiently successful in solving the incentive problems that national supervisors may disregard cross-border externalities, insufficiently monitor the cross-border activities of banks, and not deliver relevant information to other supervisors.

Thus, the incentives between the taxpayers as the principal and the supervisors as their agents are not necessarily aligned by the existing arrangements.

5 Solving the European principal-agent problem

The question remains of how to resolve the incentive conflict between taxpayers and supervisors. The first best solution would be a contract between the regulator and the society that fully aligns incentives (Kane, 1997). Management contracts for government officials usually do not include positive incentives of compensation that rises and falls with success in achieving taxpayer goals. Supervisory agents' salary does not depend on their success in safeguarding the stability of the financial system. An optimal contract would give regulatory managers a symmetric and transparent stake in the benefits and costs which their enterprise, i.e. the supervisory agency, generates for taxpayers.[20] However, society fails in developing such contracts. In general, the reason for that is a lack of accountability due to the above analysed information asymmetries and, thus, deficient enforceability. Moreover, financial stability, i.e. society's goal, is also influenced by factors, that are not under the control of the regulator. The result of this failure of developing the optimal contract is a welfare loss whose size must be controlled in other ways.

Solutions to the principal-agent problem in EU banking supervision have to consider both the vertical dimension, i.e. the explicit relationship between the taxpayers and the national regulators, and the horizontal dimension, i.e. externality problem arising form EU-wide systemic risk and the relationship between national supervisory authorities.

5.1 Single European agency

A solution to the incentive problems arising from cross-border systemic risk would certainly be a centralisation of supervisory responsibilities. A single European supervisory agency with a European mandate should not have any incentives to disregard cross-border contagious effects from one national banking market to another one. Moreover, monitoring cross-border activities of banks shouldn't cause any incentive problems since the focus would clearly be on the European banking market and no longer on single national markets. There wouldn't exist any problems due to lack of responsibility. And finally, having a single authority would solve the problem of not delivering relevant information.

[20] As a feasible start, Kane (2002) proposes a scheme of forfeitable deferred compensation for heads of deposit insurance enterprises in order to align the incentives of the agents with those of the principals.

At a first glance the creation of a single European agency would constitute a common agency problem, i.e. a situation where one agent (the single European supervisory agency) contracts with several principals (the national taxpayers), and the principals non-co-operatively provide incentives for the agent (Bernheim and Winston, 1986). However, in our situation the incentives of the multiple principals, the national taxpayers, do not differ. They all have the same objective, namely a stable banking system, which is no longer national in scope but rather European. Thus, we would end up with the same principal-agent problem at the European level, the single European supervisor being the agent and the "European society" the principal. Clearly, the horizontal dimension, i.e. incentive problems arising from the EU-wide systemic risk potential, would be resolved.

However, the vertical dimension of the incentive conflict would still remain: With asymmetric information and insufficient accountability a single European supervisory agency would also have incentives to pursue private interests and, hence, to deviate from the interests of the principal. For solving this dimension of the incentive conflict other measures have to be employed that will be discussed below.

Beside this normative arguments that speak in favour for the centralisation of supervisory responsibilities at the European level, there exists, however, a crucial political constraint: At the moment a single European supervisory authority doesn't seem to be feasible within the near future due to national resistance to give up responsibility (Economist, 2003, Thygesen, 2003).[21]

Therefore, at least in the meantime, other solutions have to be found to align the incentives of the principal and the agent. In addition, it may be questionable whether a single European agency would be the optimal solution from an efficiency point of view since this would bring about a huge – possibly too bureaucratic – authority.[22]

5.2 Enhancing co-operation between regulators

An alternative to a single European supervisory agency would be keeping the national based framework and improving co-operation and co-ordination between national supervisors. This approach is currently pursued with the

[21] One of the problems is that the fiscal costs of handling a crisis have to be meet at the national level, because there is no EU-wide budgetary competence for this purpose (Schoenmaker, 2000, 2003).

[22] For the pros and cons of a single European supervisory authority – and moving supervision to the European level in general – see, e.g., Meister (2000), Vives (2001), Schoenmaker (2003).

bilateral and multilateral MoUs and the committees at the EU level. However, as discussed above, the current arrangements fail to align incentives and to solve the horizontal dimension of the principal-agent problem due to their implicit character.

Enria and Vesala (2003) propose explicit agreements with respect to the exchange of information between national regulators. Such agreements should comprise two elements: first, a pre-commitment by the respective authorities to exchange information based on signals which are verifiable at least ex-post. Second, mechanisms to check and enforce compliance through some kind of penalty system for a breach of agreement. With respect to the first element, Enria and Vesala propose for example that market surveillance information from the host supervisors could be guaranteed by stipulating a threshold in terms of the importance of the host country's business for the institution as a whole. Moreover, a capital threshold could be defined below which the home authority should inform the host regulator. Important in this context is also some standardisation of the MoUs in order to achieve the necessary consistency. The second element, enforcement of compliance, is of course very difficult to implement in practice. On this matter, legal obligations may need to be considered. Like already in existence for enforcing fiscal discipline, Enria and Vesala suggest an EU level body which monitors the behaviour of the authorities and which can issue statements concerning compliance and, in addition, may possess means of pecuniary penalties.

Another proposal with regard to cross-border co-operation and co-ordination is the concept of "lead supervisor" derived from the Swedish example, where large and complex financial institutions (LCFI), with the potential to threaten financial stability in more than one jurisdiction, dominate the financial system (Johnston, et al., 2003, Hammarkvist, 2003).[23] In cases of such large banking institutions that operate to a substantial amount in several countries, there would be a clear assignment of supervisory responsibilities to a lead supervisory authority. The joint supervisory group – comprising the lead supervisor and all other concerned national supervisors – would operate under a multilateral MoUs. The establishment of the leader could follow clear a priori defined rules. In this context one could think of some measure reflecting the importance of the banking institution for the different markets (such as market shares) and the importance of the respective market for the banking institution (such as turnovers in that market). Of course, as with the other MoUs, it would be of crucial importance to have explicit agreements between the supervisors involved, including some mechanisms of enforcing compliance.

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[23] LCFI are defined as cross-functional and cross-border financial institutions (Johnston et al., 2003). The focus in our paper lies on the cross-border aspect.

Ultimately, enforcement of agreements between two or more national regulators constitute the main drawback of the approaches of MoUs and the concept of the lead supervisor. Consequently, there remains the risk that regulators may still have room for pursuing private interests.

Moreover, these concepts tackle only the horizontal dimension of the incentive problem. Therefore, in any case, measures to enhance co-operation and co-ordination between national supervisors, as well as a single European supervisory authority, have to be complemented by other measures that also deal with the vertical dimension of the incentive problem.

5.3 Improving accountability of regulators

In order to align incentives between the regulatory agent and the taxpayers it is essential to ensure accountability of the agent for regulatory mistakes, that – in the European context – include disregarding cross-border risks. Improving accountability comprises the following issues (Kane, 1997): First, it requires making supervisory actions and their consequences more transparent. This includes unblocking the information flow from both the regulator and the banking industry to the principal, i.e. enhancing public disclosure. Moreover, penalties on incompetent supervisory behaviour have to be imposed. In this context strengthening private oversight, i.e. the disciplinary role of the market becomes crucial.

Without doubt, improving accountability of regulators in practice turns out to be rather difficult than suggesting it in principle (Goodhart, 2001). The reason for that is particularly that the objective of supervision and, hence, supervisory performance is hardly measurable. It is per se not clear whether financial stability – or more practically speaking, the absence of financial crisis – is achieved due to luck and conjuncture or due to the efforts of supervisors. Despite these practical caveats, transparency and market discipline are crucial when – at least – trying to improve accountability of supervisory bodies.

Enhancing public disclosure

In order to make the regulatory agent more accountable for his actions (and no-actions), it is essential to improve the information flows between all players involved. Taxpayers – or in general society – have to be informed about the actions of the regulatory agent and their consequences. Moreover, taxpayers need to have reliable information about the subject of regulation, i.e. the banking industry and the banking risk. Only when having such information an assessment of the supervisory performance is possible. As discussed in Section 3 (see also Figure 1), there is information asymmetry between the taxpayers and the supervisor, and the taxpayers and the banking industry, respectively. In

addition, disinformation may distort the inferences and deductions that the society makes from the available data. Thus, unblocking of the information flows and thereby reducing information asymmetries is necessary.

A direct way of doing so is to impose self-reporting obligations on the regulatory agent and the regulated banking industry alike (Kane, 1997). Supervisory authorities should report on what they are trying to achieve, and on their successes and failures. Publication of reports on supervisory actions taken and their general results might be useful. Since any announcement of actions on specific occasions could impair confidence in the "target institution", reports should not be made public at the time but rather be published after some delay (Goodhart, 1996, 2001).

With respect to transparency, the UK's Financial Services Authority (FSA) may serve as an example. The FSA must publish a consultation paper to any regulatory rule of general guidance it makes and must accompany this by a cost-benefit analysis and a detailed statements of compatibility with the FSA's statutory objectives and principals of good regulation (Alfon and Andrews, 1999, Briault, 2003). By doing so, the FSA does not only take costs imposed on regulated firms into account, but also the costs and benefits to consumers and a wide range of other considerations. Of course, there are a lot of practical difficulties of assessing the costs and especially the benefits of regulatory actions (Goodhart, 2001). Thus, the obligation of an analysis rather than a quantification of the benefits and costs could be advisable. In any case, cost-benefit-analyses can contribute to improving regulators' compliance culture by offering a non-partisan way to discuss regulation. Thereby, cost-benefit-analysis enhance in a practical manner the accountability of regulators.

Surely, supervisory authorities already publish annual reports where they disclose information on their supervisory policy. However, information here is often held relatively general. Moreover, in the EU quite a number of supervisors are part of the central bank and in the annual report of the central bank disclosure on supervisory policy is relatively scarce. Thus, there remains room for improving disclosure of supervisory authorities.

One may argue that scarce information is necessary with respect to potential adverse market reactions. Thus, as mentioned above, publication of potential market relevant information should be made with a delay.[24]

Ultimately, the aim of improving disclosure is to make information available to the public so that the quality of the work of the supervisory agent can be

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[24] Note in this context also that the argument of "constructive ambiguity" does not apply since we do not talk about improving disclosure with regard to crisis management.

assessed. In addition to enhancing disclosure of supervisory authorities, one way of doing an assessment of the supervisory performance is to survey the regulated industry on their perception of the benefits and costs of regulation (Goodhart, 1996). Such surveys should be carried out by an independent body that – given the horizontal dimension of the incentive problem – should be located at the European level. The information from such surveys would probably be biased and, thus, of limited value. However, given the potentially small costs of such surveys, the marginal benefits should exceed the marginal costs.

For assessing the supervisory performance it is also necessary to have reliable information about the regulated industry. At present disclosure requirements differ considerably between countries. There are initiatives on the way to improve disclosure and align obligations across countries in the EU (CEPS, 2003). Improving disclosure of information by the banking institutions seems to be particular of importance with respect to risk taking strategies, risk exposures and risk management tools (Mayes and Vesala, 2000). In this context, the supervisory regime of New Zealand which is extensively based on market discipline may be viewed as an example (Mayes, 2000). For financial institutions in New Zealand quarterly disclosure of relevant bank information is mandatory, including for instance the number of large exposures (including interbank exposures) as measured relative to the bank's equity. To enable the disclosure of the full extent of the risks that have been run, New Zealand requires the disclosure of peak exposure, not just some quarterly average or end-period value. In the European context, such requirements would include improving disclosure concerning cross-border risks which is particularly of importance against the background of the horizontal dimension of the incentive conflict.[25] In addition to increasing disclosure requirements penalties have to be implemented so that banking managers have incentives for proper disclosure.

With information about the banking risk publicly available it is difficult for the regulatory agent to engage in regulatory forbearance (Enria and Vesala, 2003).

Public disclosure of information would also help to alleviate the information problem between the host and the home regulator (Mayes and Vesala, 2000): It would help the home authority to collect information on the global activities of its institutions and the host authority on the activities of foreign branches. In

[25] Note that in New Zealand all banks, except for very small ones, are subsidiaries or branches of larger banks which are headquartered elsewhere. Therefore, it is often argued that the supervisors in New Zealand, by relying largely on market discipline, are free riding on the supervisory efforts of its larger neighbours (Goodhart, 2001). Nevertheless, some measures, such as improved disclosure of risks may well serve as an example for the European case.

general, with the information being less confidential, incentive problems to exchange information may be reduced.

Strengthening market discipline

Improving public disclosure of supervisory agents and banking institutions helps the principals to assess the supervisory performance of the agent. This is a necessary condition for improving accountability and, hence, solving the incentive problem. However, it is not sufficient. The market must also be willing to monitor regulatory performance and there have to be mechanisms in place to discipline regulators in case of poor supervisory performance.

It is often argued that regulatory competition between governmental and private supervisory institutions protects society from over-regulation and also mitigates negative effects resulting from incentive problems (Kane, 1997). Regulatory competition could take a disciplinary role.[26] Market discipline and corporate governance with respect to the banking institutions strengthens the overall supervisory system by improving bank managers' incentives for prudent risk-taking. Consequently, the opportunities for regulatory forbearance by the supervisors are reduced and, thereby, the incentive conflict between regulatory agents and society is alleviated.

Thus, policies aimed at strengthening the disciplinary role of private watchdog institutions are important (Johnston et al., 2003). Such private agents comprise for instance accounting and auditing firms, regulating financial analysts and rating agencies.

With the above mentioned measures to improve disclosure of banking institutions these agents should have sufficient information at hand. Besides, the market needs to have incentives to monitor activities. Of course, it is not the general public that looks at the information disclosed. Usually, it is the financial news media, market analyst, credit rating agencies, counterparties and competitor banks that are interested in the documents and publish assessments

[26] The underlying notion is that regulation may be presumed to have a market in which it is voluntarily purchased and sold (Kane, 1991, Kane, 1987). Government bodies and private self-regulatory organisations are sellers and financial services firms are buyers. As Kane argues there exists regulatory market power. The reasons are that first, the number of potential new entrants that can economically supply regulatory services is limited. And second, there are typically high costs of entering and exiting the regulatory market. Potential entrants would need an authority for raising and distributing funds and the means for exercising disciplinary power. In addition, government entities have the right to shift costs to taxpayers giving them financial strength and the right to use the force of law to punish violators. All this gives an advantage in the market to government bodies.

of the banks. Market discipline occurs not so much because of what is actually said but because of what might be said (Mayes and Vesala, 2000, Mayes, 2000). Thus, banks are keen to act so as to avoid the need for unwelcome disclosure. It is more the potential threat of unwelcome disclosure that produces compliance in the first place.

In addition, ceding monitoring functions to agents directly responsible to subordinated debt holders can help to complement the overall supervisory system.[27] In this regard, market discipline is generated by an adequate number of creditors that are not covered by deposit insurance. Since their funds serve as loss absorber in the case of a bank failure, holders of subordinated debt have a stimulus to care for the soundness of the bank.

Certainly, market discipline based on improved disclosure has its limitations (Llewellyn, 2001): More transparency may increase, rather than decrease instability in some instances. Furthermore, there may result incentives to free ride on the information generated by others.

Supervisor of the supervisors

There may also remain questions on whether the disciplinary role of the market is sufficient to enforce accountability of the regulatory agent. Ultimately, there may be a need for further mechanisms of punishment in addition to the disciplinary role of the market. As in the context of explicit MoUs (see Section 5.5.2) one could think of an EU level body which based on the information disclosed and maybe the above mentioned surveys of the financial industry, tries to assess the supervisory performance of the regulators.

Another proposal is an international monitoring agency for regulators made up of members of supervisory agencies from other countries (Goodhart, 2001). Such an external "college" would be required to submit a grading and give its explanations publicly. This would help to identify suboptimal supervisory performance, thereby, improving accountability of regulators. The potential problem with this "self-regulation for regulators" would be that incentives to co-operate with other supervisors might even be lessened. Thus, participation of international organisations such as the Bank for International Settlement (BIS), the International Monetary Fund (IMF) and the World Bank would be advisable. Initiatives such as the Financial Sector Assessment Program (FSAP), a joint effort by the IMF and the World Bank, tend in this direction, but they need to be generalised and applied to all countries.

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[27] See Calomiris and Kahn (1991), Calomiris (1999), Board of Governors (1999, 2000), Bigus and Prigge (2002).

In addition, it may help to improve the monitoring incentives of news organisations and academic researchers to enhance the public debate about financial supervision (Kane, 1997). With regard to the regulatory authority the same argument applies as to financial institutions monitored by the market: The potential threat of unwelcome news produces compliance in the first place. The disciplinary action results more from what might be said than what actually is said. Thus, regulatory agents will make an effort to act so as to avoid the need for unwelcome disclosure. Such potential unwelcome disclosure would be ensured by the above discussed measures to improve disclosure of supervisory authorities as well as by the international monitoring group for regulators.

To sum up, although accomplishing accountability of supervisory bodies in practice remains a difficult task, market discipline based on enhanced disclosure both of supervisory authorities and regulated banks may help to improve accountability and, thus, alleviate the incentive problems. This refers to the vertical dimension as well as to the horizontal dimension of the principal-agent problem.

However, improved disclosure and market discipline are no panacea. Market discipline can only complement a proper design of supervisory arrangements (Vives, 2001). The above discussed proposals, i.e. a single European supervisory authority or a system of bilateral and multilateral co-operation and co-ordination between national supervisors, seem to be both appropriate when supplemented by stronger market discipline based on improved disclosure.

6 Summary

Analysing banking supervision in a principal-agent framework helps to explain the existence of regulatory failure (Kane, 1989a). It has been shown that the interests of the regulator (agent) deviate from those of the principal, the taxpayers, or in general the society. The reason for that is that the regulatory agent in addition to maintaining financial stability (the ultimate objective of the principal) may pursue private interests. Incomplete information, insufficient accountability of the regulatory agent and lack of enforceability of compliance result in an incentive problem. In the European context this incentive problem comprises two dimensions: The vertical dimension refers to the “traditional” principal-agent relationship in a national context. The horizontal dimension results from the fact that there exists EU-wide systemic risk potential. Thus, regulatory forbearance in the European context includes also disregarding of cross-border externalities, insufficient monitoring of foreign branches, and lack with regard to the exchange of information with other supervisors.

Since the first best solution, i.e. a contract between the regulator and the society that fully aligns incentives, is not achievable other solutions are needed. In this

paper we stress the importance of improving accountability of the supervisory agent through market discipline based on enhanced disclosure of both the supervisory authority and the regulated banking industry. With respect to the supervisory authority, enhanced disclosure could comprise delayed publication of reports on supervisory actions taken and their general results. In addition, publication of cost-benefit-analyses of regulatory actions (as already done by the FSA in the UK) may contribute to improving regulators' compliance culture by offering an objective way to discuss regulation. Improving disclosure of information by the banking industry seems to be particular of importance with respect to risk taking strategies, risk exposures and risk management tools. Strengthening the disciplinary role of the market would alleviate the incentive problem in two ways: Directly, since regulatory agents would be keen to improve their regulatory performance in order to avoid the need for unwelcome disclosure. And indirectly, since market discipline with respect to the banking institutions strengthens the overall supervisory system by improving bank managers' incentives for prudent risk-taking, thereby, reducing the opportunities for regulatory forbearance.

In addition, an international monitoring agency for regulators, by providing gradings and the reasoning behind them, may help to identify suboptimal supervisory performance, thereby, improving accountability of regulators.

However, accomplishing accountability in practice remains a difficult task and improved market discipline can only complement a proper design of supervisory arrangements. Therefore, a reform of the current European supervisory framework is needed. A single European supervisory authority would solve the horizontal dimension of the incentive problem by internalising cross-border externalities in supervision. However, due to political constraints an improvement of the current system of co-operation and co-ordination of national regulators may be more advisable. In this context, the establishment of explicit arrangements and mechanisms of punishment to ensure compliance are crucial.

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