



Helena Holopainen

# Integration of financial supervision




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The views expressed are those of the author and do not necessarily reflect the views of the Bank of Finland.

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# Integration of financial supervision

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## Abstract

The emergence of financial conglomerates and multinational financial institutions as well as the development of new financial products have raised concerns as to the ability of separate sectoral supervisors and different national authorities to effectively oversee financial markets. Concentrating on the European situation, this paper addresses these concerns by putting special emphasis on the role of organizational form in the supervisory process of financial institutions. I will first outline the developments that have led to increasing pressures to reform the current supervisory systems in Europe, proceed to discuss both some common and specific aspects of supervision of financial conglomerates and multinationals, and, finally, examine the challenges related to the integration of supervision. Using theoretical framework derived from economic theory, this paper points that multitude of factors (eg, several multitasking-related concerns) are likely to affect the effectiveness of integrated supervision.

Key words: financial supervision, financial conglomerates, multinationals, integration of supervision

JEL classification numbers: G21, G22, G28

# Finanssivalvonnan yhdistäminen

Suomen Pankin keskustelualoitteita 12/2007

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Rahapolitiikka- ja tutkimusosasto

## Tiivistelmä

Finanssiryhmittymien ja monikansallisten rahoituslaitosten yleistymisen yhdessä uudenlaisten rahoitustuotteiden kehittymisen kanssa on herättänyt huolta perinteisen eriytyneen finanssivalvontamallin sopivuudesta rahoitusmarkkinoiden valvontaan. Tässä keskustelualoitteessa tarkastellaan taloustieteellisestä näkökulmasta näiden kehitystrendien haasteita eurooppalaisen finanssivalvonnan kannalta. Alussa käsitellään lyhyesti valvontarakenteiden kehittämiseen ja uudistamiseen vaikuttavia kehitystrendejä. Tämän jälkeen tarkastellaan finanssiryhmittymien ja monikansallisten rahoituslaitosten valvontaan liittyviä yhteisiä näkökohtia ja erityiskysymyksiä. Lopuksi käsitellään sekä eriytyneen että integroidun finanssivalvontamallin haasteita. Johtopäätöksenä on, että taloustieteellisestä näkökulmasta myös integroituun valvontamalliin liittyy haasteita, mikä johtuu erityisesti useiden eri tehtävien allokoitumisesta yhdelle valvontaviranomaiselle.

Avainsanat: finanssivalvonta, finanssiryhmittymät, monikansalliset rahoituslaitokset, valvonnan integrointi, valvonta

JEL-luokittelu: G21, G22, G28

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# 1 Executive summary

The emergence of financial conglomerates and multinational financial institutions as well as the development of new financial products have raised concerns as to the ability of separate sectoral supervisors and different national authorities to effectively oversee financial markets. Concentrating on the European situation, this paper addresses these concerns by using a framework based on economic literature. Special emphasis is put on the role of organizational structure since, both in the case of financial conglomerates and multinationals, the institution's corporate structure plays a role in the emergence of some key supervisory concerns.

The paper is structured in the following way. Section 3 outlines the developments (conglomeration, cross-border consolidation, increasing popularity of integrated supervision) that have led to growing pressures to reform some of the current supervisory systems in Europe.

Section 4 contains three subsections. Section 4.1 discusses the dimensions (prudential, conduct-of-business, macroprudential) of official supervision, the powers of official supervisors as well as the relationship between official and private supervision (including some implications of Basel II on market discipline). Section 4.2 introduces the three layers of prudential supervision (solo supervision of regulated entities, consolidated supervision of homogeneous financial services groups and supplementary supervision of heterogeneous groups) that can all be present in the supervision of a financial conglomerate, and discusses the alternative corporate structures of financial conglomerates (fully-integrated, partially integrated, parent-subsidiary, holding-company model). Based on the model of Freixas, Lioranth and Morrison (2006), the section also discusses how the holding-company structure can give rise to regulatory arbitrage and how capital requirements can be used to take advantage of differences in market discipline and, in contrast to the conventional wisdom, to encourage regulatory arbitrage. Section 4.3 introduces the organizational forms for cross-border banking (correspondent banking, representative offices, agencies, branches, subsidiaries) and discusses how branches and subsidiaries differ in terms of their authorization process and how these differences affect the allocation of supervisory responsibility between the home and host country supervisors. Based on the model of Holthausen and Rønde (2005), this section also discusses how the interaction between self-interested national supervisors may lead to non-disclosure of supervisory information and distortions in closure decisions of financial institutions.

Section 5 discusses the integration of sectoral supervisors by first introducing the two alternative forms of cross-sectoral supervision (functional model with separate supervisors for the prudential supervision and the conduct of business supervision across the sectors, integrated model with a single supervisor for banking, insurance and securities combined) and then addresses the potential benefits of integrated supervision (eg, comprehensiveness of supervision and different types of economies of scale and scope) as well as the alternative means to facilitate cooperation and coordination in supervision without establishing an integrated supervisory authority. Subsections 5.1 and

5.2 discuss the challenges of integrated supervision. Since as a by-product of integration a plurality of tasks gets allocated to a single authority, Section 5.1 outlines the multitasking-based challenges (eg, potentially conflicting tasks, challenges for incentive provision, thread of overload) while Section 5.2 discusses other potential challenges (eg, the increased threat of regulatory capture or collusion, the inability to compare and play supervisors against each other).

Finally, Section 6 provides a short conclusion pointing towards the importance of careful organizational planning in the context of the integration process.

## 2 Introduction

The European financial markets have changed rapidly over the past three decades fuelled by deregulation and advances in information technology. These factors have provided scope for consolidation, as reflected in the increasing popularity of financial conglomerates and multinational financial institutions. Technological advances and deregulation have also accelerated the emergence of new financial products that are more difficult to classify under the traditional categories of banking, securities and insurance. All these developments have contributed towards the growing need for the separate sectoral supervisors as well as the different national authorities to cooperate in the supervision of financial institutions. At the level of European Union, this has raised the question of creating a supranational supervisory authority. In some individual countries like Finland where the current system of financial supervision is still based on (partial) sectoral separation between the supervisors, these developments have led to suggestions to rethink the supervisory structure.

Concentrating on the European situation, this paper uses economic literature to discuss some of the challenges imposed on the existing supervisory structures by the internationalization and, especially, conglomeration of the financial services industry in Europe. Special emphasis is put on financial conglomerates so as to highlight the issues related to the integration of sectoral supervisors pushed forward in part by the increased formation of financial conglomerates as well as the emergence of new financial products that blur the traditional distinctions between banking, securities and insurance.

Although the focus is on financial conglomerates, looking at financial conglomerates and multinationals in parallel is justified for several reasons. First, in many cases financial conglomerates are also multinationals. Second, apart from the removal of regulatory barriers, the economic literature on financial conglomerates and multinational financial institutions identify partly the same reasons as having led financial institutions to adopt these structures. In the case of financial conglomerates, conglomeration has been motivated by the desire of financial institutions to capture different types of economies of scale and scope as well as the possibility to better diversify risk insofar as the returns of various business lines are imperfectly correlated (for more detailed discussion and model along these lines, see Mälkönen, 2004a,b). In

similar vein, the formation of multinational financial institutions has been argued to be driven by the wish of financial institutions to benefit from scale economies and improved risk diversification where the latter is due to two factors; the widening of the potential asset pool as well as the reduction in the geographic concentration of the financial activities (see Calzolari and Loranth, 2001). Third, by virtue of being simultaneously supervised by more than one supervisory authority, multinational financial institutions and financial conglomerates subject to sectoral supervision are both common agents of several supervisors. Furthermore, from the viewpoint of supervision these two phenomena are also related in the sense that the corporate structure chosen by the financial conglomerates and multinationals plays a role in the economic literature as well as in the political discussions surrounding the emergence of some of the central supervisory concerns.

In this paper, I especially highlight the role of organizational form in the supervisory process of financial conglomerates and multinationals. However, before looking at the specific supervisory concerns of financial conglomerates and multinationals and their relationship to the corporate structure, I first outline the developments that have led to increasing pressures to reform the current supervisory systems in Europe. After that, I discuss some key aspects of supervision that are common both to financial conglomerates and multinationals. Finally, having looked at the supervisory issues raised by the organizational form of financial conglomerates and multinationals in turn, I examine the challenges related to the integration of sectoral supervisors which, due to the interrelated nature of financial conglomerates and multinational financial institutions, also help to understand the challenges of supranational supervision. Throughout the paper I use the Finnish situation as a reference point to illustrate some questions raised by financial market developments regarding the institutional structure of supervision.

### 3 Conglomeration and internationalization of European financial industry

According to the definition of Joint Forum (1999), financial conglomerate is an organization whose primary business is financial and whose regulated entities engage to a significant extent in at least two of the activities of banking, insurance and securities. In practice, the definition used to guide the supervision of financial conglomerates is often more restrictive than the preceding rather general characterization.<sup>1</sup>

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<sup>1</sup>In the case of EU, see The Financial Conglomerates Directive for more specific criteria concerning, eg, what is to be considered as significant engagement.

The definition of Joint Forum allows different combinations of banking, insurance and securities activities to be treated as financial conglomerates. From the European perspective, of particular interest are so called bancassurance groups; that is, those financial conglomerates that combine banking services and insurance activities.<sup>2</sup> The reasons are threefold.

First, it is common in Europe for the banks to provide traditional banking services and securities business in a single legal entity. This long-time practice, often regarded as an integral part of the European universal banking tradition, is permitted throughout the EU under the Consolidated Banking Directive and, consequently, does not qualify as a financial conglomerate in meaning of the Financial Conglomerates Directive. This is in sharp contrast to the United States which traditionally has greatly restricted the ability of banks to engage into the securities business either directly (ie, through an in-house department) or through a subsidiary of the bank.<sup>3</sup> However, the enactment of the Gramm-Leach-Bliley Act in 1999 has reduced the gap between Europe and the United States although the Act still adopts a more restrictive view on financial conglomeration than the EU by directly dictating under which corporate structures certain activities can be conducted and by limiting the freedom of banks to own (and to be owned by) non-financial companies.<sup>4</sup>

Second reason favoring the concentration on bancassurance groups is their increasing popularity in Europe. Dierick (2004) estimates that the total value of merger and acquisition activity in the banking and insurance industry involving EU undertakings reached EUR950 billion in the period 1990–2003. Approximately 40 per cent of this activity consisted of cross-sectoral deals. In particular, financial conglomeration has been a pronounced trend in Scandinavia. For instance, seven of 50 major bancassurance groups listed in Dierick are from Sweden and Finland. In terms of market shares in year 2001, financial conglomerates held 57% of deposits and 61% and 37% of premium income in the Finnish banking, life insurance and non-life insurance markets, respectively, giving further indication of the importance of conglomeration (see Shoenmaker, 2006).

The third reason for focusing on bancassurance is related to the changes in the supervisory structures of financial markets currently taking place in Europe. If organized in the traditional manner, a typical way to structure the supervision of banking, insurance and securities business is to have each of these sectors supervised by a separate supervisor. This is still the general

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<sup>2</sup>Typically, bancassurance is used to refer to banks that develop insurance activities. However, here the term is used in a broad sense to refer to the combination of banking and insurance.

<sup>3</sup>Santos (1998) offers an excellent survey on the potential advantages and disadvantages of combining traditional banking and securities business.

<sup>4</sup>Under the the Gramm-Leach-Bliley Act, the subsidiaries of banks are allowed to conduct most financial activities including much of the securities business; those activities that the subsidiaries of banks cannot conduct can be undertaken by adopting a specific corporate structure called financial holding company which is allowed to own banks as well as all the other providers of financial services as its subsidiaries. As a result, some authors have used the term ‘broad banking’ to refer to the new US legislation so as to separate it from the less restrictive European universal banking (for more detailed discussion on these issues, see Barth et al, 2000, and Benston, 1994).

principle upon which the supervisory system is built for instance in the United States. In Europe, the situation is however rapidly changing with the tendency being towards integrated supervision. Although the Finnish system already exhibits partial integration in the sense that banking and securities business are supervised by a single authority called the Financial Supervision Authority (FSA) while the supervision of insurance companies is undertaken by another agency called the Insurance Supervision Authority (ISA), the recent developments in financial markets and in other countries' supervisory structures have intensified the Finnish debate on whether the integration of supervision should be taken one step further by creating a single national authority responsible for the supervision of all the three sectors.

A similar type of discussion is taking place at the level of EU. However, here the debate concerns the creation of a supranational supervisory authority aimed at facilitating the oversight of financial industry whose supervision at the European level is yet in the hands of independent national supervisors although the industry itself is becoming increasingly multinational. In particular, at the same time as financial conglomeration has gathered pace in Europe, there has also been a consolidation trend in the financial industry whereby the providers of financial services merge with the same sector firms not only domestically but also across the national borders. According to Berger et al (2000), the value of cross-border consolidation in Europe has increased more rapidly in recent years than in the past. In fact, Berger et al (1999) estimate that, although domestic deals still dominated in the banking industry, in the securities and insurance industries the market value of cross-border mergers and acquisitions involving European financial institutions of same sector exceeded that of domestic consolidations in the period 1985–1997. In Scandinavia, the emergence of financial conglomerates and multinationals has been closely related since some prominent examples of financial conglomerates like Nordea have extensive cross-border activities.

Reflecting the preceding developments in the financial industry, supervisory issues have become a concern also in economics. One aspect that has attracted much attention in the recent theoretical literature (and also in the political debate) is the role played in supervision by the corporate structure of financial conglomerates and multinationals. Another aspect that has raised interest is the interaction between official and private supervision. I will now turn to discuss these issues.

## 4 Financial supervision

In this section, I first briefly discuss the concept of financial supervision including the interplay between the official and private supervision. After that, I describe the relevant corporate structures for financial conglomerates and multinational financial institutions and discuss some central supervisory concerns raised by them in the light of the existing theoretical literature. Special attention is paid to the legal framework of the EU.

## 4.1 Supervision of financial institutions

As distinct from regulation, which generally refers to the rules that govern the behavior of the providers of financial services, supervision is the oversight that takes place to ensure compliance with the regulatory rules (Barth et al, 2006). Typically, individual financial institutions are subject to both official and private supervision. The official supervision of individual institutions takes place along two dimensions; prudential and conduct-of-business. The aim of prudential supervision is to promote the safety and soundness of financial institutions by systemically evaluating the risk-profile and risk-bearing capacity of the supervised entities so as to ensure their solvency. The conduct-of-business supervision, in turn, aims at protecting investors and consumers alike by promoting a fair and transparent market process.

In some cases, financial institutions are also supervised in aggregate. If defined as an explicit task, this type of macroprudential supervision oriented at preserving the stability of the financial system as a whole is typically undertaken by the central bank. Examples of central banks with this explicit duty are the Bank of England and, outside Europe, the US Federal Reserve while Bundesbank (and the Bank of Finland for that matter) is an example of central bank without an explicitly defined role as the guarantor of the stability of the financial system. However, central banks around the world have the general task of promoting financial stability. As a result, Bundesbank (as well as the Bank of Finland) is expected to contribute toward efficient and harmonized operation of payment system and, to this end, has the need to conduct also macro-level analysis and surveillance of financial markets (for more on this topic, see Koskenkylä and Koskinen, 2004, and Vives, 2001).

To fulfill their supervisory duties, the official supervisors have access to various supervisory powers. A characteristic feature of banking and insurance industry is that the operation of banks and insurance companies is regulated among other things through an authorization process. In terms of the different supervisory powers, the power that has attracted most attention in the recent economic literature is the ability of a supervisor to grant and, in particular, to withdraw the license of a financial institution. Other typical supervisory powers include for example the ability to conduct off-site and on-site examinations and to impose sanctions and fines for non-compliance.<sup>5</sup>

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<sup>5</sup>For a listing of the typical supervisory powers, see Martínez and Rose (2003). For more general discussion on the relationship between statutory supervisory powers and their effectiveness and enforcement, see for example Barth et al (2006).

Apart from the official supervision, financial institutions are also subject to other forms of supervision through internal controls, auditing, ratings, self-regulation and monitoring by stakeholders (such as debt and equity holders). Some economists have argued that official supervision should, in fact, be subordinate to private supervision. That is, the role of official supervision should be to create an environment conducive to effective private supervision, generally referred to as market discipline, by ensuring information disclosure (in accurate form) by financial institutions.<sup>6</sup>

In terms of international banking regulation and supervision, the importance of private supervision is reflected to some extent on the revised Basel II Capital Accord which, in contrast to its predecessor, includes market discipline as one of its three pillars although capital ratios still receive the overwhelming majority of the attention. However, insofar as imposed common standards on capital ratios are considered as reliable measures of economic capital adequacy, they will allow market participants to better assess and compare the creditworthiness of banks both cross-sectionally and across time. Consequently, Basel II with its regulatory standards for minimum capital requirements may serve to further market discipline also in a more indirect way (for more on this, see Gordy and Howells, 2006).

In principle, market discipline may both complement official supervision and provide some advantages over it. Potential advantages include the aggregation of information from numerous market participants as well as the ability to shift the burden of proof to the financial institution that needs to demonstrate it is not excessively risky to the markets. Market discipline could also complement official supervision in that the pricing of risk-sensitive debt instruments could be considered in setting deposit insurance premiums or in triggering supervisory action like on-site examination.<sup>7</sup> Adopting the viewpoint that information contained in securities prices could be used to complement official supervision Lehar et al (2005) argue that, by being able to use market information to target auditing on bad banks, supervisory authorities could benefit from incorporating market information into the supervisory process especially in good times.

In practice, the use of risk-sensitive debt instruments is considered to be an effective way to promote market discipline both through the instruments' issuance market and their secondary market. Although not the only instrument capable of providing market discipline, subordinated notes and debentures are usually seen as particularly attractive for disciplinary purposes due to three reasons: they are among the first liabilities to lose value in the event of failure (in particular, a bailout in the case of failure is considered as highly unlikely), they do not benefit from any upside of excessive risk-taking thus creating an incentive for investors to monitor and limit risk-taking, and, thirdly, they have

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<sup>6</sup>See Barth et al (2006) for this view; for the concept of market discipline as well as discussion of the market-based banking supervision system of New Zealand, see Llewellyn and Mayes (2003) and Mayes (2000), respectively.

<sup>7</sup>For the supervisory authorities to benefit from market information, the market does not have to be better informed than the authorities; rather, the parties just have to respond to different information. In this case, the supervisors may benefit from incorporating market information into their own assessments.

a relatively long maturity diminishing the ability of investors to withdraw their funds and run.<sup>8</sup>

To shed some light (among other things) on the relationship of market discipline to official regulatory and supervisory tools, I will next turn to discuss the relevant corporate structures of financial conglomerates as these structures form the context in which the supervisory issues have been analyzed in the recent theoretical literature. Simultaneously I also discuss the specifics of the supervision of financial conglomerates within the EU.

## 4.2 Supervision and corporate structure of financial conglomerates

In the prudential supervision of regulated entities there are three layers within the legal framework of the EU all of which can be present in the supervision of a financial conglomerate. First, the individual regulated entities are supervised on a stand-alone or solo basis. Second, regulated entities forming a group active in the same sector of the financial industry are subject to consolidated or supplementary supervision. This type of consolidated supervision is well established for banking groups while insurance groups are subject to a more limited supplementary supervision. The Financial Conglomerates Directive deals with the supervision of the third layer; ie, the supplementary supervision of heterogeneous financial services groups active in several financial sectors. The Financial Conglomerates Directive is based on so called solo-plus approach. It takes as its starting point the solo supervision of individually regulated entities and complements it by a group-wide assessment. It also introduces a coordinator which is the competent authority assigned the responsibility to exercise and coordinate the supplementary supervision when several sectoral supervisors are involved or the conglomerate has cross-border activities (for an in-depth discussion of these issues, see Dierick, 2004, and Gruson, 2004).

Within this general supervisory framework, the financial conglomerates can provide financial services through various corporate structures. As the existing literature is systematically bank-oriented, I concentrate here on the four main organizational ways for a bank to extend its scope of activities into the securities business and insurance.<sup>9</sup> Under the first structure, all the financial services are provided within a single corporate structure supported by a single capital base. Although called somewhat misleadingly as the German

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<sup>8</sup>A variety of proposals has been put forward as to what characteristics subordinated debt programs should have (eg, should the issuance of subordinated debt be mandatory, what type of institutions should be subject to it, who (in the case of bank-holding companies) should issue it, what amount of assets should be funded through it, how regularly issuance should occur etc.). For a general discussion on these issues, see the Board of Governors of the Federal Reserve System Staff Study (1999); for a model where compulsory issuance of subordinated debt may allow to reduce minimum capital requirement, see Decamps et al (2004).

<sup>9</sup>This section on corporate structures draws heavily on Dierick (2004), Herring and Santomero (1990), Vander Vennet (2002) and Walter (1997).



universal bank, no actual bank conforms to this type of fully-integrated structure (combining banking, securities activities and insurance as in-house departments) once insurance activities are included. In particular, while it is possible in Europe to conduct banking and securities business within a single legal entity, such a structure is not possible when the scope of activities is extended to also cover insurance. In fact, combining insurance with banking, securities or any other commercial business in the same legal entity is prohibited by law. This same separation applies also to the different types of insurance activities which should be undertaken in distinct entities.

In terms of the degree of integration between the activities, the ‘next-best solution’ is then partial integration; ie, to undertake commercial and investment banking within the same entity, and to conduct the separately regulated insurance activity through a separately capitalized subsidiary. The third option is to conduct both securities activities and insurance as the subsidiaries of the parent bank. The model entailing the most extensive legal separateness between the activities is the holding company model under which each of the activities of banking, securities business and insurance is undertaken via a separately capitalized subsidiary of a holding company. Excluding the fully-integrated model, all the other three models are possible in Europe while the United States is more restrictive banning also partial integration.

In principle, the preceding corporate structures insulate the different financial activities from the outcomes of the other activities to a different degree. In fact, due to the cushioning effect of the holding company that, in contrast to the bank-parent model, makes the relationship between the bank and the other units only indirect, the perceived better insulation of banking activities from the potential problems in nonbank affiliates together with the perceived improved easiness of limiting safety net coverage to the traditional banking activities, have importantly directed the US regulatory decision-making to favor the holding-company structure. This has led holding-company to be the predominant corporate structure in the United States while in countries, which allow more freedom to choose the organizational form, the banks typically conduct securities activities in-house and insurance activities in subsidiaries (Herring and Santomero, 1990, and Santos, 1998). However, whether (as is generally argued) a bank’s incentives to bail out a failing nonbank unit are really decreased when the unit is an affiliate rather than a subsidiary, remains an open question.<sup>10</sup> Consequently, the actual effective differences between the alternative corporate structures tend in practice to be less clear-cut especially since a financial institution corresponding to a certain legal structure may also itself engage into voluntary (ie, self-imposed) ring-fencing and firewall arrangements to operationally isolate different units from each other (Herring and Santomero, 1990, and

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<sup>10</sup> According to a former chairman of a large American bank, it is inconceivable that any major bank would walk away from any subsidiary of its holding company since, despite legal separateness, markets do not generally perceive the units as independent (Santos, 1998). To limit the reputational losses associated with an affiliate’s failure in a holding-company structure, the separateness of affiliates is sometimes accentuated by requiring firewalls such as that an affiliate differ from the bank name (Herring and Santomero, 1990).

Song, 2004).<sup>11</sup>

Building on the idea that the corporate structure of financial conglomerate may affect the degree of isolation between different activities, Freixas et al (2006) develop a stylized model where a financial conglomerate can adopt one of two structures; a holding-company structure or an integrated structure. Under the holding-company structure, the financial conglomerate consists of a deposit financed entity (whose debt holders, called as depositors, have access to deposit insurance) and of a non-deposit financed entity with each of these entities having a separate capital base and, consequently, also a separate capital requirement. In the integrated structure these entities are combined under a single capital base subject to a single capital requirement which, in contrast to the holding-company structure, introduces a joint liability between the entities. Due to this built-in bailing-out policy, the integrated structure is able to profit from diversification benefits since a failure of an investment project in one entity can be cancelled out by a successful project in the other entity; under the holding-company structure these benefits are lost because the entities fail independently.

A central supervisory concern raised in context of financial conglomerates is the possibility of regulatory arbitrage which refers to the risk that investment projects are transferred within the conglomerate structure from one entity to another so as to take advantage of potentially lower capital requirements. One of the main insights of the model by Freixas et al is that, although a holding-company financial conglomerate is unable to access diversification benefits and, due to the separate capital requirements, is able to engage into regulatory arbitrage, such a structure can nevertheless be socially optimal (and even dominate an integrated structure) if capital requirements are set appropriately.<sup>12</sup> This necessitates that the capital requirement for the holding-company bank is set above that of the non-deposit financed entity so as to take advantage of differences in market discipline and, in contrast to the conventional wisdom, to encourage regulatory arbitrage (ie, the shifting of

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<sup>11</sup>The effective differences may also get blurred by the actions of the regulators. In the United States the regulators have for example attempted to introduce a so-called source of strength doctrine according to which the holding-company has a duty to act as a source of financial strength to its banking subsidiary. The aim is to simulate the bank-parent model where, if the bank gets into financial trouble, the bank's creditors can claim the assets of the subsidiaries (as the capital of these units is an asset of the bank) while in the holding-company model the capital is an asset of the holding-company and, hence, beyond the reach of the bank's creditors (Santos, 1998).

<sup>12</sup>However, one should be careful in interpreting this result as evidence of the superiority of the holding-company structure as compared to the other alternative models of *conglomerate structure*. In particular, interpreting the non-deposit financed entity as an insurance company is only possible if the conglomerate adopts the holding-company structure. Furthermore, interpreting the integrated structure as a financial conglomerate where banking and securities business are conducted under a single capital base is questionable for two reasons. First, under the current EU legislation, such a combination is considered as a homogeneous financial group and, consequently, it does not fall under the Financial Conglomerates Directive. Second, it is not possible to combine banking and securities business in such a way in the United States. As a result, in contrast to being a comparison between two forms of financial conglomerates, the model is (under the current European and US legislation) in essence a comparison between a traditional European-style universal bank and a holding-company financial conglomerate.

projects from the bank to the other division).<sup>13</sup>

Interestingly, the results of Freixas et al suggest that strict enough market discipline may justify the setting of capital ratio for the non-deposit financed entity to zero, thus making official regulation and, consequently, also official supervision partly unnecessary. In context of insurance markets, similar result is also reached by Rees et al (1999) who show that, if consumers are fully informed about the risk of insurer's insolvency, capital regulation is redundant since insurers will never risk being insolvent. Rees et al then argue that the primary function of official regulation and supervision should be information provision and, only secondarily, capital regulation. In banking, similar conclusion emphasizing the priority of concentrating on information dissemination in the supervision process is made by Demirgüç-Kunt et al (2006) who show that bank soundness is substantially improved by compliance with the information provision principles of Effective Banking Supervision issued by the Basel Committee on Banking Supervision.

As a final remark before moving to the analysis of multinational financial institutions, there tends to be skepticism as to whether deposit insurance has such a substantial effect on market discipline as Freixas et al seem to suggest. In particular, it is argued that the small (retail) depositors whose deposits are insured are unlikely to do any monitoring anyway. This view is based on the idea that small depositors, who generally are the primary holders of bank debt, are too unsophisticated and dispersed to have either the understanding or the incentive to perform monitoring. In fact, Dewatripont and Tirole (1993) argue under their representation hypothesis that regulation in the form of a private or public representative is motivated in particular by the need to protect these small depositors.

### 4.3 Supervision and organizational structure of multinational financial institutions

In this section, I consider the supervision of multinational financial institutions, especially banks, in the EU. Before discussing the essential principle affecting the supervision of multinational banks, namely the principle of home country control, I introduce the main organizational forms for multinational banking.

There are several forms under which multinational banking can be undertaken. These organizational forms differ in the extent of activities they allow the bank to conduct abroad. Ranked in order of increasing foreign involvement, these forms are correspondent banking, representative offices, agencies, branches and subsidiaries. While only a limited range of banking

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<sup>13</sup>In Freixas et al, the debt holders of the non-deposit financed entity are assumed to exercise perfect market discipline while the depositors are discouraged from exercising it because deposit insurance insulates them from any potential losses. These differences in market discipline then make it optimal to set the capital requirements so as to encourage the transfer of projects to the entity where risk is priced appropriately (ie, increased risk-taking leads to higher cost of funds). For a model, where market discipline is reduced not because of deposit insurance but because diversification diminishes the sensitivity of the aggregate cash flow to the investment decisions of individual divisions, see Boot and Schmeits (2000).

activities in the foreign market is allowed under the first three structures, a full range of activities is typically available for a branch and subsidiary (for a detailed discussion about the allowed activities under each of these forms, see Curry et al, 2003).

Notwithstanding the similarities in the extent of permitted activities, foreign branches differ from foreign subsidiaries in terms of supervision due to the differences in the authorization process. In particular, in contrast to foreign subsidiaries which are basically considered as local banks and, consequently, require separate authorization by the host country officials, foreign branches are extensions of the home country bank and, as such, do not require further authorization. As a result, based on the principle of home country control which, as a central principle of supervision in the EU, allocates the supervision of solvency in the hands of the officials of the country where the bank has been authorized, foreign branches are supervised by the home country officials while subsidiaries are supervised by the host country.<sup>14</sup>

In effect, the branch structure creates a single European passport by enabling a bank authorized in one EU country to offer financial services in the other EU countries, provided of course that the bank has been authorized to offer such services in the home country. The access to this passport is, however, conditional on the choice of branch structure. An interesting feature of the European cross-border banking is that it often takes place in the form of subsidiaries although, in contrast to branch structure, this necessitates a separate authorization by the host country officials and, as a result, increases the regulatory burden (for an interesting discussion about this topic, see Dermine, 2002). Loranth and Morrison (2003) argue that this phenomenon may result from the desire of banks to avoid a potential underinvestment problem caused by the inherent bailing out policy of branch structure that reduces the value of deposit insurance subsidy and, consequently, may lead a bank with branch structure to set an inefficiently high hurdle rate for its investment.<sup>15</sup>

Insofar as legal impediments have played a role in directing the choice of organizational structure, the European Company Statute aimed at enabling companies established in more than one European Union member state to merge and operate under a single set of rules may well prove to have an important effect on the structure in which cross-border banking is carried out in the future. In this respect, an interesting example is Nordea which is planning to take advantage of the European Company Statute and replace its current subsidiary-based banking operations in several Nordic countries with a branch structure headquartered in Sweden. However, there still remains open legislative issues outside the scope of the European Company Statute concerning for instance the organization of deposit insurance which under

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<sup>14</sup>However, even in the case of foreign subsidiaries the consolidated supervision is the responsibility of the home country officials. The home country principle also applies to deposit insurance which, in the case of foreign branches, is provided by the home country.

<sup>15</sup>Under the branch structure, the branches and the parent institution are jointly liable for any losses. Under the subsidiary structure, the parent institution is not liable for the failure of a subsidiary but can (at least in principle) walk away from a failing subsidiary so as to extract the full value of deposit insurance safety net.

the planned new structure should at least in principle be entirely provided by Sweden. Especially, the difficulties associated with withdrawing and transferring contributions from the existing national deposit insurance schemes is identified as one factor slowing down the transition to the branch structure (on the Nordea case, see Mayes, 2005).

Taken together, a characteristic feature of the current supervisory framework of multinational financial institutions in Europe is decentralized supervision which means that multinational financial institutions are simultaneously supervised by several national authorities. This has raised the question of strategic interaction between the home and host country authorities among the central issues in the literature on multinational banking supervision.<sup>16</sup>

The paper by Holthausen and Rønde (2005) illustrates one of the central supervisory concerns related to multinational banks in a framework where the supervisory authorities may intervene in the operation of a multinational bank by closing it down. Holthausen and Rønde concentrate on a multinational bank which conducts its foreign operations through a branch. In this case, the consolidated supervision as well as the decision of whether to close the bank down are in the hands of the home country supervisor. Holthausen and Rønde show that, if the two countries are differently affected by the closure decision, the self-interested national supervisors who only care about their own national welfare do not agree upon the closure decision which leads the host country supervisor to withhold some of its supervisory information. As a result, the first best closure decision is not achieved.<sup>17</sup>

The model by Holthausen and Rønde highlights one of the central supervisory concerns related to the principle of home country control; namely that the incentives of national supervisors to acquire or share information may be adversely affected by the allocation of the ultimate supervisory responsibility included in this principle.<sup>18</sup> In practice, one factor causing differences in the way that the countries are affected by closure decisions and, as a result, potentially acting as an impediment to information acquisition or flow between the supervisors is that the multinational financial institutions may not be of same systemic importance in all countries. In Finland, systemic concerns related to the ability of the authorities to achieve effective and timely supervisory decisions have been raised in the context of Nordea, which plays a more important role in the Finnish financial markets than in Sweden, but has plans (as was discussed above) to replace its subsidiary-based banking

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<sup>16</sup>For a general discussion on the problems of home country control, see for example Enria and Vesala (2003) and Mayes and Vesala (1998).

<sup>17</sup>In a related paper, Repullo (2001) shows that lack of coordination among national supervisors may lead the domestic supervisor to apply softer closure policy to a multinational bank with branch structure than to a national bank. Calzolari and Loranth (2006), in turn, demonstrate that the organizational structure of multinational bank (branch or subsidiary) may cause differences in the intervention and information acquisition policies of the home and host country supervisors. However, neither of these papers considers strategic information exchange between the separate authorities.

<sup>18</sup>On the regulatory side, an analogous concern is that decentralized regulation may lead to a race to the bottom in capital standards. For a model along these lines, see Acharya (2003) and Dalen and Olsen (2003).

structure in Finland by a branch structure to be supervised dominantly by the Swedish authorities instead of the Finnish ones.<sup>19</sup>

Conflict of interest between national authorities may also be triggered by the differing weights these authorities put on factors like the soundness or profitability of the banking sector. By taking this approach, Dell’Ariccia and Marquez (2005) analyze capital regulation among competing national regulators. In the process of doing this, they raise an important question. What would it take for the national regulators to prefer centralized (ie, supranational) regulation? I know turn to this question of integration of supervision so as to analyze some of the challenges related to it. Although the viewpoint will predominantly be one of financial conglomerates, understanding the concerns raised by the integration of sectoral supervisors also helps to shed some light on the potential challenges posed by the integration of supervision at the European level.

## 5 Integration of sectoral supervisors

Until recently, the supervision of financial institutions at national level has been based in many European countries on the sectoral model of supervision. In this model, there are separate supervisors for banking, securities business and insurance. However, cross-sector arrangements for supervision in the form of functional or integrated model have increasingly gained popularity. In the functional model, there are separate supervisors for the prudential supervision and the conduct of business supervision across the sectors. The underlining principle for the organization of supervision is thus the objective of supervision. For example in the Netherlands, the current supervisory system allocates the prudential supervision in all the three sectors to an authority distinct from the authority responsible for the conduct of business supervision in all the three sectors. In the integrated model, in turn, there is a single supervisor for banking, insurance and securities combined. Except for Finland, having a single supervisor conducting prudential and conduct of business supervision across the sectors is the typical supervisory arrangement in the Scandinavian countries.<sup>20</sup>

Several reasons have been put forward so as to justify the integration of supervision at national level. One of the leading reasons is related to the emergence of financial conglomerates and the increasing need for the sectoral supervisors to cooperate and coordinate their actions so as to ensure that these institutions are supervised comprehensively enough. Another set of arguments is related to the possibility to reap economies of scale and scope by integration.

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<sup>19</sup>In context of financial conglomerates, there has been a similar type of concern with respect to the supervisory objectives of different supervisors since in insurance and securities supervision consumer and investor protection typically are of great concern, whereas in banking supervision systemic risk considerations play a central role.

<sup>20</sup>Whatever way supervision is organized, the institutional structure of supervision is a second order issue in the sense that the conditions for effective supervision (ie, clear objectives, independence, accountability, adequate resources and enforcement powers) should first be in place; for discussion on this, see Abrams and Taylor (2000).

These include among other things the possibility to operate under a single management, the opportunity to avoid duplication of monitoring costs and the possibility to prevent a moral hazard in teams problem whereby the agencies blame each other in case something goes wrong. Furthermore, integration may also enable the industry to enjoy economies of scope to the extent that integrated supervision simplifies reporting, allows ‘one-stop-shopping’ and reduces costs of supervision which in some cases (eg, in Finland) are paid by the industry.

In principle, there are alternative means to facilitate cooperation and coordination in supervision without establishing an integrated supervisory authority. One such vehicle (both within and between countries) is memorandum of understanding which is a formal agreement between independent authorities setting out their respective supervisory tasks and responsibilities. However, a typical feature of these agreements is that they are legally non-binding. Other proposed solutions to enhance information sharing between sectoral supervisors include mutual board representation, introduction of formal consultation procedures and the establishment of cross-sectoral committees. Generally, there is scepticism whether these mechanisms are sufficient for cooperation especially if some of the information is confidential (ie, cannot be freely exchanged between independent authorities).

At the international level, the harmonization of regulatory and supervisory policies functions as a coordination device in the absence of a supranational authority by basically tying up the hands of various national authorities. However, for the harmonization to be an effective tool it has to be comprehensive enough; otherwise, as Acharya (2003) demonstrates, any benefits from cross-border standardization of regulatory policies like capital ratios can be undone by competing national authorities unless central supervisory policies such as closure policies are standardized as well. As a result, less than full step towards complete coordination can be more harmful than no step at all.

Diversification of business lines by financial institutions contrasts sharply with the trend of deconglomeration in other industries. As supervisory structures should be robust to changes in the composition of financial institutions, this has called in question the sensibility of integrating supervision after all since financial institutions may posit on less diversification in the future. Whether this trend of conglomeration will turn out to be a long-lasting phenomenon in the financial markets, there are nevertheless further reasons (most prominently the emergence of new financial products) that favor and require tight cooperation of supervisors. For instance, new types of securities products such as credit derivatives share in practice many similarities with an insurance product (Briault, 1999). Consequently, as the development of new financial products has blurred the distinctions between traditional industry lines making it more difficult for supervisory authorities to classify products by the type intermediary, the case for increased cooperation in supervision does not rest entirely on the popularity of financial conglomerates.

The integration of sectoral supervisors poses challenges as well. In what follows, I will outline some of these by broadly categorizing them into multitasking-based and non-multitasking based challenges.

## 5.1 Multitasking-based challenges for integrated supervision

As a by-product of integration, a plurality of tasks gets allocated to a single authority. This may give rise to several problems. First, some of these tasks might be in conflict with each other. This concern is sometimes used to justify why supervision should not be integrated to the central bank although there might be synergies (informational economies of scope) between supervision and the conduct of central bank's other tasks. For example, it is feared that an initiative by the central bank to promote the profitability of a troubled financial sector might conflict the aim of price stability. In accordance with this view, Di Noia and Di Giorgio (1999) find that allocating banking supervision to the central bank leads to higher and more volatile inflation rates. Furthermore, Kahn and Santos (2005) argue in a multitasking framework that allocating bank supervisory powers to the lender of last resort which typically is the central bank is conducive to excessive forbearance (ie, too few bank closures taking place); this can be improved upon by giving the supervisory powers to the provider of deposit insurance instead.<sup>21</sup> A related, although not necessarily central bank specific concern is that a desire to acquire reputation as a capable supervisor might lead to lax attitude and excessive passivity in intervention so that bank closures will not put the authority's supervisory capacity in question (for a model along these lines, see Boot and Thakor, 1993). Arguably much for this reason prompt corrective action (PCA) requiring mandatory regulatory intervention for undercapitalized institutions was introduced in the United States in 1991. To limit supervisory forbearance, it is also sometimes suggested that the potentially conflicting tasks of supervision and intervention (ie, withdrawal of operating licence) should be separated (for discussion on this, see Dewatripont and Tirole, 1993).

Second, a multiplicity of tasks may introduce problems with incentive provision if performance on some tasks is less easily measured. In this setting, providing incentive pay on the measurable task tends to distort the effort against the activities whose results are less measurable (see Holmström and Milgrom, 1991). Consequently, the use of high-powered incentives may be precluded. The incentive provision problem is even more compounded if, as the result of the integration, the mission of the agency is so broad as to become

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<sup>21</sup>However, this solution may lead to the neglect of investors' interests and market discipline if the provider of deposit insurance sees the protection of deposit insurance fund as its primary duty. In particular, Eisenbeis (2004) points out that the Federal Deposit Insurance Corporation (FDIC) in the United States resisted for years the disclosure of even most basic financial information on banks out of fear that accurate information might trigger a run on financial institutions and lead to losses to the deposit insurance fund. The separation of monetary and supervisory powers may also weaken the accuracy of central bank's macroeconomic forecasts by preventing the central bank to access confidential bank supervisory information (see Peek et al, 1999).



‘fuzzy’. Since broadening the mission makes the market evaluation of the officials’ talent more difficult, alternative measures like career concerns become less efficient in inducing the officials to exert effort (for the incentive costs of the pursuance of multiple goals by agencies, see for example Dewatripont et al, 1999).

Finally, since the integration of supervision is typically accompanied with a move to single management, the resulting multiplicity of tasks may cause overload problems in monitoring if such a move is associated with resource cuts and the monitoring ability of individuals is limited (ie, it is increasingly costly for an individual to monitor an increasing number of projects). This problem can manifest itself as an internal problem whereby the capability of upper hierarchical levels of the supervisory agency to oversee the lower ones gets more limited or as an external problem entailing limitations in the ability of the supervisory authority to monitor the industry (of course, these problems are interrelated in the sense that the first one can give rise to the second one).

## 5.2 Other challenges

One argument sometimes raised in favour of integrated supervision is that, since it creates a larger supervisory entity, it could alleviate the threat of regulatory capture; that is, it could function against the threat that regulatory and supervisory policies get driven by the desires of powerful interest groups like the industry. Interestingly, Laffont and Martimort (1999) however argue that the integration of supervisors may actually increase the threat of regulatory capture by enabling a self-interested supervisor to have a larger scope to enter into collusive agreements with the industry thanks to the monopoly in the acquisition of supervisory information. Prevention of collusive behavior then establishes a potential case for the separation of supervisors.

Yet another argument for keeping the supervisors separated comes from the possibility to play supervisory agencies against each other (this is a variant of the yardstick competition argument put forward by Shleifer, 1985). However, as Maskin et al (2000) argue, the possibility to capture the benefits of yardstick competition does not necessarily require keeping the supervisors separate. In particular, in an integrated agency the benefits of relative performance evaluation could be captured through organizational design by choosing the multidivisional structure (M-form) over the unitary structure (U-form).<sup>22</sup> Note that this argument establishes an interesting analogy between the organizational design of the corporations to be supervised and that of the supervisor; in both cases, the organizational structure seems to play a role in the emergence of supervisory challenges.

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<sup>22</sup>When applied to the design of integrated banking and insurance supervisor, this implies for instance that the prudential supervision of banking and insurance sectors should be undertaken not in the same but in separate divisions.

## 6 Conclusions

A key feature of the changes that have taken place in the European financial markets is a substantial increase in the interdependence of different sectors of financial markets as well as countries. This has raised the question whether a decentralized supervisory framework is equipped to handle the challenges of ongoing further integration and structural change.

However, as discussed in this paper, a move to integrated supervision is likely to posit challenges of its own. An inherent characteristic of integrated supervision is the monopoly position of single authority in the supervision of financial industry. Consequently, careful consideration and design is needed to ensure the effective functioning of integrated supervision as such a move necessarily results to a situation where a plurality of tasks gets allocated to a single authority giving rise to several potential multi-tasking related challenges.

In particular, it is important for a multitasking organization to have a clear sense of mission for the integration process not to lead to unintended negative consequences like the demoralization of staff or departure of experienced personnel.<sup>23</sup> The design of the objective is also central so as to prevent one agency's approach to supervision from becoming overly dominant over that of the other agencies especially if, at the outset of the integration process, one of the agencies outnumbers the others in terms of staff or resources. Otherwise, the integration process may threaten the recognition of industry-specific characteristics and expertise in supervision. Similar concern of course applies to the design of infrastructure like the existence of adequate and up-to-date legislation and sufficient budgetary resources as well as operational systems (IT in particular). Failure to account for these challenges may unnecessarily complicate and prolong the transition process making it more difficult to achieve desired improvements in the effectiveness of supervision.

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<sup>23</sup>In a study of integrated supervisory agencies, Martínez and Rose (2003) found that these two problems were commonly encountered in establishing integrated agencies.

## References

- Abrams, R – Taylor, M (2000) **Issues in the unification of financial sector supervision.** IMF Working Paper WP/00/213.
- Acharya, V (2003) **Is the international convergence of capital adequacy regulation desirable?** *The Journal of Finance*, LVIII(6), 2745–2781.
- Barth, J – Caprio, Jr. G – Levine, R (2006) **Rethinking bank regulation. Till angels govern.** Cambridge University Press.
- Barth, J – Brumbaugh, Jr. D – Wilcox, J (2000) **Policy watch: the repeal of Glass-Steagall and the advent of broad banking.** *The Journal of Economic Perspectives*, 14(2), 191–204.
- Benston, G (1994) **Universal banking.** *The Journal of Economic Perspectives*, 8(3), 121–143.
- Berger, A – Demsetz, R – Strahan, P (1999) **The consolidation of financial services industry: causes, consequences, and implications for the future.** *Journal of Banking & Finance*, 23, 135–194.
- Berger, A – DeYoung, H – Udell, G (2000) **Globalization of financial institutions: evidence of cross-border banking performance.** *Brookings-Wharton Papers on Financial Services*, 23–125.
- Board of Governors of the Federal Reserve System (1999) **Using subordinated debt as an instrument of market discipline.** Staff Study 172.
- Boot, A – Schmeits, A (2000) **Market discipline and incentive problems in conglomerate firms with applications to banking.** *Journal of Financial Intermediation*, 9, 240–273.
- Boot, A – Thakor, A (1993) **Self-interested bank regulation.** *The American Economic Review*, 83 (2), 206–212.
- Briault, C (1999) **The rationale for a single national financial services regulator.** FSA Occasional Paper.
- Calzolari, G – Loranth, G (2006) **Regulation of multinational banks: a theoretical inquiry.** A manuscript.
- Calzolari, G – Loranth, G (2001) **On the regulation of multinational banks.** A manuscript.
- Curry, E – Fung, J – Harper, I (2003) **Multinational banking: historical, empirical and case perspectives.** In Mullineux, A and Murinde, V (eds.), *Handbook of International Banking*. Edward Elgar Publishing.
- Dalen, D – Olsen, T (2003) **Regulatory competition and multinational banking.** CESifo Working Paper No. 971.

- Decamps, J-P – Rochet, J-C – Roger, B (2004) **The tree pillars of Basel II: optimizing the mix.** *The Journal of Financial Intermediation*, 13, 132–155.
- Dell’Ariccia, G – Marquez, R (2005) **Competition among regulators and credit market integration.** Forthcoming in the *Journal of Financial Economics*.
- Demirgüç-Kunt, A – Detragiache, E – Tressel, T (2006) **Banking on the principles: compliance with Basel core principles and bank soundness.** IMF Working Paper 06/242.
- Dermine, J (2002) **European banking: past, present and future.** A manuscript.
- Dewatripont, M – Jewitt, I – Tirole, J (1999) **The economics of career concerns, part II: application to missions and accountability of government agencies.** *The Review of Economic Studies*, 66(1), 199–217.
- Dewatripont, M – Tirole, J (1993) **The prudential regulation of banks.** The MIT Press.
- Dierick, F (2004) **The supervision of mixed financial services groups in Europe.** ECB Occasional Paper Series, No. 20.
- Di Noia, C – Di Giorgio, G (1999) **Should banking supervision and monetary policy tasks be given to different agencies?** *International Finance*, 2(3), 361–378.
- Eisenbeis, R (2004) **Agency problems and goal conflicts.** Federal Reserve Bank of Atlanta Working Paper 2004-24.
- Enria, A – Vesala, J (2003) **Externalities in supervision: the European case.** In Kremers, J – Shoenmaker, D – Wierdsma, P (eds.), *Financial Supervision in Europe*. Edward Elgar Publishing.
- The Financial Conglomerates Directive 2002/87/EC.
- Freixas, X – Lorianth, G – Morrison, A (2006) **Regulating financial conglomerates.** Forthcoming in the *Journal of Financial Intermediation*.
- Gordy, M – Howells, B (2006) **Procyclicality in Basel II: can we treat the disease without killing the patient.** *Journal of Financial Intermediation*, 15, 395–417.
- Gruson, M (2004) **Supervision of financial conglomerates in the European Union.** A manuscript.
- Herring, R – Santomero, A (1990) **The corporate structure of financial conglomerates.** *Journal of Financial Services Research*, 471–497.
- Holmström, B – Milgrom, P (1991) **Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design.** *Journal of Law, Economics and Organization*, 7, 24–52.

- Holthausen, C – Rønne, T (2005) **Cooperation in international banking supervision**. CEPR Working Paper No. 4990.
- Joint Forum on Financial Conglomerates (1999) **Supervision of financial conglomerates**.
- Kahn, C – Santos, J (2005) **Allocating bank regulatory powers: lender of last resort, deposit insurance and supervision**. European Economic Review, 49, 2107–2136.
- Koskenkylä, H – Koskinen, J (2004) **Financial stability, regulation and supervision**. In Koskenkylä, H (ed.), Financial integration. Bank of Finland Studies, A:108.
- Laffont, J-J – Martimort, D (1999) **Separation of regulators against collusive behavior**. The RAND Journal of Economics, 30(2), 232–262.
- Lehar, A – Seppi, D – Strobl, G (2005) **Using price information as an instrument of market discipline in regulating bank risk**. A manuscript.
- Llewellyn, D – Mayes, D (2003) **The role of market discipline in handling problem banks**. Bank of Finland Discussion Paper No. 21/2003.
- Loranth, G – Morrison, A (2003) **Multinational bank regulation with deposit insurance and diversification effects**. CEPR Discussion Paper No. 4148.
- Martínez, J – Rose, T (2003) **International survey of integrated financial sector supervision**. World Bank Policy Research Working Paper 3096.
- Maskin, E – Qian, Y – Xu, C (2000) **Incentives, information, and organizational form**. Review of Economic Studies, 67(2), 359–378.
- Mayes, D (2005) **The role of the safety net in resolving large financial institutions**. In Evanoff, D – Kaufman, G (eds.), Systemic financial crisis: resolving large bank insolvencies. World Scientific Publishing Co.
- Mayes, D (2000) **A more market based approach to maintaining systemic stability**. FSA Occasional Paper Series, No. 10.
- Mayes, D – Vesala, J (1998) **On the problems of home country control**. Bank of Finland Discussion Paper No. 20/1998.
- Mälkönen, V (2004a) **Capital adequacy regulation and financial conglomerates**. Journal of International Banking Regulation, 6(1).
- Mälkönen, V (2004b) **The efficiency implications of financial conglomeration**. Bank of Finland Discussion Paper No. 17/2004.
- Peek, J – Rosengren, E – Tootell, G (1999) **Is banking supervision central to central banking?** The Quarterly Journal of Economics, 114(2), 629–653.
- Rees, R – Gravelle, H – Wambach, A (1999) **Regulation of insurance markets**. The Geneva Papers on Risk and Insurance Theory, 24, 55–68.

- Repullo, R (2001) **A model of takeovers of foreign banks.** Spanish Economic Review, 3, 1–21.
- Santos, J (1998) **Commercial banks in the securities business: a review.** Journal of Financial Services Research, 14(1), 35–60.
- Shleifer, A (1985) **A theory of yardstick competition.** The RAND Journal of Economics, 16(3), 319–327.
- Shoenmaker, D (2006) **Reform of financial supervision.** Presentation held at the Bank of Finland on 19 May 2006.
- Song, I (2004) **Foreign market supervision and challenges to emerging market supervisors.** IMF Working Paper WP/04/82.
- Vander Venet, R (2002) **Cost and profit efficiency of financial conglomerates and universal banks in Europe.** Journal of Money, Credit, and Banking, Vol. 34(1), 254–282.
- Vives, X (2001) **Restructuring financial regulation in the European monetary union.** Journal of Financial Services Research, 19(1), 57–82.
- Walter, I (1997) **Universal banking: a shareholder value perspective.** Financial Markets, Institutions & Instruments, 6(5), 85–113.

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