

Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications

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Given all the talk of regulatory convergence in financial markets, one would think that good data would be available regarding the actual intensity of financial regulation in developed countries as well as a robust literature about how to determine the optimal level of regulatory intensity for financial markets and financial institutions. As it turns out, neither data nor theories are well developed on these topics. In this paper, I discuss first the considerable difficulties of conducting a theoretically complete analysis of costs and benefits in the area of financial regulation as well as the problems associated in making international comparisons between the observed levels of the intensity of financial regulation across national boundaries. Notwithstanding these difficulties, I proceed to present some data about direct regulatory costs of financial regulation in the United States and then engage in some preliminary international comparisons. Even after making adjustments for the size of U.S. financial markets, the costs of financial regulation in the United States are substantially higher than the costs observed in most other jurisdictions. Moreover, common law jurisdictions, in general, seem to incur substantially higher regulatory costs than do civil law jurisdictions.

The paper also presents some additional evidence about the level of regulatory intensity in the area of securities regulation by reporting data on public and private securities enforcement actions in the United States in recent years, including data on both monetary and non-monetary sanctions. Compared to at least the United Kingdom and Germany, the intensity of securities enforcement actions in the United States appears to be strikingly higher. Not only are there more financial regulators in the United States, but they carry bigger sticks than their foreign counterparts. While law on the books may be converging, the level of enforcement efforts seems to vary widely across national boundaries and even within the regions, such as Europe.

The paper concludes with some thoughts about additional lines of research in this area and then touches briefly upon the implications of my data for the debate over regulatory convergence and for future lines of research.

Several years ago, when I was giving a talk in South Korea on financial reform, I was asked a question I found difficult to answer. How many people should South Korea's new Financial Services Authority hire to oversee the country's financial services industry? As a conceptual matter, the answer was clear. The government should hire staff until the marginal benefit to be derived from additional employment exceeded marginal cost. A number of related theoretical guidelines also sprang to mind. In selecting among regulatory tools – including hiring decisions – the government should select the most cost effective combination of regulatory mechanisms given the country's endowments of technology, capital and labor. Due consideration should be given to the possibilities of self-regulation at the industry and firm level plus the capacity of market mechanisms to police certain activities more efficiently than government oversight. Within federal systems, a proper allocation of authority between central authorities and local institutions should be ascertained. All quite true in theory, but not exactly the kind of answer my interlocutor was seeking. He was looking for an answer like a staff of 100 or 1000 or 10,000.

Since this exchange, I have spent a reasonable amount of effort trying to come up with a more helpful response to what seems on its face a perfectly reasonable question. In a modern economy, what level of regulatory intensity is appropriate for the financial services industry? Upon reflection, I have concluded that this question is genuinely difficult to answer. The benefits of financial regulation are multi-faceted and likely vary across jurisdictions. Even once specified, many of these benefits are difficult to measure. Regulatory costs are somewhat easier to define, though also difficult to measure. It is, moreover, quite plausible that the efficacy of comparable regulations may be dramatically different in different jurisdictions, both because of variation in enforcement efforts across jurisdictions and because of variation in private responses to public mandates. Thus, the task of comparing marginal costs to marginal benefits in the field of financial regulation may be fundamentally intractable, and international comparisons of the sort implicit in such concepts as “regulatory convergence” may be highly problematic.

In grappling with this problem, I have uncovered some interesting empirical evidence of

potential interest to both my South Korean inquisitor and perhaps a broader academic audience as well. If one focuses on financial regulatory costs that can be measured objectively and compared across jurisdictions, there is a surprising heterogeneity across national regulatory systems. Whether measured in terms of regulatory budgets or enforcement efforts, regulatory intensity varies widely across jurisdictions. To be sure, there are considerable difficulties in making meaningful comparisons across countries of different sizes with different kinds of financial markets, not to mention the complexities of fluctuating exchange rates and differentials in wages. But the variations are so striking that I, at least, am convinced that genuinely different levels of regulatory intensity exist. These variations, moreover, are not exactly in the predicted direction. In particular, the common law countries – the United States, the United Kingdom, and countries formerly connected to the British Empire – report markedly higher levels of regulatory intensity on all dimensions I have been able to study. While many observers associate the civil law regimes with legal rigidity and bureaucratic ossification, these indicia on regulatory intensity in financial areas suggest that it is the common law countries that carry the bigger stick and swing it with greater frequency and force.

Suppose there are substantial differences in regulatory intensity across jurisdictions. What difference does it make? In the first instance, there is a question of whether increased regulatory intensity translates into net benefits for society. In some contexts, regulatory intensity might be counter-productive – for example in kleptocracies where the primary function of public authority is to extract wealth from the public for the benefit of government officials and their associates. Even in more benign settings where governmental efforts are simply ineffectual, increased regulatory intensity may do little good in and of itself, while dragging down other activities through higher tax rates. In some – perhaps many – domains, however, regulatory intensity may be associated with public benefits, and indeed there is some recent empirical evidence to support this proposition, albeit in extremely narrow slices of financial regulation.

In part this dearth of empirical evidence about the relationship between regulatory intensity and public benefit is related to the fact that it is extremely difficult to measure the public benefit of

financial regulation. In only a few areas (such as the regulation of insider trader) are objective intermediate outcomes are susceptible to measurement and comparative analysis. In part, however, the lack of evidence stems from the fact that academic analysts have not been able to collect the relevant data from a large enough sample of jurisdictions. Support from regulators and multi-lateral organizations could correct this defect and lead to better understanding of the relationship between regulatory intensity and social benefit in the future.

In the meantime, useful guidance available to my South Korean questioner is limited. For most areas of financial regulation, we cannot now estimate with any degree of precision the predicted social benefit of increases in regulatory intensity or other regulatory costs. A fortiori, we cannot make empirically validated estimates of likely benefits in particular institutional settings that distinguish one country from another. What we can currently offer are gross comparisons of regulatory intensity across a reasonably large sample of countries. These measures offer a crude yardstick for self-assessment. Countries with indices of regulatory intensity well above or well below these transnational benchmarks may well pause to consider whether their deviation from international standards are justified by local conditions. Eventually we may be able to offer more firmly grounded advice about optimal levels of regulatory intensity, but for now crude guidance appears to be the best we can do.

I. The Challenge of Measuring Costs and Benefits in Financial Regulation

Although cost benefit analysis (or CBA as its sometimes abbreviated) is a staple of the modern regulatory state, the methodology is unevenly applied. In the United States, most serious cost-benefit analysis is conducted in the area of environmental or health regulations, and the principal tradeoff explored is between the costs of some new technology – for example, pollution control equipment – measured against predicted benefits in terms of lives saved or diseases avoided. To be sure, even these applications of cost benefit analysis generate ample debates and disagreements, such as over the value of human life, appropriate discounting of future savings, and estimates of plant conversion costs. But what is striking about the cost-benefit debate in the United

States is how little of the attention has been directed to financial regulations.

A number of factors appear to explain this lack of attention. To begin with, the agency principally responsible for cost benefit analysis in the United States is the Office of Management and Budget (“OMB”), which for many years has required costs benefit analysis for rulemaking proposals of many federal agencies and departments. These OMB requirements do not, however, extend to the independent agencies, such as the SEC and CFTC, nor do they apply to the Federal Reserve Board or FDIC nor to any of the many state agencies involved in overseeing the financial services industry. While some federal agencies with jurisdiction over some aspects of financial regulation are subject to OMB oversight – for example, the Comptroller of the Currency and the Department of Housing and Urban Development – relatively little attention has been given to the manner in which these agencies conduct their cost benefit analysis, as the OMB appears not to give financial regulatory proposals the same degree of review that it imposes on, say, environmental proposals from the EPA.¹

A. Difficulties in Measuring the Benefits of Financial Regulation

Another reason why cost-benefit analysis for the financial services industry is relatively underdeveloped is that the undertaking is difficult, perhaps even intractable, particularly on the benefit side. In considering whether it might be possible to ascertain whether officials at the U.K.’s Financial Services Authority (FSA) were achieving the goals assigned to them by Parliament, Professor Charles Goodhart of the London School of Economics has opined: “[I]t is difficult to come to any other conclusion except that the achievement of the objectives which have been set for the FSA are non-operational in the sense that no measurement of success can be achieved.”² The same

¹ For additional background on cost-benefit analysis in U.S. financial regulation, see Edward Sherwin, *Cost-Benefit Analysis of Financial Regulation: Why Dollars Don’t Always Make Sense in SEC Rulemaking* (Apr. 27, 2005) (on file with author).

² Charles A.E. Goodhart, “Regulating the Regulator – An Economist’s Perspective on Accountability and Control, 151, 153, in *THE CHALLENGES FACING FINANCIAL REGULATION* 311 (2001) (Eilis Ferran & Charles A.E. Goodhart, eds).

might be said of efforts to measure with any degree of precision the realized benefits from U.S. financial services regulation.

Several years ago, I attempted to summarize the goals of financial services regulation in the United States.³ At the time I contended that regulatory intervention in this field was designed to produce four distinct social benefits, with the relative importance of the benefits varying somehow across different sectors of the industry.

1. Protection of General Public – In certain contexts this goal is defined to be achieving the level of protection that fully informed and fully rational investors, depositors and insurance policy holders would choose for themselves; a hypothetical contract approach to regulation. Other times, this objective is cast in a more paternalistic light, imposing absolute protection on the general public without regard to their preferences.

2. Elimination of Negative Externalities from Financial Failures. The most prominent sort of negative externality is the elimination of systemic shocks to the economy that financial crises could precipitate. A variant of this objective is the elimination of the costs that society would bear if members of the general public suffered losses from financial institution failures and then demanded *ex post* compensation from public resources.

3. Advancing Various Equitable and Redistributive Goals. Though present in a smaller share of financial regulations than the preceding two objectives, equitable and redistributive objectives are undoubtedly present in some areas of U.S. financial services regulation. In banking, for example, some regulations steer lending into particular markets to enhance economic development or promote certain activities; in insurance regulation, some degree of cross-subsidies between insurance pools is mandated to advance social goals independent of (and sometimes at odds with) solvency concerns.

4. Promoting Certain Aspects of Political Economy. Finally, some aspects of financial regulation reflect political compromises. Long-standing barriers to the geographic expansion of banks are one good example, but so are restrictions on commercial activities of financial holding companies and certain aspects of SEC capital market regulation.

Since September 11th, one might add the elimination of financial crime and international terrorism

³ Howell E. Jackson, *Regulation of a Multisectoral Financial Services Industry: An Exploratory Essay*, 77 WASH. U. L. Q. 319 (1999).

as a separate goal, or one might expand the third category to include these objectives.

How would one quantify the success of a regulatory agency in achieving these objectives? Even the most straightforward goal – consumer protection – presents enormous complexities. To the extent one is attempting to replicate the hypothetical contracts that consumers would choose under conditions of perfect information and rationality, how does one figure out what the contract is? And for which consumer, the median individual or some other individual or groups of individuals? Moreover, even if one specified the appropriate level of protection to achieve, how do you measure the benefit of moving consumers from some (presumably) lower level of protection to a higher level of protection? Measuring losses avoided is one possibility, I suppose, but probably over-inclusive because consumers likely are called upon to pay some cost for this protection, such as lower interest payments. In theory one might have to estimate the overall utility of consumers in the absence of regulation and their overall utility with regulation, but then one would have to convert utility improvements into some monetary value. And, of course, if absolute protection is the social objective here, consumer utility is probably not the right metric to use because paternalistic interventions of this sort necessarily override individual choices and measures of utility based on purely individual preferences.

Benefits from the elimination of externalities are, if anything, more difficult to measure. Systemic risks are low-probability, high-impact events. Regulatory interventions, in theory, have the potential to reduce the probability of these events and also diminish their severity. But how effective any particular intervention is on these two dimensions is difficult to tell. It requires information about a counter-factual situation: how likely is it that a systemic shock would have occurred in the absence of regulatory invention and how severe would the shock have been in an unregulated environment. Even *ex post*, the absence of systemic shocks does not provide particularly valuable information about the benefits of regulatory intervention because shocks may also not have occurred in the absence of regulation.⁴

⁴ If financial crime were added as regulatory objective, similar problems of measurement would arise. And, indeed, the problem of measuring benefits from crime prevention are

Equitable, redistributive, and political objectives are even less susceptible to quantification as they don't translate easily into monetary values. For example, the benefits of preventing insurance companies from charging different rates to men and women for life insurance or forbidding any bank holding company from controlling more than 10 percent of the nation's deposits may be real and substantial. But they are hard to quantify for purposes of cost benefit analysis.

B. Difficulties in Measuring the Costs of Financial Regulation

The costs of financial regulation are somewhat more susceptible to measurement. Perhaps most quantifiable is the direct cost of regulatory agencies: salaries paid to supervisory officials and other operating expenses associated with maintaining governmental operations. Though analysts face certain impediments to the collection of this data – government agencies are not always forthcoming about their budgets and occasionally one faces difficulties in allocating costs when a ministry combines supervisory functions with other government services – direct government costs of maintain a supervisory force does not present serious theoretical challenges.

The private costs of regulation, in contrast, are more difficult to ascertain. The most obvious private cost of financial regulation is the compliance costs that members of the regulated industry incur in hiring compliance staff and assigning personnel to fill out forms and structure operations so as to conform to regulatory standards. So, for example, some fraction of the costs associated with the general counsel's office of financial institutions like qualify as regulatory costs. Proper cost allocation is, however, also a problem in this context. Not everything that bank counsel do is a product of regulation. Even in the absence of regulatory requirements, banks would spend some resources on hiring attorneys to negotiate contracts customers and monitor the activity of bank employees. The true direct costs of regulation are the incremental costs that financial institutions incur beyond the levels of effort they would expend in the absence of regulation. Thus, in this

analogous in many respects to the problem of measuring benefits from financial regulation discussed in the main text. See, e.g., Darryl K. Brown, *Cost-Benefit Analysis in Criminal Law*, 92 CALI. L. REV. 323 (2004) (exploring application of cost benefit analysis in field of criminal justice).

context, one must again deal with counter-factual conjecture regarding the level of costs that the private sector would have willingly assumed in the absence of regulation.⁵

Regulations impose substantial additional costs beyond the those borne directly by regulated parties. Often times regulatory regimes employ enforcement mechanisms, like courts and other dispute resolution fora, that incur costs as a result of regulation. In the securities field, for example, the federal judiciary expends considerable resources – well beyond costs borne by the parties – in resolving the federal securities cases filed each year. Arbitration systems run by the NASD and NYSE also incur costs as do the administrative tribunals used to enforce and interpret banking and insurance regulation. Even a non-trivial share of the Supreme Court’s time is spent resolving disputes over financial regulation – since its enactment in 1974, ERISA has generated dozens of Supreme Court decisions.

And, of course, private parties incur a variety of indirect costs as a result of financial regulation. In many contexts – for example the regulation of financial privacy – consumers are required to expend effort in order to determine their options under regulatory regimes and may have to expend more effort to obtain financial services by, for example, supplying financial institutions additional information needed to comply with regulatory requirements. More difficult to measure but probably substantially more important in terms of economic costs are the transactions that regulatory intervention unintentionally deters. In many contexts, regulations will disrupt some number of transactions that would have been socially desirable but that regulation impeded either through overbreadth or misinterpretation on the part of private parties. Determining how much of this sort of disruption any particular regulation will generate – much less the costs of such disruption – may be an intractable problem. But there is not doubt that this is another form of regulatory costs.

C. Sanctions, Fees and Transfer Payments

⁵ Private industry estimates of regulatory compliance costs are often unreliable, tending to attribute all legal and supervisory costs to regulation and sometimes assuming that transitional compliance costs for new regulations will recur annually.

Many payments arise as a result of financial regulation. Some but not all of these qualify as regulatory costs and should be included in any comprehensive cost benefit analysis for the financial service industry. Others are not true costs, but may still be useful measures of regulatory intensity and definitely can influence private responses to regulatory interventions.

1. Monetary Sanctions: Public & Private. One kind of payment are the civil penalties, fines, and damage awards from private litigation – payments typically made by regulated entities and their employees or agents to the public fisc or to private plaintiffs. While these payments undoubtedly feel like costs to the parties sanctioned, the payments do not generally qualify as regulatory costs as they represent resources transferred to other parties and can be used for other purposes. One exception to this general proposition comes in civil litigation systems such as the United States where a fraction of private awards are typically used to compensate plaintiff counsel. In these cases, a fraction of private damage awards might appropriately be classified as a cost of any regulation that created the cause of action under which the suit arose.⁶

2. Non-Monetary Sanctions. Non-monetary sanctions may also generate some true regulatory costs. Injunctions, for example, to the extent that they impose compliance costs or disrupt private activity excessively, generate additional real costs. Censures and penalties that remove individuals from career paths may generate costs through the dissipation of human capital or business opportunities. And, at the extreme, incarceration can prevent productive employment for the period of incarceration. Resources expended defending against, prosecuting, or adjudicating non-

⁶ There is a literature estimating the cost of effecting transfer payments through the legal system as a percentage of the amount of transfer payments made. For example, litigation costs might be estimated to consume 40 to 60 percent of payments made by defendants in the U.S. tort system. See, e.g., STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 281 n.2 (2004). There may well be a stable relationship between overall litigation costs and the level of regulatory sanctions, though the relationship has not been formally studied as far as I know and would likely vary across jurisdictions. Some of these costs – such as the costs of hiring government attorneys – is reflected in other measures of regulatory costs that can be obtained directly. But other cost, such as private litigation costs and costs of administering a dispute resolution system, may not be easily measured directly and may be better estimated as a fraction of sanctions imposed.

monetary sanctions are all real regulatory costs. Estimating the full economic costs of non-monetary sanctions is difficult, but as an analytical matter, they should figure into a comprehensive cost-benefit study.

3. *Fees & Other Transfer Payments.* Finally, financial institutions often pay a large number of fees (for example, registration fees with the SEC or bank examination fees for the OCC) or premiums (for example, FDIC insurance premiums). In some cases these payments are used to finance a regulatory agency; in other contexts, they are turned over to the public fisc. For the most part, these fees should not be included in regulatory costs, as they are transfer payments used for other purposes, although one might argue that the economic distortions caused by industry fees – similar to the distortions from other forms of taxation – might be another regulatory cost attributable to financial regulation to the extent those fees are used to finance a regulatory authority.⁷

5. *Interaction Between Sanctions & Other Regulatory Costs.* As explained above, many monetary sanctions imposed on financial institutions are not themselves regulatory costs because these payments are transferred to other parties for other uses. These sanctions are, however, important indicia of regulatory intensity and have an influence on regulatory costs. The larger the level of expected sanctions, the more private parties will likely spend on compliance costs or legal defenses – two sources of true regulatory costs. Consequently, if an agency has a practice of rigorous enforcement of regulation, the total regulatory costs associated with the adoption of a regulation by that agency will likely be higher than the regulatory costs of an identical regulation by an agency with a less strenuous enforcement record. So, while sanctions may not always themselves be regulatory costs, they are closely intertwined with regulatory costs.

D. The Promise Comparative Cost Benefit Analysis

Putting aside for a moment the formidable challenges of measuring costs and benefits in the area of financial regulation outlined above, suppose that one country – say, the United States –

⁷ Similarly the incremental costs of raising general revenues to support financial regulation might be considered a regulatory cost.

succeeded in accurately measuring all relevant factors and established for itself an optimal system of financial regulation in which there would be a net loss to that country if its regulatory system expanded or contracted one iota. Could another country sensibly free ride off our efforts and impose the same level of regulatory intensity with confidence that the decision would, as a first approximation, generate a cost-effective system of financial regulation in the second country? Or to go back to my South Korean exchange, should a country such as South Korea be determining its staffing decisions or other elements of regulatory intensity based on resource allocation choices of the United States and other industrialized economies?

Many international financial experts – and much of the work of the World Bank and other multi-lateral organizations – proceeds from the assumption that there is, in fact, much that developing countries can learn from studying and emulating the regulatory structures of more advanced countries, implying that what makes regulatory sense in one jurisdiction would make sense elsewhere around the world. Indeed, my own predilections lie in that direction, otherwise I should not be going to South Korea (or any other country) to give advice on financial reform. It bears noting, however, that there are a number of reasons why countries should be cautious in importing regulatory structures from foreign jurisdictions, even such basic matters as general targets for staffing levels at supervisory agencies.

1. Differences in Scale. One obvious problem relates to problem of scale. India presumably needs a larger regulatory apparatus than, say, Thailand, but how much larger? Is there a linear relationship between the appropriate level of regulatory staffing based on population or perhaps GDP or are there economies of scale in the financial regulation that warrants something less than a linear relationship.

2. Differences in Composition and Sophistication of Financial Services Industry. Another obvious difference between jurisdictions is the composition and sophistication of the financial services industry. Some countries have many banks; others have few. Some have developed capital markets; others do not. In some countries, financial institutions have sophisticated systems of internal controls; in others, they do not. Presumably these considerations, which vary by

jurisdiction, are also relevant to determining the optimal level of a country's regulatory effort, including its staffing and budgeting decisions.

3. *Differences in Regulatory Objectives.* Countries may also differ in their regulatory objectives. Even countries as similar in terms of regulatory philosophy and industrial development as the United States and the United Kingdom have strikingly different goals for their financial regulatory agencies.⁸ If countries benefit differentially from financial regulation, then their optimal regulatory structures are also likely to differ.

4. *Different National Endowments.* Wage and capital costs will also differ across jurisdictions, as will the educational levels of the population. Such differences imply that different combinations of labor and capital investments might be appropriate in different jurisdictions, with higher staffing levels appropriate in jurisdictions with low labor costs.

5. *Different Levels of Enforcement Intensity.* Another potentially important difference concerns the intensity with which financial regulations are enforced in various jurisdictions. Where enforcement levels are high and are supplemented with private rights of action, one might assume that less regulation or perhaps fewer regulators would be needed to obtain a given amount of compliance than would be necessary in a jurisdiction with more lax enforcement intensity and limited private rights of action.

6. *Different Levels of Lawlessness of Population.* Finally, there may be differences in the underlying levels of lawfulness in different jurisdictions. Some jurisdictions may be populated with scoff-laws, prone to abusive practices and needing intensive and continuous oversight. Other populations maybe more lawful, less prone to fraud and deceit, and less needing of supervisory oversight. The benefits to be derived from regulatory efforts in the former jurisdictions are likely to be greater than regulatory efforts in the latter, again complicating international comparisons.

⁸ Howell E. Jackson, *An American Perspective on the FSA: Politics, Goals & Regulatory Intensity* (forthcoming in a conference volume to be published by the East West Center/ Korean Development Institute 2005).

So there are many reasons to be cautious about selecting a level of regulatory effort in one jurisdiction based on the degree of regulatory effort observed in another jurisdiction even if one is confident that the second jurisdiction has established its regulatory effort in a manner that is fully cognizant of the costs and benefits of financial regulation within its boundaries.

II. Evidence on Variations in Regulatory Effort and Enforcement Intensity

And yet, one still wonders is there some rough consensus as to the appropriate level of regulatory effort and enforcement intensity that can be observed among the leading industrialized countries around the world? Accepting that local conditions vary and one size will not fit all, can one nevertheless offer some guidance as to appropriate levels of regulatory intensity that would offer ballpark targets? Plus or minus fifty percent? Or a factor of two? How about one order of magnitude?

In an effort to gain purchase on this question, I present in this section preliminary evidence on the levels of regulatory intensity in a number of jurisdictions. Analysis focuses on two different measures of intensity: regulatory budgets and staffing on the one hand and securities enforcement actions on the other. In each instance I begin with data regarding the United States, where information is most easily collected. I then offer a limited amount of comparative analysis, drawing on a combination of third party data and information collected under my own supervision.

Many caveats apply to this data. These indicia of regulatory intensity relate to only a subset of a comprehensive measure of regulatory costs. Enforcement levels are not, strictly speaking, included in regulatory costs, though they are intimately connect to regulatory costs. Finally, the data presented below is incomplete in certain respects and reporting conventions undoubtedly vary across jurisdictions. (Key variations of which I am aware are noted in the text or margins.) Yet, despite all these shortcomings, the evidence presented below is, to my knowledge, the most comprehensive data ever produced on comparative regulatory intensity and, for that reason, may advance our knowledge of the subject.

1. Regulatory Budgets and Personnel Levels

A. The Regulatory Budgets and Staffing Levels in the United States

To establish one benchmark against which to make international comparisons, I have attempted to collect a comprehensive picture of regulatory budgets and staffing levels for financial regulators in the United States. Although U.S. regulatory agencies generally make reasonable efforts to report this information, the fragmentation of U.S. supervisory oversight – both between sectors of the financial services industry and between state and federal authorities – makes this a challenging data collection process that has consumed hundreds of hours of research (mostly conducted by research assistants to whom I am extremely grateful.) Presented below in Table One is an overview of the regulatory budgets and staffing levels for the United States in 2002, the most recent year for which I have been able to assemble reasonably comprehensive data.

As illustrated in Table One, the total budgets of financial regulatory authorities in the United States in 2002 was in excess of \$5.6 billion, and staffing levels were reported at 43,244. A more complete presentation of this data is presented in Appendix A, and a background memorandum describing the sources of the data and manner in which the data was assembled is available.⁹ Before attempting to compare these indicia of regulatory effort to data from other jurisdictions, let me summarize some interesting points about information provided in Table One. First, half of our financial regulatory budgets in the United States are allocated to the oversight of depository institutions, with a somewhat smaller percentage of staff engaged in this field. Our second largest

⁹ See Memorandum from Benjamin Koplin to Howell Jackson (Oct. 16, 2004) (on file with author). The data presented in table one is preliminary because, among other things, it does not include estimates of state securities commission budgets or staffing. Certain other estimates, in particular estimates of state banking commissions and budgets for certain securities self-regulatory organizations such as the NASD, are drawn in part from other surveys, most importantly surveys of regulatory costs that the U.K. Financial Services Authority prepares each year. In some instances, data was not available for 2002 and so data from prior years were extrapolated to produce estimates for 2002. For some agencies, including the Federal Reserve Board and two of the agencies responsible for supervising private pension, costs and personnel had to be allocated from larger groupings with other responsibilities.

area of financial regulation is the security industry (if one measures by budgets) or the insurance industry if one measures by staffing levels. As suggested by the column reporting budget per staff member, the differential results from the fact that the compensation levels paid to regulatory staff in the securities field, which includes personnel from SROs, is much higher than the salaries for

Table One			
U.S. Budgets and Staffing for Financial Regulation			
(Estimates for 2002)			
	2002 Estimates	Percentage of Total	Budget/Staff
<i>Depository Institutions</i>			
Budgets	\$2,779,897,996	50.02%	\$148,127
Staffing	18,767	43.40%	
<i>Securities Industry</i>			
Budgets	\$1,308,923,440	23.55%	\$205,644
Staffing	6,365	14.72%	
<i>Insurance Industry</i>			
Budgets	\$946,600,000	17.03%	\$72,501
Staffing	13,056	30.19%	
<i>Private Pensions</i>			
Budgets	\$522,178,331	9.40%	\$103,279
Staffing	5,056	11.69%	
Total			
Budgets	\$5,557,599,767	100.00%	\$128,516
Staffing	43,244	100.00%	

regulatory staff for the insurance industry.¹⁰ The smallest budgets and staffing levels are for the regulation of private pension plans, but even in these areas the levels of regulatory expenditure (total budgets in excess of \$500 million and staffing over 5000 individuals), the numbers are not trivial.

B. Comparative Analysis Using Data from Financial Services Authority

¹⁰ The differential would likely decrease somewhat if state securities regulatory budgets and staffs were included in Table One, as compensation levels for state regulators are typically lower than those of federal and SRO personnel.

To get a sense of how United States regulatory budgets and staffing levels compare to those of other jurisdictions, one can look to data that the U.K.'s Financial Services Authority compiles each year in its annual reports on comparative regulatory costs.¹¹ While the scope of the FSA's annual survey is relatively limited – only ten jurisdictions are included – the data is still useful, both because it is compiled with some care and because it makes an effort to allocate regulatory costs and staffing levels to the three basic sectors of the financial services industry: banking, securities and insurance. (As the FSA does not have jurisdiction over private pension plans, the agency does not compile data on this area of the financial services industry.)

Table Two presents, in a slightly reformulated manner,¹² comparative financial costs and staffing data from the FSA's 2004 Annual Report.¹³ The ten jurisdictions on which the FSA collects data are organized alphabetically starting with Australia and ending with the United States. A second set of estimates for the United States (labelled U.S. (HEJ)) are presented at the extreme right hand side of the table and reflect my own estimates of the U.S. financial regulatory costs and staffing for the United States, which are larger than those of the FSA and, I believe, somewhat more complete.¹⁴

¹¹ As I have discussed elsewhere, see Jackson *supra* note 8, cost efficiency is a major objective for the U.K.'s FSA and the agency compiles comparative data on an annual basis in order to demonstrate compliance with this Parliamentary requirement.

¹² The FSA reports regulatory costs in pounds sterling, based on exchange rates prevailing on April 7, 2004. I have converted these values into U.S. dollars based on the prevailing exchange rate on that same date.

¹³ FSA 2004 Annual Report, App. 5.

¹⁴ The data presented in this table is more limited than the data presented in Table One and discussed in the surrounding text as it does not include private pension regulation because the FSA does not collect data for this sector.

The first two rows of data presented in Table Two report absolute levels of regulatory costs and staffing, similar to figures reported for U.S. regulatory costs and staffing levels in Table One. The balance of the table adjusts the data in various ways designed to facilitate comparative analysis. The first three adjustments deal with the entire system of financial services regulation: regulatory costs as a percentage of GDP, regulatory personnel as a percentage of total population, and regulatory costs per staff member. The final three adjustments present the total regulatory costs in each of the major subsectors of the financial services industry (banking, securities, and insurance) divided by one crude measure of the size of each sector in reporting countries (total banking assets, stock market capitalization, and insurance premia). Estimates of sector size in each country are based on information reported in the FSA's 2004 Annual Report. Estimates of GDP and population are drawn from World Bank data sets for 2003.

	<i>Australia</i>	<i>Canada</i>	<i>France</i>	<i>Germany</i>	<i>Hong Kong</i>	<i>Irish Republic</i>	<i>Singapore</i>	<i>Sweden</i>	<i>UK</i>	<i>US</i>	<i>USA (HEJ)</i>
Total Costs of Financial Regulators	\$ 214.07	\$ 248.83	\$ 130.21	\$ 109.06	\$ 105.20	\$ 46.90	\$ 43.95	\$ 25.01	\$ 496.56	\$ 4,633.43	\$ 5,418.87
Total Staff	1900	2209	916	1319	640	267	300	186	3,069	29,924	38,709
Regulatory Costs per billion of GDP	\$ 412,960	\$ 298,218	\$ 74,491	\$ 45,429	\$ 663,341	\$ 315,692	\$ 481,208	\$ 83,152	\$ 276,655	\$ 425,804	\$ 497,984
Total Regulatory Staff Per Million of Population	95.53	69.84	15.34	15.98	93.90	67.65	70.59	20.77	51.77	102.82	133.00
Regulatory Costs per Regulatory Staff Member	\$ 112,669	\$ 112,644	\$ 142,149	\$ 82,683	\$ 164,370	\$ 175,644	\$ 146,515	\$ 134,472	\$ 161,798	\$ 154,840	\$ 139,990
Banking Budget per \$ bn of banking assets	\$ 19,400	\$ 23,969	\$ 17,452	\$ 67,815	\$ 31,157	n.a.	\$ 31,394	\$ 21,922	\$ 18,130	\$ 247,405	\$ 298,333
Insurance Budget per \$ bn of Insurance Premia	\$ 852,941	\$ 477,912	\$ 62,642	\$ 170,860	\$ 1,000,000	n.a.	\$ 1,029,412	\$ 201,439	\$ 158,629	\$ 809,726	\$ 809,541
Securities Budget per \$ bn of Stock Market Capitalization	\$ 279,587	\$ 220,515	\$ 19,041	\$ 8,896	\$ 73,317	n.a.	\$ 95,406	\$ 33,573	\$ 138,159	\$ 83,943	\$ 97,973

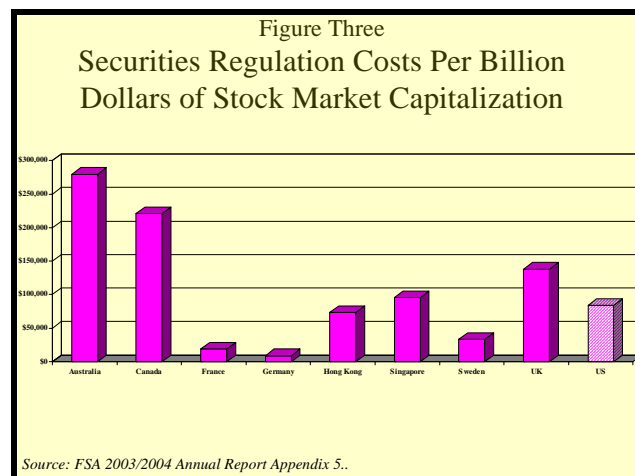
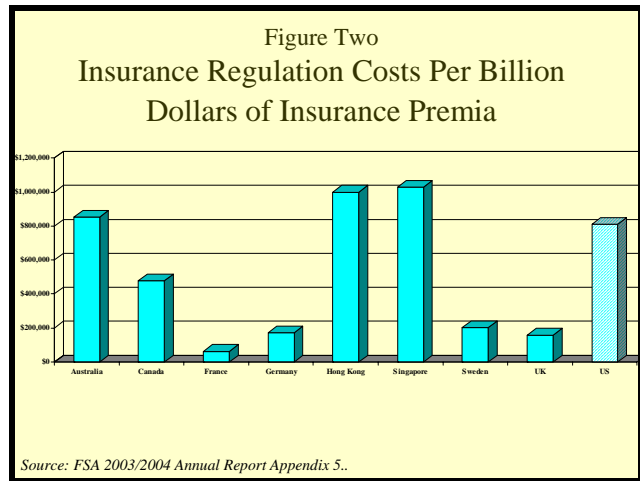
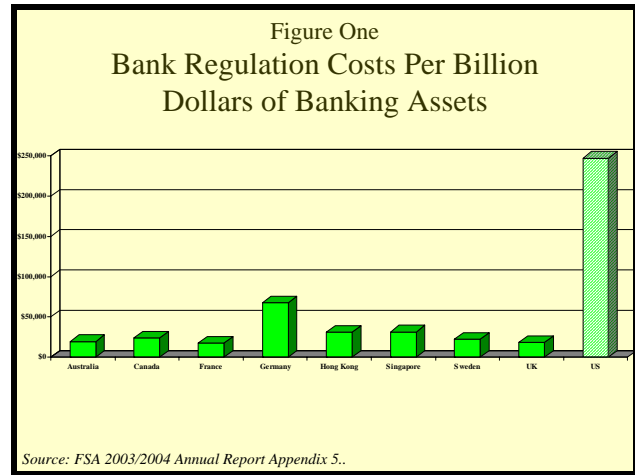
The one area in which U.S. regulatory intensity is unambiguously out of line with the other countries that the FSA surveys each is the field of banking. Even adjusted for total banking assets, the costs of banking regulation in the United States is dramatically higher than the costs in any other jurisdiction presented in Figure One.¹⁵ According to FSA estimates, total U.S. banking regulatory costs are \$247,405 per billion dollars of banking assets whereas the next most costly jurisdiction is Germany with \$67,815 of bank regulation costs per billion dollars of banking costs – roughly one

¹⁵ In the following figures, the U.S. data presented comes from the FSA's estimates, rather than my own somewhat higher estimates of costs and staffing in the United States. Had my data been used, U.S. regulatory intensity would appear higher on all reported dimensions, aside from regulatory costs per staff member.

quarter the U.S. level of intensity under this measure. Idiosyncratic features of decentralized banking regulation and a fragmented industry in the United States undoubtedly contributes to this differential, but the relative cost of banking regulation in the United States is nonetheless striking.

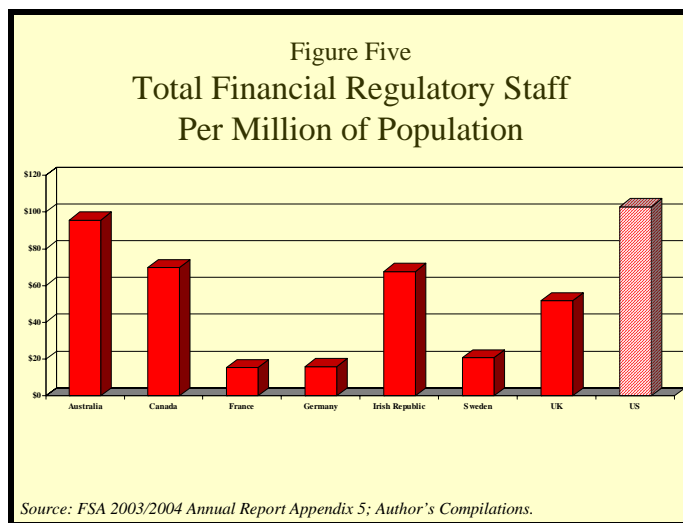
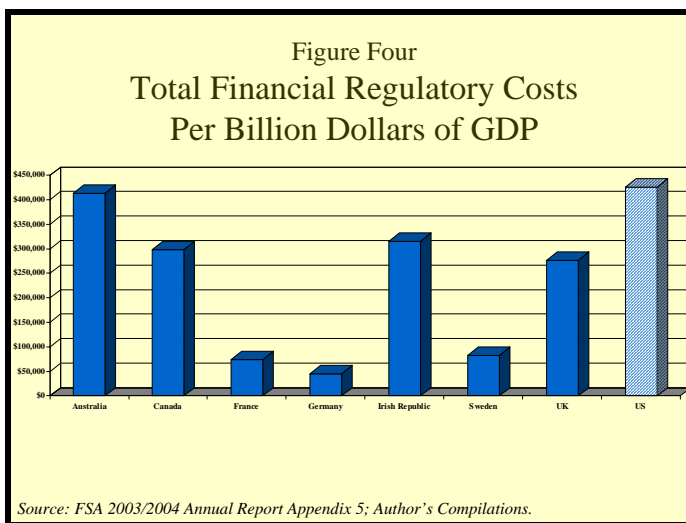
The United States is also towards the top end of the spectrum of insurance regulation costs per billion dollars of insurance premia. See Figure Two. Indeed, if one sets aside the offshore financial centers, Hong Kong and Singapore, the United States and Australia are basically tied with \$ 809,541 and \$852,941 of insurance regulatory costs per billion dollars of insurance premia – Australia’s reported intensity of regulation being inflated by having a fairly small insurance industry. Again, the decentralization of U.S. insurance regulation undoubtedly contributes to the country’s high costs of regulation in this field.

In the area of securities regulation (see Figure Three), the level of regulatory intensity reported for the United States (\$ 83,943 per billion dollars of stock market capitalization) is lower than the adjusted costs for Australia



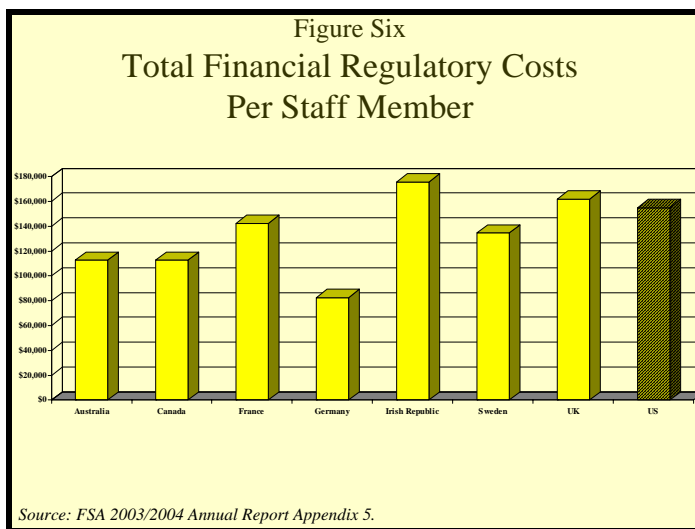
(\$279,587), Canada (\$220,515), and the United Kingdom (\$138,159), and roughly comparable to that of the offshore centers, Hong Kong (\$73,317) and Singapore (\$95,406), but substantially higher than France (\$19,041), Germany (\$8,896), and Sweden (\$33,573). The ranking of the U.S. on this measure of regulatory intensity is again influenced by the scaling factor. U.S. stock market capitalization, estimated for these purposes at \$17 trillion, is more than seven times larger than the next largest market, which is the U.K.’s estimated here at \$2.4 trillion.

In Figures Four and Five, I present summary estimates of intensity in financial regulation: first total regulatory costs as a percentage of GDP and then total regulatory staff as a percentage of population. Although these gross measures of intensity have their drawbacks, the two charts are still, I think, illuminating. First, by both measures of intensity, U.S. financial regulation outstrips all other jurisdictions surveyed here (the offshore financial centers being excluded for these overall measures). Second, these measures of regulatory intensity do not reflect any adjustments for economies of scale. Were such adjustments included, the United States, having an economy and population many times larger than other jurisdictions



surveyed, would have led the world by an even larger margin.¹⁶ Finally, if one begins to look for larger trends in the data, it appears that, by both measures of overall intensity, the common law countries outstrip civil law jurisdictions. Notice how the three civil law jurisdictions – France, Germany, and Sweden – all show marked lower levels of regulatory intensity in both charts, as compared with the common law jurisdictions. I will return to this last point shortly.

A final dimension of comparison is regulatory costs per staff member. See Figure Six. The measure reflects the average amount of financial resources supporting each staff member and might also be seen as a measure of staff quality as salaries constitute the largest share of regulatory budgets.¹⁷ From my perspective, the most interesting point about this comparison is the consistency in regulatory costs per staff member across jurisdictions. While other measures of regulatory intensity vary a good deal, most of these jurisdictions are expending roughly the same level of financial resources per staff member. Six



of the ten jurisdictions reported regulatory costs per staff in the relatively narrow range of \$134,000 to \$164,000 per staff member, with the Irish Republic being slightly above that range at over \$175,000 per staff member and both Canada and Australia being somewhat below at \$112,000 per staff member. Only Germany's reported expenditures per staff member (at less than \$83,000 per staff members) seems out of line. So while jurisdictions seem to be making very different choices

¹⁶ The U.S.'s GDP is roughly 4.5 times larger than number two Germany's, while the American population is 3.5 times larger than runner-up Germany's.

¹⁷ As suggested above, variations in labor market costs as well as exchange rates make these comparisons problematic.

about how intensely to regulated the financial services industry, there is much less variation in the level of support they put behind each member of their regulatory staff.

C. Further Extensions Adding Data from CBP Survey

One of the most intriguing implications of the foregoing analysis is the suggestion that common law jurisdictions might, as a general matter, impose lower levels of regulatory intensity on their financial services industries than do civil law jurisdictions. To the extent that civil law regimes are often characterized as having heavy-handed legal requirements that inhibit economic development and the emergence of vibrant capital markets, this finding is counter-intuitive and suggests that further investigation into the common law/civil law distinctions may be in order. Within the law and finance literature, common law jurisdictions are sometimes characterized as being more conducive to capital market development because the common law protects investors more effectively than civil law regimes;¹⁸ however, if the intensity of regulation is generally higher in common law jurisdictions, then an alternative hypothesis arises: it's not law, but enforcement that matters.

While I have not had the opportunity to pursue this issue in substantial detail, I have made some preliminary efforts to extend the analysis undertaken above. Using a recent survey of international financial regulation, undertaken Central Banking Publications of London (CBP),¹⁹ plus a few other sources of data, I have assembled preliminary estimates of total regulatory costs, staffing levels, and adjusted estimates of overall financial regulatory intensity for 18 civil law jurisdictions and 10 common law jurisdictions. The data should be regarded as extremely preliminary, but is presented in summary form in Appendix B.²⁰

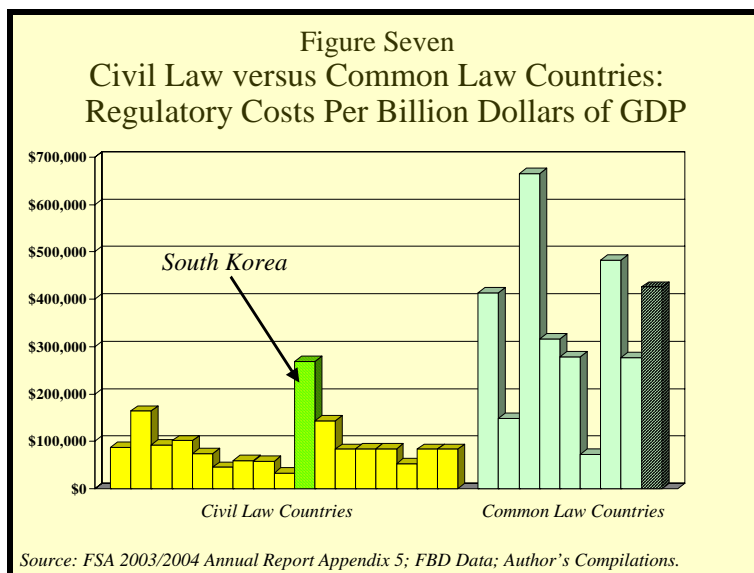
¹⁸ See, e.g., Rafael La Porta et al., *Law and Finance*, 106 J. POLI. ECON. 1113 (Dec. 1998).

¹⁹ See CENTRAL BANKING PUBLICATIONS, *HOW COUNTRIES SUPERVISE THEIR BANKS, INSURERS, AND SECURITIES MARKETS* (2004) (Neil Courtis, ed.).

²⁰ In compiling data for Appendix Three, I began with the FSA data reported above, because the quality of the FSA's survey appears to be higher than the data compiled in the more

The differential between regulatory intensity in civil law and common law jurisdictions noted above in the FSA data set seems to be confirmed (indeed somewhat strengthened). Though it is possible that the construction is somewhat biased in the direction of underestimating the size of regulatory staffs in civil law jurisdictions,²¹ my intuition is that the magnitude of the differences is substantial enough to survive in a more consistently constructed data set. At a minimum, the data here suggests that further inquiry is warranted.

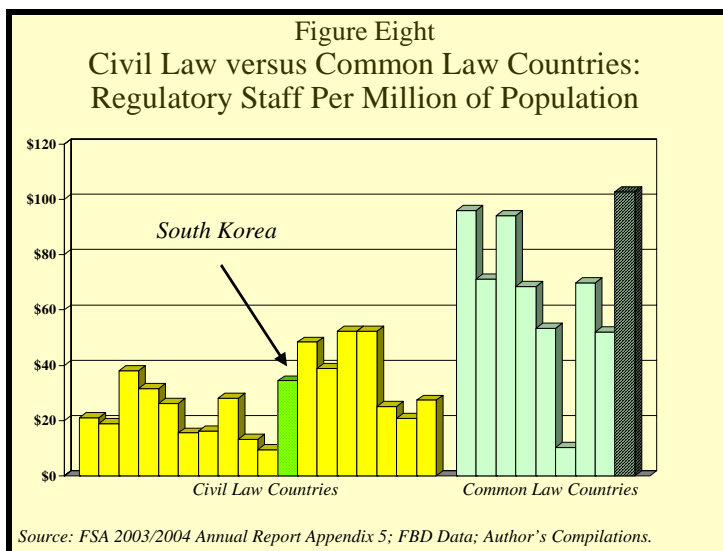
The most striking differences between the civil law and common law jurisdictions are in the two basic measures of overall regulatory intensity: Regulatory Costs per Billion Dollars of GDP (Figure Seven) and Regulatory Staff per



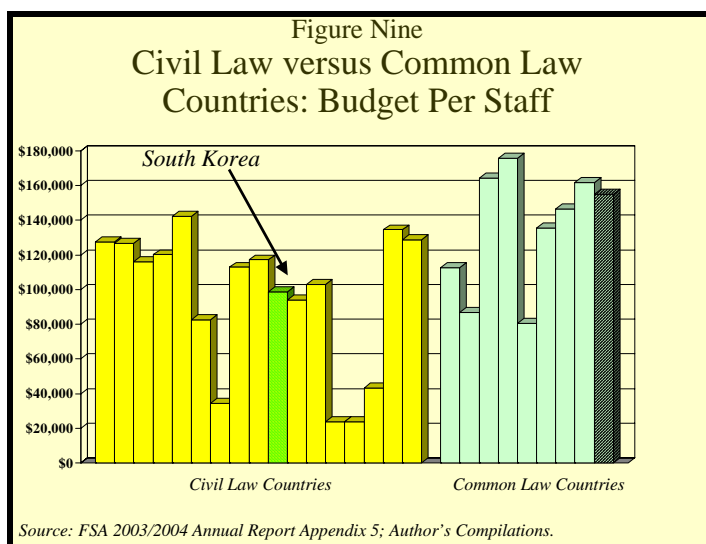
comprehensive CBP study. Appendix B also includes additional data on South Korea that I obtained directly from South Korean governmental sources. (The CBP entry on South Korea appeared to be flawed.) Finally, I have also included in Appendix Three my own estimate of US regulatory costs and staffing along with the FSA's data, though for purposes of figures presented in the text, I report only the FSA estimates of US regulatory costs and staffing.)

²¹ My chief concern is that I have had to rely more heavily on CBP data for civil law jurisdictions, as the FSA's data is tilted in favor of common law jurisdictions. As mentioned earlier, see note __, the FSA data is generally more comprehensive, whereas the CBP data is more apt to exclude budgetary and staffing information for regulatory agencies that are located in large ministries with broader jurisdictions, as is often the case with insurance regulation. The CBP exclusions, however, typically concern very limited sectors of the financial services industry, which is why I believe that a more comprehensive report of civil law jurisdictions would not materially affect the data presented in Appendix Three or illustrated in the figures in the main text.

Million of Population (Figure Eight). In the first case, the civil law jurisdiction average regulatory costs (\$88,942) are substantially lower than the averages for common law jurisdictions (\$358,013). Similarly, average staffing levels for civil law countries (28.76 per million of population) are markedly lower than those of common law jurisdictions (75.09 per million of population). Even the average for regulatory costs per staff member are lower for civil law jurisdictions (\$90,466) than for common law jurisdictions (\$135,828).



One final comment about this expanded data set concerns my query from South Korea. In this data set, I have included for the first time information on South Korean financial regulation. (The bar representing South Korea is noted with an arrow in Figures Seven, Eight, and Nine.) While this analysis cannot speak to the normative question over whether South Korea is maintaining an



appropriate level of regulatory staffing at its FSA, the figures do suggest that South Korea's level of regulatory intensity is roughly in line with effort observed in other Civil Law countries, and perhaps above average for civil law jurisdictions if one focuses on the country's regulatory costs adjusted for GDP. (See Figure Seven). While the higher levels of regulatory effort observed in

common law jurisdictions – including regional neighbors such as Hong Kong and Singapore – suggest that higher levels of regulatory intensity might also be plausible, the South Korean resource allocation choices do not seem to be widely out of line with international standards.

2. Securities Enforcement

So far in this section, I have considered only one kind of regulatory costs: direct governmental expenditures. As explained earlier, however, there are many other kinds of regulatory costs that should be evaluated in a theoretically complete balancing of regulatory costs and benefits: industry compliance costs, litigation costs, the costs of unnecessarily disrupted transactions, and others. Conceivably, there is some reasonable stable relationship between direct government costs and those other kinds of regulatory costs. After all, as a first approximation, it seems reasonable to assume that the more effort a government expends on regulatory activity, the higher the costs imposed on private parties. However, some factors may point in the other direction. For example, if auditors were hired by a government agency, then private costs for creating audited financial statements would be lower. Moreover, to the extent that one is interested in making international comparisons, the relationship between public costs and private costs may vary considerably, depending on the efficacy of regulatory effort and a number of other factors. So to make fully credible international comparisons as to total regulatory costs one would likely need to conduct fairly intensive studies of individual countries. This would be a substantial undertaking.

A more modest, but still challenging study would compare the level of sanctions imposed on financial markets and financial institutions in different jurisdictions. Data on sanctions is often compiled within government agencies, if not always made available to the general public. Moreover, the level of sanctions imposed in various markets is, in all likelihood, more tightly correlated with private regulatory costs than are gross regulatory budgets. After all, well-paid but ineffectual regulators will increase regulatory budgets, but may not have much of an impact on private compliance efforts. Higher sanctions, on the other hand, do probably have a strong influence on private compliance efforts – if one can make fairly modest assumptions that those sanctions are, in fact, imposed in response to regulatory infractions as opposed to some other reason

(like punishing enemies of the government).

To get a more robust picture of the regulatory intensity in various jurisdictions, a researcher might sensibly compile data on the level of sanctions in various jurisdictions as well as data on regulatory costs and budgeting. My research assistants and I are currently undertaking such an effort, initially for securities enforcement efforts in the United States and then for a wider set of jurisdictions, which currently include the United Kingdom, Germany, and the United States. Table Three, set out below, presents summary data on U.S. Securities Enforcement Effort in 2000 to 2002.²² As with other information presented in this paper, the data is preliminary in certain respects and subject to updating.²³

A. The U.S. Baseline

U.S. securities enforcement efforts are notable in number respects. First, the number of governmental agencies and quasi-governmental agencies is striking: not just the SEC, but also the Department of Justice, the state securities commissions, plus the NASD and NYSE, play major roles and impose substantial sanctions on our securities markets and securities firms. Second, the overall number actions each year is high, averaging more than 5,000 actions. And the level of public sanctions is substantial: averaging over \$1.8 billion a year, plus more than 2,100 non-monetary sanctions and nearly 5,000 months of prison terms plus over 8,600 months of probation imposed in

²² Details about the assumptions underlying this presentation and a comprehensive list of sources are available from the author.

²³ For certain kinds of sanctions, such as NYSE arbitrations, data about monetary sanctions was not available. In other areas, such as state enforcement efforts, data was not available for each of the three years averaged in Table Three. In these cases, Table Three reports averages of data from years in which data are available. This convention may bias the level of state enforcement efforts upward as the available data was from later years in which state securities commissions have been particularly active.

federal criminal actions. (Data on state criminal probation is not available.)

Table Three			
U.S. Securities Enforcement Effort			
(Annual Averages: 2000 to 2002)			
Public Enforcement Effort			
SEC Actions	528		
DOJ Prosecutions	101		
State Actions	2,964		
NASD Actions	1,268		
<u>NYSE Actions</u>	<u>240</u>		
Total Enforcement Actions	5,101		
		Private Enforcement Actions	
		Class Actions	205
		NASD Arbitrations	1,415
		<u>NYSE Arbitrations</u>	<u>595</u>
		Total Private Enforcement Actions	2,214
Public Sanctions			
<i>Monetary Sanctions:</i>			
SEC Monetary Sanctions	\$801,333,333		
State Monetary Sanctions	\$931,212,489		
NASD Disciplinary Sanctions	\$126,110,622		
<u>NYSE Disciplinary Sanctions</u>	<u>\$5,752,833</u>		
Total Public Monetary Sanctions	\$1,864,409,277		
		Private Monetary Sanctions	
		Class Action Settlements	\$1,906,333,333
		Class Action Trial Awards	\$17,626,000
		NASD Arbitration Awards	\$104,000,000
		<u>NYSE Arbitration Awards</u>	<u>n.a.</u>
		Total Private Sanctions	\$2,027,959,333
<i>Non Monetary Civil Sanctions:</i>			
SEC Suspensions., Expulsions & Censures	358		
NASD Suspensions., Expulsions & Censures	1,382		
<u>NYSE Suspensions., Expulsions & Censures</u>	<u>406</u>		
Total Suspensions., Expulsions & Censures	2,146		
<i>Incarceration & Probation:</i>			
Imprisonment from DOJ Prosecutions (mos.)	3,564		
Probation from DOJ Prosecutions (mos.)	1,330		
Imprisonment from State Prosecutions (mos.)	8,615		
<u>Probation from State Prosecutions (mos.)</u>	<u>n.a.</u>		
Total Incarceration & Probation (mos.)	13,509		

Perhaps the most noteworthy feature of U.S. securities enforcement action is the fact that the public monetary sanctions – substantial though they are – account for less than half of the total monetary sanctions imposed on the industry during the period surveyed. More than \$2.0 billion of private sanctions were also imposed on the U.S. securities markets in this period, the vast majority of which coming through class action settlements, though still more than \$100 million of awards a year were made through NASD arbitration proceedings. As mentioned earlier, data on NYSE arbitration awards are not available.

B. Two Preliminary Comparisons: The United Kingdom & Germany

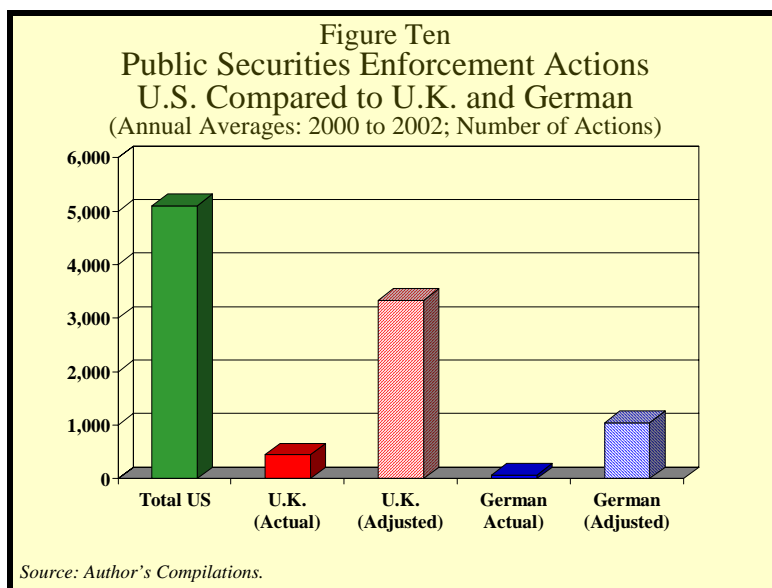
Simply reporting that average annual U.S. securities enforcement efforts in the 2000 to 2002

period consisted of more than 7,000 public and private actions, imposing nearly \$4.0 billion of public and private monetary sanctions plus a considerable amount of non-monetary sanctions (both criminal and civil), may persuade many readers that the intensity of U.S. securities enforcement efforts is higher than that of most other jurisdictions. Indeed, I hardly need to report the data, as it is a common place among practitioners at least that enforcement and litigation is a more serious matter in the United States than it is in other jurisdictions.

It is, however, instructive to quantify exactly how much more serious (that is, intensive) enforcement actions are in the United States if one is seeking to get a handle on difference in overall regulatory costs in this country as compared with other jurisdictions. In addition, much of the academic debate regarding comparative financial regulation – for example, discussions about the existence of regulatory convergence – often seems to assume some rough equivalence of regulatory effort from one jurisdiction to the next. If the level of enforcement intensity as well as the level of direct regulatory costs is higher in some jurisdictions than others, then de facto regulatory convergence is unlikely to occur even if de jure convergence does.

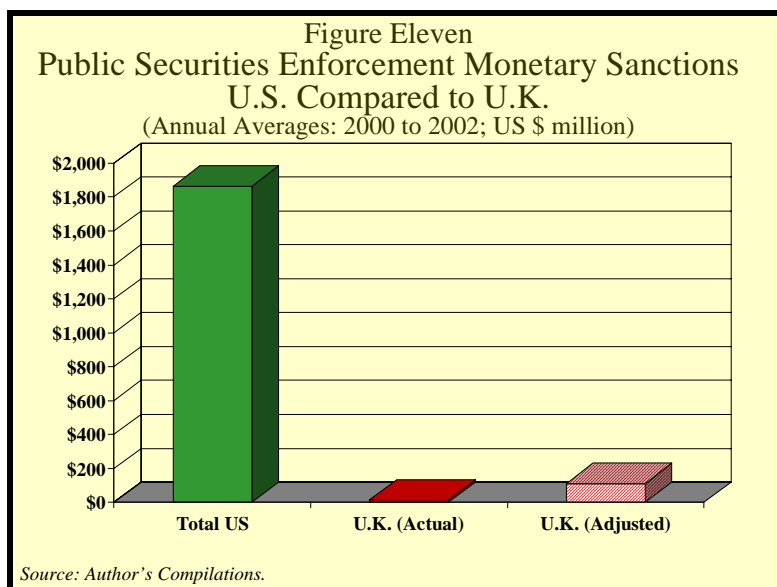
My efforts to compare securities enforcement intensity in the United States with securities enforcement intensity in other jurisdictions are at an extremely preliminary stage. To date, my efforts have been limited to public enforcement effort by central government agencies in the United Kingdom and Germany. In the case of Germany, my information is limited to the number of actions and

doesn't include data on sanction levels. While the data is skeletal, my research suggests that the two



agencies involved – the Financial Services Authority for the United Kingdom and the Federal Financial Supervisory Body (BAFin) for Germany – represent the principal source of financial oversight for both jurisdictions.

Figures Ten and Eleven compare the actual levels of public securities actions and public securities sanctions of these jurisdictions, as available, with the public levels reported for the U.S. Securities Enforcement in Table Three. Even when adjusted for market size,²⁴ the United States had substantially more enforcement actions than the United Kingdom and many times more than Germany. On the dimension of public monetary sanctions, the differential between the United States and the United Kingdom was even more dramatic. And, of course, these comparisons do not factor in private securities litigation, which account for more than half of the monetary sanctions imposed on U.S. securities markets.



While my analysis of securities regulation enforcement is still at a most rudimentary stage, the evidence collected so far suggests that there is at least as much variation in securities enforcement efforts across international boundaries as there is variation in levels of regulatory budgets and staffing and probably more, though it is possible that the United States represents an outlier at the upper end of the distribution of intensity in sanctioning.

²⁴ I used an adjustment factor of 7 for the United Kingdom and 16 for Germany, reflecting the differences between stock market capitalization in the United States and in those two other jurisdictions.

III. Concluding Remarks and Potential Future Lines of Inquiry

Accept for a moment that further and more systematic empirical inquiry confirms the preliminary evidence I have presented above and we can all agree that the levels of regulatory intensity – both in terms of governmental expenditures and sanction levels – varies markedly across jurisdictions. What should academic analysts and policy advisers infer from this empirical fact? And, how should representatives of governments such as South Korea proceed domestically in light of this information?

A. Competing Hypotheses Regarding Variation

As a preliminary matter, one cannot reject out of hand the possibility that observed variation in regulatory intensity might be perfectly rational. Each country may be pursuing an optimal level of financial regulation within its boundaries, but because of the many factors identified above,²⁵ we observe different levels of regulatory intensity in each jurisdiction. In many respects, this would be a comforting state of affairs. It would, moreover, greatly simplify discussions of regulatory convergence because it would imply that whatever legal rules a country adopted these rules would be enforced optimally within that jurisdiction even though objective measures of intensity – the number of staff assigned to oversee the law or the number of enforcement actions brought each year – might vary from one country to the next.

Another possibility is that regulatory intensity varies from jurisdiction to jurisdiction because some jurisdictions (perhaps most or even all) are regulating their financial markets in a manner that is inefficient in that a different mix of regulatory costs and liability rules would improve social welfare. These inefficiencies would imply some degree of political failure, but we have plenty of theoretical explanations for such short-comings in public governance: agency capture, path dependence, or a variety of other defects in political process. To the extent that variations in regulatory intensity across jurisdictions reflect differences in the capacities of different countries to adopt efficient levels of regulation, then discussions about regulatory convergence become more

²⁵ See supra pp.12-14.

complex. Simply tracking whether countries are converging towards a single legal rule is not that informative in terms of ascertaining the effect on either industry participants or society at large. One must also consider whether the rule is being enforced with the same degree of intensity across national boundaries in order to determine whether there is de facto regulatory convergence.²⁶ De jure convergence may not always equate with de facto convergence.

Yet another possibility is that the variation in regulatory intensity across national boundaries reflects a combination of factors: both variations that reflect different local conditions and variations that reflecting differing levels of efficiency in instituting a system of regulatory safeguards. This hypothesis is really just a combination of the preceding two possibilities: an intermediate and hybrid case, in which some of the variation is rational and some of the variation reflects differentially inefficient allocation of economic resources.

B. Exploring the Relationship Between Costs and Benefits

Testing which of the foregoing hypotheses best describe the state of affairs in the world of financial regulation would be a daunting challenge. One could imagine complex econometric models that would explore the relationship between regulatory effort in various jurisdictions and the social benefits they generate. To the extent that one found consistent relationships between effort and benefits across jurisdictions, that would imply that variations in regulatory efforts were not efficient. To the extent one discovered measurable and persistent country-specific effects – for example, if adding regulatory staff in France had much less social benefit than adding staff in the United Kingdom – that evidence would tend to support the hypothesis that national variations in regulatory effort may be rational, at least in part.

In certain areas, empirical work exploring the relationship between regulatory intensity and observed outcomes has begun. Several recent papers have explored the relationship between the enforcement of insider trading laws and market characteristics (like volatility, ownership separation,

²⁶ If all countries were identically inefficient, I suppose, the discussion of regulatory convergence would again be simplified.

and synchronicity) that insider trading laws are supposed to effect. And the evidence is that insider trading laws do have a measurable impact in the predicted directions.²⁷ One must recognize, however, that insider trading regulation is somewhat unusual in that one can identify objective market characteristics that insider trading regulation is supposed to influence. The effects of most kinds of financial regulation are not so easily observed. Moreover, these effects are not the same as social benefits. The impact of insider trading laws on increased separation of ownership is not a social benefit in and of itself; ownership separation is beneficial because it reduces the cost of capital or increases the investment opportunities of firms. So, while we now have preliminary evidence that insider trading enforcement has an impact on market characteristics, we don't have evidence that the benefits of enforcing insider trading law exceeds the costs of enforcing those laws.

Other studies attempt to explore the relation between financial regulation and broader measures of economic performance. For example, World Bank economists have studied the relationship between different aspects of banking regulation (though not staffing or enforcement levels) on the development, efficiency and stability of countries banking systems.²⁸ And, the Law and Finance literature has done similar work on various aspects of securities regulation on the development of securities markets.²⁹ One could imagine extending both of these lines of inquiry to ascertain the impact of regulatory intensity on these broader measures of economic performance. Again, one would need to convert impacts into benefits and then evaluate in light of regulatory costs, but such work would be extremely useful in enhancing our understanding of the significance of regulatory intensity and the possibility that variations in intensity across jurisdictions reflect rational

²⁷ See Laura N. Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence*, 7 AM. L. & ECON. REV. 144 (2005); Utpal Bhattacharya & Hazem Daouk, *The World Price of Insider Trading*, 57 J. FIN. 75 (2002); Duncan Herrington, *Insider Trading Enforcement & Market Performance* (May 3, 2004) (on file with author).

²⁸ See James R. Barth et al, *Bank Regulation and Supervision: What Works Best?*, 13 J. FIN. INTERMEDIATION 205 (2004).

²⁹ See Raphael La Porta et al., *What Works in Securities Law?* (forthcoming *Journal of Finance* 2005).

responses to unique local conditions as opposed to inefficient products of local political conditions.

C. Living with Under-Theorized Benchmarks

For the foreseeable future, however, our ability to distinguish between efficient and inefficient variation in regulatory intensity across jurisdictional boundaries is likely to be incomplete. At best, what we are likely to have are a series of under-theorized benchmarks of regulatory intensity, probably not too different than the preliminary data presented in this paper. Under these conditions, it probably does make sense for regulatory officials around to world to consider how their own levels of regulatory intensity vary widely from international standards. So, my South Korea inquisitor was likely acting entirely sensibly in seeking general guidance on staffing levels. And, today, perhaps German authorities would be well advised to consider whether they are making appropriate choices in terms of staffing, enforcement intensity, and salaries for regulatory personnel as the continental capital markets emerge.

And, of course, we in the United States might also benefit from comparing ourselves to international standards. As I assumed above, it is possible that the United States has stumbled upon the optimal level of financial regulation and enforcement for its financial markets, but it is also possible that the levels of regulatory staffing and even enforcement that we observe in this country are inefficient and excessive. Perhaps local conditions in the United States warrant markedly higher levels of regulatory staffing and enforcement than are observed elsewhere in the industrialized world, but then again perhaps not.

Appendix A

Appendix A
 Summary of Financial Regulatory Budgets and Staffing in the United States: 1997 to 2004

		1997	1998	1999	2000	2001	2002	2003	2004
Depository Insitutions	Federal Board of	Budget, \$64,544,000	\$73,993,000	\$73,993,000	\$83,209,000	\$83,209,000	\$95,590,000	\$95,590,000	\$105,770,500
		Staff, 610	613	613	615	615	659	659	665
	Federal Reserve Banks	Budget, Expense \$436,392,000	\$451,859,000	\$480,836,000	\$502,575,313	\$444,752,000	\$471,858,000	\$494,489,000	\$520,137,000
		Staff, 5,118	4,933	5,024	5,018	4,423	4,529	4,652	4,621
	FFIEC	Budget, \$5,579,631	\$5,579,631	\$5,626,934	\$6,272,242	\$6,205,966	\$6,753,125	\$6,255,251	\$6,255,251
		Staff, 46	46	47	52	52	56	52	52
	FDIC	Budget, Expense \$1,377,300,000	\$1,202,000,000	\$1,156,400,000	\$1,121,200,000	\$1,043,800,000	\$1,189,900,000	\$1,035,426,343	\$1,035,426,343
		Staff, 7,793	7,359	7,266	6,452	6,167	5,430	5,300	\$5,300
	NCUA	Budget, \$97,200,000	\$97,200,000	\$100,600,000	\$114,600,000	\$127,600,000	\$132,600,000	\$134,200,000	\$134,100,000
		Staff, 953	953	1,013	1,042	1,049	1,029	995	971
	OCC	Budget, \$329,961,256	\$379,306,051	\$384,024,300	\$376,873,508	\$400,731,373	\$399,536,871	\$423,622,606	\$423,622,606
		Staff, 2,864	2,830	2,975	2,920	2,837	2,792	2,761	\$2,761
	OTS	Budget, Expense \$147,756,000	\$148,314,000	\$153,709,000	\$156,981,000	\$160,752,516	\$155,749,000	\$153,452,000	\$153,452,000
		Staff, 1,997	1,998	1,999	2,000	2,001	2,002	2,003	\$2,003
State Bank Regulators	Budget, Expense \$327,911,000	\$327,911,000	\$327,911,000	\$327,911,000	\$327,911,000	\$327,911,000	\$327,911,000	\$327,911,000	
	Staff, 2,270	2,270	2,270	2,270	2,270	2,270	\$2,270	\$2,270	
Securities Industry	Blue Sky regulators	Budget, 0	0	0	0	0	0	0	0
		Staff, 0	0	0	0	0	0	0	0
	CFTC	Budget, Expense \$62,761,000	\$67,842,000	\$75,339,000	\$62,761,000	\$67,842,000	\$75,339,000	\$85,429,000	\$89,901,000
		Staff, 434	440	514	434	440	514	521	497
	NASD and other SROs	Budget, \$313,643,700	\$328,697,600	\$313,643,700	\$328,697,600	\$354,999,300	\$498,865,500	\$534,983,700	\$534,983,700
		Staff, 1,700	1,850	1,700	1,850	1,850	2,087	2,085	\$2,085
	NFA	Budget, Expense \$35,026,200	\$29,752,800	\$35,026,200	\$29,752,800	\$32,505,960	\$32,307,480	\$32,261,250	\$32,261,250
		Staff, 280	280	280	280	220	145	226	\$226
	NYSE	Budget, Expense \$93,933,900	\$93,933,900	\$93,933,900	\$93,933,900	\$93,933,900	\$215,066,460	\$215,066,460	\$215,066,460
		Staff, 610	610	610	610	610	610	\$610	\$610
SEC	Budget, \$311,143,000	\$311,143,000	\$338,887,000	\$369,825,000	\$412,618,000	\$487,345,000	\$619,321,000	\$811,500,000	
	Staff, 2,768	2,768	2,776	2,840	2,936	3,009	3,060	3,592	
Insurance Industry	State Insurance	Budget, \$772,900,000	\$772,900,000	\$839,200,000	\$880,000,000	\$942,600,000	\$946,600,000	\$1,003,900,000	\$1,028,500,000
		Staff, 12,065	12,065	12,131	12,410	12,331	13,056	13,056	\$13,056
Total For Pensions	EBSA	Budget, \$89,950,000	\$98,434,000	\$89,950,000	\$98,434,000	\$107,633,000	\$111,214,000	\$111,214,000	\$111,214,000
		Staff, 764	823	764	823	850	850	\$850	\$850
	IRS	Budget, \$138,428,267	\$147,884,376	\$138,428,267	\$147,884,376	\$176,897,675	\$194,964,331	\$205,198,626	\$215,945,605
	Staff, 1,991	1,863	1,991	1,863	2,096	2,206	2,207	2,132	
PBGC	Budget, \$216,000,000	\$216,000,000	\$216,000,000	\$216,000,000	\$216,000,000	\$216,000,000	\$250,000,000	\$250,000,000	
	Staff, 2,000	2,000	2,000	2,000	2,000	2,000	2,000	\$2,000	
	US Total	\$4,820,429,954	\$4,752,750,358	\$4,823,508,301	\$4,916,910,739	\$4,999,991,690	\$5,557,599,767	\$5,728,320,236	\$5,996,046,715
	US Total	44,264	43,702	43,972	43,479	42,747	43,244	43,308	43,691

Blue font indicates interpolated data. Red font indicates data that is completely unavailable.

Appendix B

Appendix B					
Preliminary Data on Regulatory Costs and Staffing in Selected Civil Law and Common Law Jurisdictions					
	Total Regulatory Staff	Total Regulatory Costs	Regulatory Costs Per Staff Member	Total Regulatory Costs per Billion Dollars of GDP	Regulatory Staff Per Million of Population
Civil Law Jurisdictions					
Austria	171	\$22	\$127,485	\$86,853	21.11
Argentina	719	n.a.	n.a.	n.a.	18.92
Belgium	391	\$50	\$126,765	\$164,123	37.96
Denmark	170	\$20	\$115,882	\$92,925	31.48
Finland	136	\$16	\$120,074	\$101,429	26.15
France (FSA)	916	\$130	\$142,149	\$74,533	15.53
Germany (FSA)	1,319	\$109	\$82,683	\$45,441	16.09
Greece	301	\$10	\$34,385	\$59,827	28.13
Italy	756	\$85	\$112,870	\$58,246	13.26
Japan	1,213	\$142	\$117,065	\$32,825	9.55
Korea (Direct)	1,648	\$163	\$98,627	\$268,509	34.40
Netherlands	784	\$74	\$93,878	\$144,031	48.40
Norway	179	\$18	\$102,793	\$83,258	38.91
Portugal	534	\$13	\$23,689	\$84,615	52.35
Portugal	534	\$13	\$23,689	\$84,615	52.35
Spain	1,027	\$44	\$43,189	\$53,057	25.05
Sweden (FSA)	186	\$25	\$134,472	\$83,373	20.67
Switzerland	200	\$26	\$128,700	\$83,301	27.40
		<i>Civil Law Averages:</i>	\$ 90,466	\$ 88,942	28.76
Common Law Jurisdictions					
Australia (FSA)	1,900	\$214	\$112,669	\$413,265	95.96
Canada (FSA)	2,209	\$249	\$86,695	\$148,908	71.26
Hong Kong (FSA)	640	\$105	\$164,370	\$665,801	94.12
Ireland (FSA)	267	\$47	\$175,644	\$316,872	68.46
Israel	357	\$29	\$80,392	\$278,641	53.28
New Zealand	41	\$6	\$135,366	\$73,026	10.25
Singapore (FSA)	300	\$44	\$146,515	\$483,016	69.77
United Kingdom (FSA)	3,069	\$497	\$161,798	\$276,788	52.02
United States (FSA)	29,924	\$4,633	\$154,840	\$425,827	102.83
United States (HEJ)	38,709	\$5,419	\$139,990	\$497,984	133.00
		<i>Common Law Averages:</i>	\$ 135,828	\$ 358,013	75.09

Sources: FSA 2004 Annual Report, Appendix 5; Freshfields Bruckhaus Deringer, *How Countries Supervise their Banks, Insurers and Securities Markets 2004*; Author's Compilations.