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ABSTRACT

After two decades of extreme turbulence in banking and financial markets around the world, it is reasonable to ask about the current status of banking regulation and supervision. Our unique starting point for answering that question comes from the fact that we make use of the first, and therefore the oldest, detailed, multi-country database on banking regulation and supervision, developed by us twenty years ago. We compare that 1993 data for nineteen developed market economies to similar data from the most recent (2011-2012) World Bank survey data on banking supervision and regulation. Key observations emerging from our intertemporal cross-country analysis include the following: (1) the very largest banks retain the same kind of dominance in 2011 as they did twenty years ago (before the continued occurrence of evermore serious financial crises); (2) in the case of some basic banking activities, including in particular funding practices, the nature of systemic risks seems to have remained the same, if not worsened, over time; (3) in at least one respect—scope of coverage—deposit insurance schemes have changed in a way that encourages moral hazard behavior. These observations suggest that there is much more work to be done to address banking risks and more data to collect and analyze to help us understand how well banking policies and practices are succeeding around the world.

*The opinions expressed in this paper are the authors' alone and should not be interpreted as representing those of the Office of the Comptroller of the Currency or the Treasury Department of the United States.

INTRODUCTION

The global financial crisis of 2008-2009 generated a flurry of policy responses, at both the national and international levels, to reform financial markets. To date, the greatest focus has been on reforming the operations of the banking industry, including, in particular, strengthening regulation and supervision. In contrast to the somewhat uneven progress on policy measures targeting nonbank financial institutions and markets, many banking system reforms have been fully implemented, or are in the process of being implemented. Under those circumstances, and considering that we are five years and counting since the full eruption of the global financial crisis in fall 2008, it is reasonable to ask, "What is the status of banking regulatory and supervisory policies around the world now?" A corollary question immediately arises: "Current status, as compared to what?"

The purpose of this article is to answer those two questions, exploiting a unique vantage point we possess. Two decades ago, two of us (along with a third coauthor) constructed the first detailed and wide-ranging cross-country data set on banking structure, regulation, and supervision, and established what can be fairly called the "prototype" pattern for analyzing such data.[1] Since that time, subsequent data collection efforts in this vein have appeared, the most substantial of which are the four surveys of banking supervisory authorities in roughly 180 countries undertaken and published by the World Bank.[2] Studies using the World Bank's *Bank Supervision and Regulation Survey* ("World Bank survey") data continue to proliferate, and we follow in their footsteps in the sense that, in this paper, we use the most recent survey data (centering mostly on 2011) in combination with other relevant data from 2013, to paint a fairly contemporary "now" landscape. However, because our original data set covered 1993 (with, as noted below, a few exceptions), we are able to span an approximately twenty-year "then vs. now" time period, which is at least a half a decade longer than any other comparable study can cover. Our greater span of time is conceptually meaningful in that our starting point, 1993, is representative of the last broadly stable period—the early-1990s—in financial markets. Indeed, one could argue that the two decades directly thereafter constitute the two most turbulent decades in financial markets history.[3]

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[1] We originally published the results of those efforts in an Economics Working Paper for the U.S. Office of the Comptroller of the Currency. *See* James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf [hereinafter Barth et al., I]. A shorter version of that paper was published in *Managerial Finance*. *See* James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison*, 23 MANAGERIAL FIN., no. 11, 1997, at 1 [hereinafter Barth et al., II].

[2] Section I.B of the current paper summarizes the nature of, and includes a link to, the World Bank's *Bank Regulation and Supervision Survey*. *See infra* Section I.B and notes 7-8. Especially for the earlier surveys, much of the work was directly undertaken or heavily influenced by one of this article's authors, James R. Barth, in cooperation with Gerard Caprio, Jr. and Ross Levine.

[3] Beginning in the mid-1990s and carrying on to the present, large-scale and, in a number of cases, global financial crises succeeded each other in rapid succession (including the East Asian crisis, the Dot-Com bubble

The article is organized as follows. Section I describes the nature of our data set, focusing on key facets of its two major components. Our "then" component is the 1993 data drawn from our original Barth, Nolle, Rice study ("BNR") of banking structure, regulation, and supervision in nineteen developed market economies. Our "now" data set centers on 2011-2013 and is primarily drawn from the most recent World Bank survey. Section II briefly highlights several basic changes in banking system structure revealed by comparing the 1993 and 2011-2013 data. Section III presents information on banking regulation across countries and over time, focusing on three broad areas: (1) "banking powers," by which we mean the degree to which regulations (and other laws) allow banks to engage in activities beyond their "traditional" deposit-taking and lending; (2) capital requirements; and (3) deposit insurance schemes. Section IV considers several key supervisory practices, including the nature of bank examinations, consumer protection measures, and reliance on market discipline in the form of external auditing. The last section summarizes and concludes.

I. INTERTEMPORAL CROSS-COUNTRY DATA SET

When we undertook our original research in the mid-1990s, cross-country comparisons of any aspect of banking were relatively rare, and those that existed were limited in scope in two basic ways. First, with the exception of the United States and a few other countries, publicly available data on a national basis describing not only banking regulation and supervision, but even basic banking structure such as the number of banks, measures of bank size, and concentration in the banking industry was difficult and expensive to come by. Second, as a consequence of this, the international comparisons that appeared from time to time covered a small number of countries—typically, six or fewer.[4] This section begins by briefly summarizing how we (i.e., Barth and Nolle, for the BNR work) responded to this situation, in a manner well beyond what had been attempted by anyone else, by constructing the first "modern" cross-country data set on banking structure, regulation, and supervision across a wide range of countries. It is that original data that we draw upon for the "then" (mostly 1993) component of the data set used in the current article. Subsection B summarizes the nature of the "now" (2011-2013) component of the data set for this article, briefly explaining its direct connection to our original 1993 work.

A. Our "Then" (1993) Data: Genesis, Construction, Contents

Facing the paucity of readily usable data outlined above, we took action on two fronts, ultimately combining the resultant data into what at the time was by far the largest such integrated cross-country data set. We explored the contents and mastered the use of the BankScope database, which provides private sector data covering basic structure, balance sheet, and income statement data on a bank-specific basis for (most)

and bust, the global mortgage market bubble and bust, which generated the 2008-2009 global financial market crisis, and the European sovereign debt crisis).

[4] See Barth et al., I, *supra* note 1, for a discussion of and citations to the representative literature at that time.

publicly traded banks in a wide range of countries. Up to that point, this BankScope data had been used almost exclusively to construct analyses of peer groups of competing banking companies for purposes of furthering the business interests and market share, among other reasons, of clients subscribing to the company's database.[5] We realized that, subject to careful filtering and other measures, we could build a country-by-country bank-specific data set useful to describe in a systematic and comparable way the banking system "landscape" for selected countries.

We also needed country-specific data on regulatory and supervisory practices. No such database existed, nor could a wide-ranging one be built by scouring country-specific sources. Under these circumstances we obtained the permission of the relevant authorities at the U.S. Office of the Comptroller of the Currency (OCC), where two of the authors of the current paper, Barth and Nolle, were at that time employed (as indeed was the third coauthor, Rice), to ask bank regulatory authorities in selected countries for relevant bank structure, regulatory, and supervisory information.[6] To do so necessitated the construction of a carefully designed survey instrument, and the composition of the appropriate official letters of inquiry. It also required what to this day we remain most grateful for: expert, cooperative responses to the survey from supervisory authorities in eighteen foreign countries. (The U.S. data we were able to provide ourselves.)

The regulatory and supervisory information for 1993 (and, in some cases, 1995) presented in the remainder of this article is from the original BNR data set which, it should be noted, covered more dimensions of regulation and supervision than are addressed in the current article. Our "then" component also includes country-specific data on the macroeconomy and size and composition of the financial services industry.

B. Our "Now" (2011-2013) Data, and the Comparability of Our "Then" and "Now" Data Components

The World Bank has collected detailed information on the banking systems by administering, to date, four surveys filled out by supervisory authorities in roughly 180 countries.[7] Each succeeding survey has refined the existing material in an effort to elicit standardized, closely comparable information from respondents and enhance the analytic utility of the data collected, and each has added questions to the preceding survey.[8] Our "now" (2011-2013) component draws on selected aspects of World Bank

[5] BankScope is owned and maintained by Bureau van Dijk, IBCA. *See Our Products, BankScope,* BUREAU VAN DIJK, http://www.bvdinfo.com/en-us/products/company-information/international/bankscope (last visited May 16, 2014).

[6] When the Barth, Nolle, and Rice (Barth et al., I) paper was produced, James R. Barth was a Visiting Scholar at the OCC; Daniel E. Nolle was (and remains) a Senior Financial Economist at the OCC; and, at that time, Tara N. Rice was a Research Assistant in the Economics Department of the OCC.

[7] James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111, 111-12 (2013) [hereinafter *Bank Regulation and Supervision in 180 Countries*]; see also Bank Regulation and Supervision Survey, WORLD BANK, http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTGLOBALFINREPORT/0,,print:Y~isCURL:Y~contentMDK:23267421~pagePK:64168182~piPK:64168060~theSitePK:8816097,00.html (last visited Mar. 18, 2013).

[8] The first World Bank's *Bank Regulation and Supervision Survey*, covering the 1998-2000 period, included 175 questions and was completed by 107 countries; the second survey, covering 2003, expanded coverage in

survey IV, adding to that recent macroeconomic and financial system size and composition data from other sources.[9]

For the combined data set, several observations warrant special attention. It is important to note that there are direct, significant links between the World Bank surveys and the original BNR work. The most important of those links is personal, in the following sense: not long after completing his term as a Visiting Scholar at the OCC, Barth accepted a visiting position at the World Bank. While there, Barth, along with Gerard Caprio (who at the time was employed at the World Bank), and Ross Levine (who at the time was a Visiting Scholar at the World Bank), became one of the three main architects of the first World Bank survey, and continued to contribute to the construction of subsequent surveys. Those three were also instrumental in creating and systematizing empirical methods for interpreting and analyzing survey results. In addition, Barth was able to use data he and Nolle collected by re-surveying their original set of countries in 1997 and 1998 to augment and filter data collected in the first World Bank survey.

The above discussion shows the strong conceptual and empirical connection between the two parts of the data set used in the current study. Nevertheless, it is important to point out that in some cases it is not possible to make direct comparisons between the 1993 and 2013 components of our current data set. Although conceptually the two components cover the same topics, in selected cases the underlying definitions are different and/or the level of detail is different. Difficulties with data comparability across time are noted in the discussion of several topics covered in Sections II, III, and IV.

C. Country Coverage

A third feature of our combined data sets—our country sample—is also worth special consideration. The World Bank surveys cover roughly 180 countries, while the BNR data covers a much smaller group of nineteen countries, which define the "cross-country" dimension of our current study.[10] Table 1 lists the specific countries.[11]

It is worthwhile to consider the factors motivating BNR's selection of countries. Each country in the original study was included because its national banking system was large, and/or because it was a member of at least one of the international groups regarded at the time as being particularly influential, namely, the G-10 or/and the European Union. Those nineteen developed market economies ("DMEs") include G-10 (only) members Canada, Japan, Switzerland, and the United States; E.U. members which were also G-10 members (Belgium, France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom); and the then-remaining E.U. members not part of

two dimensions by asking 275 questions which were completed by 152 countries; Survey III, covering 2006, completed by 142 countries, contained more than 300 questions; and Survey IV surveyed 180 countries and was fully completed by 2012 by more than 125 countries. The current article draws on Survey IV. For full details of the surveys, see *Bank Regulation and Supervision in 180 Countries, supra* note 7, at 112-13, and *Bank Regulation and Supervision Survey*, *supra* note 7.

9 For a list of these sources, see citations in Tables 1-3.

10 *See infra* Table 1.

11 *See infra* Table 1.

the G-10 (Austria, Denmark, Finland, Greece, Ireland, Luxembourg, Portugal, and Spain).

BNR's criteria for selecting countries are outdated now. One obvious change is that the European Union includes many more member countries currently (twenty-eight total in 2014).[12] In addition, the G-10 has faded in significance as an important multilateral group. One now speaks of the G-7 countries and, perhaps more importantly, the G-20, as Nolle argues in a forthcoming publication.[13] As indicated in Table 1, our nineteen DMEs as a group accounted in 1993 for very large shares of world GDP (77%), banking assets (86%), stock market capitalization (83%), and bond market activity (76%).[14] By 2013, while still substantial, group world shares had declined in every category.[15] The main reason for that trend is well known: a number of emerging market economies ("EMEs") had become big players. Table 2 focuses on the three most important EMEs over time in this respect: China, India, and Brazil. The table shows that all three rose among the ranks of the top ten economies over the past two-plus decades, and that their combined share of world economic activity more than doubled over that time.[16]

II. KEY CHARACTERISTICS OF BANKING INDUSTRY STRUCTURE: CHANGES OVER TWO DECADES

Following the structure of the discussion in BNR, in this section we present and discuss cross-country data on several basic characteristics of banking industry structure in 1993 and in 2013. Table 3 focuses on various gauges of banking industry size and concentration.[17] It is important to note at the outset that the two data components use different definitions of the term "bank." The respective underlying data sets (i.e., BNR and World Bank survey) can be consulted for complete details, but what we highlight here is that the BNR definition is narrower, for most countries, than that used by the World Bank surveys.[18] The first left-hand column heading in Table 3 makes this clear. Banks, as narrowly defined for the 1993-based data collected by BNR, accounted in many countries for less than 100% of bank-like depository institutions; while in the 2011 World Bank data, banks comprised most, or all, of what the World Bank survey terms bank-like "credit institutions."[19] Interestingly, even with

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[12] *See EU member countries*, EUROPA.EU, http://europa.eu/about-eu/countries/member-countries/index_en.htm (last visited Mar. 30, 2014).

[13] See *infra* Table A.1 for a list of the G-20 members, as well as a clear indication of the relative economic and financial market "heft" of that group. For a detailed explanation of the G-20's rise to prominence after the 2008-2009 global financial crisis, see Daniel E. Nolle, *Who's in Charge of Fixing the World's Financial System? The Under-Appreciated Lead Role of the G20 and the FSB*, FIN. MARKETS, INST. INSTRUMENTS (forthcoming), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2354395.

[14] *See infra* Table 1.

[15] *See infra* Table 1.

[16] *See infra* Table 2.

[17] *See infra* Table 3.

[18] *Compare* Barth et al., I, *supra* note 1, *with Bank Regulation and Supervision Survey*, *supra* note 7.

[19] *See infra* Table 3. Basically, BNR asked countries to respond about depository institutions equivalent to the U.S. concept of "commercial banks."

a somewhat wider definition of what constitutes the banking industry in the 2013 data, in one country, Austria, banks made up a smaller portion of all credit institutions in 2013 than in 1993.[20]

The banking-assets-to-GDP columns in Table 3 provide a measure of the relative economic importance of countries' banking industries.[21] This standard metric compares a stock concept, bank assets, to a flow, GDP, but even so the intuition behind the measure is useful, especially when one compares the figures across countries. Focusing first on comparisons for a single time period, one can say, for example, that in 1993 the banking system of the France, whose assets totaled about 104% of GDP, was—relative to that country's economy—about twice as big as the banking industry in the United States, which accounted for about 56% of U.S. GDP.[22]

Even though the two time periods differ in their definitions of what constitutes a bank, looking across the two time periods yields insight. Several points stand out when one ranks the countries in each time period from biggest to smallest in terms of the size of their banking systems relative to GDP (ranking not shown in the table). Country rankings vary considerably between the two time periods, with some countries moving up, and some moving down in 2011 compared to their rank in 1993. However, about half (eight) of the countries for which there is data in both time periods show roughly the same assets-to-GDP size in both time periods, an indication that banking industry growth was roughly in line with growth of the economy.[23] Five countries show about a doubling in the banking-assets-to-GDP ratio in 2011 compared to 1993, and for these it is not possible on the basis of this information alone to say how much of the difference in ratios was due to definitional differences between the periods, and how much due to differences in the growth of the banking industry compared to economic growth overall.[24] Only two countries, Switzerland and Ireland, show a ratio in 2011 multiple times that in 1993;[25] the factors at work in those cases bear additional investigation, but that is beyond the scope of the current article.

Table 3 shows data for both time periods on the ratio of bank deposits to bank assets.[26] The relevant columns in Table 3 are labeled as "Bank Funding" due to the fact that deposits, on the liabilities side of the bank balance sheet, in effect are an important source of funding for banks' assets-side activities, including, in particular, credit extension. Indeed, deposits are commonly the biggest single source of funding for banks' assets-side activities. Although types of deposits vary in volatility and riskiness—demand deposits are very stable, while deposits made by institutional investors are less so—overall deposits are a more stable source of bank funding than other sources such as short-term funds borrowed from other financial institutions. At both the national and international levels, policy makers' emphasis, post-2008-2009 financial crisis, on the nature and volatility of funding continues to increase, and it is

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20 *See infra* Table 3.
21 *See infra* Table 3.
22 *See infra* Table 3.
23 *See infra* Table 3.
24 *See infra* Table 3.
25 *See infra* Table 3.
26 *See infra* Table 3.

fair to say that official concerns in this regard are on a par with the attention given to stronger capital requirements.

In that context, several observations about the data in Table 3 bear consideration. First, as the table shows, in five of the nineteen countries in 1993 (the United States, Japan, Canada, Greece, and the United Kingdom), deposits funded two-thirds or more of banking assets, while, in the rest, the deposits-to-assets ratio was below that, in some cases substantially so.[27] By 2011, for five of the seventeen countries for which we have the relevant data, deposits-to-assets ratios were at or above the two-thirds of assets level, and, of those, only the United States and Canada crossed that threshold in both time periods.[28] Second, in 2011, nine countries out of the seventeen for which we have data saw their bank deposits-to-assets funding ratios drop.[29] Finally, in 1993, when far less attention was devoted to funding issues, thirteen of the nineteen countries (68%) relied on deposits for a little over half, or less, of banking industry funding.[30] But, by 2011, despite the sea change in the emphasis that supervisors and policy makers worldwide place on bank funding volatility and stability, nearly the same proportion of countries—65%—evinced this funding pattern.[31]

The far right-hand columns in Table 3 add a final perspective on banking industry structure. Specifically, the three-firm concentration ratio shows the percent of all banking system assets accounted for by the biggest three banks in a country.[32] For the majority of countries, in both time periods, the three-firm concentration ratio is above 50%, generally substantially so.[33] Furthermore, broadly speaking, the change in that ratio, for a given country, is not particularly large for the more narrowly focused definition of "banking" in 1993 compared to 2011. The larger point is this: in most countries, including the clear majority of the nineteen where the banking industry has a large role in the overall economy, the very largest banks dominated the banking industry twenty years ago, and continue to do so now.[34] Under those circumstances, the post-2008-2009 financial crisis emphasis, at both the national and international levels, placed on policy measures to mitigate risks posed by systemically important banks ("SIBs") seems well-justified.[35]

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[27] *See infra* Table 3.
[28] *See infra* Table 3.
[29] *See infra* Table 3.
[30] *See infra* Table 3.
[31] *See infra* Table 3.
[32] *See infra* Table 3.
[33] *See infra* Table 3.
[34] *See infra* Table 3.
[35] For a detailed discussion of global policies to address SIBs, see James R. Barth, Chris Brummer, Tong Li & Daniel E. Nolle, *Systemically Important Banks (SIBs) in the Post-Crisis Era: 'The' Global Response, and Responses Around the Globe for 135 Countries*, *in* THE OXFORD HANDBOOK OF BANKING (revised ed. forthcoming 2014), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2294641. For a comprehensive discussion of the role of the Basel Committee on Banking Supervision, the G20, and Financial Stability Board on this issue, see Nolle, *supra* note 12.For a comprehensive discussion of the role of the Basel Committee on Banking Supervision, the G20, and Financial Stability Board on this issue, see Nolle, *supra* note 13.

III. CHANGES IN BANKING REGULATION OVER TWO TURBULENT DECADES

There are many dimensions to bank regulation. As the development of succeeding generations of the World Bank's survey illustrate, it is a challenging task to comprehensively identify all relevant dimensions of regulation and supervision, much less figure out precisely how to measure them.[36] That challenge is magnified, of course, by another challenge: constructing and administering a survey mechanism that faithfully reflects concepts and metrics. With that in mind, we note that our original data collection and research efforts were animated by the thought that more information, even if less than comprehensive, is better than less information. The result, in concrete terms, was our selection at that time of what we judged to be a useful start, wherein we focused on three major dimensions of regulation: (1) "banking powers," i.e., the nature and degree of limitations or restrictions on banks in engaging in non-traditional activities and ownership opportunities considered to be "non-traditional" for commercial banks; (2) capital requirements; and (3) deposit insurance schemes. The current article follows our original research in focusing on these three important aspects of regulation.

A. Banking Regulation: Banking Powers

Our original BNR research explains that an important indicator of the nature of the regulatory regime in a country is the degree to which banks are allowed to engage in financial activities beyond the "traditional" banking functions of taking deposits and making loans.[37] Table 4 presents a summary of the detailed information they collected from national regulatory and supervisory authorities (as of 1995) on "banking powers."[38] Specifically, that term covers banks' powers to offer securities (stock market) services (including sales and underwriting), insurance services, and real estate services to their customers; and the degree to which the integration of banking and commerce was permitted in the nineteen DMEs.

Our first-ever data collection and analysis efforts in this respect guided important parts of the construction and interpretation of World Bank survey work, and, as a result, there is strong commonality, conceptually, between the original BNR work and subsequent World Bank work. It is important to note here, however, that there are substantial differences between the two data sources. Broadly speaking, our original survey was at the time viewed by us, and respondents at regulatory and supervisory agencies in the nineteen countries, as a "one-time" exercise. In consequence, we felt justified in asking for a degree of narrative detail that would be inappropriately burdensome to ask for in a regularly repeated survey such as the World Bank's. However, the World Bank's data covers an increasingly wide range of information because the World Bank continually refines the nature and number of precisely targeted questions on regulation and supervision asked in its survey. In the end, because the two

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[36] *See Bank Regulation and Supervision*, *supra* note 7.

[37] *See* Barth et al., I, *supra* note 1 (manuscript at 12).

[38] *See infra* Table 4.

data sets differ substantially in the structure and qualitative nature of the data they collect on banking powers, we have chosen, as the construction of Table 4 reveals, to deviate from the kind of straightforward now-and-then presentation used in many of the other tables in this article. Table 4 includes, for each of the nineteen DMEs, "mini-narratives" summarizing the information BNR collected from national authorities for each of the five "banking powers."[39] And, although it was not possible to configure relevant World Bank survey data similarly, we include in the far right-hand column an overall assessment of how the World Bank survey IV data compares to the detailed data for 1995.[40]

As BNR originally observed, the degree of variation across countries in permissible banking activities and ownership options is wide enough to make generalizations about what constitutes "standard practice" difficult, with the one (rough) exception that no country had a "split personality" with respect to banking powers. That is, it was never the case that any country was very restrictive on some powers and at the same time very liberal on the remaining powers. Rather, a country that was fairly restrictive in the case of a given power was also at least somewhat restrictive toward the others, while countries that were the least restrictive on several powers were also no more than moderately restrictive (if that) toward the others. As a consequence, BNR explain their method for categorizing countries into several different groups, based on the at least rough similarity among group members in the degree of restrictiveness they impose on banks engaging in the five non-traditional "powers."

For the purposes of the current article, the following discussion consolidates BNR's groupings into two basic categories, based on the BNR groupings and the existence of relevant data for 2011. The two groupings for this article, for the sixteen countries for which we have 2011 data are (1) countries with, overall, somewhat narrower powers (Italy, Belgium, Canada, Greece, and the United States), and (2) countries with, overall, somewhat wider (or at least less restrictive) powers (the remaining eleven countries).[41] The remainder of this section focuses on how countries were evaluated on the overall nature of the change between their 1995 "powers" status and our assessment of their 2011 status, as summarized in the far right-hand column of Table 4.[42]

It is difficult to justify a firm *a priori* expectation for any given country, or for all nineteen DMEs as a group, with respect to the nature of the change in banking powers regulation between 1995 and 2011. On the one hand, astounding advancements in information technology and financial engineering, combined with increasing emphasis, pre-2008-2009 financial crisis, on the benefits of less restrictive banking and financial markets argue for an overall trend of greater banking powers liberalization, regardless of a given country's banking powers status twenty years ago. On the other hand, by 2011, policy makers had begun to implement measures aimed at mitigating systemic risk. Hence, one could expect to see, overall, a tightening up on the range of

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[39] *See infra* Table 4.

[40] *See infra* Table 4.

[41] *See infra* Table 4.

[42] *See infra* Table 4.

activities and ownership opportunities in which banks can engage, relative to an earlier era.

In that event, the information in Table 4 justifies neither presumption. Among the eleven countries with relatively wide banking powers in 1995, nine (Austria, Switzerland, United Kingdom, France, Netherlands, Finland, Ireland, Portugal, and Spain) retained a similar degree of "wide-ish" banking powers in 2011, while only two (Denmark and Luxembourg) decreased banking powers somewhat.[43] Under those circumstances it is hard to conclude that the trend in banking powers was either toward greater liberalization or more restrictiveness.

The conclusion for the five countries with rather narrow or more restrictive banking powers in 1995 is, if anything, even less clear. Two countries in the formerly "narrower powers" group, Belgium and the United States, increased banking powers by 2011 compared to 1995.[44] In the case of the United States, and despite recent measures implemented under the post-crisis enactment of the Dodd-Frank Act,[45] that posture derived, in part, from two factors: (1) the enactment of the Gramm-Leach-Bliley Act of 1999[46] allowing for greater integration of banking and commerce; and (2) the decades-long movement toward wider powers at the bank holding company level as compared to the individual bank level.[47] Even so, this evidence partially supporting the *a priori* expectation that, at least for the formerly more restrictive countries, the trend will be toward wider banking powers, is contradicted by the fact that two of the narrower powers countries, Italy and Greece, *decreased* banking powers by 2011.[48]

B. Banking Regulation: Capital Requirements

Capital regulations have long been important in the banking industry so as to limit the extent to which individual banks are able to leverage. Higher capital requirements lead to lower leverage, so that it takes larger losses to wipe out the equity of a bank. Setting minimum capital requirements is therefore a way to provide a cushion to lessen the likelihood of insolvency of a bank due to losses. The Basel Committee on Banking Supervision (BCBS) in 1988 issued guidelines calling for a minimum capital requirement of 8% of risk-weighted assets, known as Basel I.[49] Most countries adopted this proposed requirement for banks.

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43 *See infra* Table 4.

44 *See infra* Table 4.

45 Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (codified as amended in scattered sections of the U.S.C.).

46 Gramm-Leach-Bliley Act, Pub. L. No. 106-102, 113 Stat. 1338 (1999) (codified as amended in scattered sections of the U.S.C.).

47 *See,* ERNST & YOUNG, CHALLENGES FOR CENTRAL BANKS: WIDER POWERS, GREATER RESTRAINTS (2012), http://www.ey.com/Publication/vwLUAssets/Challenges_for_central_banks_wider_powers_greater_restraints/$FILE/Challenges_for_central_banks_wider_powers_greater_restraints.pdf.

48 *See infra* Table 4.

49 BASEL COMM. ON BANKING SUPERVISION, THE NEW BASEL CAPITAL ACCORD: AN EXPLANATORY NOTE 3 (2001), *available at* http://www.bundesbank.de/Redaktion/EN/Downloads/Tasks/Banking_supervision/the_new_basel_capital_accord_an_explanatory_note.pdf?__blob=publicationFile.

However, the composition of capital satisfying this requirement varied among countries. This is clear from the information for the nineteen DMEs in Table 5a.[50] All the countries allowed subordinated term debt to be included as a component of regulatory capital in 1995, while at the same time only three countries allowed for the inclusion of investment in the capital of other banks and financial institutions.[51] In the case of the other ten potential components of capital, there was substantial variation among the nineteen countries as to which of them were allowable.[52] This means that, although all the countries may have reported that banks met the minimum capital requirement, the degree of leverage allowed still could have differed fairly widely due to the variation in the items that were allowed to satisfy this requirement.

In 2004, the BCBS issued Basel II as an improvement upon Basel I.[53] Most countries had implemented Basel II by 2011, although the United States had not due to the global financial crisis that fully emerged in September 2008.[54] Then, as a result of the crisis, Basel III was proposed in 2010-2011 to be implemented in phases over the period 2013-2018.[55] We can therefore still compare differences in the allowable components of regulatory capital under Basel I and Basel II. This is done using the information in Table 5a for 1995 and Table 5b for 2011.[56] Based on available information, one finds that, in contrast to some variation among countries as to whether goodwill and other intangibles are allowable components of regulatory capital in 1995, all of the countries exclude these items in 2011.[57] With regard as to whether the other items are allowable components of capital, the degree of variation among the countries has remained roughly constant over the fifteen-year period.

C. Banking Regulation: Deposit Insurance Schemes

To reduce the likelihood, if not completely eliminate, widespread runs on banks, many countries have established deposit insurance schemes over time. The United States was the first such country to do so in 1933.[58] Of course, a deposit insurance scheme creates more hazard problems. Depositors who are protected from losses in case a bank suffers losses have no incentive to monitor the risk-taking behavior of that bank. This may provide an incentive to the bank to engage in excessively risky activity. Countries may design a deposit insurance scheme with

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[50] *See infra* Table 5a.
[51] *See infra* Table 5a.
[52] *See infra* Table 5a.
[53] BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENTS AND CAPITAL STANDARDS (2004), *available at* http://www.bis.org/publ/bcbs107.pdf.
[54] Comm. on Econ. & Monetary Affairs, Eur. Parliament, *U.S. Implementation of Basel II: Final Rules Issued, But No Supervisory Approvals To Date*, at 10-13 (Oct. 2011) (by John C. Dugan & Jennifer Xi), *available at* http://www.europarl.europa.eu/RegData/etudes/note/join/2011/464451/IPOL-ECON_NT(2011)464451_EN.pdf.
[55] *See* BASEL COMM. ON BANKING SUPERVISION, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS (2010), *available at* http://www.bis.org/publ/bcbs189_dec2010.pdf.
[56] *Compare infra* Table 5a, *with* Table 5b.
[57] *See infra* Table 5a, Table 5b.
[58] Barth et al., I, *supra* note 1 (manuscript at 23).

features so as to limit its generosity, and thereby more hazard. We have rich data on three main dimensions of deposit insurance schemes: administration of scheme, coverage, and funding.

Table 6 provides information on the administration and membership of the deposit insurance schemes for the nineteen DMEs for 1995 and 2011.[59] All of the schemes were established during the past eight decades and about two-thirds of the schemes were administered by the government or jointly by the government and industry in 1995.[60] In all but three of the countries, membership in the scheme was compulsory in that same year.[61] In contrast, there was a slight increase in the administration of the system by the private sector and membership was compulsory for all domestic banks and foreign bank subsidiaries in 2011.[62] Information on membership by foreign bank branches was also available in 2011 but not in 1995.[63] In this case, membership was nearly equally divided between compulsory and voluntary for these branches among the deposit insurance schemes.[64]

Information on the coverage protection of the deposit insurance schemes is provided in Table 7.[65] There was substantial variation in the extent or the amount of coverage in 1995 as compared to 2011.[66] The reason for many more countries providing the same amount of coverage in the later year is due to the formation of the European Union. The member countries eventually agreed to provide the same level of coverage.[67] In 1995, moreover, every country but one excluded interbank deposits from coverage, whereas in 2011 these deposits were offered protection in all but five countries.[68] Another major difference between the two years is that all but two countries provided coverage protection for foreign-currency denominated deposits in 1995.[69] However, in 2011, only four countries offered such protection for these deposits.[70] Information available in 2011 but not in 1995 also indicates that more than 80% of the countries provide coverage protection for the deposits of foreign subsidiaries.[71] Clearly, not all countries provide the same amount or scope of coverage protection in their deposit schemes.

The third dimension of deposit insurance schemes is funding. The schemes may be funded ex-ante and ex-post. For both 1995 and 2011, the number of scheme funded either ex-ante or ex-post was about the same, with roughly two-thirds funded ex-

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59 *See infra* Table 6.
60 *See infra* Table 6.
61 *See infra* Table 6.
62 *See infra* Table 6.
63 *See infra* Table 6.
64 *See infra* Table 6.
65 *See infra* Table 7.
66 *See infra* Table 7.
67 *See* Int'l Monetary Fund, *Deposit Insurance Technical Note*, IMF Country Report No. 13/66 (Mar. 2013), *available at* http://www.imf.org/external/pubs/ft/scr/2013/cr1366.pdf.
68 *See infra* Table 7.
69 *See infra* Table 7.
70 *See infra* Table 7.
71 *See infra* Table 7.

ante.[72] There were differences among the deposit insurance schemes with respect to the base on which premiums were levied, typically being either insured deposits or total deposits for both years.[73] Interestingly enough, the percentage of schemes with risk-based premiums in 1995 doubled by 2011.[74] Yet, in the latter year, only about half of the schemes included risk-based premium.[75]

IV. BANKING SUPERVISION

The two data sets (especially the World Bank survey data) from which our current data is drawn cover more dimensions of banking supervision than our current combined data set does. This is because of a substantial degree of incomparability between the underlying data sets on this topic. Nevertheless, there are two key dimensions of banking supervision where we can make some headway, including consumer protection regulations and emphasis on market discipline via external auditing.

Table 9 shows that roughly two-thirds of the countries providing information indicating that there were consumer protection laws in existence or the bank regulatory agency had powers relating to consumer protection laws in both 1993 and 2011.[76] Interestingly enough, some countries answered "Yes" in one year but then answered "No" in the other year, including Belgium, Canada, Greece, Netherlands, Switzerland and United Kingdom.[77] However, the questions for the two years are worded differently, which may have led to answers that are not directly comparable.[78] For example, France indicates that consumer protection laws exist, but not specifically for banks.[79] It may therefore be the case that consumer protection laws exist even in those countries indicating the lack of bank regulatory agency to take actions based on such laws.

External audits are deemed to be quite important for banks as indicated in the information in Table 9.[80] All of the countries providing information required external audits in 1993.[81] However, Italy only required them in the case of banks quoted on the stock exchange, and the United States excluded audits for banks with less than $500 million in assets.[82] In 2011, all of the countries providing information also required external audits, but without any country indicating any qualifications.[83]

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[72] *See infra* Table 8.
[73] *See infra* Table 8.
[74] *See infra* Table 8.
[75] *See infra* Table 8.
[76] *See infra* Table 9.
[77] *See infra* Table 9.
[78] *See infra* Table 9.
[79] *See infra* Table 9.
[80] *See infra* Table 9.
[81] *See infra* Table 9.
[82] *See infra* Table 9.
[83] *See infra* Table 9.

Much more information regarding audits was available in 2011 as compared to 1993.[84] One important piece of information is whether the audit is conducted in accordance with International Standards on Auditing (ISA). In two-thirds of the countries, this is the case.[85] However, the United States does not require auditors to comply with ISA.[86] The importance of this type of difference means that the balance sheets of banks in countries using different standards of auditing are not directly comparable. The other three important pieces of information regarding audits relate to whether auditors are required to report information regarding the nature of their opinions, the safety and soundness of a bank, and illegalities of officers or directors to the supervisory agency. In more than 80% of the countries in each of these areas, such information was required to be reported.[87] The United States, however, does not require auditors to inform bank supervisors when they intend to issue qualified opinions on the accounts of a bank.[88]

V. SUMMARY AND CONCLUSIONS

We began this article by observing that it is reasonable to ask, after two decades of extreme turbulence in banking and financial markets around the world, what the status of banking regulation and supervision is. As we explained Section I, our unique starting point for answering that question comes from the fact that two of us developed and analyzed the first, and therefore the oldest, detailed, multi-country database on banking regulation and supervision. We explain the nature of the approximately twenty-year (1993-2013) perspective that data gives us, combined with the most recent World Bank survey data, in a series of tables highlighting major aspects of banking regulation and supervision across the nineteen developed market economies originally examined by Barth, Nolle, and Rice in 1997. We showed that, although the ascendance of several emerging market economies—including, in particular, China—over the past twenty years diminished the share of world banking "heft" accounted for by those nineteen DMEs, they nevertheless still account, as a group, for the majority of world banking and financial activity.

Our review of key aspects of banking market structure yielded the "big picture" conclusion that the business of banking has gotten riskier in at least two *systemic* ways, amid a continuing sequence of regional and banking crises, and despite the inevitable flurry of policy responses to the perceived causes of those crises. First, our data on banking concentration ratios show that the very largest banks continue to dominate the industry in almost all of the nineteen countries; further, that data, combined with our data on the huge size of the banking industry relative to overall economic activity, show the particularly crucial role played by a handful of the very largest banks in most of the countries.

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84 *See infra* Table 9.
85 *See infra* Table 9.
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87 *See infra* Table 9.
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Our examination of data on banking industry structure over the two time periods points to a second way in which banking has grown riskier. Despite repeated policy initiatives to address negative systemic impacts from banking activities gone awry, our data on banking industry deposits-to-assets ratios indicate that, in most of the nineteen DMEs, the stability of bank funding practices in 2011 remains much as it was two decades ago.

Whether improvements in regulation and supervision can offset these and other factors remains to be seen. Sections III and IV contribute to taking the necessary first step in addressing that question by describing key aspects of the bank regulation and supervision "landscape." Section III focuses on three dimensions of bank regulation: banking powers, capital requirements, and deposit insurance schemes. The first part of Section III looked at data from both 1995 and 2011 on "banking powers," i.e., the degree to which the nineteen DMEs restrict the extent to which banks can engage in securities, insurance, and real estate services, as well as the extent to which the integration of banking and commerce is restricted by ownership options. We found no clear-cut trend across the nineteen DMEs over time of either increased liberalization or increased restrictiveness of banking powers. That finding strikes us as a bit of a surprise, given the substantial energy policy making authorities at the national and international levels have devoted to mitigating systemic risk, especially in the wake of the global financial crisis of 2008-2009.

Our brief review of the nature of capital requirements across countries and over time in Section III did not yield the same kind of surprise, but offers food for thought. It is clear that all nineteen of the DMEs agree that upgrades in capital requirements, as embodied in Basel II (and, by inference, Basel III) are crucially important. However, the key take-away from the data in Tables 5a and 5b is that countries vary widely—perhaps too widely—in how, exactly, they have chosen to implement higher capital requirements. Section III ends by considering a wealth of details on deposit insurance schemes in 1995 and 2011. A basic finding from the discussion is that there has been a broad trend to increase the scope of these schemes. Section IV highlights several elements of banking supervision across the nineteen DMEs. Perhaps, most importantly, the data show that, at least via the channel of external audit requirements, most countries have beefed up their commitment to market discipline.

Our data allow us to paint a useful, even if not comprehensive, landscape of banking around the world. Furthermore, our two-decade timeframe provides a context for reflecting on what can be said about long-run trends. One possible train of thought in that vein starts with the well-known fact, as revealed in our analysis, that there are substantial differences across countries in the composition of the elements of internationally agreed capital requirements. Move on then to our conclusion that the very largest banks retain the same kind of dominance in 2011 as they did twenty years ago (before the continued occurrence of evermore serious financial crises), and that at least in the case of some basic banking activities, including in particular funding practices, the nature of systemic risks seems to have remained the same, if not worsened, over time. One could then mix in the fact that in at least one respect—scope of coverage—deposit insurance schemes have changed in a way that encourages moral hazard behavior. The final observation, that there is some evidence, in looking at trends in external auditing requirements, that countries are placing more emphasis on market

discipline. Taken as a whole, these observations suggest that there is much, much more work to be done to address banking risks, and to collect and analyze additional data to help us understand how well banking policies and practices are succeeding around the world.

Table 1. Economic and Financial Market Importance for 19 Developed Markets Economies (DMEs) (1993 and 2013)

	Share of World Population (%)		Share of World GDP (%)		Share of World Banking Assets (%)		Share of World Equity Market Capitalization (%)		Share of World International Debt Securities (%)		Share of OECD Domestic Debt Securities (%)	
	1993	**2013**	**1993**	**2013**	**1993**	**2012**	**1993**	**2013**	**1993**	**2013**	**1993**	**2013**
United States	4.69	4.50	27.08	22.77	13.18	13.74	36.78	35.91	8.68	9.10	47.38	43.90
Switzerland	0.13	0.11	1.00	0.88	2.31	2.44	1.95	2.45	0.81	0.10	0.95	0.26
Japan	2.27	1.81	18.23	6.82	25.31	10.24	21.48	7.41	16.68	0.90	20.17	16.58
Canada	0.53	0.50	2.07	2.48	1.71	3.26	2.34	3.44	7.11	3.30	2.38	2.18
Austria	0.15	0.12	0.79	0.57	1.23	0.99	0.20	0.20	2.22	1.50	0.52	0.40
Belgium	0.18	0.16	0.91	0.69	2.17	0.61	0.56	0.59	1.38	0.80	1.53	0.75
Denmark	0.09	0.08	0.51	0.44	0.59	0.95	0.30	0.52	1.67	0.60	1.18	0.83
Finland	0.09	0.08	0.32	0.35	0.39	0.17	0.17	0.35	2.34	0.70	0.30	0.19
France	1.05	0.91	5.42	3.73	7.56	7.72	3.27	3.45	7.51	7.40	4.81	3.85
Germany	1.48	1.16	8.27	4.89	11.59	8.51	3.32	3.27	5.89	6.00	6.99	3.74
Greece	0.19	0.16	0.27	0.33	0.23	0.40	0.09	0.13	0.67	0.70	0.31	0.08
Ireland	0.06	0.07	0.19	0.30	0.13	0.41	n.a.	0.27	0.69	4.60	0.12	0.21
Italy	1.04	0.87	4.29	2.82	3.34	3.05	0.98	1.02	3.44	4.20	6.02	3.91
Luxembourg	0.01	0.01	0.05	0.08	1.51	0.11	0.14	0.05	0.10	2.40	0.02	0.30
Netherlands	0.28	0.24	1.34	1.09	2.19	2.83	1.30	0.63	2.59	9.70	1.01	0.23
Portugal	0.18	0.15	0.37	0.30	0.46	0.45	0.09	0.14	0.24	0.50	0.21	0.38
Spain	0.71	0.66	2.07	1.85	2.58	4.22	0.85	1.25	1.11	3.40	1.19	2.06
Sweden	0.16	0.14	0.72	0.75	0.67	1.91	0.77	1.17	3.72	2.30	1.12	0.50
United Kingdom	1.06	0.91	3.54	3.39	8.46	8.86	8.25	6.50	8.67	15.40	2.23	2.99
19 DMEs	14.35	12.62	77.44	54.53	85.59	70.87	82.84	68.74	75.52	73.77	98.44	83.35
European 15	6.73	5.69	29.06	21.58	42.99	41.19	20.29	19.53	42.24	60.33	27.56	20.41
Memo:												
World Levels	5.5Bil	7.0Bil	$23.3Tril	$73.5Tril	$25.2Tril	$109.6Tril	$14.0Tril	$62.1Tril	$2.0Tril	$57.7Tril	$19.7Tril	$76.9Tril

Sources: The 1993 data are from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf. The 2013 data (2012 for banking assets) are from Bank for International Settlements, International Monetary Fund's World Economic Outlook, European Central Bank, BankScope, Bloomberg, and Milken Institute.

Table 2. Top 10 Countries, Ranked by GDP based on Purchasing-Power-Parity

	1990	2000	2013
1.	United States	United States	United States
2.	Japan	Japan	**China**
3.	Germany	**China**	**India**
4.	France	Germany	Japan
5.	Italy	**India**	Germany
6.	United Kingdom	France	Russia
7.	**China**	United Kingdom	**Brazil**
8.	**Brazil**	Italy	United Kingdom
9.	**India**	**Brazil**	France
10.	Mexico	Russia	Mexico
Share of World GDP (%)			
United States	25.1	24.0	19.3
European 15*	47.9	40.9	29.0
Brazil, China, India	10.4	13.6	23.9

Source: International Monetary Fund's World Economic Outlook and Milken Institute.
* European 15 refers to the list of European countries listed in Table 1.

Table 3. Banking Structure in the 19 DMEs (1993 and 2011)

	Bank Share of Total Assets of All Credit Institutions (%)		Banking Assets to GDP (%)		Bank Funding: Deposits to Assets (%)		3-Firm Concentration Ratio (%)	
	1993	2011	1993	2011	1993	2011	1993	2011
United States	77.1	90.0	55.7	65.5	74.3	70.6	13.3	31.6
Switzerland	98.1	99.7	53.8	178.4	56.3	52.5	79.8	85.7
Japan	n.a.	n.a.	236.4	178.1	63.9	n.a.	28.3	44.2
Canada	80.3	n.a.	87.8	n.a.	78.1	65.3	65.2	59.8
Austria	28.5	24.9	120.7	135.8	57.8	34.0	61.4	57.7
Belgium	100.0	100.0	149.8	115.2	50.5	65.2	44.4	85.3
Denmark	n.a.	100.0	46.9	n.a.	53.6	38.0	63.7	81.7
Finland	73.0	100.0	87.2	98.2	25.8	27.0	93.8	94.8
France	51.4	100.0	103.9	130.2	20.3	45.2	63.6	63.8
Germany	27.0	n.a.	118.2	129.6	42.8	60.9	89.5	77.4
Greece	73.9	91.8	67.7	128.9	85.4	54.5	98.3	66.0
Ireland	81.4	100.0	52.3	244.4	37.8	34.5	93.6	67.0
Italy	77.4	100.0	83.3	145.8	54.6	70.2	35.9	61.5
Luxembourg	98.8	100.0	n.a.	188.8	44.2	77.3	17.2	35.4
Netherlands	100.0	100.0	103.2	217.7	52.1	55.2	59.0	77.2
Portugal	n.a.	98.8	86.0	201.1	60.2	43.4	38.1	85.4
Spain	67.3	100.0	102.1	232.7	44.8	47.0	50.1	72.8
Sweden	48.6	n.a.	166.6	n.a.	51.5	n.a.	86.6	93.4
United Kingdom	n.a.	100.0	106.7	202.2	71.2	50.0	29.1	56.0

Sources: The data for Banking Assets to GDP (%) are from the Financial Development and Structure Dataset compiled by Čihák,Demirgüç-Kunt, Feyen, and Levine (2012). For Bank Share of Total Assets of All Credit Institutions, Bank Funding, and 3-Firm Concentration Ratio, the 1993 data are from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf, while the 2011 data are from James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013), using World Bank Survey IV.

Table 4. Banking Regulation in the 19 DMEs: Restrictions on Activities and Ownership (1995 and 2011)

Country	Securities	Insurance	Real Estate	Commercial Bank Investment in Non-financial Firms	Nonfinancial Firm Investment in Commercial Banks	Overall Nature of Change in Banking Powers (2011 vs. 1995)*
United States	Restricted; national and state member banks generally are prohibited from underwriting or dealing in corporate debt and equity instruments or securities. They may, however, engage in discount and full-service brokerage as well as serve as agent for issues in privately placing securities. State non-member banks are subject to the same restriction as national banks, unless the FDIC determines the activity would not pose a significant risk to the deposit insurance fund. Bank holding companies may, on a case by case basis, be permitted to underwrite and deal in corporate debt and equity securities through a Section 20 subsidiary so long as the subsidiary's revenues for these activities do not exceed 10 percent of total gross revenues. Firewalls are mandated.	Restricted; banks generally may engage in credit life and disability insurance underwriting and agency activities. National banks, in addition, may engage in general insurance agency activities in towns with less than 5,000 in population.	Restricted; banks generally are restricted to investment in premises or that which is necessary for the transaction of their business.	Restricted; national and state member banks generally are prohibited from making direct equity investment in voting or nonvoting stock. State nonmember banks generally are limited to investments that are permissible for national banks. Bank holding companies are limited to an investment not to exceed 25 percent of a nonfinancial firm's capital.	Restricted; a nonfinancial firm may make equity investments in banks and bank holding companies. However, the investment must not exceed 25 percent of the bank's capital to avoid becoming a bank holding company. In other words, banks may only be acquired by companies that limit their activities to those deemed to be closely related to banking by the Federal Reserve Board.	INCREASE
Switzerland	Unrestricted; conducted either directly in bank or through subsidiaries. No firewalls mandated.	Permitted; conducted only through subsidiaries.	Unrestricted; investments in a single real estate project are limited to the equivalent of 20% of the bank's capital. However, the Swiss Federal Banking Commission can allow this limit to be exceeded.	Unrestricted; a single participation is limited to the equivalent of 20% of the bank's capital. However, the Swiss Federal Banking Commission can allow this limit to be exceeded.	Unrestricted; a nonfinancial firm may own 100% of the equity in a bank.	SIMILAR
Japan	Restricted; only bonds (not equities) and only through securities subsidiaries. A bank can only own more than 50% of a securities firm with permission from the Ministry of Finance and Fair Trade Commission. Firewalls are mandated.	Prohibited.	Restricted; generally limited to bank premises.	Restricted; a single bank's ownership is limited to 5% of a single firm's shares, including other banks (Article 9, Anti-Monopoly Law).	Restricted; total investment is limited to firms capital or net assets. The Anti-Monopoly Law prohibits establishment of a holding company whose main business is to control the business activities of other domestic companies through the holding of ownership.	n.a.
Canada	Permitted; conducted only through subsidiaries. No firewalls mandated.	Permitted; conducted only through subsidiaries.	Permitted; conducted only through subsidiaries.	Restricted; limited to 10% of the outstanding shares of a nonfinancial firm, with aggregate holdings not to exceed 70% of bank capital.	Restricted; limited to 10% of the outstanding shares. Since no shareholders may exceed this 10% limit, Canada is attempting to assure that banks are widely held.	SIMILAR
Austria	Unrestricted; conducted either directly in bank or through subsidiaries. No firewalls mandated.	Permitted; conducted only through subsidiaries. However, a bank may broker insurance policies.	Unrestricted; conducted either directly in bank or through subsidiaries. The total book value of a bank's investment in real estate, plant and equipment, furniture and fixtures must not exceed liable capital.	Unrestricted; complies with the EC Second Banking Directive. Subject to this limitation, a bank may own 100% of the equity in a nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive.	SIMILAR

Country	Securities	Insurance	Real Estate	Commercial Bank Investment in Non-financial Firms	Nonfinancial Firm Investment in Commercial Banks	Overall Nature of Change in Banking Powers (2011 vs. 1995)*
Belgium	Permitted; conducted either directly in bank or through subsidiaries. No restrictions on bonds. However, a bank may not underwrite stock issues. No firewalls mandated.	Permitted; conducted directly in the bank for those activities licensed by the Insurance Supervisory Authority, and through insurance companies (subsidiaries), in which banks can own either controlling or minority participating interests, if certain framework conditions are fulfilled.	Restricted; investments limited to real estate used in the exercise of the bank's activities. May serve as an agent and manager of real estate for clients as well as engage in real estate leasing through subsidiaries.	Restricted; single share holding may not exceed 10% of bank's own funds and such share holding on an aggregate basis may not exceed 35% of own funds. More restrictive than the EC Second Banking Directive during a transition period	Unrestricted; complies with the EC Second Banking Directive. However, the Banking and Finance Commission examines the "fit and proper" character of those shareholders holding at least 5% of the bank's capital.	INCREASE
Denmark	Unrestricted; conducted either directly in bank or through subsidiaries. Firewalls are mandated.	Permitted; conducted only through subsidiaries.	Permitted; banks are permitted to hold real estate to a book value not exceeding 20% of the bank's own funds. Real estate in which the bank performs banking activities are not included in this 20% limitation. Mortgage-credit activity is only permitted through subsidiaries.	Permitted; complies with the EC Second Banking Directive. However, a bank may not hold a permanent decisive participation in nonfinancial firms.	Unrestricted; complies with the EC Second Banking Directive. However, a bank may not without supervisory authority have engagement with a firm that through its ownership of shares or otherwise directly or indirectly has a decisive influence on the bank.	DECREASE
Finland	Unrestricted; conducted either directly in bank or through subsidiaries. No firewalls mandated.	Restricted; only selling of insurance policies as an agent is permitted.	Permitted; may hold real estate and shares in real estate firms up to 13% of the bank's total assets, either directly in bank or through subsidiaries.	Unrestricted; complies with EC Second Banking Directive. Subject to this limitation, a bank may own 100% of the equity in any nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive. In the case of commercial banks, a firm is not allowed to vote at the annual meeting with more than 5% of the total voting rights presented at the meeting.	SIMILAR
France	Unrestricted; conducted either directly in bank or through subsidiaries. No firewalls mandated.	Permitted; sale of insurance products/services may be conducted directly in bank, but underwriting must be done through subsidiaries.	Permitted; either conducted directly in bank or through subsidiaries, but limited to 10% of the bank's net income.	Unrestricted; complies with EC Second Banking Directive. Subject to this limitation a bank may own 100% of the equity in any nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive.	SIMILAR
Germany	Unrestricted; conducted directly in bank. No firewalls mandated.	Restricted; conducted as principal only through insurance subsidiaries, which are supervised by the Insurance Supervisory Office. Insurance regulation does not allow any business other than insurance business being carried out by an insurance firm. However, a bank may conduct insurance activities as agent without restrictions.	Permitted; investment in equity and real estate, calculated at book value, may not exceed a bank's liable capital, but unlimited through subsidiaries.	Unrestricted; complies with EC Second Banking Directive. Subject to this limitation a bank may own 100% of the equity in any nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive.	n.a.
Greece	Permitted; underwriting may be conducted directly in bank, whereas dealing and brokerage must be conducted through subsidiaries. However, the selling of mutual funds products directly by banks is permitted. Some firewalls are mandated. For example, persons responsible for the management of a bank cannot hold similar positions in a securities firm.	Restricted; selling of limited combined bank/insurance products by banks is permitted, but selling of separate insurance products by banks is not. The latter is allowed through bank subsidiaries.	Restricted; direct investment in real estate is limited to 50% of own funds for purposes of conducting banking activities. Real estate investment for commercial purposes is not permitted. The setting up of a subsidiary engaging in real estate management requires Bank of Greece permission. Subsidiaries engaging in real estate development are considered nonfinancial firms and are regulated according to the EC Second Banking Directive.	Unrestricted; complies with EC Second Banking Directive. Subject to this limitation, a bank may own 100% of the equity in any nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive.	DECREASE

Country	Securities	Insurance	Real Estate	Commercial Bank Investment in Non-financial Firms	Nonfinancial Firm Investment in Commercial Banks	Overall Nature of Change in Banking Powers (2011 vs. 1995)*
Ireland	Unrestricted; conducted directly in bank or through subsidiaries. No firewalls are mandated.	Prohibited. (6)	Unrestricted.	Unrestricted; complies with the EC Second Banking Directive. Subject to these limitation, a bank may own 100% of the equity in a nonfinancial firm.	Unrestricted. However, advance notification is required for any application of more than 5% of the voting rights in a bank, and prior approval is required for any acquisition of 10% or more of the total shares or voting rights or any holding or interest that confers a right to appoint or remove directors.	SIMILAR
Italy	Unrestricted; conducted either directly in bank or through subsidiaries. However, for brokering and dealing in securities listed on an Italian exchange other than Italian government and government-guaranteed securities, only through a special subsidiary. Firewalls are mandated.	Permitted; sale of insurance products/services may be conducted directly in bank, but underwriting must be done through subsidiaries.	Restricted; generally limited to bank premises.	Restricted; more restrictive than the EC Second Banking Directive. Most banks are subject to an overall investment limit of 15% of own funds (7.5% in the case of unlisted firms) and to a concentration limit of 3% of own funds in each holding in nonfinancial firms or groups. Some banks, due to their size and proven stability, are subject to less stringent limits (overall and concentration limits of respectively 50% and 6% for leading banks, and 60% and 15% for specialized banks). Consistency with the principle of separation between banking and commerce is ensured by a further investment limit of 15% of invested firms' capital for all banks.	Restricted; more restrictive than the EC Second Banking Directive. Persons who engage in significant business activity in sectors other than banking and finance are forbidden from acquiring an equity stake which, when added to those already held, would result in a holding exceeding 15% of the voting capital of a bank or in control of the bank.	DECREASE
Luxembourg	Unrestricted; conducted either directly in bank or through subsidiaries. No firewalls mandated.	Permitted; bank employees may obtain an insurance license and thereby sell insurance products/services as an agent of insurance firms within the bank. However, a bank is allowed to carry out insurance activities through a subsidiary or by taking an equity stake in an insurance firm, with prior approval.	Unrestricted; conducted either directly in bank or through subsidiaries.	Unrestricted; complies with EC Second Banking Directive. Subject to this limitation a bank may own 100% of the equity in any nonfinancial firm.	Restricted; nonfinancial firms may legally be the majority shareholders in banks. However, general policy is to discourage nonfinancial groups or private persons from being major shareholders in banks.	DECREASE
Netherlands	Unrestricted; conducted directly in bank or through subsidiaries. No firewalls mandated.	Permitted; sale of insurance products/services may be conducted directly in bank, but underwriting must be done through subsidiaries. More generally, an insurance company is not allowed to pursue the business of a bank within one corporation (Insurance Companies Supervision Act).	Permitted; but real estate other than bank premises may not exceed 25% of the actual own funds of the bank.	Unrestricted; complies with the EC Second Banking Directive. Subject to this limitation a bank may own 100% of the equity in any nonfinancial firm. However, a declaration of non-objection from the Minister of Finance (or the Nederlandsche Bank on behalf of the Minister) is required for any bank investment exceeding 10% of the capital of a nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive. However, a declaration of non-objection from the Minister of Finance (or the Nederlandsche Bank on behalf of the Minister) is required for an investment exceeding 5% of a bank's capital.	SIMILAR
Portugal	Unrestricted; conducted either directly in bank or through subsidiaries. However, for the organized stock exchanges, brokerage and dealer activities must be conducted through subsidiaries. No firewalls mandated.	Permitted; conducted only through subsidiaries for underwriting and selling as principal. May sell as agent directly in bank.	Restricted; generally limited to holding bank premises. Moreover, the net value of fixed assets shall not exceed own funds.	Permitted; complies with the EC Second Banking Directive. However, a bank may not control more than 25% of the voting rights of a nonfinancial firm.	Unrestricted; complies with the EC Second Banking Directive.	SIMILAR

Country	Securities	Insurance	Real Estate	Commercial Bank Investment in Non-financial Firms	Nonfinancial Firm Investment in Commercial Banks	Overall Nature of Change in Banking Powers (2011 vs. 1995)*
Spain	Unrestricted; conducted directly in bank or through subsidiaries, but banks do not have direct access to official stock exchanges. No firewalls mandated.	Permitted; sale of insurance products/services may be conducted directly in bank, but underwriting must be done through subsidiaries.	Restricted; generally limited to bank premises. Real estate and other immobilized tangible assets are limited to 70% of own funds. Banks may also hold such assets in payment of debts for up to 3 years.	Unrestricted; complies with the EC Second Banking Directive. Subject to this limitation, a bank may own 100% of the equity in any nonfinancial firm.	Permitted; complies with the EC Second Banking Directive. However, a nonfinancial firm cannot hold more that 20% of the shares of a new bank during the first five years of its existence. Specified shareholder thresholds require authorization by the Bank of Spain before additional investment.	SIMILAR
Sweden	Unrestricted; conducted directly in bank or through subsidiaries. No firewalls mandated.	Permitted; bank may only directly sell insurance products/services. However, both banks and insurance firms are allowed to form "concern constellation" (financial groups) as long as the two activities are conducted in different firms.	Restricted; generally limited to bank premises.	Restricted; investments on an aggregated basis are limited to 40% of a bank's own funds. Ownership in a firm is limited to 5% of this base (i.e. 1.5% in a firm or group of firms related to each other). Furthermore, ownership in a firm must not exceed 5% of the total voting power in the firm concerned. These limits do not apply when a bank has to protect itself against credit losses. In this case the bank must sell when market conditions are appropriate.	Restricted; ownership is limited to 50% except under certain circumstances when a bank is near insolvency and there is a need for external capital injection. In the latter case, greater ownership may be permitted, based upon suitability of new owners.	n.a.
United Kingdom	Unrestricted; conducted either directly in bank or through subsidiaries. However, gilt-edged market making must be conducted through a subsidiary. No firewalls mandated.	Permitted; sales of insurance products/services may be conducted directly in bank, but underwriting only through subsidiaries. However, the bank's investment in the subsidiary must be deducted from the bank's capital when calculating its capital adequacy if the bank ownership share in the subsidiary exceeds 20%.	Unrestricted; conducted either directly in bank or through subsidiaries.	Unrestricted; complies with the EC Second Banking Directive. Subject to this limitation, a bank may own 100% of the equity in any nonfinancial firm. However, an ownership share of more than 20% requires that the investment be deducted from the bank's capital when calculating its capital adequacy on a risk basis. Otherwise, the investment is treated as a commercial loan for the risk-based calculation.	Unrestricted; complies with the EC Second Banking Directive. However, a firm would have to make application to the Bank of England to become a shareholder controller and receive the Bank's non-objection.	SIMILAR

Sources: 1995 information from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf. * The characterization of Overall Nature of Change in Banking Powers is based on the authors' judgment, using information in James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013) and World Bank Survey IV.

Notes:

(1) Securities activities include underwriting, dealing and brokering all kinds of securities and all aspects of the mutual fund business.

(2) Insurance activities include underwriting and selling insurance products/services as principal and as agent.

(3) Real estate activities include investment, development and management.

(4) The EC Second Banking Directive (Article 12) limits "qualifying investments" to no more than 15% of a bank's own funds for investments in a single nonfinancial firm and to no more than 60% for aggregate investments in nonfinancial firms. In exceptional circumstances these limits may be exceeded, but the amount by which the limits are exceeded must be covered by a bank's own funds and these own funds may not be included in the solvency ratio calculation. A qualifying investment is defined as a direct or indirect holding in an undertaking equal to at least 10% of its capital or voting rights or permitting the exercise of significant influence over its management.

(5) The EC Second Banking Directive (Article 11) subjects qualifying investments to regulatory consent based only on the suitability of shareholders.

(6) However, 3 commercial banks are authorized to engage in assurance activities.

(7) The EU members are Austria (January 1, 1995), Belgium (original member), Denmark (January 1, 1973), Finland (January 1, 1995), France (original member), Germany (original member), Greece (January 1, 1981), Ireland (January 1, 1973), Italy (original member), Luxembourg (original member), the Netherlands (original member), Portugal (January 1, 1986), Spain (January 1, 1986), Sweden (January 1, 1995), and the United Kingdom (January 1, 1973).

(8) Definitions:

(a) Unrestricted- A full range of activities in the given category can be conducted directly in the bank.
(b) Permitted- A full range of activities can be conducted, but all or some must be conducted in subsidiaries.
(c) Restricted- Less than a full range of activities can be conducted in the bank or subsidiaries.
(d) Prohibited- The activity cannot be conducted in either the bank or subsidiaries.

Table 5.a. Banking Regulation in the 19 DMEs: Capital Requirements (1995)

	Noncumulative perpetual preferred stock	Current year profit-added (or loss deducted)	Intangible assets other than goodwill	Goodwill (1)	Undisclosed reserves (2)	Hybrid capital instruments (including cumulative perpetual preferred stock) (3)	Subordinated term debt (4)	Limited life redeemable preference shares (5)	Fixed asset revaluation reserves (6)	Latent, or hidden, revaluation reserves (7)	General loan loss reserves (8)	Investment in the capital of other banks and financial institutions
United States	Yes	Yes	No, with limited exceptions	No	No	Yes, but limits	Yes, but limits	Yes, but limits	No	No	Yes, but limits	No
Switzerland	Yes, no limits	Yes	No	No	Yes, but limits	Yes, but limits and not including cumulative perpetual preferred stock	Yes, but limits	No	Yes, but limits	Yes, but limits	Yes, no limits	No
Japan	Yes	Yes	Yes	No	No	Yes, but not prevalent	Yes	Yes, but not issued	No	Yes	Yes	No, if sole purpose is to raise capital ratio
Canada	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No	No	Yes, but back-to-back issues are deducted
Austria	Yes	Yes	No	No	Yes, but limits	Yes, but limits	Yes, but limits	No	Yes, but limits	No	Yes	No
Belgium	Yes	Yes	No	No	Yes, but limits	Yes, but limits	Yes, but limits	Yes, but limits	Yes, but limits	No	Yes	No
Denmark	No, does not exist	Yes	No	No	No information	No, does not exist	Yes	No, does not exist	No, does not exist	No, does not exist	No, does not exist	No
Finland	Yes	Yes	No	No	No	Yes	Yes	Not applicable	Yes	No	Yes	No
France	No, issues not permitted in domestic market	Yes	No, except for lease renewal rights	No	No	Yes	Yes	Yes, but not issued	Yes	No	Yes	Yes, but limits
Germany	Yes	No	No	No	Yes, but limits	Yes, but limits	Yes, but limits	No	No	Yes, but limits	Yes, but limits	No
Greece	Yes	Yes	Yes	Yes	No	Yes, but limits	Yes, but limits	Yes, but not utilized at present	Yes, but limits	No	Yes	No
Ireland	Yes, no limits	Yes	No	No	No	Yes, but limits	Yes, but limits	Yes, but limits	Yes, but limits	No	Yes, but limits	No
Italy	Yes, but limits	Yes	Yes	Yes	No	Yes, but limits	Yes, but limits	No, does not exist	Yes, but limits	No	Yes, but limits	No
Luxembourg	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No	Yes	No
Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Portugal	Yes	Yes	Yes	Yes	No information	Yes	Yes, but limits	No information	Yes	No information	Yes	No
Spain	Yes	No	No	No	No	Yes, but limits	Yes, but limits	Yes, but limits	Yes, but limits	No	No	No
Sweden	Yes	Yes	No	No	No	Yes with approval	Yes	No	Yes, with approval	No	No	No

	Noncumulative perpetual preferred stock	Current year profit-added (or loss deducted)	Intangible assets other than goodwill	Goodwill (1)	Undisclosed reserves (2)	Hybrid capital instruments (including cumulative perpetual preferred stock) (3)	Subordinated term debt (4)	Limited life redeemable preference shares (5)	Fixed asset revaluation reserves (6)	Latent, or hidden, revaluation reserves (7)	General loan loss reserves (8)	Investment in the capital of other banks and financial institutions
United Kingdom	Yes	Yes	No	No	Not applicable	Yes, but limits	Yes, but limits	Yes	Yes, with caution	Not applicable	Yes, but limits	No
Memo:												
% Yes	89%	89%	32%	21%	38%	95%	100%	65%	68%	24%	79%	16%

Source: James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf.

Notes:

(1) Goodwill is an intangible asset.

(2) Undisclosed reserves are portions of accumulated after-tax retained earnings not identified in the published balance sheet or otherwise disclosed, except to banking supervisors.

(3) Hybrid-capital instruments including cumulative preferred stock are instruments that combine the characteristics of equity capital and of debt, and should meet the following requirements: unsecured, subordinated, and fully paid-up; not redeemable at the of the holder or without prior consent of supervisory authority; available to participate in losses without the bank being obliged to cease trading (unlike conventional subordinated debt); and all service obligations to be deferred where the profitability of the bank not support payment.

(4) Subordinated term debt is normally not available to participate in losses of a bank that continues operating (included in capital only if minimum original maturity of five years).

(5) Limited life redeemable preference shares are the same as immediately above.

(6) Fixed-asset revaluation reserves represent a formal revaluation, carried through to the balance sheet, of a bank's own premises.

(7) Latent, or hidden, revaluation reserves are the difference between the market value and historic cost book value of long-term holdings of equity securities.

(8) General loan loss reserves are reserves that are held against future and presently unidentified losses and are freely available to meet losses that may subsequently materialize.

Table 5.b. Banking Regulation in the 19 DMEs: Capital Requirements under Basel II (2011)

	Which of the following items are allowed as part of Tier 1 capital			Which of the following items are allowed as part of Tier 2 capital				Are the following items deducted from regulatory capital?				
	Hybrid debt capital instruments	Asset revaluation gains (or revaluation reserves)	Subordinated debt	Hybrid debt capital instruments	General provisions	Asset revaluation gains (or revaluation reserves)	Subordinated debt	Goodwill	Deferred tax assets	Intangibles	Unrealized losses in fair valued exposures	Investment in the capital of certain banking, financial and insurance entities which are outside the scope of consolidation
United States	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Switzerland	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Japan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	Yes	No	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Austria	Yes	No	No	No	No	Yes	Yes	Yes	No	Yes	No	Yes
Belgium	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Yes	Yes	n.a.	n.a.
Finland	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
France	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Germany	Yes	No	No	n.a.	n.a.	n.a.	n.a.	Yes	No	Yes	Yes	Yes
Greece	Yes	No	No	No	No	No	Yes	Yes	No	Yes	Yes	Yes
Ireland	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Italy	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Luxembourg	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Netherlands	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Portugal	Yes	Yes	n.a.	Yes	Yes	Yes	n.a.	Yes	No	Yes	No	Yes
Spain	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Memo:												
% Yes	94	19	7	87	67	87	100	100	35	100	81	88

Sources: James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013) and the World Bank Survey IV.

Table 6. Deposit Insurance Schemes for 19 DMEs (1995 and 2011): Administration of and Membership in the System

Country	Name of Guarantee/Insurance System	Year First Established	Agency Responsible for Administering System	1995		2011			
				Administration of System: Government or Industry	Membership: Voluntary or Compulsory	Administration of System: Government or Industry	Membership: Voluntary or Compulsory		
							Domestic banks	Foreign bank subsidiaries	Foreign bank branches
United States	Bank Insurance Fund	1933	Federal Deposit Insurance Corporation	Government	Compulsory	Public sector	Compulsory	Compulsory	Voluntary
Switzerland	Deposit Guarantee Scheme	1982	Swiss Banker's Association	Industry	Voluntary	Private sector	Compulsory	Compulsory	Compulsory
Japan	Deposit Insurance Corporation	1971	Deposit Insurance Corporation	Government/ Industry - joint	Compulsory	n.a.	n.a.	n.a.	n.a.
Canada	Canada Deposit Insurance System	1967	Canada Deposit Insurance Corporation	Government (Crown Corporation)	Compulsory	Public sector	Compulsory	Compulsory	Voluntary
Austria	Deposit Guarantee System	1979	Sectoral Associations	Industry	Compulsory	Private sector	Compulsory	Compulsory	Voluntary
Belgium	Guarantee Scheme for Deposits with Credit Institutions	1974	Herdiscontering-en Waarborginstituut-Institut de Reescompte et de Garantie	Government/ Industry - joint	Compulsory	Jointly by private/public officials	Compulsory	Compulsory	Voluntary
Denmark	Deposit Insurance Fund	1987	Deposit Insurance Fund	Government	Compulsory	Jointly by private/public officials	Compulsory	Compulsory	Voluntary
Finland 1	Guarantee Fund of Commercial Banks and Postipankki Ltd.	1966	Guarantee Fund of Commercial Banks and Postipankki Ltd.	Industry	Compulsory	Private sector	Compulsory	Compulsory	Voluntary
France	Deposit Guarantee Fund	1980	French Bankers' Association	Industry	Compulsory	Private sector	Compulsory	Compulsory	Compulsory
Germany	Deposit Protection Fund of the Federal Association of German Banks	1966	Federal Association of German Banks	Industry	Voluntary	Private sector	Compulsory	Compulsory	Compulsory
Greece	Deposit Guarantee Fund	1995 2	Deposit Guarantee Fund	Government/ Industry - joint	Compulsory	Jointly by private/public officials	Compulsory	Compulsory	Compulsory
Ireland	Deposit Protection Account (Central Bank)	1989	Central Bank of Ireland	Government	Compulsory	Public sector	Compulsory	Compulsory	Compulsory
Italy	Fonds Interbancario Di Tutela Dei Depositi	1987	Independently Administered	Industry	Voluntary	Private sector	Compulsory	Compulsory	Compulsory
Luxembourg	Association pour la Garantie des Depots, Luxembourg (AGDL)	1989	AGDL	Industry	Compulsory	Private sector	Compulsory	Compulsory	Voluntary
Netherlands	Collective Guarantee System	1979	De Netherlandsche Bank N.V.	Government/ Industry - joint	Compulsory	Public sector	Compulsory	Compulsory	Voluntary
Portugal	Deposit Guarantee Fund	1992	Deposit Guarantee Fund	Government	Compulsory	Jointly by private/public officials	Compulsory	Compulsory	Compulsory
Spain	Deposit Guarantee Fund	1977	Fondo de Garantia de Depositos	Government/ Industry - joint	Compulsory	Jointly by private/public officials	Compulsory	Compulsory	Compulsory
Sweden	Swedish Deposit-Guarantee Scheme	1974	The Bank Support Authority	Government	Compulsory	n.a.	n.a.	n.a.	n.a.
United Kingdom	Deposit Protection Fund	1982	Deposit Protection Board	Government	Compulsory	Private sector	Compulsory	Compulsory	Voluntary
Memo:									
% Compulsory					84%		100%	100%	47%

Sources: The 1995 data from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf. The 2011 data are from James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013) and the World Bank Survey IV.

Table 7. Deposit Insurance Schemes for 19 DMEs (1995 and 2011): Coverage Protection

Country	1995					2011				
	Extent or Amount of Coverage	Interbank Deposits Covered	Deposits of Foreign Branches of Domestic Banks Covered		Foreign-Currency Denominated Deposits Covered	Extent or Amount of Coverage*	Interbank Deposits Covered	Deposits of the Foreign Branches of Domestic Banks Covered	Deposits of the Foreign Subsidiaries of Domestic Banks Covered	Foreign currency deposits
			Branches located in EU Country	Branches located in Non-EU Country						
United States	100,000 USD (per depositor)	No	No	No	Yes	USD 250,000	No	No	No	No
Switzerland	SF 30,000 (per depositor)	No	No	No	Yes	CHF 100,000	Yes	Yes	Yes	No
Japan	10 million Yen (per depositor)	No	No	No	No	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	Can $60,000 (per depositor)	Yes	No	No	No	CAD 100,000	No	Yes	Yes	Yes
Austria	ATS 260,000 (per physical person-depositor)	No	Yes	Yes	Yes	EUR 100,000	Yes	No	Yes	Yes
Belgium	15,000 ECU until Dec. 1999 (20,000 ECU thereafter)	No	Yes	No	Yes, but only deposits expressed in ECU or another EU currency	EUR 100,000	Yes	No	Yes	No
Denmark	300,000 DKK or 42,000 ECU (per depositor)	No	Yes	Yes	Yes	DKK 750,000	No	Yes	No	No
Finland	100 percent (per depositor)	No	Yes	Yes	Yes	EUR 100,000	No	No	No	No
France	FF 400,000 (per depositor)	No	Yes	No, except for EEA countries	Yes, but only deposits expressed in ECU or another EU currency	EUR 100,000	Yes	Yes	Yes	Yes
Germany	100% up to a limit of 30% of the bank's liable capital (per depositor)	No	Yes	Yes	Yes	EUR 100,000	Yes	Yes	Yes	Yes
Greece	20,000 ECU (per depositor)	No	Yes	Yes	Yes	EUR 100,000	Yes	No	Yes	No
Ireland	90% of deposit - Max. Compensation is 15,000 ECU	No	Yes	Yes	Yes	EUR 100,000	Yes	Yes	Yes	No
Italy	100% of first 200 million Lit and 75% of next 800 million Lit (per deposit)	No	Yes	Yes	Yes	EUR 100,000	Yes	No	Yes	No
Luxembourg	Lux F 500,000 (per depositor), only natural persons	No	No	No	Yes	EUR 100,000	Yes	No	Yes	No
Netherlands	20,000 ECU (per depositor); compensation paid in Guilders	No	Yes	No	Yes	EUR 100,000	Yes	No	Yes	No
Portugal	100% up to 15,000 ECU 75% - 15,000 - 30,000 ECU 50% - 30,000 - 45,000 ECU (per depositor)	No	Yes	No	Yes	EUR 100,000	Yes	Yes	Yes	No
Spain	Ptas 1.5 million (per depositor); to be increased to 20,000 ECU.	No	Yes	Yes	Yes	EUR 100,000	Yes	No	Yes	No
Sweden	SEK 250,000 (per depositor)	No	Yes	No	Yes	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	90% of protected deposits, with the maximum amount of deposits protected for each depositor being £20,000 (unless the sterling equivalent of ECU 22,222 is greater). Thus, the most an individual can collect in a bank failure is £18,000 (per depositor) or ECU 20,000 if greater.	No	Yes, throughout EEA	No	Yes, but only deposits in other EEA currencies and the ECU, as well as sterling	GBP 85,000	No	No	Yes	No
Memo:										
% Yes		5%	58%	32%	89%		71%	41%	82%	24%

Sources: The 1993 data from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf. The 2011 data are from James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013)and the World Bank Survey IV.

- Extent or Amount of Coverage for European 15 is per depositor per institution.

Table 8. Deposit Insurance Schemes for 19 DMEs (1995 and 2011): Funding

Country	1995			2011				
	Ex Ante or Ex Post Funding	Base for Premium	Risk-Based Premiums	Is there an ex ante fund/reserve to cover deposit insurance claims in the event of the failure of a member bank?	Is the premium assessed on a participating bank's . . . ?			Do deposit insurance fees/premiums charged to banks vary based on some assessment of risk?
					Insured deposits	Total deposits	Total assets	
United States	Ex ante	Domestic Deposits	Yes	Ex ante	No	No	No	Yes
Switzerland	Ex post	Two Components: Fixed fee in relation to gross profit; Variable fee depending on share of total protected deposits of an individual bank.	n.a.	Ex ante	No	No	No	No
Japan	Ex ante	Insured Deposits	No	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	Ex ante	Insured Deposits	No	Ex ante	Yes	No	No	Yes
Austria	Ex post, system organized as an incident-related guarantee facility	The deposit guarantee system shall obligate its member institutions, in case of paying-out of guaranteed deposits, to pay without delay pro rata amounts which shall be computed according to the share of the remaining member institution at the preceding balance sheet date as compared to the sum of such guaranteed deposits of the deposit guarantee system.	n.a.	Ex post	No	No	No	No
Belgium	Ex ante, but in case of insufficient reserves, banks may be asked to pay, each year if necessary, an exceptional additional contribution up to 0.04 percent	Total amount of customers' deposits which qualify for reimbursement and which are expressed either in BEF, ECU or another EU currency.	No	Ex ante	Yes	No	No	No
Denmark	Ex ante	Deposits	No	Ex ante	No	No	No	No
Finland	Ex ante	Total Assets	No	Ex ante	No	No	No	Yes
France	Ex post	The contribution consists of two parts: 1. A fixed part, irrespective of the size of the bank, equal to 0.1% of any claim settled and with a FFR 200,000 ceiling; 2. A proportional part, varying according to a regressive scale relative to the size of the bank contributing, based on deposits and one-third credits.	n.a.	Ex ante	Yes	No	No	Yes
Germany	Ex ante; however, additional assessments may be made if necessary to discharge the fund's responsibilities. These contributions are limited to twice the annual contribution	Balance sheet item "Liabilities to Customers."	No	Ex ante	No	No	No	Yes
Greece	Ex ante	Total Deposits	No	Ex ante	No	No	No	Yes
Ireland	Ex ante	Total Deposits excluding Interbank Deposits and Deposits represented by Negotiable Certificates of Deposit.	No	Ex ante	No	Yes	No	No
Italy	Ex post; banks commit ex ante, however contributions are ex post.	Max. limit for funding the whole system: 4,000 Billion Lire. Contributions are distributed among participants on the basis of: (Deposits + Loans - Own Funds) with a correction mechanism linked to deposit growth.	n.a.	Ex post	Yes	No	No	Yes
Luxembourg	Ex post	Banks' premiums based on percentage of loss to be met.	n.a.	Ex post	Yes	No	No	No
Netherlands	Ex post	Amount repaid in Compensation to insured is apportioned among participating institutions. However, the contribution in any one year shall not exceed 5% per an institution's own funds and per all institutions' own funds.	n.a.	Ex post	No	No	No	No
Portugal	Ex ante. However, the payment of the annual contributions may be partly	Guaranteed Deposits	Yes	Ex ante	Yes	No	No	Yes

Country	1995			2011				
	Ex Ante or Ex Post Funding	Base for Premium	Risk-Based Premiums	Is there an ex ante fund/reserve to cover deposit insurance claims in the event of the failure of a member bank?	Is the premium assessed on a participating bank's . . . ?			Do deposit insurance fees/premiums charged to banks vary based on some assessment of risk?
					Insured deposits	Total deposits	Total assets	
	replaced, with a legal maximum of 75%, by the commitment to deliver the amount due to the Fund, at any moment it proves necessary.							
Spain	Ex ante	Deposits	No	Ex ante	No	No	No	No
Sweden	Ex ante	Covered Deposits	Yes	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	Ex ante; banks make initial contributions of L10,000 when a bank is first authorized, further contributions if the fund falls below L3 million, not exceeding L300,000 per bank based on the insured deposit base of the banks involved, and special contributions, again based on the insured deposit base of the banks involved, but with no contribution limit.	All deposits in EEA currencies less deposits by credit institutions; financial institutions, insurance undertakings, directors, controllers and managers, secured deposits, CDS, deposits by other group companies and deposits which are part of the bank's own funds.	No	Ex post	Yes	No	No	No
Memo:								
% Yes			23%		41%	6%	0%	47%

Sources: The 1993 data from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf. The 2011 data are from James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013) and the World Bank Survey IV.

Table 9. Banking Supervision in 19 DMEs: Selected Aspects (1995 and 2011)

	External Audits						Consumer Protection Laws	
	1993	2011					1993	2011
	Required external audits	Is an audit by a professional external auditor required for all commercial banks in your jurisdiction?	Do laws or regulations require auditors to conduct their audits in accordance with International Standards on Auditing (ISA)?	Are auditors required to promptly inform banking supervisors when they intend to issue qualified opinions on the accounts?	Are auditors required to promptly inform banking supervisors when they identify information that could affect the safety and soundness of a bank?	Are auditors required to communicate directly to the supervisory agency any presumed involvement of bank directors or senior managers in illicit activities, fraud, or insider abuse?	Consumer protection laws exist	Does your agency have the responsibility to implement, oversee and/or enforce any aspect of financial consumer protection laws and regulations that apply to banks?
United States	Yes, for banks with assets exceeding $500 million	Yes	No	No	Yes	Yes	Yes	Yes
Switzerland	Yes, official part of supervisory system	Yes	Yes	Yes	Yes	Yes	No	Yes
Japan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Austria	Yes	Yes	No	No	Yes	No	Yes	n.a.
Belgium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Denmark	Yes	Yes	Yes	Yes	Yes	Yes	No, not specifically for banks	Yes
Finland	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
France	Yes	Yes	Yes	Yes	Yes	Yes	n.a.	Yes
Germany	Yes	Yes	No	Yes	Yes	Yes	Yes	n.a.
Greece	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Ireland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Italy	Yes, for banks quoted on the stock exchange	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Luxembourg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Netherlands	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Portugal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spain	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Sweden	Yes	n.a.	n.a.	n.a.	n.a.	n.a.	Yes	
United Kingdom	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Memo:								
% Yes	100%	100%	65%	82%	100%	94%	76%	69%

Sources: The 1993 data from James R. Barth, Daniel E. Nolle & Tara N. Rice, *Commercial Banking Structure, Regulation, and Performance: An International Comparison* (Office of the Comptroller of the Currency, Economics Working Paper No. 97-6, 1997), *available at* http://www.occ.gov/publications/publications-by-type/economics-working-papers/1999-1993/97-6txt.pdf. The 2011 data are from James R. Barth, Gerard Caprio, Jr. & Ross Levine, *Bank Regulation and Supervision in 180 Countries from 1999 to 2011*, 5 J. FIN. ECON. POL'Y 111 (2013) and the World Bank Survey IV.

Table A.1. G-20 member countries in global economic and financial systems (2012)

G-20 Member	*Real Economy*		*Financial System*							
	GDP		Bank assets		Stock market capitalization		Bond market[2]		Financial market (stocks+bonds+banks)	
	$U.S. Trillion.	*% Total world*	*$U.S. Trillion*	*% Total world*	*$U.S. Trillion*	*% Total world*	*$U.S. Trillion*	*% Total world*	*$U.S. Trillion*	*% Total world*
Argentina	0.47	0.7	0.06	0.1	0.03	0.1	0.05	0.0	0.15	0.1
Australia	1.54	2.1	3.26	3.3	1.37	2.5	4.04	2.9	8.67	3.0
Brazil	2.40	3.3	1.78	1.8	1.20	2.2	2.29	1.7	5.27	1.8
Canada	1.82	2.5	3.58	3.6	1.87	3.4	4.49	3.2	9.93	3.4
China	8.23	11.5	13.67	13.9	2.98	5.4	3.82	2.7	20.46	7.0
France	2.61	3.6	7.88	8.0	1.66	3.0	6.16	4.4	15.69	5.4
Germany	3.40	4.7	3.92	4.0	1.55	2.8	5.72	4.1	11.19	3.8
India	1.82	2.5	1.40	1.4	1.18	2.1	0.64	0.5	3.22	1.1
Indonesia	0.88	1.2	0.31	0.3	0.42	0.8	0.17	0.1	0.90	0.3
Italy	2.01	2.8	3.43	3.5	0.51	0.9	4.83	3.5	8.77	3.0
Japan	5.96	8.3	9.61	9.8	3.89	7.0	29.18	21.0	42.68	14.6
Mexico	1.18	1.6	0.18	0.2	0.56	1.0	0.68	0.5	1.42	0.5
Russia	2.02	2.8	1.09	1.1	0.83	1.5	0.79	0.6	2.70	0.9
Saudi Arabia	0.73	1.0	0.27	0.3	0.37	0.7	0.06	0.0	0.70	0.2
South Africa	0.38	0.5	0.60	0.6	0.49	0.9	0.25	0.2	1.34	0.5
South Korea	1.16	1.6	1.08	1.1	1.07	1.9	1.44	1.0	3.60	1.2
Turkey	0.79	1.1	0.71	0.7	0.31	0.6	0.60	0.4	1.62	0.6
UK	2.44	3.4	9.30	9.5	3.55	6.4	9.20	6.6	22.05	7.5
U.S.	15.68	21.9	15.07[1]	15.3	18.14	32.8	37.20	26.8	70.40	24.1
EU (total)	*16.41*	*22.9*	*36.07*	*36.7*	*10.19*	*18.4*	*44.95*	*32.4*	*91.21*	*31.2*
EU (excluding individual G-20 members)[3]	5.95	8.3	11.54	11.8	2.92	5.3	19.04	13.7	33.51	11.5
G-20 total[4]	61.47	85.7	88.74	90.4	44.90	81.2	130.64	94.2	264.28	90.4
Total world	*71.71*	*100.0*	*98.19*	*100.0*	*55.32*	*100.0*	*138.75*	*100.0*	*292.26*	*100.0*

Source: James R. Barth, Chris Brummer, Tong Li & Daniel E. Nolle, *Systemically Important Banks (SIBs) in the Post-Crisis Era: "The" Global Response, and Responses Around the Globe for 135 Countries*, in THE OXFORD HANDBOOK OF BANKING (revised ed. forthcoming 2014), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2294641.

Notes:

[1] Based on consolidated, publicly traded banks, which include commercial banks, savings banks, cooperative banks, investment banks, and bank holding companies.

[2] Public + private debt securities.

[3] Excludes data reported separately for France, Germany, Italy, and the UK; EU members that do not have separate individual representation in the G-20 include Austria, Belgium, Denmark, Finland, Greece, Ireland, Luxembourg, the Netherlands, Portugal, Spain, and Sweden.

[4] Sum of individual G-20 members and "EU excluding individual G-20 members" to avoid double counting France, Germany, Italy, and the UK.

Table A.2. The World's 50 Biggest Banks

(a) 1990

	Bank	Country	Total assets ($millions)
1	Dai-ichi Kangyo Bank	Japan	426,855
2	Mitsubishi Bank	Japan	412,783
3	Sumitomo Bank	Japan	407,907
4	Mitsui Taiyo Kobe Bank	Japan	407,502
5	Sanwa Bank	Japan	401,465
6	Fuji Bank	Japan	398,321
7	Credit Agricole	Japan	302,983
8	Banque Nationale de Paris	France	289,747
9	Industrial Bank of Japan	Japan	289,179
10	Credit Lyonnais	France	285,238
11	Deutsche Bank	Germany	267,702
12	Barclays Bank	United Kingdom	260,048
13	Tokai Bank	Japan	248,986
14	Norinshukin Bank	Japan	248,901
15	National Westminster Bank	United Kingdom	233,468
16	ABN-AMRO Bank	Netherlands	232,694
17	Bank of Tokyo	Japan	222,501
18	Citicorp	United States	214,821
19	Societe Generale	France	204,485
20	Long-Term Credit Bank of Japan	Japan	200,064
21	Dresdner Bank	Germany	189,500
22	Compagnie Financiere de Paribas	France	184,232
23	Union Bank of Switzerland	Switzerland	180,612
24	Groupe des Caisses d'Epargne Ecureuil	France	174,030
25	Bank of China	China	164,515
26	Swiss Bank Corp	Switzerland	148,926
27	Hong Kong Bank	Hong Kong	148,582
28	Commerzbank	Germany	144,501
29	Bayerische Vereinsbank	Germany	137,723
30	Westdeutsche Landesbank Girozentrale	Germany	137,279
31	DG Bank	Germany	136,450
32	Istituto Bancario San Paolo di Torino	Italy	133,156
33	Banca Nazionale del Labvoro	Italy	132,122
34	Nippon Credit Bank	Japan	130,961
35	Mitsubishi Trust & Banking Corporation	Japan	130,764
36	Rabobank Nederland	Netherlands	119,469
37	Daiwa Bank	Japan	118,583
38	Bayerische Hypotheken & Wechsel-Bank	Germany	116,772
39	Credit Suisse	Switzerland	115,535
40	Midland Bank	United States	114,972
41	Sumitomo Trust & Banking	Japan	113,600
42	Kyowa Bank	Japan	112,500
43	BankAmerica Corp	United States	109,089
44	Lloyds Bank	United Kingdom	106,424
45	Saitama Bank	Japan	106,146
46	Bayerische Landesbank	Germany	103,720
47	NMB Postbank Group	Netherlands	102,672
48	Shoko Chukin Bank	Japan	102,358
49	Cariplo (Cassa di Risparmio delle P.Lombarde)	Italy	99,698
50	People's Construction Bank of China	China	99,163

Source: The Banker, 1990 .

Table A.2. Continued.

(b) 2013

	Bank	Country	Total assets ($millions)
1	Industrial & Commercial Bank of China	China	2,789,083
2	HSBC Holdings Plc	United Kingdom	2,692,538
3	Deutsche Bank AG	Germany	2,655,138
4	BNP Paribas	France	2,516,546
5	Crédit Agricole S.A.	France	2,430,876
6	JPMorgan Chase & Co	United States	2,415,689
7	Mitsubishi UFJ Financial Group Inc	Japan	2,407,111
8	Barclays Plc	United Kingdom	2,351,777
9	China Construction Bank Corporation	China	2,221,577
10	Agricultural Bank of China Limited	China	2,105,753
11	Bank of America Corporation	United States	2,102,273
12	The Royal Bank of Scotland Group Plc	United Kingdom	2,070,846
13	Bank of China Limited	China	2,016,124
14	Citigroup Inc	United States	1,880,617
15	Mizuho Financial Group	Japan	1,839,478
16	Banco Santander SA	Spain	1,675,192
17	Société Générale	France	1,650,212
18	Sumitomo Mitsui Financial Group, Inc	Japan	1,572,041
19	ING Groep NV	Netherlands	1,541,934
20	Wells Fargo & Company	United States	1,527,015
21	BPCE Group	France	1,514,080
22	Lloyds Banking Group Plc	United Kingdom	1,458,974
23	UBS AG	Switzerland	1,373,808
24	UniCredit SpA	Italy	1,222,889
25	Credit Suisse Group AG	Switzerland	1,008,379
26	Rabobank Nederland-Rabobank Group	Netherlands	992,756
27	Goldman Sachs Group, Inc	United States	938,555
28	Nordea Bank AB (publ)	Sweden	893,665
29	Intesa Sanpaolo	Italy	888,603
30	Banco Bilbao Vizcaya Argentaria SA	Spain	841,516
31	Commerzbank AG	Germany	839,000
32	Bank of Communications Co. Ltd	China	838,428
33	Toronto Dominion Bank	Canada	824,916
34	Royal Bank of Canada RBC	Canada	823,278
35	Metlife, Inc.	United States	799,625
36	Morgan Stanley	United States	780,960
37	National Australia Bank Limited	Australia	752,585
38	Bank of Nova Scotia	Canada	711,350
39	Commonwealth Bank of Australia	Australia	698,745
40	Fédération du Crédit Mutuel	France	658,698
41	Australia and New Zealand Banking Group	Australia	654,432
42	Westpac Banking Corporation	Australia	648,485
43	Standard Chartered Plc	United Kingdom	636,518
44	Danske Bank	Denmark	615,854
45	Banco do Brasil S.A.	Brazil	561,679
46	China Merchants Bank Co Ltd	China	541,882
47	Industrial Bank Co Ltd	China	516,881
48	Bank of Montreal-Banque de Montreal	Canada	513,867
49	China Minsheng Banking Corporation	China	510,684
50	Shanghai Pudong Development Bank	China	500,144

Source: BankScope.
Note: The data are from the latest quarter available in 2013 (accessed 1/27/2014).