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A Structural View of U.S. Bank Holding Companies

1. Introduction

Large banking organizations in the United States are generally organized according to a bank holding company (BHC) structure. In this paper, we describe the organizational structure of large U.S. bank holding companies and present summary statistics that document the increasing size, complexity, and diversity of these organizations. We also outline the different types of regulatory data filed with the Federal Reserve by U.S. bank holding companies and describe the strengths and weaknesses of these data, as a source for researchers and others interested in these organizations.

A BHC is simply a corporation that controls one or more banks. Typically, a large U.S. parent BHC owns a number of domestic bank subsidiaries engaged in lending, deposit-taking, and other activities, as well as nonbanking and foreign subsidiaries engaged in a broader range of business activities, which may include securities dealing and underwriting, insurance, real estate, private equity, leasing and trust services, asset management, and so on.

Chart 1 illustrates the rapid growth in the size and scope of BHCs over the past twenty years. As shown in the chart, nearly all U.S. banking assets are controlled by bank holding companies, and U.S. BHCs as a group (inclusive of firms whose ultimate parent is a foreign banking organization) control well over $15 trillion in total assets, representing a fivefold increase since 1991.[1] By comparison, nominal GDP increased by only around 150 percent over the same period.

Notably, assets held in nonbanking subsidiaries or directly by the BHC parent account for a progressively larger share of total BHC assets over time (the gray area in Chart 1, panel A). This trend reflects a significant broadening in the types of commercial activities engaged in by BHCs and a shift in revenue generation toward fee income, trading, and other noninterest activities (Stiroh 2004). These trends are attributable in part to important changes in the regulatory environment, as discussed in Section 2.

Partly the result of a wave of mergers, the share of BHC assets controlled by the ten largest firms has more than doubled over the past two decades, from less than 30 percent to more than 60 percent (see Chart 1, panel B). The total number of firms organized as BHCs has declined from 5,860 in 1991 to 4,660 as of fourth-quarter 2011, also reflecting industry consolidation. See Copeland (2012) for a further discussion of trends in banking consolidation and income generation.

Chart 2 provides a window into the organizational complexity of large BHCs. One simple measure of complexity

[1] Recent growth in industry assets plotted in Chart 1 in part reflects the conversion of several firms to a BHC organizational form (for example, Goldman Sachs, Morgan Stanley, Ally Financial, American Express) as well as out-of-industry acquisitions by BHCs (for example, JPMorgan Chase's acquisition of Bear Stearns, an investment bank, and Bank of America's acquisitions of Merrill Lynch and Countrywide Financial, an investment bank and savings bank, respectively). The sizable increase in total assets and nonbank subsidiary assets in first-quarter 2009 reflects the fact that this is the quarter in which Goldman Sachs and Morgan Stanley first file BHC regulatory reports. The bulk of the assets of these two firms are held outside their bank subsidiaries.

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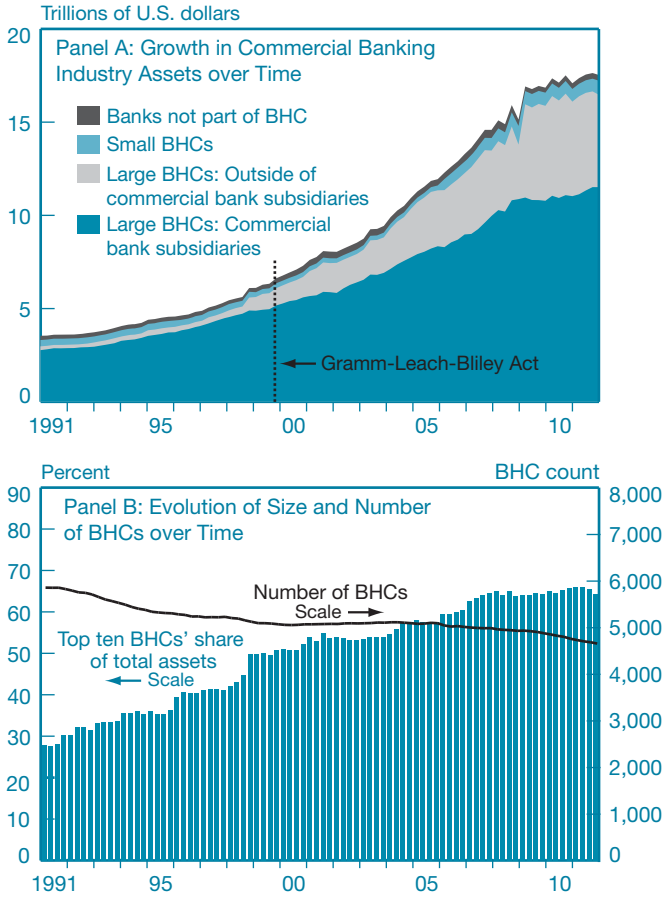
Chart 1

Trends in Number and Total Size of U.S. Bank Holding Companies



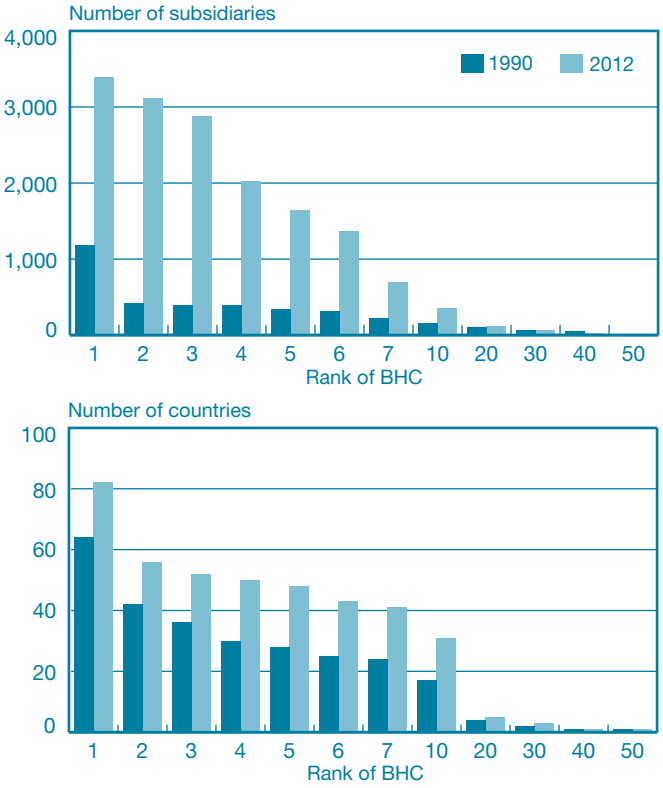
Sources: National Information Center; FR Y-9C; FFIEC 031; FFIEC 041.

Notes: The chart presents financial data up to fourth-quarter 2011. A large bank holding company (BHC) is defined as a top-tier BHC that files a Y-9C report (in recent years, this report has been required of BHCs with at least $500 million in total assets). Commercial bank assets of large BHCs in panel A are measured as the sum of consolidated assets reported by each banking subsidiary in its Call Report filing. It is a slight overestimate because of double-counting of any related party exposures between banks controlled by the same BHC. Nonbank assets of large BHCs are the difference between total assets as reported in the Y-9C and commercial bank assets as defined above. Assets of small BHCs reflect only their commercial bank subsidiaries (which is, however, likely to be a good approximation of BHC assets for this class of firms). In panel B, the number of BHCs is a count of Y-9C filers plus the number of distinct high holders of commercial banks filing a Call Report, exclusive of banks that are their own high holder or have a Y-9C filer high holder. See the online appendix for more details.

in this context is the number of separate legal entities in the BHC. This variable is plotted in the top panel, sorted in rank order across firms. Today, the four most complex firms measured on this dimension each have more than 2,000 subsidiaries, and two have more than 3,000 subsidiaries.

Chart 2

Organizational Complexity and International Reach of Large U.S. Bank Holding Companies



Sources: National Information Center; FR Y-10.

Note: Data are as of February 20, 2012, and December 31, 1990, and include the top fifty bank holding companies (BHCs) at each of these dates. See the online appendix for more details.

In contrast, only one firm exceeded 500 subsidiaries in 1991. BHCs have also expanded their geographic reach; each of the seven most internationally active banks controls subsidiaries in at least forty countries.

Building on these stylized facts, in section 2 we describe the origins of the BHC organizational form and discuss several key pieces of legislation that have shaped the scope and size of the U.S. commercial banking industry. Section 3 outlines the typical organizational structure of large BHCs and presents a primer on the types of regulatory data filed by these firms. Making use of these data, section 4 presents additional stylized facts about the organizational complexity and scope of large BHCs. Section 4 also includes preliminary statistical analysis of the determinants of organizational complexity, proxied by the log number of subsidiaries. The analysis suggests that complexity is positively related to BHC size and weakly positively related to the diversity of the BHC's activities. Section 5 concludes.

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2. How Did We Get Here?

Changes in the legislative and regulatory environment have been a key driver of the trends toward greater BHC size, scope, and industry consolidation documented in Charts 1 and 2. The evolution of U.S. financial legislation in turn reflects a long-running public debate about the appropriate size and scope of banking organizations. As discussed in detail below, there has been a secular trend in recent decades toward enlarging the allowable scope of BHC activities. However, recent legislation represents something of a reversal of this trend; most prominently, the "Volcker rule" provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) prohibit BHCs from engaging in proprietary trading and limit their investments in hedge funds, private equity, and related vehicles.

The primary legislation defining the allowable scope of BHC activities is the Bank Holding Company Act of 1956 (BHCA, 12 U.S.C. § 1841). The Act establishes conditions under which a corporation may own a U.S. commercial bank and invests responsibility for supervising and regulating BHCs with the Federal Reserve.[2]

A key original goal of the BHCA was to limit the co-mingling of banking and commerce, that is, to restrict the extent to which BHCs or their subsidiaries could engage in nonfinancial activities (for more details and historical background, see Omarova and Tahyar 2011; Santos 1998; Aharony and Swary 1981; and Klebaner 1958). This separation is intended to prevent self-dealing and monopoly power through lending to nonfinancial affiliates and to prevent situations where risk-taking by nonbanking affiliates erodes the stability of the bank's core financial activities, such as lending and deposit-taking (Kroszner and Rajan 1994; Klebaner 1958). To further enhance stability, BHCs are also required to maintain minimum capital ratios and to act as a "source of strength" to their banking subsidiaries, that is, to provide financial assistance to banking subsidiaries in distress.[3]

BHCs today engage in a significantly broader range of activities than the narrow limits set out in the 1956 BHCA, enabled through subsequent amendments to the Act.[4] For example, in 1970 the BHCA was amended to allow multibank holding companies to engage either directly or indirectly through subsidiaries in activities that are "closely related to banking" (Aharony and Swary 1981).[5,6] BHCs may invest in nonfinancial firms, although their stake cannot generally exceed 5 percent of the company's outstanding voting stock.

The passage of the Gramm-Leach-Bliley Act (GLBA) of 1999 further amended the BHCA to enable a BHC to register as a financial holding company (FHC), thereby allowing the firm to engage in a broad range of financial activities, including securities underwriting and dealing, insurance underwriting, and merchant banking activities.[7] Today, virtually all large BHCs are registered as FHCs. While it is difficult to prove causality, it is notable that the striking growth in the size and importance of nonbank BHC subsidiaries dates almost entirely to the period after the passage of the GLBA (see Chart 1, panel A).

The Federal Reserve holds regulatory responsibility for umbrella supervision of FHCs, as it does for other BHCs. However, the GLBA provides for functional regulation of a FHC's nonbank financial subsidiaries. For example, broker-dealer subsidiaries of a financial holding company are primarily regulated by the Securities and Exchange Commission (SEC), and insurance subsidiaries by state insurance regulators.

Most recently, the passage of the Dodd-Frank Act represents a significant shift toward strengthening regulations governing financial service providers and restricting the scope of activities that BHCs may engage in. Most notably, the "Volcker Rule" provisions of the Act (§619) introduce two key types of restrictions: (1) banks are prohibited from engaging in proprietary trading (that is, short term trading on the bank's own account) on many types of financial instruments; and

[2] Ownership of banks by nonbanks was lightly regulated under the earlier 1933 Banking Act. The Glass-Steagall Act also prohibited firms principally engaged in investment banking from affiliating with member banks. The original 1956 BHC Act addressed only multibank holding companies, that is, corporations controlling 25 percent or more of the voting shares of at least two commercial banks. The 1970 amendment to the BHCA extended the Federal Reserve's authority to single-bank holding companies.

[3] The BHCA (§ 225.28) defines source of financial strength to mean, "the ability of a company that directly or indirectly owns or controls an insured depository institution to provide financial assistance to such insured depository institution in the event of the financial distress of the insured depository institution." Ashcraft (2008) presents evidence that affiliation with a multibank holding company reduces a bank's probability of financial distress, consistent with the view that the source of strength doctrine improves financial stability. Regulation Y sets out the procedural rules that apply to BHCs to ensure they act as a source of strength.

[4] See Omarova and Tahyar (2011) for a detailed discussion of the evolution of the BHCA, particularly the changes in the statutory definition of a "bank" within the Act.

[5] As defined in Subpart C of Regulation Y (§225.28), this list of permissible related activities includes mortgage banking, consumer and commercial finance, loan servicing, leasing, collection agency, asset management, trust company services, real estate appraisal, and financial and investment advisory activities.

[6] While expanding the range of permissible activities for multibank holding companies, the 1970 amendment to the BHCA had the opposite effect of constraining the scope of activities for single bank holding companies, since these firms were not subject to the BHCA until the passage of the 1970 amendment. As discussed in Omarova and Tahyar (2011), this difference in regulatory treatment had led to a rapid growth in single bank holding companies after the original passage of the BHCA in 1956.

[7] In order to register as an FHC, the holding company as well as all subsidiary depository institutions must be well-managed and well-capitalized, and be in compliance with the Community Reinvestment Act, among other requirements (see Regulation Y (§225.84)).

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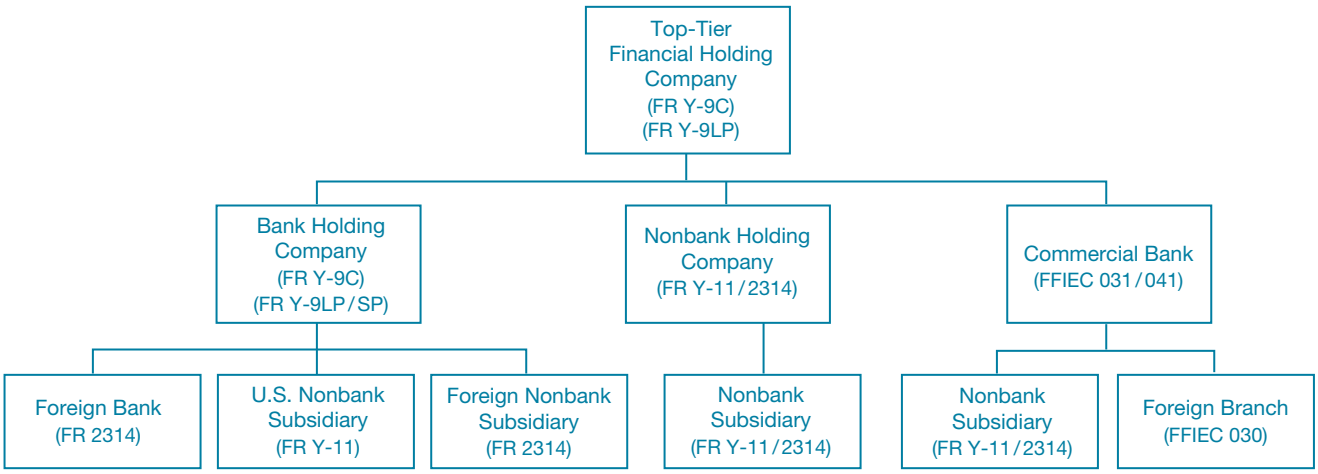
Stylized Structure of a Large Bank Holding Company



(2) limits are placed on banks' ownership or sponsorship of private equity firms, hedge funds, venture capital funds, and certain other privately offered funds and pooled investment vehicles.[8]

Another ongoing debate about BHC scope concerns firms' commodity trading operations. The BHCA restricts holding companies' ability to own or trade physical commodities, or to own hard assets related to commodity trading such as storage tanks, shipping containers, and warehouses. But a "grandfathering" exemption in the GLBA allows an investment bank that converted to holding company status after 1999 to continue to trade or own physical assets if it did so before September 1997. This exemption has allowed a number of the largest BHCs to operate large, profitable commodity trading businesses. However, the legal scope of the exemption is widely seen as ambiguous. For example, it is unclear to what extent it allows firm to purchase new hard assets related to an existing commodities business, or to expand into new commodities markets. Many speculate that the Federal Reserve may tighten its treatment of the exemption.[9]

These recent developments represent a notable reversal of the trend over the past several decades toward expanding the range of permissible activities for U.S. BHCs. They also emphasize that concerns about the separation between banking and commerce, and debates about the appropriate scope of BHC activities, remain as active as ever. In addition, restrictions on the scope of large banking organizations are being considered in other countries in the wake of the financial crisis. For example, in the United Kingdom, the Independent Commission on Banking has recommended "ring-fencing" retail banking activities inside separately capitalized subsidiaries (see Independent Commission on Banking 2011).

3. Structure and Data Sources

Chart 2 illustrates that, as well as increasing in size, the largest BHCs have become significantly more organizationally complex over the past two decades, at least as measured by the number of separate legal entities within each firm and the geographic reach of these organizations. This section sheds some light on the organizational structures of large BHCs and describes key types of regulatory data available regarding different entities within the BHC, to serve as a guide for researchers and other analysts.

The exhibit above presents a stylized picture of the organizational structure of a typical large BHC, including both banking and nonbanking subsidiaries. It also lists (in parentheses) the key regulatory reports filed by different legal entities within the structure. A more detailed table summarizing regulatory data filed by BHCs and their subsidiaries is compiled in Appendix A to this paper.

The exhibit is simplified by necessity, because in practice the most complex BHCs control up to several thousand separate

[8] Specifically, the Act restricts the bank from owning more than 3 percent of the fund, places an overall limit of 3 percent of the bank's Tier 1 capital invested in private funds, and introduces other limitations relating to the name of the fund and affiliated transactions.

[9] For a detailed discussion, see David Sheppard, Jonathan Leff, and Josephine Mason, "Insight: Wall Street, Fed Face Off over Physical Commodities," Reuters newswire, March 2, 2012, available at: http://www.reuters.com/article/2012/03/02/us-fed-banks-commodities-idUSTRE8211CC20120302 (accessed April 9, 2012).

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subsidiaries. A snapshot of the organizational structure of each BHC is reported annually as part of the FR Y-6 *Annual Report of Bank Holding Companies*; this report requires BHCs to file an organizational chart, intercompany ownership and control relationships, and data on domestic branches, among other information. In addition, on the FR Y-10 *Report of Changes in Organizational Structure*, top-tier BHCs report, as they occur, any changes to the firm's worldwide organizational structure including mergers, acquisitions, or transfers of interests in other entities, internal reorganizations, commencements of new activities, and openings, closings or relocations of branches or subsidiaries.[10] By combining these two reports, it is possible to generate at any point in time an updated picture of the organizational structure of the firm. Data from these two reports are publicly available through the National Information Center repository.[11]

In determining the set of entities controlled by the ultimate parent BHC, banking regulations use a definition of control which differs from that used for financial reporting purposes under U.S. Generally Accepted Accounting Principles (GAAP).[12] Thus, regulatory reports vary in terms of which definition of control is used. For example, the FR Y-6 and Y-10 reports require firms to use the supervisory definition of control when determining the set of subsidiaries controlled by the BHC. However, the consolidated financial statements of the BHC are prepared based on U.S. GAAP consolidation definitions. (See the "Consolidation Rule" column of Appendix A.) End users should bear these differences in mind when interpreting regulatory data.

The key source of consolidated financial data on U.S. BHCs is the FR Y-9C *Consolidated Report of Condition and Income,* which is completed on a quarterly basis by each BHC with at least $500 million in total assets. The Y-9C provides data on the financial condition of the firm, based on U.S. GAAP consolidation rules, as well as the capital position of the consolidated entity. The balance sheet and income data include items similar to those contained in SEC filings; however, the Y-9C also contains a rich set of additional information, including data on regulatory capital and risk-weighted assets, off-balance sheet exposures, securitization activities, delinquency statistics on different types of loans, and so on. Since comparability across firms is important for regulatory purposes, the Y-9C and other reporting forms tend to be more prescriptive about the way financial data is measured and reported than U.S. GAAP-based reporting.

The top-tier BHC, shown at the top of the exhibit, also submits a separate quarterly report known as the FR Y-9LP, prepared on an unconsolidated basis. Note that the parent BHC depicted in the exhibit is also registered as a financial holding company (FHC). As we discussed in Section 2, this FHC status allows the firm to control entities engaged in a broader range of financial activities.

Each domestic commercial bank, like the one depicted on the right side of the exhibit, files a detailed set of quarterly financial reports commonly known as "Call Reports" (FFIEC 031, if the bank has both foreign and domestic offices, or FFIEC 041, if it has only domestic offices). Like the Y-9C, Call Reports are prepared on a consolidated basis, but at the level of the bank, rather than the BHC. Many similarities exist between the structure of the Y-9C and Call Reports, although the set of information reported does differ between the two reporting forms in important ways. For example, the Call Report provides additional information on core banking activities, such as the composition of deposit liabilities. Conversely, the Y-9C provides additional information on broader financial activities, such as insurance and reinsurance.

Foreign bank subsidiaries, such as the one depicted at the far bottom left of the exhibit, also report regulatory data on their activities, but on a standalone rather than a consolidated basis.[13] Large foreign subsidiaries, whether banks or nonbanks, report balance sheet and income data through the FR 2314 report, while smaller subsidiaries (those below a set of reporting thresholds) report a small number of data items in the FR 2314S. Foreign bank branches not incorporated into a separate subsidiary (as depicted at bottom right of the exhibit) file the FFIEC 030 report.

A BHC's banking subsidiaries are "special" in a number of ways relative to nonbanks; for example, they are able to raise insured deposits and can borrow at the Federal Reserve's discount window. However, these entities are also bound by separate capital requirements and face additional regulation. Furthermore, although the GLBA has expanded the activities that BHCs may engage in, many of these activities, such as underwriting, commodities dealing, and insurance, must generally occur outside of the BHC's commercial bank(s) or their subsidiaries, a factor contributing to the organizational complexity of BHCs.

Financial information on each large nonbank subsidiary is filed in the FR Y-11 report (if a domestic subsidiary), or the FR 2314 (if a foreign subsidiary).[14] An exception is made,

[10] A top-tier BHC is the ultimate domestic parent organization (that is, a BHC that is not controlled by another domestic BHC).

[11] See http://www.ffiec.gov/nicpubweb/nicweb/NicHome.aspx.

[12] For example, U.S. GAAP determines that control has been established if the parent owns more than 50 percent of the voting stock of the firm, while for supervisory purposes, this limit is only 25 percent.

[13] In this context, "standalone" means that the accounts of the firm are based only on the entity itself, without consolidating the assets and liabilities of any subsidiaries.

[14] Smaller subsidiaries instead file an FR Y11S (if domestic) or 2314S (if foreign), based on size thresholds. See Appendix A for more details. Note that the FR 2314/2314S is the same report filed by foreign banking subsidiaries.

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however, for securities and insurance affiliates facing separate functional regulation; such subsidiaries are exempt from filing the FR Y-11 and instead file reports on their activities and financial position with their functional regulator.

Another way to examine the foreign activities of U.S. BHCs is to study their exposure to foreign individuals, firms, and governments, instead of studying the country in which each subsidiary is domiciled. This approach is relevant because a BHC's domestic subsidiaries may engage in significant foreign lending. Cross-border exposures of bank holding companies are reported on the FFIEC 009, *Country Exposure Report*. This report presents a consolidated view of the distribution by country of claims (including derivative exposures) on foreigners, including foreign subsidiaries of the BHC. As an application of these data, Cetorelli and Goldberg (2011) use FFIEC 009 reports to analyze liquidity management and internal capital markets among internationally active U.S. banks during the Great Recession. A second instrument, the *Treasury International Capital* (TIC) reports, provides data on the foreign portfolio exposures of the BHC's U.S. subsidiaries. These data reflect the geographic location of the exposure itself, rather than the location of the legal entity holding the security. Together these two reports provide a global picture of the BHC's activities and exposures.

To summarize, while BHCs are organizationally complex, a range of detailed data is available to regulators, researchers, and other analysts to help analyze the scope, size, complexity, and global reach of these organizations. This section has presented a (nonexhaustive) list of many of these data sources. We now make use of these reporting data to construct simple summary statistics on the structure and characteristics of large U.S. BHCs.

4. Stylized Facts

We focus on the fifty largest BHCs, which together make up a large fraction of total industry assets. Our intention is to present stylized facts on the organizational complexity and structure of these organizations and to illustrate some of the many ways in which regulatory reporting data can be used to shed light on the activities of bank holding companies. All the statistics are based on the most updated information, reported as of February 20, 2012.[15]

Table 1 presents some simple summary statistics on a sample of large BHCs, sorted in order of total assets and combining several of the regulatory reports discussed above. Six of the seven largest BHCs control more than a thousand subsidiaries; nearly all of these subsidiaries are nonbanks, and many are foreign firms. These subsidiaries have been created for a variety of purposes: (i) for regulatory reasons, for example, because separate subsidiaries are required in each country in which the firm operates, or for particular activities; (ii) to limit taxation, for example, by shifting certain activities into lower-tax jurisdictions; (iii) to manage the regulatory burden of the firm, for example, to avoid burdensome laws or regulatory regimes; (iv) to secure or limit the position of different claimholders on the firm in the case of bankruptcy. (See Section 4.4 for further discussion.)

While BHCs control a large number of nonbank subsidiaries, most assets are generally held in a small number (between one and five) of domestic commercial banks. For example, the largest BHC by total assets, JPMorgan Chase, controls 3,391 subsidiaries; of the 2,940 subsidiaries that are domestically domiciled, only four are domestic commercial banks. These banks and their subsidiaries do, however, hold 86 percent of the firm's total assets.[16]

The fraction of total assets held within the BHC's banking subsidiaries varies significantly across firms. For smaller BHCs, this fraction is close to 100 percent. For MetLife, Goldman Sachs, and Morgan Stanley, which engage in relatively little traditional lending and deposit-taking, banking subsidiaries contain a strikingly small fraction of the firm's assets (3.2 percent, 11.2 percent, and 10.5 percent, respectively). For the other largest BHCs, which have large retail banking operations but also engage in securities dealing and underwriting, insurance, and so on, the fraction of bank assets falls between these two extremes, varying between 69 percent and 93 percent of firm assets among the four largest firms.

4.1 Industry Breakdown

Charts 3 and 4 present an industry breakdown of the activities of the subsidiaries of large BHCs. Appropriate regulation of the

[15] Each firm's organizational structure as reported in the 2011 FR Y-6 was updated for any structural changes that occurred up to February 20, 2012. (Recall that each change in structure must be reported by the BHC through an FR Y-10 filing.) Financial data are reported quarterly and thus reflects each firm's financial position as of December 31, 2011. Note that two large firms, Taunus Corporation and RBC USA Holding Corporation, lost their BHC status in early 2012. Even though both firms were among the top fifty BHCs as of December 2011, they were not BHCs as of February 20, 2012, and thus are not included in our statistics.

[16] These estimates of commercial banking assets are calculated by simply summing total assets, as reported in the Call Reports of each commercial banking subsidiary. From a consolidated BHC perspective, this calculation will overstate commercial bank assets in cases where there are related party exposures among commercial banks within the same BHC (since these should in principle be "netted out" from a consolidated perspective). However, we believe this overstatement will generally be small in practice.

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Table 1

Number and Distribution of Subsidiaries: Selected Top Fifty Bank Holding Companies

BHC Rank	Name	Number				Asset value	
		Domestic					
		Commercial Bank	Other	Foreign	Total	Domestic Commercial Bank (Percentage of Y-9C Assets)	Consolidated Total Assets (Y-9C) (Billions of U.S. Dollars)
1	JPMorgan Chase & Company	4	2,936	451	3,391	86.1	2,265.8
2	Bank of America Corporation	5	1,541	473	2,019	77.9	2,136.6
3	Citigroup Incorporated	2	935	708	1,645	68.8	1,873.9
4	Wells Fargo & Company	5	1,270	91	1,366	92.5	1,313.9
5	Goldman Sachs Group, Incorporated	1	1,444	1,670	3,115	11.2	923.7
6	MetLife, Inc.	1	39	123	163	3.2	799.6
7	Morgan Stanley	2	1,593	1,289	2,884	10.5	749.9
10	The Bank Of New York Mellon Corporation	3	211	146	360	83.2	325.8
20	Regions Financial Corporation	1	35	4	40	97.1	127.0
30	Comerica Incorporated	2	72	2	76	99.8	61.1
40	First Horizon National Corporation	1	35	1	37	99.1	24.8
50	Webster Financial Corporation	1	21	0	22	99.8	18.7
Total		86	13,670	5,847	19,603	70.4	14,359.1

Sources: National Information Center; FR Y-9C; FR Y-10; FR Y-11; FR 2314; FFIEC 031; FFIEC 041.

Notes: Structure data are as of February 20, 2012. Financial data are as of fourth-quarter 2011. The number of subsidiaries of each bank holding company (BHC) is determined based on the Regulation Y definition of control. Asset data include approximately 3,700 of the more than 19,600 subsidiaries belonging to the top fifty BHCs that meet particular reporting threshold criteria. See the online appendix for more details.

scope of BHCs' activities has been an important and prominent public policy issue for many decades, as discussed in Section 2. These figures are based on combining structural data from the FR Y-10 and financial data from the FR Y-11, FR 2314, and FFIEC 031 and 041 reports. Industry is classified according to the North American Industry Classification System (NAICS).[17]

Based on raw counts (Chart 3), the most common industry categories are "Funds, Trusts, and Other Financial Vehicles" and "Securities, Commodity Contracts, and Other." Weighted by assets, however, the most important category is "Credit Intermediation and Related Activities." This breakdown is consistent with Table 1. Large BHCs have a large number of subsidiaries for managing trusts and investment funds as well as many other purposes; however, the majority of BHC assets relate to "traditional" credit intermediation activities.

Again, these two charts illustrate enormous variation in industry composition across firms. For example, perhaps unsurprisingly, Morgan Stanley and Goldman Sachs, which focus more heavily on investment banking activities, have a large volume of subsidiaries in the "Funds, Trusts, and Other Financial Vehicles" category and have a smaller fraction of assets held in subsidiaries engaged in credit intermediation. In addition, few assets are reported for MetLife, since a large fraction of firm assets are held in insurance subsidiaries that do not submit FR Y-11 reports.

Also notable is a "tail" of BHC subsidiaries engaged in activities that are not obviously closely related to banking. For example, BHCs own a number of subsidiaries engaged in "Health Care and Social Assistance" and "Professional, Scientific, and Technical Services." Ownership of such subsidiaries can arise in a number of ways; for example, a bank may acquire a firm that it has lent to as the outcome of bankruptcy proceedings. In general, these nonfinancial subsidiaries do not make up a significant share of total firm assets. (Note: Information on the industry distribution of BHC subsidiaries is also tabulated in Appendix B.)

As an illustration of the richness of these regulatory data when compared with other data sources, we have constructed similar industry figures using Capital IQ, a widely-used data vendor that compiles data from firm's SEC filings and other sources. The number of subsidiaries captured in Capital IQ is significantly smaller than that from the regulatory data. For

[17] NAICS codes are used to classify firms by their primary economic activity. The codes range from two to six digits in length, in which two-digit codes represent the broadest categories and six-digit codes represent the most specific categories. We use two-digit NAICS codes, except for the finance and insurance industry, which we break out further using three-digit NAICS codes.

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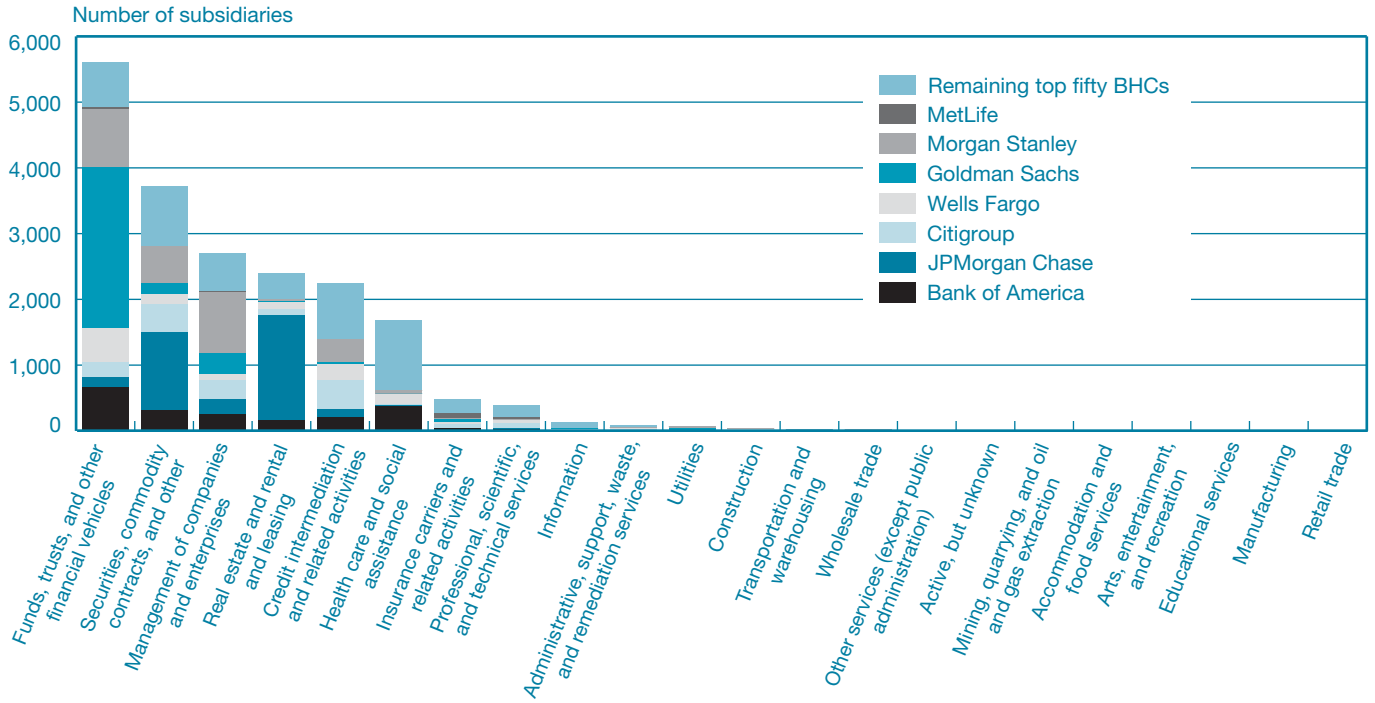
Chart 3

Industry Breakdown of Subsidiaries



Sources: National Information Center; FR Y-10.

Notes: Data are for the top fifty bank holding companies and are as of February 20, 2012. See the online appendix for more details.

example, for the seven largest BHCs, 3,890 subsidiaries are recorded in Capital IQ, of which asset data are reported for only 53. In contrast, for the same seven firms, 14,583 subsidiaries are recorded in BHC regulatory filings, and asset data are available for 2,981 subsidiaries. A table in the online appendix also shows that the sum of subsidiary assets reported in Capital IQ significantly understates the corresponding sum from regulatory reports for six of the seven largest BHCs.[18]

4.2 Geographic Breakdown

Another important dimension of BHC scope is the geographic reach of firms' activities. Chart 2, panel B showed that the most internationally active BHCs control subsidiaries in forty-to-eighty separate countries. Data on the geographic composition of these subsidiaries are reported in Table 2, panel A (based on the FR Y-10), which reports geographic data at the country level. For exposition, we have grouped countries by geographic region.

A large majority of total BHC assets, 75.82 percent, are held in the United States. Perhaps unsurprisingly, the fraction of foreign assets and subsidiaries is significantly higher for the largest BHCs than for smaller firms. Europe is the most important location for foreign-held BHC assets (making up 15.40 percent of assets), followed by the Caribbean (3.15 percent of assets), Asia (2.79 percent of assets), and Latin America (1.55 percent of assets).

Table 2, panel B reports aggregate foreign exposures of U.S. BHCs, based on data originally reported in the FFIEC 009 report. Note that foreign exposures may differ significantly from the fraction of assets domiciled overseas, for example, because domestic BHC subsidiaries may lend to or engage in derivatives transactions with foreign organizations. Indeed, the table shows that 62 percent of all foreign exposures are held within domestic BHC subsidiaries.

[18] The exception is MetLife, for which the sum of subsidiary assets is actually larger in Capital IQ than in their regulatory filings. The reason is that, as mentioned above, MetLife has large insurance subsidiaries that do not file a Y-11 report of their financial position because they are functionally regulated by state insurance regulators (see the discussion in section 3). For the other six largest BHCs, the sum of reported subsidiary assets in Capital IQ are only 4 percent to 77 percent as large as in the same firm's regulatory filings.

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Table 2

Geographic Distribution of Bank Holding Company Assets and Exposures

Panel A: Geographic Location of U.S. BHC Subsidiaries

	Top Seven BHCs		Remaining Top Fifty BHCs		Top Fifty BHCs	
Region	Number	Assets (Percent of Total)	Number	Assets (Percent of Total)	Number	Assets (Percent of Total)
United States	9,761	70.92	3,954	89.12	13,715	75.82
Europe	1,828	18.47	526	7.08	2,354	15.40
Caribbean	1,518	3.42	164	2.41	1,682	3.15
Asia	593	3.80	154	0.07	747	2.79
Latin America	377	2.04	67	0.25	444	1.55
Australia	227	0.58	47	0.32	274	0.51
Africa	153	0.26	13	0.00	166	0.19
Canada	126	0.52	95	0.75	221	0.58
Total	14,583	100.00	5,020	100.00	19,603	100.00

Panel B: Foreign Exposures of U.S. BHCs

		Exposures by Subsidiary Type (Percent of World Total)		
Region	Total (Billions of U.S. Dollars)	Domestic	Foreign	Total
Europe	2,017.2	35.73	16.19	51.92
Asia	970.3	11.22	13.75	24.98
Latin America	349.4	4.19	4.81	8.99
Caribbean	205.6	5.16	0.13	5.29
Canada	163.5	2.53	1.68	4.21
Australia	147.7	2.28	1.52	3.80
Africa	26.3	0.34	0.34	0.68
International organizations	5.1	0.13	0.00	0.13
World Total	3,885.1	61.58	38.42	100.00

Sources: National Information Center; FR Y-10; FR Y-11; FR 2314; FFIEC 031; FFIEC 041; E.16.

Notes: Structure data are as of February 20, 2012. Financial data are as of fourth-quarter 2011. Asset data in panel A reflect approximately 3,700 of the more than 19,600 subsidiaries controlled by the top fifty bank holding companies (BHCs), which meet particular reporting threshold criteria. Aggregate data in panel B are drawn from the E.16 Country Exposure Lending Survey and Country Exposure Information Report, which in turn is based on data from FFIEC 009. See the online appendix for more details.

4.3 Caveats and Limitations

When interpreting the above statistics on industrial and geographic scope, it is worth reiterating some limitations of the underlying regulatory data:

1. Assets for each nonbank subsidiary reported in the FR Y-11/FR 2314 are based on treating the subsidiary in question as a standalone entity. Given this treatment, asset and liability positions with related entities (for example, a loan to or equity position in a subsidiary) will be included as part of the subsidiary's balance sheet, even though such positions net out to zero from a consolidated BHC perspective. For this reason, summing up reported assets for each subsidiary will tend to overstate the total assets of the firm as a whole—particularly in a highly tiered structure. It is not possible to fully correct this double-counting.[19]
2. As described in section 3, some (potentially large) U.S. nonbank subsidiaries do not file a Y-11 because they instead report separately to their U.S. functional regulator. This practice is primarily relevant for securities and insurance subsidiaries, which are significant in size for

[19] Balances with related entities are disclosed in the FR Y-11/FR 2314. However, the item "Claims on related entities" includes related entities whether or not they are consolidated by the ultimate parent under U.S. GAAP. Therefore, using this line item to offset related party holdings may generate an overadjustment.

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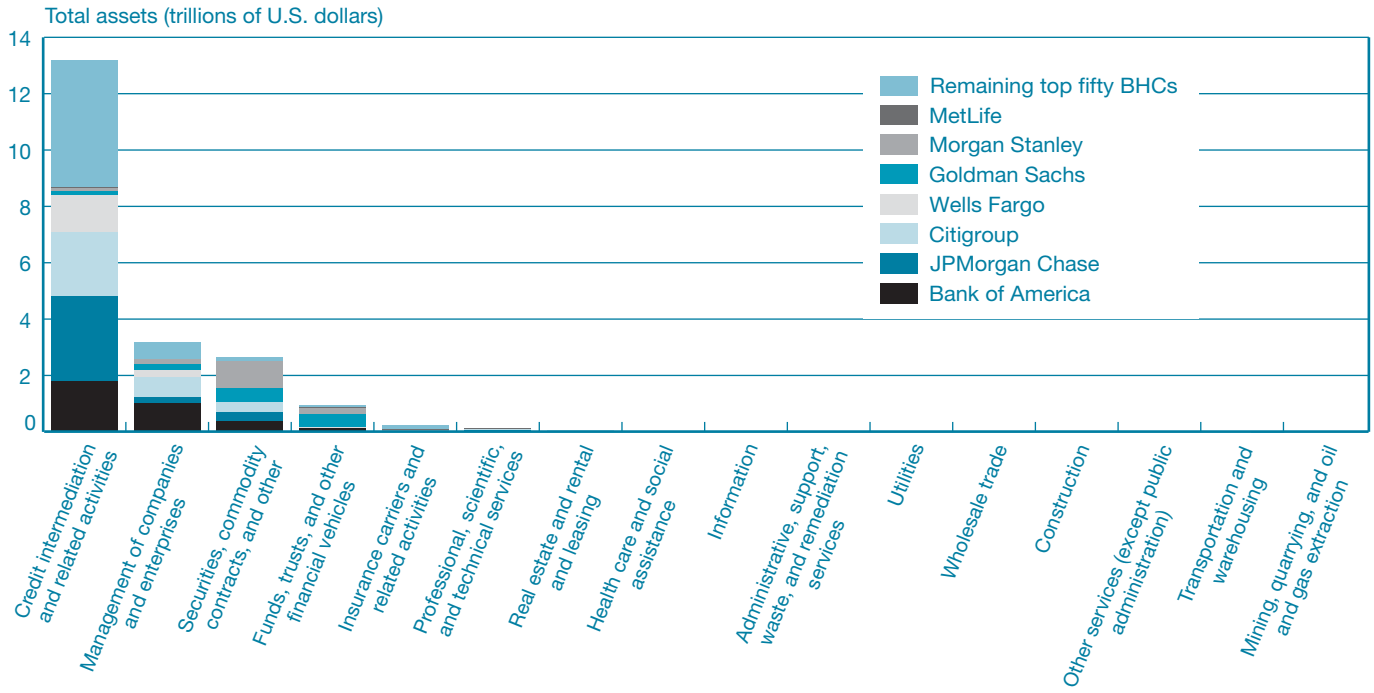
Chart 4
Industry Breakdown by Assets



Sources: National Information Center; FR Y-10; FR Y-11; FR 2314; FFIEC 031; FFIEC 041.

Notes: Data are for the top fifty bank holding companies (BHCs). Structure data are as of February 20, 2012. Financial data are as of fourth-quarter 2011. Asset data include approximately 3,700 of the more than 19,600 subsidiaries belonging to the top fifty BHCs that meet size thresholds and other requirements for reporting asset data. See the online appendix for more details.

some BHCs. These separate filings are in general not available to analysts outside the functional regulator.[20]

3. Small subsidiaries that are below reporting thresholds are not required to file asset data.

These data limitations are likely to introduce some bias into the asset-weighted statistics reported in Chart 4 and Table 2, panel A.

4.4 Causes and Consequences of Complexity

Earlier in this section, we posited a number of drivers of BHC organizational complexity: regulation (and regulatory arbitrage), tax management, and the determination of control rights and priority of claims in bankruptcy. A full examination of each of these drivers is outside the scope of this paper. However, as a first step, below we present a simple cross-sectional regression analysis of the correlates of BHC complexity, as proxied by the total number of subsidiaries.[21]

Specifically, we regress the log of the number of subsidiaries controlled by each of the top fifty BHCs on measures of size (total assets and log total assets) and the concentration of activities: the fraction of commercial bank assets and indexes measuring the industry and geographic concentration of the firm's assets. Our expectation is that larger BHCs, as well as those engaged in a more diversified range of activities, are likely to be more organizationally complex. We estimate a simple linear model using least squares, using robust standard errors to account for heteroskedasticity. The results are presented in Table 3.

The number of subsidiaries is strongly positively and statistically significantly related to BHC size. The coefficient on log assets is consistently less than unity, however, implying that a given percentage increase in BHC size is associated with a smaller-than-proportionate increase in the number of subsidiaries. In other words, larger BHCs, on average, have larger individual subsidiaries.

[20] For example, broker-dealer subsidiaries of BHCs are required to file balance sheet and income data with the SEC, their primary regulator, in the form of a FOCUS (Financial and Operational Combined Uniform Single) report. Information in these FOCUS reports is not publicly available, however, unless voluntarily disclosed by the broker dealer.

[21] We readily acknowledge that the number of subsidiaries is likely to be a noisy measure of organizational complexity, and that it only measures one dimension of the complexity of BHCs. Studying other dimensions (for example, the complexity of the firm's assets or derivatives positions) would be a fascinating topic for future research, but is outside the scope of this paper.

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Table 3

Determinants of Bank Holding Company Complexity

	Dependent Variable: Log Number of Subsidiaries					
Independent Variables	1	2	3	4	5	6
Total assets (trillions of U.S. dollars)					0.333	0.33
					[0.26]	[0.26]
Log total assets	0.889***	0.861***	0.851***	0.912***	0.751***	0.741***
	[0.097]	[0.087]	[0.085]	[0.075]	[0.13]	[0.12]
Industry concentration index (three-digit NAICS)	-0.895				-0.18	-0.158
	[0.74]				[0.81]	[0.79]
Geographic concentration index (region)		-1.23			-0.786	
		[0.97]			[1.18]	
Geographic concentration index (country)			-1.232			-0.969
			[0.86]			[1.05]
Percent of domestic commerical bank assets				-0.752	-0.333	-0.194
				[0.66]	[0.86]	[0.87]
Constant	-11.03***	-10.18***	-9.999***	-11.54***	-8.193***	-7.995***
	[2.26]	[2.28]	[2.14]	[1.72]	[2.68]	[2.60]
Observations	50	50	50	50	50	50
Adjusted R^2	0.77	0.78	0.78	0.77	0.77	0.77

Source: Authors' calculations.

Notes: The table reports estimates from linear regression models of the correlates of bank holding company (BHC) complexity, measured by the log of the number of total subsidiaries. Data are for the top fifty BHCs and are as of February 20, 2012. Linear regression, heteroskedasticity-consistent standard errors are presented. The dependent variable is the natural logarithm of the number of subsidiaries. Robust standard errors are in brackets.

***p<0.01
**p<0.05
*p<0.1

Indexes measuring industry and geographic concentration are constructed similarly to a Herfindahl-Hirschman Index. To create the industry concentration index, we identify the subset of subsidiaries for which total assets are reported; we then compute the share of these assets related to each industry i (measured at the three-digit NAICS level), and calculate the index as the sum of thesquared industry shares $\sum_i s_i^2$. A high index value (close to 1) means that the subsidiaries are highly concentrated in one industry, whereas a low value (close to 0) means that the subsidiary assets are spread across many different industries. The same approach is used to construct the two geographic concentration indexes, one based on world region weights and another on country weights.

The coefficients on all three concentration indexes are consistently negative in each column of results. However, they are not statistically significant at the 10 percent level. Similarly, a smaller share of BHC assets located in "traditional" banking subsidiaries is also associated with greater complexity, although again the coefficient is not statistically significant.[22]

Together, these results may be interpreted as some evidence, albeit weak, that organizational complexity is positively related to the diversity of the BHC's activities, across both industrial sectors and geographic locations. In future research, it would be interesting to analyze this question in more depth, making use of a larger sample of firms as well as time-series variation in organizational structure, rather than just a single cross section.

Outside the scope of this paper are important questions regarding the consequences of BHC organizational complexity. For example: To what extent is organizational structure largely irrelevant, conditional on the asset and liability structure of the consolidated entity? Would simplifying the organizational

[22] We have also estimated a range of other specifications; for example, using the total number of subsidiaries, rather than its log value, as the dependent variable. Our findings are generally similar. One disadvantage of our benchmark approach is that asset data are not available for all subsidiaries. We also experimented with constructing concentration indexes based on the number of subsidiaries (rather than using asset shares). However, this approach generally does not seem reliable; for example, it dramatically underweights the activity share of commercial banking, because the average commercial banking subsidiary is much larger in size than average nonbank subsidiaries.

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structure of BHCs make these firms easier to reorganize in bankruptcy? Are any costs and benefits associated with BHC complexity internalized (so that the BHC is "optimally" complex), or do they generate externalities for counterparties or others?

One interesting paper related to these questions is Goetz, Laeven, and Levine (2011), which studies frictions associated with BHC geographic scope, one dimension of complexity. Goetz et al. find that greater geographic reach has a negative effect on BHC valuations. The authors' preferred interpretation is that geographic diffusion makes the firm more difficult to monitor, thus weakening corporate governance. Another relevant contribution is Morgan (2002), which argues that banks are more opaque than other types of firms. In future research, it would be interesting to use the data described above to understand whether opacity and organizational complexity are related.

5. Conclusions

The size, scope, and complexity of large U.S. bank holding companies have grown significantly in recent decades, shaped by consolidation, legislative changes, and growth in the overall size of the financial system. In this paper, we have described the typical structure of large BHCs, as well as many of the main types of regulatory data they file. As we have illustrated by way of some simple summary statistics, these data can be used to provide a rich picture of the financial condition, composition, and organizational structure of BHCs and represent a valuable resource for researchers and others interested in these important firms.

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Appendix A: Regulatory Reports[a]

This appendix provides information, including a brief description, unit of observation, filing frequency, rules of consolidation (U.S. GAAP or statutory rules), and public availability, for the bank holding company (BHC) reports listed below. Links to the forms are available at http://www.newyorkfed.org/banking/reportingforms/index.html.

Financial Data on BHCs and Their Subsidiaries

FR Y-9C, *Consolidated Financial Statements of Bank Holding Companies*

FR Y-9LP, *Parent Company Only Financial Statements for Large Bank Holding Companies*

FR Y-9SP, *Parent Company Only Financial Statements for Small Bank Holding Companies*

FFIEC 031, *Consolidated Reports of Condition and Income for a Bank with Domestic and Foreign Offices*

FFIEC 041, *Consolidated Reports of Condition and Income for a Bank with Domestic Offices Only*

FR Y-11/FR Y-11S, *Financial Statements of U.S. Nonbank Subsidiaries of U.S. Bank Holding Companies*

FR 2314/S, *Financial Statements of Foreign Subsidiaries of U.S. Banking Organizations*

FFIEC 030/030S, *Foreign Branch Report of Condition/ Abbreviated Foreign Branch Report of Condition*

Organizational Structure and Attributes

FR Y-6, *Annual Report of Bank Holding Companies*

FR Y-10, *Report of Changes in Organizational Structure*

Foreign Exposures of U.S. BHCs and Their Subsidiaries

FFIEC 009/9a, *Country Exposure Report/Country Exposure Information Report*

Treasury International Capital (TIC) Data

U.S. Entities Controlled by Foreign Banking Organizations outside a U.S. BHC Structure

FR Y-7Q, *The Capital and Asset Report for Foreign Banking Organizations*

FR Y-7N/S, *Financial Statements of U.S. Nonbank Subsidiaries Held by Foreign Banking Organizations*

FFIEC 002, *Report of Assets and Liabilities of U.S. Branches and Agencies of Foreign Banks*

FFIEC 002S, *Report of Assets and Liabilities of Non-U.S. Branches Managed or Controlled by U.S. Branch or Agency of Foreign Bank (based on U.S. GAAP)*

Miscellaneous

FFIEC 101, *Risk-Based Capital Reporting for Institutions Subject to the Advanced Capital Adequacy Framework*

FR 2436, *Semiannual Report of Derivatives Activity*

[a]This appendix provides a high-level overview of each reporting form. For more granular information on the description, unit of observation, frequency, rules of consolidation, and public availability of each form, refer to the form instructions. To access publicly available forms, visit the following sites: NIC (http://www.ffiec.gov/nicpubweb/nicweb/nichome.aspx), FFIEC (https://cdr.ffiec.gov/public/Default.aspx), and FOIA (http://www.federalreserve.gov/generalinfo/foia/request.cfm).

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Appendix A: Regulatory Reports[a] (Continued)

U.S. Bank Holding Companies and Their Subsidiaries

Panel A

Name of Report	Description	Unit of Observation	Frequency	Consolidation Rule	Data Availability
Financial Data on BHCs and Their Subsidiaries					
FR Y-9C	Balance sheet, income, and other financial data on a consolidated basis for domestic BHCs, incorporating both domestic and foreign subsidiaries. Reporting threshold for filing: $500 million in assets ($150 million pre-2006).	Consolidated top-tier domestic BHCs	Quarterly	Consolidated (GAAP basis)	Public
FR Y-9LP, FR Y-9SP	Balance sheet, income, and other financial data information for large domestic BHCs (those with less than $500 million in assets) on parent-only basis. FR Y-9SP collects balance sheet and income statement information for small domestic BHCs (more than $500 million in assets) on parent-only basis.	FR Y-9LP: Parent company of large BHCs FR Y-9SP: Parent company of small BHCs	FR Y-9LP: Quarterly FR Y-9SP: Semiannually	Unconsolidated	Public
FFIEC 031, FFIEC 041	Commonly known as the "Call Reports." FFIEC 031 collects balance sheet, income, and other financial data on consolidated basis for commercial banks with domestic and foreign offices. FFIEC 041 includes the same data but is filed by banks with domestic offices only.	FFIEC 031: Commercial banks with domestic/foreign offices FFIEC 041: Commercial banks with domestic offices only	Quarterly	Consolidated at bank level (GAAP basis)	Public
FR Y-11, FR Y-11S	Balance sheet, income, and other financial data for certain large U.S. nonbank subsidiaries of domestic BHCs (for example, if subsidiary assets exceed $1 billion). FR Y-11S collects four financial data items for certain smaller subsidiaries and is required only if parent files a Y-9C.	Large U.S. nonbank subsidiaries of domestic BHCs	FR Y-11: Quarterly FR Y-11S: Annual	Unconsolidated, by legal entity	Public
FR 2314, FR2314S	Balance sheet, income, and other financial data for direct or indirect foreign subsidiaries of U.S. BHCs or other U.S. banking organizations. FR 2314S collects four financial data items for smaller, less complex subsidiaries.	Foreign subsidiaries of U.S. banking organizations	Quarterly or annually (based on reporting thresholds)	Unconsolidated, by legal entity	Public
FFIEC 030, FFIEC 030S	Data on the structure and geographic distribution of foreign branch assets, liabilities, derivatives, and OBS items. 030S collects five financial data items for smaller and less complex branches (those with between $50 million and $250 million in total assets).	Foreign branches of insured U.S.-chartered commercial banks	FFIEC 030: Quarterly or annually (based on certain thresholds) FFIEC 030S: Annually	Reported at branch level with option to aggregate branches within same country	Public aggregate data, but private microdata
Organizational Structure and Attributes					
FR Y-6	Includes organizational chart, verification of domestic branches, and information on principal shareholders, directors, and executive officers.	Top-tier BHCs	Annually	Set of controlled entities determined based on regulatory definition of control, not GAAP definition	Public, unless BHC requests confidential treatment
FR Y-10	Data on changes in organizational structure, including establishment, opening, closing, relocation, acquisition, merger, reorganization, transfer, sale, liquidation, and other changes of interests.	Variety of financial institutions, such as BHCs, state member banks, Edge and agreement corporations, and FBOs	As needed		Public

Key: BHC = bank holding company; FBO = foreign banking organization; OBS = off-balance-sheet; FHC = financial holding company; OTC = over-the-counter

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U.S. Bank Holding Companies and Their Subsidiaries (*Continued*)

Panel B

Name of Report	Description	Unit of Observation	Frequency	Consolidation Rule	Data Availability
Foreign Exposures of U.S. BHCs and Their Subsidiaries					
FFIEC 009, FFIEC 009a	Data on distribution by country of claims on foreigners held by U.S. commercial banks and BHCs. FFIEC 009a is a supplement that provides information on the institution's exposures in certain countries.	FFIEC 009: U.S. commercial banks, BHCs holding more than $30 million in claims on residents of foreign countries FFIEC 009a: Subset of 009 filers based on exposure thresholds	Quarterly	Consolidated (GAAP basis)	Published aggregate data, but private microdata
Treasury International Capital (TIC) Data	Information on cross-border financial flows and positions between U.S. and foreign entities. The data cover a variety of financial information, such as transactions in long-term securities, claims and liabilities reported by institutions, and financial derivatives transactions.	Any individual, corporation, or organization located in the United States	Depends on type of data	N/A	Published aggregate data, but private microdata
U.S. Entities Controlled by Foreign Banking Organizations Outside a U.S. BHC Structure					
FR Y-7Q	Regulatory capital data for all FBOs organized under foreign law and that engage in banking in the United States through various types of financial institutions, such as branches or agencies and subsidiary banks.	FBOs that engage in banking in the United States	Quarterly or annually (based on FHC status)	Consolidated at FBO level	Public, unless FBO requests confidential treatment
FR Y-7N, FR Y-7NS	FR Y-7N collects balance sheet, income statement, and OBS information for U.S. nonbank subsidiaries held by FBOs other than through a U.S. BHC or bank. FR Y-7NS collects four financial data items for smaller and less complex subsidiaries.	FBOs with nonbank subsidiaries	Quarterly or annually (based on certain thresholds)	Unconsolidated by legal entity	Public
FFIEC 002, FFIEC 002S	Balance sheet and OBS information on U.S. branches and agencies of foreign banks. No income data are reported. FFIEC 002S is a supplement that collects balance sheet information from non-U.S. branches of U.S. branches or agencies of foreign banks.	FFIEC 002: U.S. branches and agencies of foreign banks FFIEC 002S: Non-U.S. branches controlled by U.S. branches and agencies of foreign banks	Quarterly	Each branch files separately unless in same state and district. Each branch is consolidated.	FFIEC 002: Public FFIEC 002S: Private microdata, occasional aggregate data
Miscellaneous					
FFIEC 101	Data on components of capital and risk-weighted assets for banks, savings associations, and BHCs that qualify for and adopt Basel II in determining their risk-based capital requirements.	Banks, savings associations, and BHCs that qualify for and adopt Basel II	Quarterly	Consolidated (GAAP basis)	Private
FR 2436	Data on notional amounts and gross market values of outstanding OTC derivatives. Used to compute comprehensive and internationally consistent information on size and structure of global OTC derivatives market.	Five of the large U.S. dealers of OTC derivatives (reporting is voluntary)	Semiannual	Consolidated (GAAP basis)	Published aggregate country data, but private microdata

Key: BHC = bank holding company; FBO = foreign banking organization; OBS = off-balance-sheet; FHC = financial holding company; OTC = over-the-counter

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Appendix B: Distribution of Subsidiaries by Industry

	Number			Assets (Billions of U.S. Dollars)		
Industry	Domestic	Foreign	Total	Domestic	Foreign	Total
Funds, trusts, and other financial vehicles	3,694	1,911	5,605	281.71	673.99	955.70
Securities, commodity contracts, and other	2,365	1,355	3,720	802.32	1,836.23	2,638.55
Management of companies and enterprises	1,437	1,263	2,700	2,440.23	736.76	3,176.99
Real estate and rental and leasing	2,239	149	2,388	19.26	39.79	59.04
Credit intermediation and related activities	1,564	683	2,247	11,899.93	1,286.89	13,186.82
Health care and social assistance	1,682	0	1,682	4.27		4.27
Insurance carriers and related activities	315	164	479	2.00	234.59	236.59
Professional, scientific, and technical services	228	164	392	33.22	77.63	110.85
Information	68	64	132	1.36	1.79	3.16
Administrative, support, waste, and remediation services	23	60	83	0.48	2.67	3.15
Utilities	51	15	66	1.36	0.37	1.73
Construction	41	2	43	1.56		1.56
Wholesale trade	14	4	18	1.64	0.07	1.71
Transportation and warehousing	11	7	18	0.24		0.24
Other services (except public administration)	14	1	15	1.09		1.09
Active, but unknown	1	4	5			
Mining, quarrying, and oil and gas extraction	5	0	5	0.17		0.17
Educational services	0	1	1			
Arts, entertainment, and recreation	1	0	1			
Accommodation and food services	1	0	1			
Manufacturing	1	0	1			
Retail trade	1	0	1			
Total	13,756	5,847	19,603	15,490.83	4,890.79	20,381.62

Sources: National Information Center; FR Y-10; FR Y-11; FR 2314; FFIEC 031; FFIEC 041.

Notes: Structure data are as of February 20, 2012. Financial data are as of fourth-quarter 2011. The number of subsidiaries for each bank holding company (BHC) is determined based on the Regulation Y definition of control. Asset data include approximately 3,700 of the more than 19,600 subsidiaries belonging to the top fifty BHCs (that is, those meeting thresholds for reporting asset data). The sum of total assets reported significantly exceeds Y-9C total assets in Table 1 of the article because of related-party transactions between subsidiaries. See the online appendix for more details.

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