



CHAPMAN  
UNIVERSITY  
ARGYROS SCHOOL OF  
BUSINESS AND ECONOMICS

# Systemic Risk and the Organization of the Financial System

*Friday, May 12, 2017*

8:30 a.m. to 8:50 a.m.

Light Breakfast

8:50 a.m. to 9 a.m.

Conference Welcome Message - Professor Clas Wihlborg

9 a.m. to 10 a.m.

**Keynote Address - Thomas M. Hoenig, Vice Chairman of FDIC**

10 a.m. to 10:15 a.m.

Coffee Break

10:15 a.m. to 11:25 a.m.

*Session 1: Business Models and the Transmission of Risk*

- Rym Ayadi, HEC Montreal, "Bank Business Models and Risk"
- Luis Brandao-Marques, IMF, "Cross-Border Spillovers from Mutual Fund Activity" (with Marco Espinosa-Vega, IMF and OFR)

11:25 a.m. to 12 p.m.

*Session 2: International Transmission*

- Linda Goldberg, NY Fed, "The Shifting Drivers of Global Liquidity."

12 p.m. to 1 p.m.

**Lunch**

1 p.m. to 2:10 p.m.

*Session 3: Resolution and Liquidity*

- Richard Herring, Wharton School, U. Penn, "Making Bankruptcy Work: Living Wills and the Liquidity Challenge."
- Steve Gjerstad, Chapman University, "Bondholder Reorganization of Systemically Important Financial Institutions"

2:10 p.m. to 3:20 p.m.

*Session 4: Volatility and Central Clearing*

- Marc Weidenmier, Claremont McKenna, "Stock Volatility and the Great Depression," (with Gustavo S. Cortes, U. of Illinois)
- Wolfgang Bessler, University of Giessen, "Centralized Derivatives Markets, Systemic Risk, and Recovery and Resolution of CCPs"

3:20 p.m. to 3:40 p.m.

**Coffee Break**

*chapman.edu/argyros*



CHAPMAN  
UNIVERSITY  
ARGYROS SCHOOL OF  
BUSINESS AND ECONOMICS

# Systemic Risk and the Organization of the Financial System

*Friday, May 12, 2017*

*Continued*

3:40 p.m. to 4:35 p.m.

*Session 5: Panel 1 on "Sources of Systemic Risk"*

- Chair: Ed Kane, Boston College
- James Barth, Auburn University
- Vineer Bhansali, CEO, LongTail Alpha
- Philippe Jorion, PAAMCO and UCI
- Michael Melvin, UC San Diego

4:35 p.m. to 5:30 p.m.

*Session 6: Panel 2 on "More, Less or Different Regulation"*

- Harald Benink, Tilburg University
- Vernon Smith, Chapman University
- Michele Mazzoleni, Research Affiliates

5:25 p.m. to 7 p.m.

**Break**

7 p.m.

**Dinner**



CHAPMAN  
UNIVERSITY  
ARGYROS SCHOOL OF  
BUSINESS AND ECONOMICS

# Systemic Risk and the Organization of the Financial System

*Saturday, May 13, 2017*

9 a.m. to 9:45 a.m.

**Konstantin Sokolov**, Rochester Institute of Technology, "Every Cloud Has a Silver Lining: Fast Trading, Microwave Connectivity and Trading Costs."

9:45 a.m. to 10:30 a.m.

**Kebin Ma**, Warwick Business School, "A Theory of Endogenous Asset Sales, Bank Runs and Contagion."

10:30 a.m. to 10:50 a.m.

**Coffee Break**

10:50 a.m. to 11:35 a.m.

**Alexander Bleck**, University of British Columbia, "Risk-insensitive Regulation."

11:35 a.m. to 12:20 p.m.

**Thomas Gehrig**, University of Vienna, "Did the Basel Process of Capital Regulation Enhance the Resiliency of European banks?"

12:20 p.m.

**Lunch**

*Conference concludes. Please enjoy sunny Southern California!*

## Term Sheet

### **Regulatory Relief and Accountability for Financial Holding Companies Engaged in Nontraditional Banking Activities**

**A Proposal by FDIC Vice Chairman Thomas M. Hoenig**

**Released March 13, 2017**

**Updated May 12, 2017**

- I. **PURPOSE.** To ensure that the public safety net is not expanded beyond the traditional banking activities that it was originally designed to support and to restore open market competition within the financial services industry. Traditional and nontraditional banking activities inside a Financial Holding Company (FHC) organization structure should be legally separated and capitalized<sup>1</sup>, similar to the UK approach championed by John Vickers.
- II. **SCOPE OF APPLICATION.** This term sheet would apply to banking organizations with one or more entities that are either:
  - a. Registered as a broker-dealer, an investment adviser, a securities-based swaps dealer, or a major securities-based swaps participant with the SEC;
  - b. Registered as a futures commission merchant, a commodity pool operator, a swaps dealer, or a major swaps participant with the CFTC;
  - c. An Edge Act or Agreement Corporation;
  - d. A merchant banking entity or a financial subsidiary controlled by one or more insured depository institutions;
  - e. A sponsor or manager of hedge funds, private equity funds, or securitizations the underlying assets of which are not loans (other than SBICs or Community Reinvestment Act vehicles);
  - f. An insurance underwriter (including reinsurance); or
  - g. An entity that provides similar services.
- III. **EXCLUSIONS FROM SCOPE OF APPLICATION.** This term sheet would not apply to banking organizations that do not fall within the Scope of Application as defined above.

---

<sup>1</sup> There are a few banking organizations that engage in these activities, but which do not currently have a holding company. This term sheet should be read to apply to these organizations by imposing a requirement to establish a holding company structure that would contain separate IHCs.

**IV. EXCLUSION FROM SCOPE FOR TRADITIONAL BANKS.** For all other banking organizations please see the term sheet for Traditional Bank Regulatory Relief originally proposed in April 2015<sup>2</sup>. Generally a traditional bank would be eligible for regulatory relief if:

- a. It holds no trading assets or liabilities (other than permissible derivatives);
- b. It holds no derivative positions other than interest rate and foreign exchange derivatives;
- c. The total notional value of all its derivatives exposures - including cleared and non-cleared derivatives - is less than \$8 billion; and
- d. It maintains a ratio of Generally Accepted Accounting Principles equity-to-assets of at least 10% (there is a 2 year transition period to meet this ratio).

Traditional Bank Regulatory Relief would include:

- a. Exemption from all Basel capital standards and associated capital amount calculations and risk-weighted asset calculations;
- b. Exemption from several entire schedules on the Call Report, including schedules related to trading assets and liabilities, regulatory capital requirement calculations, and derivatives;
- c. Elimination of requirements to refer "possible fair lending violations to Justice" if judged to be de minimis or inadvertent;
- d. Establishment of criteria that would exempt traditional banks from appraisal requirements;
- e. Exemption of traditional banks, if applicable, from stress testing requirements under section 165(i)(2) of the Dodd-Frank Act; and
- f. Require only an 18 month examination cycle as opposed to a 12 month cycle for traditional banks.

**V. SEPARATION OF TRADITIONAL AND NONTRADITIONAL BANKING ACTIVITIES.** Traditional banking activities (TBA) would be allowed access to the current federal safety net but nontraditional banking activities (NTBA) would not have direct access and only limited, indirect access.

- a. TBA would be limited to the "business of banking" (as traditionally conceived) but a discussion of TBAs would be necessary to ensure that appropriate depository, credit intermediation and payment systems services are conducted. In no case should TBA include activities associated with insurance underwriting, securities or swaps; and as such, should not include underwriting, market making, broker-dealer, futures commissions merchant (FCM), investment advisory, asset management, investment company, hedge fund/private equity investment, or swaps dealing activities;

---

<sup>2</sup> <https://www.fdic.gov/about/learn/board/hoenig/relief.html>

- b. Both TBA and NTBA affiliates would be structured underneath one or more separately capitalized intermediate holding companies of an FHC;
- c. TBA would be conducted in the bank intermediate holding company (BIHC) and NTBA would be conducted in the nontraditional intermediate holding company (NIHC);
- d. The BIHC would be the holding company for an insured depository institution and its subsidiaries;
- e. The NIHC would be the holding company for all entities and affiliates conducting NTBA, including broker dealer, FCM, swap activities and all other non-traditional banking activities. Edge Act and Agreement Corporations and their subsidiaries engaged in any form of NTBA would be included in an NIHC.

**VI. NONTRADITIONAL INTERMEDIATE HOLDING COMPANY.** Each NIHC would be a separate affiliate, which is separately managed and capitalized.

- a. Each NIHC structure should be established in a manner deemed by the FHC board of directors to be a “resolvable entity”; that is, the entity could be resolved through the bankruptcy process;
- b. Each NIHC would be capitalized in the form of tracking shares issued by the FHC, which perfectly track to gains/losses and other economics of the NIHC;
- c. Each NIHC would be subject to independent liquidity requirements designed to (1) limit or eliminate access to the public safety net and (2) to ensure that in the event the NIHC were to be separated from the FHC it could continue to function as an operational entity;
- d. No more than [20%] of the debt of NIHC’s liabilities and debt would be held in aggregate by the FHC and any other affiliates;
- e. The NIHC would be prohibited from engaging in speculative proprietary trading that would be controlled through trader mandates rather than the complicated measures of the Volcker Rule;
- f. Each NIHC would be subject to a modified 23A/23B arrangement where the quantitative limits on transactions with affiliates is applied to the capital stock and surplus of the member banks as well as the capital stock and surplus of the NIHC affiliate.

**VII. BANK INTERMEDIATE HOLDING COMPANY.** Each BIHC would be a separate affiliate, which is separately managed and capitalized.

- a. The risk mitigating hedging requirements of the Volcker Rule, along with its prohibitions related to hedge fund/private equity investments would continue in force;
- b. All other activities covered by the Volcker Rule would be considered NTBA, such as market making and underwriting.



**VIII. SAFEKEEPING INTERMEDIATE HOLDING COMPANY.** An FHC would be permitted to establish a special Safekeeping Intermediate Holding Company (SIHC) to conduct Safekeeping Banking Activities (SKBAs). SKBAs would be limited to the safekeeping of assets on behalf of customers under a safekeeping arrangement. Such activities would include custodial services, trust services, and central clearing on behalf of clients. If elected, each SIHC would be a separate affiliate, which is separately managed and capitalized.

- a. Each SIHC structure should be established in a manner deemed by the FHC board of directors to be a “resolvable entity”; that is, the entity could be resolved through the bankruptcy process;
- b. An SIHC would be allowed to contain a Safekeeping Bank, which would be defined as an insured depository institution, the assets of which would be limited to cash, deposits at the Federal Reserve, and short- term direct obligations of the United States government<sup>3</sup>;
- c. An SIHC would be the holding company for all entities and affiliates conducting SKBA, including any Safekeeping Bank, broker dealer, or FCM. Edge Act and Agreement Corporations and their subsidiaries engaged solely in SKBA would be included in a SIHC.
- d. An SIHC would have access to the public safety net; as such, the safety net constraining requirements associated with the BIHC (i.e., independent liquidity requirements, limitations on interaffiliate debt holdings, tracking stock requirements, and modified 23A/23B arrangements) would not apply to the SIHC.

**IX. GOVERNANCE.** Internal oversight would need to be reformed to ensure appropriate separation of management and to ensure an adequate internal control structure.

- a. Management would not be allowed to serve on the Board of Directors;
- b. An Independent “General Internal Auditor” (GIA) position would be required for each FHC;
  - i. The incumbent in this position would report directly and exclusively to the Board of Directors.
  - ii. The GIA would be in charge of the independent audit function of the FHC and all affiliates and would oversee the external audit of the firm.
  - iii. To ensure complete independence, the GIA should be prohibited from serving in any capacity at the FHC, or its subsidiaries or affiliates, for a period of 5 years following the end of his/her employment.
- c. External auditors would be prohibited from providing any service other than traditional auditing services (e.g. no consulting or other “value-added” services) and must rotate at least every 5 years.

---

<sup>3</sup> The asset holding limitation applies to all economic exposures both on and off balance sheet, including assets borrowed or lent.

**X. CAPITAL REFORMS.** The leverage ratio would be the primary measure of capital adequacy for regulatory purposes.

- a. A 10% leverage ratio would be required at each BIHC on a consolidated basis and at each IDI subsidiary of a BIHC as well as any standalone IDIs.
- b. An 8% leverage ratio would be required at each NIHC on a consolidated basis.
- c. A 5% leverage ratio would be required at each SIHC on a consolidated basis and at each Safekeeping Bank.
- d. A 10% leverage ratio would be required at the FHC on a standalone basis.
- e. The leverage ratio requirements should be designed to ensure that all risks are generally captured: credit, operational, market, concentration, liquidity, interest rate, off-balance sheet and other risks;
  - i. As such, the leverage ratio should be appropriately expansive to incorporate the credit, counterparty and payment/liquidity risks associated with derivatives and other so-called level 2 and level 3 assets.
  - ii. One form could be the enhanced supplemental leverage ratio and another simpler and more direct form would be to recognize only payment netting for derivatives (as contemplated by IFRS).

**XI. REGULATORY RELIEF.** The structure described above and the leverage capitalization of the various entities should eliminate the need for many of the complex regulations under the Dodd Frank Act such as:

- a. The comprehensive capital analysis and review (CCAR) exercise;
- b. Dodd Frank Act Stress Testing (DFAST);
- c. Regulatory risk-based capital (as a primary measure of capital adequacy);
- d. Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR);
- e. Title II and living wills; and
- f. Other enhanced requirements under section 165 of the DFA.

**XII. PROMPT CORRECTIVE ACTION.** PCA will need to be revised to:

- a. Eliminate risk-based capital and to incorporate recognition of the higher Leverage Ratio requirements; and
- b. Enhanced to include measures of deterioration in asset quality (such as the "Texas Ratio").

**XIII. SUPERVISORY EXPECTATIONS.** Determinations of safety and soundness will include:



- a. Internally calculated risk-based capital calculations and liquidity measurements should be a non-publically disclosed component of the supervisory assessment of safety and soundness;
- b. Internal stress testing practices would remain as a management and supervisory tool; however, stress testing scenarios and assumptions should be designed by the banking organization (subject to board and supervisor approval) and should be commensurate with its own business model and risks rather than being developed by the agencies as a one-size fits all approach;
- c. Supervisors will assess the adequacy and soundness of planned capital distributions; and
- d. FHCs should be able to demonstrate that they have internally allocated their equity to absorb losses that could emanate from any risks.

**XIV. REGULATORY OVERSIGHT.** There would be no change to the current structure of the prudential banking agencies or market regulatory agencies.

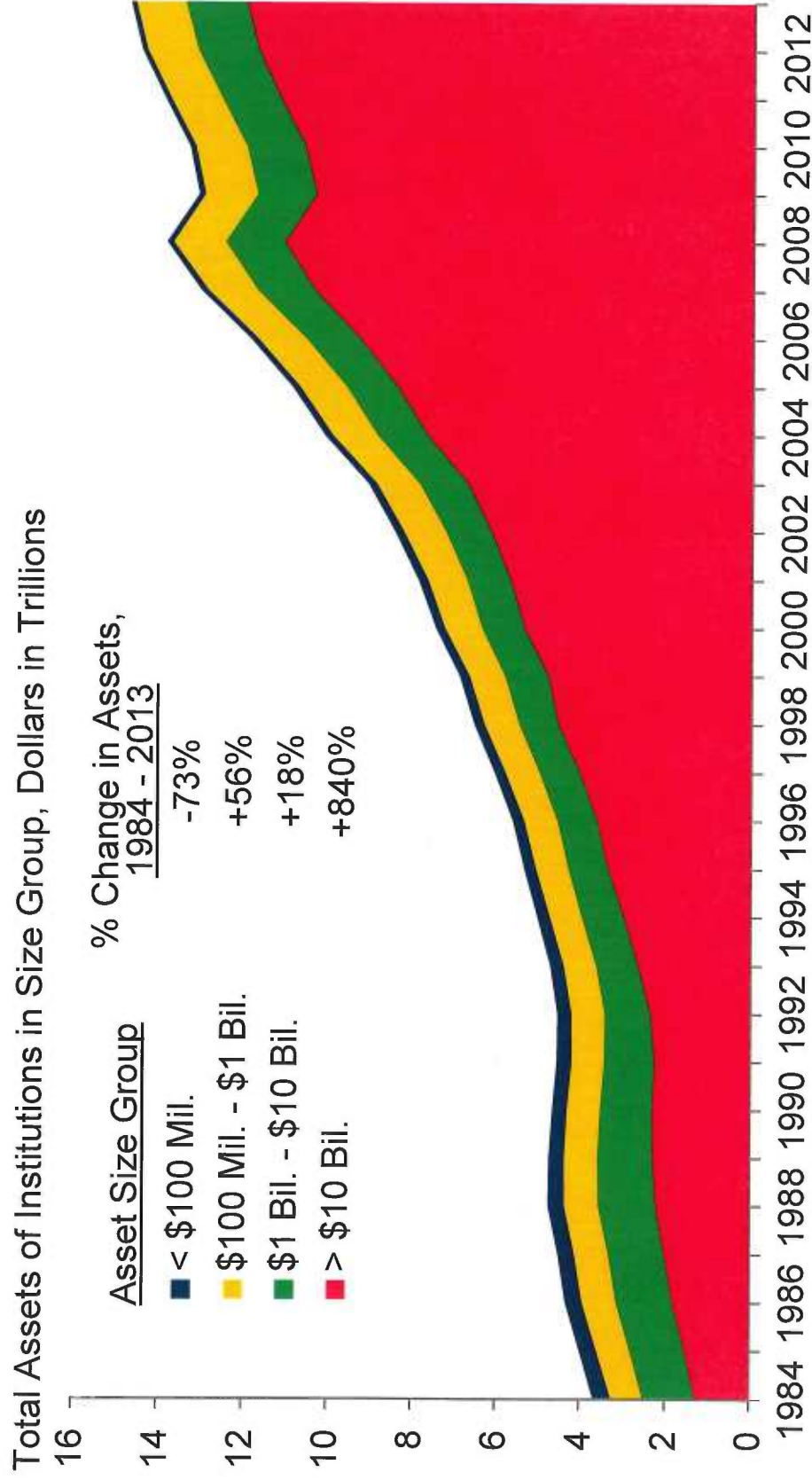
- a. The primary regulator of the FHC, BIHC, NIHC, and SIHC would be the Federal Reserve;
- b. Insured depository institutions subsidiaries of the BIHC or SIHC would continue to be regulated based on charter affiliation;
- c. Entities within the NIHC and entities other than the Safekeeping Bank within the SIHC would be regulated by the current applicable regulator.

**XV. TRANSITION PERIODS.** An appropriate period of time would be provided to allow for a gradual transition to ensure continued delivery of financial services to the economy.

- a. Structural transitions should occur over a period not to exceed [3] years;
- b. Capital requirements should be transitioned in over a period not to exceed [5] years.

# Consolidation of the Credit Channel

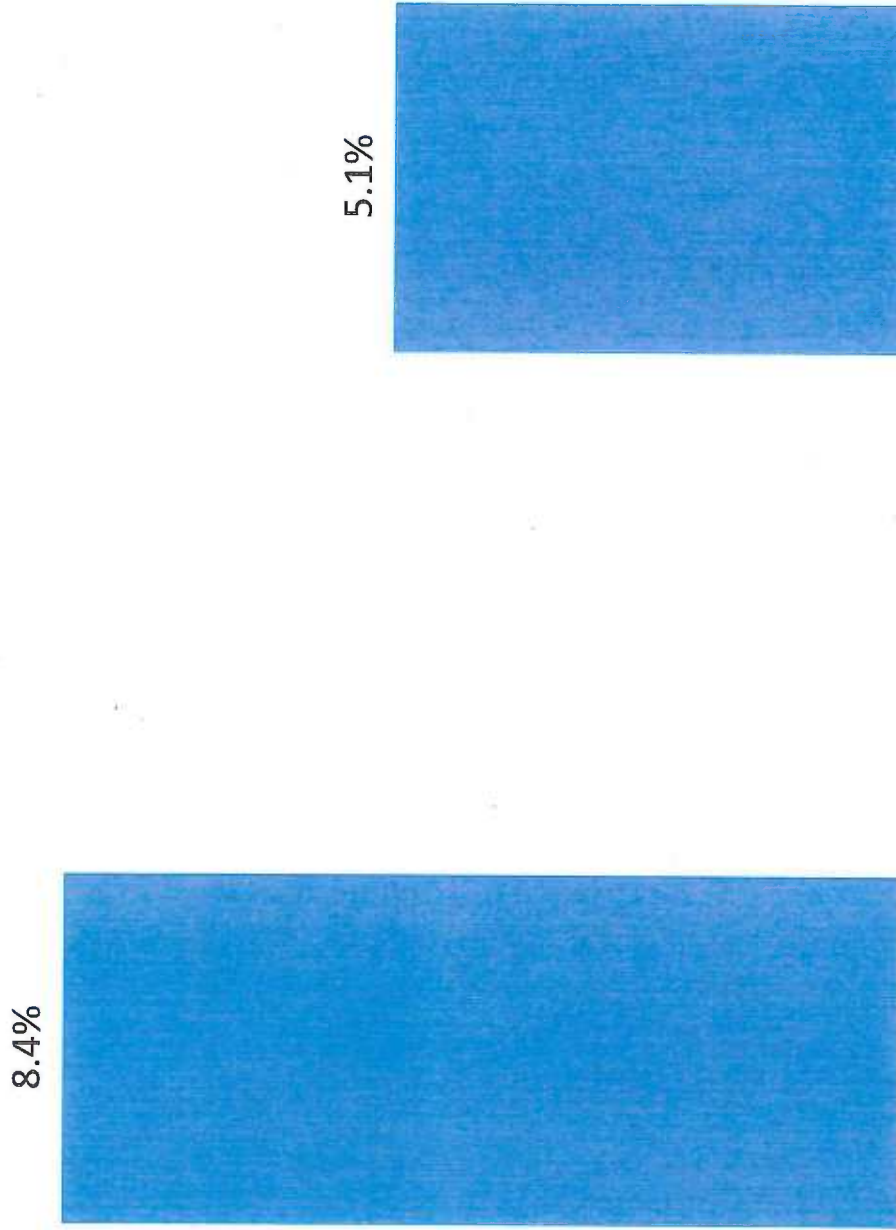
Change in Assets by Bank Size Groups  
(1984-2013)



Source: FDIC. Reflects the aggregation of total assets of FDIC-insured institutions by bank holding company and also includes charter-level assets for banks with no holding company.



## Broker Dealer Equity Capital Ratio



Not affiliated with a bank

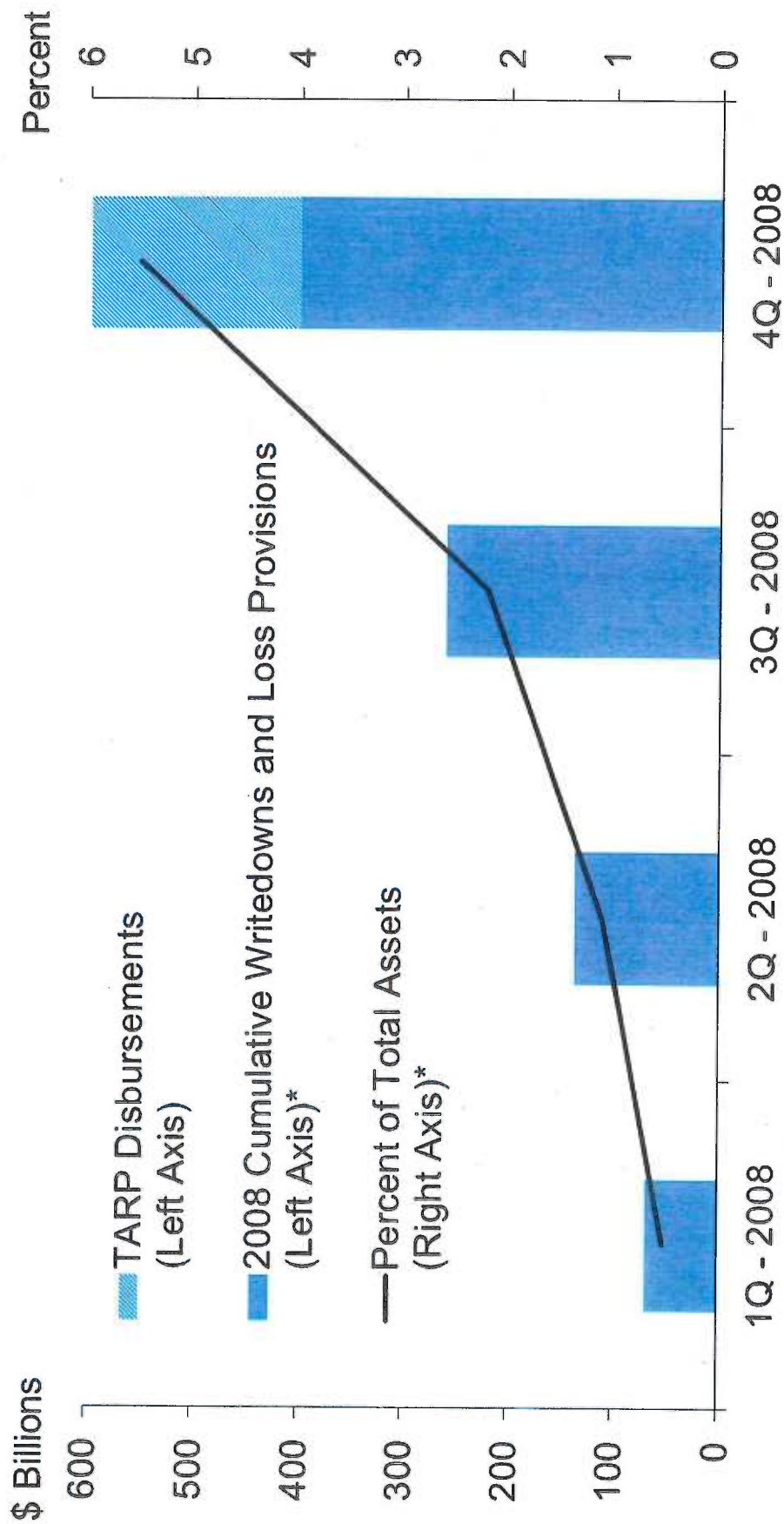
Affiliated with a bank

As of year-end 2015. Equity capital ratio is total equity capital divided by total assets.

Source: SNL. Excludes clearing houses and exchanges.

"Not affiliated with a bank" means the broker dealer and the broker dealer's parent and ultimate parent are not a BHC or IDI.

# Cumulative Writedowns and TARP Disbursements for U.S. Banks in 2008



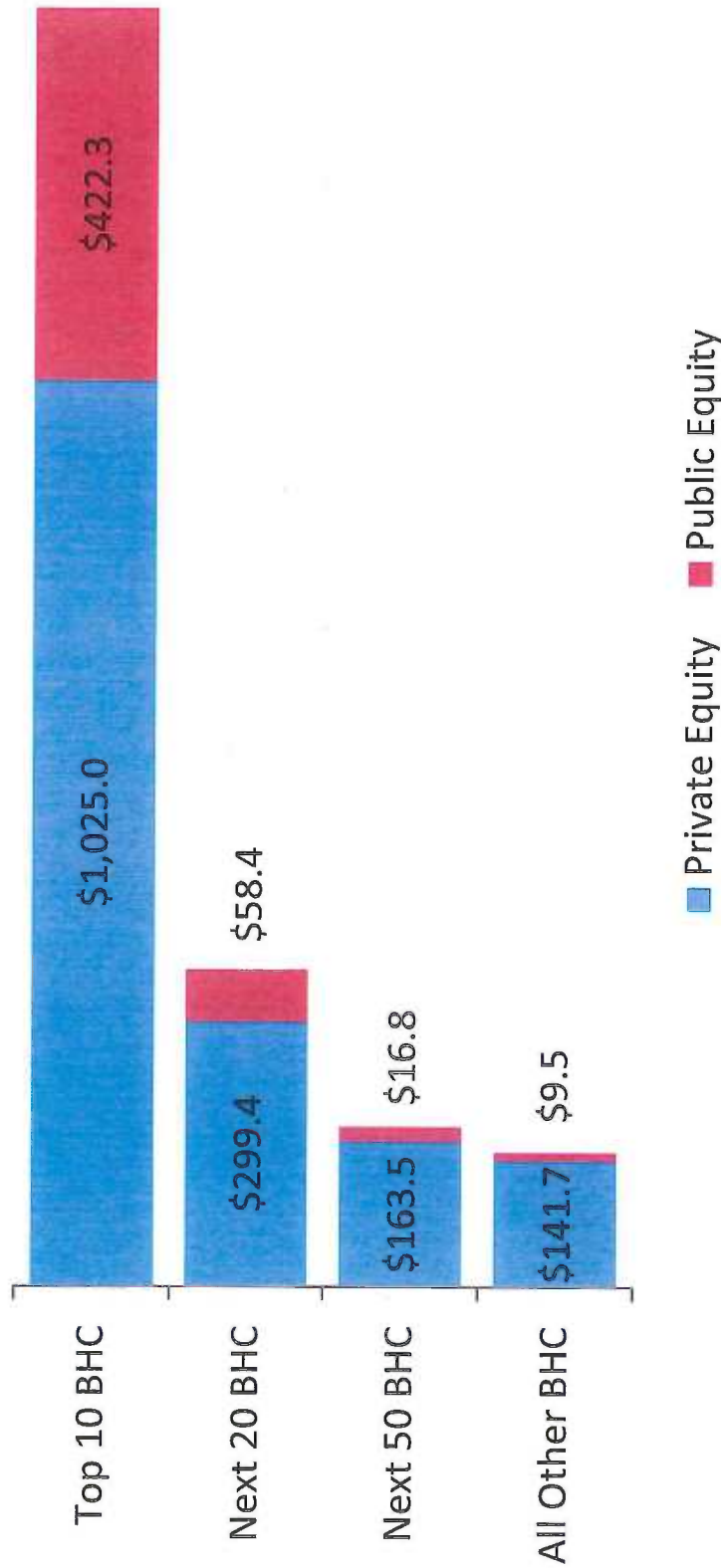
Sources: Bloomberg / U.S. Treasury.

\*Data for 26 large U.S. bank holding companies from the Bloomberg WDCI command.



# Tangible Equity: Private vs. Public

## Amount in Red to Reach a 10% Leverage Ratio



Source: FR Y-9C. Includes all BHC, FHC and Intermediate HC reporting a Y-9C at 12/31/2016.

Note: Amounts in \$ billions. "Top 10 BHC" represents the largest 10 banking organizations by total consolidated assets. "Private Equity" represents equity capital as reported on the consolidated balance sheet. "Public equity" represents the amount of additional equity capital needed to achieve a 10% ratio of Tangible Equity / [Tangible Asset + Netted Derivatives]. Tangible Equity and Tangible Assets exclude Goodwill and other intangible assets. "Netted Derivatives" represents the amount of derivatives with a positive FV that are excluded from the consolidated balance sheet as a result of netting permitted under GAAP, which approximates the positive fair value that would be reported under IFRS. It is calculated as the gross amount of all derivatives (both trading and non-trading) reported on Schedule HC-L with a positive fair value less the amount of trading derivatives with a positive fair value reported in schedule HC-D. BHC data excludes all SLHCs as well as Y-9C filers that are not the top filing holding company within a holding company structure and all small BHCs that are FR Y-9SP filers.



# Global Capital Index

Capitalization Ratios for Global Systemically Important Banks (GSIBs)  
Data as of June 30, 2016

	Basel Risk-Based Capital				Self-Reported Basel III Leverage Ratio <sup>4</sup> (Percent)	Tangible Capital				Components of Tangible Capital			Price-to-Book	
	Tier 1 Capital <sup>2</sup> (\$Billions)	Risk-Weighted Assets (\$Billions)	Tier 1 Capital Ratio <sup>3</sup> (Percent)	GAAP		IFRS ESTIMATE <sup>5</sup>		Total Equity <sup>7</sup> (\$Billions)	Goodwill and Other Intangibles (\$Billions)	Deferred Tax Assets (\$Billions)	Price-to-Book Ratio <sup>a</sup> (Percent)	Price-to-Adjusted Tangible Book Ratio <sup>a</sup> (Percent)		
				Total Assets (\$Billions)		Leverage Ratio <sup>6</sup> (Percent)	Total Assets (\$Billions)						Leverage Ratio <sup>6</sup> (Percent)	
Institution <sup>1</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
U.S. G-SIBs														
Bank of America	187	1,562	11.99	6.95	2,190	8.22	3,036	5.86	267	75	19	0.56	0.92	
Bank of New York Mellon	21	179	11.54	5.00	372	4.93	389	4.71	39	21	0	1.15	2.81	
Citigroup	181	1,204	15.05	7.48	1,819	8.97	2,559	6.30	232	29	46	0.58	0.90	
Goldman Sachs	81	579	14.00	6.10	897	8.82	1,902	4.14	87	4	4	0.80	0.90	
JPMorgan Chase	204	1,498	13.65	6.60	2,466	8.19	3,651	5.49	252	53	2	0.99	1.31	
Morgan Stanley	67	356	18.76	6.10	829	7.74	1,405	4.53	77	9	5	0.72	0.90	
State Street	16	104	14.97	6.10	255	5.85	268	5.57	22	7	0	1.11	1.86	
Wells Fargo	169	1,355	12.50	7.70	1,889	8.54	2,011	8.01	202	44	0	1.34	1.78	
U.S. G-SIBs (\$ Total, % Weighted Average)														
	926	6,837	13.55	...	10,717	8.24	15,221	5.75	1,177	244	76	0.90	1.12	
Foreign G-SIBs														
Agricultural Bank of China Limited (China)	188	1,749	10.75	6.26	2,810	8.24	2,810	6.20	189	4	12	0.67	0.74	
Banco Santander (Spain)	80	650	12.32	4.90	1,490	3.50	1,490	3.50	111	32	29	0.56	1.49	
Bank of China Limited (China)	199	1,659	11.98	6.94	2,647	7.86	2,647	7.86	214	2	4	0.62	0.65	
Barclays (UK)	71	488	14.59	4.20	1,800	4.29	1,800	4.29	92	10	6	0.41	0.51	
BNP Paribas (France)	88	703	12.45	4.00	2,411	3.75	2,411	3.75	113	15	8	0.55	0.72	
BPCE Group (France)	60	430	14.02	4.80	1,354	4.58	1,354	4.58	73	6	5	...	...	
China Construction Bank (China)	224	1,691	13.24	7.05	2,972	7.37	2,972	7.37	227	3	5	0.74	0.77	
Crédit Agricole Group (France)	91	575	15.76	5.60	1,965	4.54	1,965	4.54	112	18	6	...	...	
Deutsche Bank (Germany)	63	447	14.00	3.40	2,001	2.68	2,001	2.68	74	11	10	0.27	0.39	
HSBC (UK)	152	1,082	14.07	5.10	2,608	6.50	2,608	6.50	198	24	7	0.71	0.87	
Industrial and Commercial Bank of China (China) <sup>9</sup>	278	2,120	13.11	7.30	3,538	7.75	3,538	7.75	281	5	3	0.74	0.76	
ING Bank (Netherlands)	54	354	15.13	4.40	983	5.30	983	5.30	55	2	1	0.72	0.77	
Nordea bank (Sweden)	30	159	18.86	4.50	745	3.94	745	3.94	33	4	0	1.01	1.15	
Royal Bank of Scotland (UK)	58	327	17.71	5.20	1,201	5.04	1,201	5.04	72	9	3	0.43	0.52	
Société Générale (France) <sup>10</sup>	54	394	13.63	3.90	1,621	3.52	1,621	3.52	69	5	7	0.45	0.58	
Standard Chartered (UK)	42	293	14.35	5.50	661	6.49	661	6.49	49	5	2	0.55	0.64	
UBS (Switzerland)	44	222	19.82	4.20	1,015	3.61	1,015	3.61	55	7	12	0.88	1.36	
UniCredit (Italy)	50	443	11.30	4.33	989	3.67	989	3.67	59	6	17	0.25	0.45	
Foreign IFRS (\$ Total, % Weighted Average)														
	1,825	13,789	13.23	...	32,812	5.45	32,812	5.45	2,076	167	139	0.59	0.73	
Other Foreign G-SIBs														
Credit Suisse (Switzerland; CHF, U.S. GAAP)	51	282	18.10	4.40	842	4.21	842	4.21	46	5	6	0.48	0.64	
Mitsubishi UFJ FG (Japan; JPY, Local GAAP)	142	1,039	13.70	4.79	2,911	5.31	2,911	5.31	167	12	1	0.41	0.45	
Mizuho FG (Japan; JPY, Local GAAP)	73	607	12.08	3.75	1,930	4.04	1,930	4.04	86	8	0	0.51	0.58	
Sumitomo Mitsui FG (Japan; JPY, Local GAAP)	87	640	13.64	4.71	1,771	5.11	1,771	5.11	101	9	1	0.46	0.52	
All Foreign G-SIBs (\$ Total, % Weighted Average)														
	2,179	16,356	13.32	...	40,267	5.33	40,267	5.33	2,476	201	148	0.55	0.64	
U.S. BHC by Size Group <sup>11</sup>														
U.S. G-SIBs	926	6,837	13.55	...	10,717	8.24	15,221	5.75	1,177	244	76	0.90	1.12	
Ten Largest Non-G-SIBs	210	1,787	11.75	...	2,235	9.02	2,251	8.95	275	75	6	1.02	1.60	
Ten Largest Less Than \$50 Billion <sup>12</sup>	30	255	11.64	...	355	8.05	355	8.05	38	8	2	1.22	1.51	
Ten Largest Less Than \$1 Billion <sup>12</sup>	1	7	16.13	...	10	10.65	10	10.65	1	0	0	...	...	

Source: Federal Reserve Y-9C Reports, Securities and Exchange Commission Form 10-K, SNL Financial (Data update as of September 12, 2016).

Source: Federal Reserve Y-9C Reports, Securities and Exchange Commission Form 10-K, SNL Financial (Data update as of September 12, 2016).

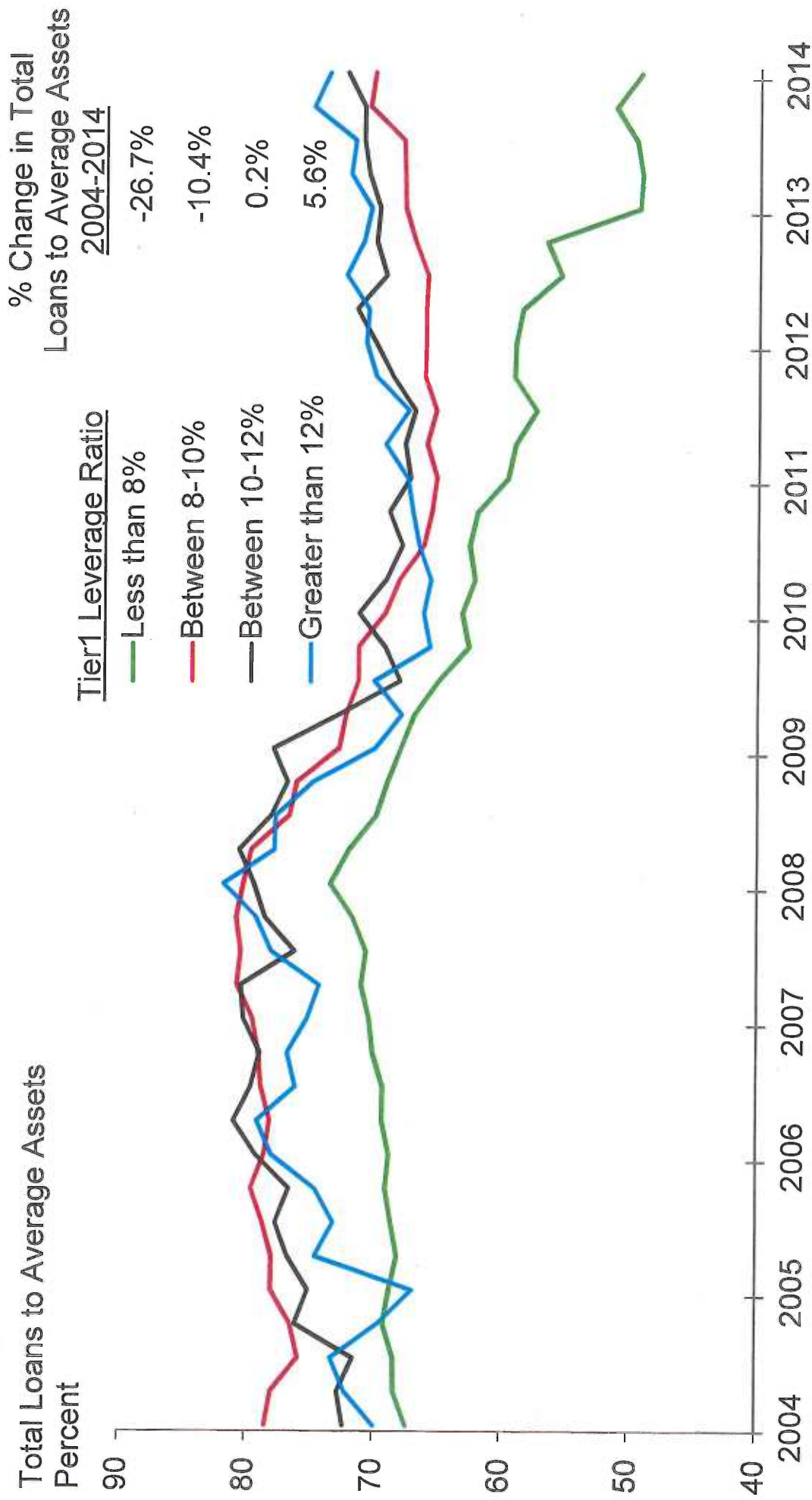
Notes:

- <sup>1</sup> Global systemically important banks (G-SIBs) are defined by the Financial Stability Board and include eight U.S. bank holding companies (BHC). Foreign G-SIBs report in local currencies, which are converted into U.S. dollars by SNL Financial.
- <sup>2</sup> Tier 1 Capital is equity capital less unrealized gains on available-for-sale debt securities, unrealized losses on available-for-sale equity securities, disallowed preferred stock, disallowed goodwill, disallowed servicing assets, disallowed deferred tax assets, and other tier 1 capital components.
- <sup>3</sup> Tier 1 Capital ratios are self-reported by institutions in published financial statements and presentations. They have not been reviewed for accuracy.
- <sup>4</sup> Basel III leverage ratios are calculated and reported under Basel III capital standards for all G-SIBs.
- <sup>5</sup> Differences in accounting requirements for netting and offsetting of assets and liabilities result in significant differences in banks' total assets. The ability to offset under International Financial Reporting Standards (IFRS) is limited in comparison with Generally Accepted Accounting Principles (GAAP), especially for derivatives traded with the same counterparty under an International Swaps and Derivatives Association (ISDA) Master Netting Agreement. U.S. GAAP permits the netting of derivative receivables and payables, and the related cash collateral received and paid when a legally enforceable master netting agreement exists between a firm and a derivative counterparty. U.S. GAAP discloses gross derivative assets and liabilities and the offset amount applied to derivatives in the notes to the consolidated financial statements rather than in the consolidated balance sheet. To narrow the difference in total assets between IFRS and U.S. GAAP reporting institutions, the U.S. G-SIBs IFRS estimates follow the methodology used by ISDA in its Netting and Offsetting Report (May 2012, <http://www2.isda.org/functional-areas/research/studies/>) and adds the disclosed offsetting amount applied to derivatives back to total assets in order to calculate total assets. Total assets are as reported in the consolidated balance sheet while the offset applied to derivatives is as reported in the notes to the consolidated financial statements on derivatives in each firm's 10-Q report.
- <sup>6</sup> The Leverage Ratio is the ratio of adjusted tangible equity to adjusted tangible assets. Adjusted tangible equity, adjusted tangible assets, and adjusted tangible book subtract goodwill, other intangibles, and deferred tax assets.
- <sup>7</sup> Equity Capital is the basic GAAP measure of net worth, defined as total assets minus total liabilities.
- <sup>8</sup> Median price-to-book ratios and price-to-adjusted tangible book ratios are used instead of averages for subgroups and for U.S. BHC size groups. Current quarter data are not available for Mizuho FG; first quarter 2016 ratios referenced as proxy. Data are not available for six bank holding companies with assets less than \$1 billion, as well as for BPCE Group and Credit Agricole Group.
- <sup>9</sup> Current quarter goodwill and intangible assets data are not unavailable; fourth quarter 2015 figures are referenced as a proxy.
- <sup>10</sup> Tier 1 capital and accompanying ratio are reported under fully phased-in capital rules.
- <sup>11</sup> Bank holding companies that are owned by a foreign parent or reported a net loss in second quarter 2016, and thrift holding companies that did not file a full FRY-9C report as of second quarter 2016 were excluded.
- <sup>12</sup> The ten largest U.S. bank holding companies with assets less than \$50 billion and the ten largest U.S. bank holding companies with assets less than \$1 billion reported de minimis derivative exposures. We assume that total assets and the adjusted tangible equity to adjusted tangible assets ratio are essentially the same under U.S. GAAP and the IFRS estimate.



**Chart 1**

# **Lending Through the Cycle** Quarterly Median for Noncommunity Banks



Source: FDIC.

Note: Excludes insured institutions reporting zero loans.

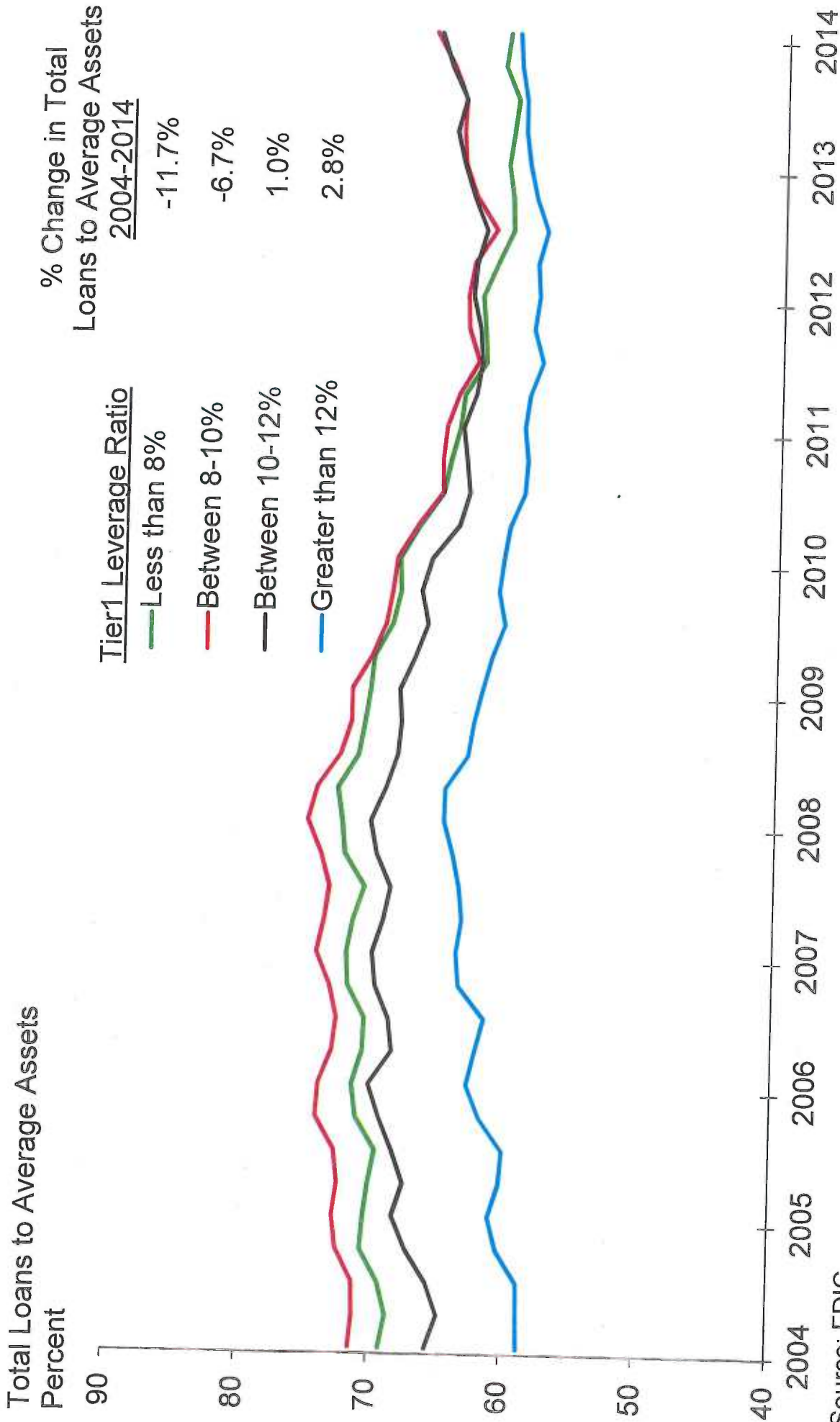
See FDIC Community Banking Study for definition of noncommunity bank.

<https://www.fdic.gov/regulations/resources/cbi/report/CBSI-1.pdf>



## Chart 2

### Lending Through the Cycle Quarterly Median for Community Banks



Source: FDIC.

Note: Excludes insured institutions reporting zero loans.

See FDIC Community Banking Study for definition of community bank.

<https://www.fdic.gov/regulations/resources/cbi/report/CBSI-1.pdf>