



TBTF: Some Considerations

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Outline

1. Size:

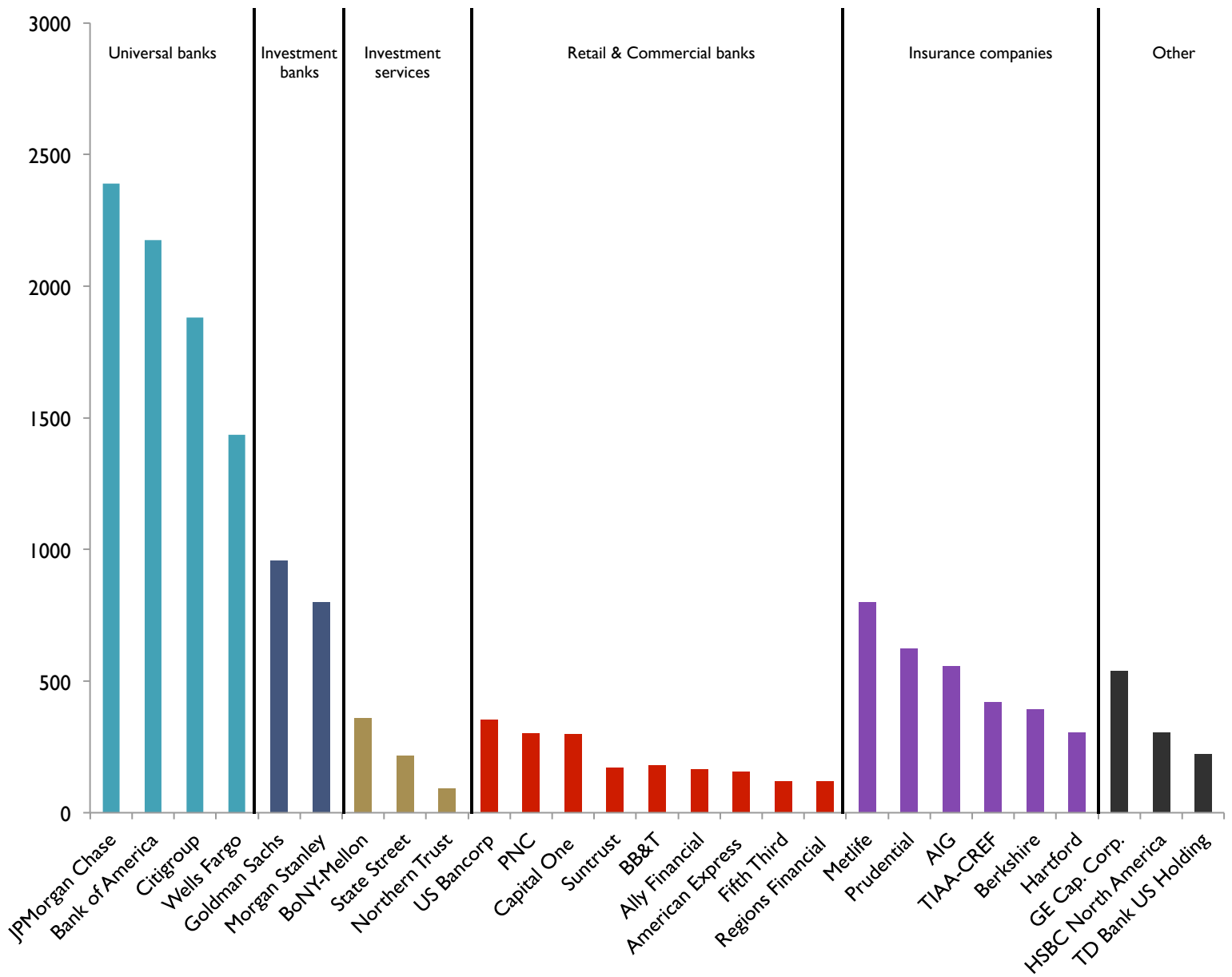
- What is a big financial institution and why are they big?
- Are there social benefits to large financial institutions?
- Are there trends in size relative to other trends
- Focus on banks (including investment banks)

2. The failure of big financial institutions

- Why is the failure of big financial institutions problematic?

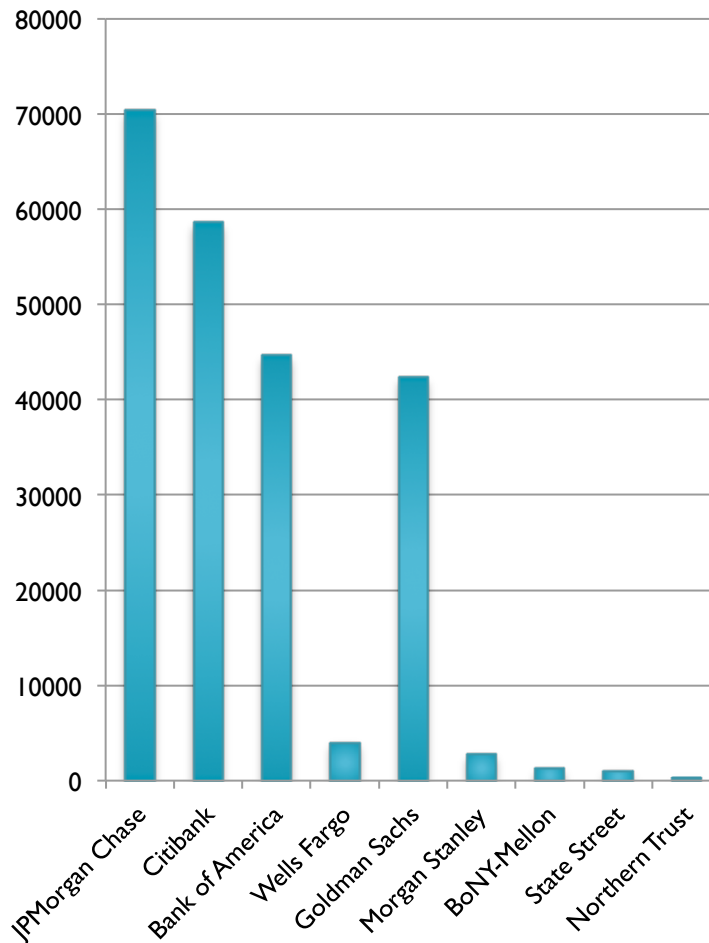
3. Is Dodd-Frank a solution to TBTF?

- Is there are a TBTF subsidy?
- Why is the bankruptcy code not enough?



Large Financial Companies by Total Assets. U.S. banks above \$100bn (with US parent companies). 2013Q1 Insurance companies above \$200bn. 2011Q4 In billions. Source: FFIEC; classification of the banking sector due to "Understanding the Economics of Large Banks," The Clearing House

Size and complexity



Notional amount of derivatives contracts, March 31st 2013
Billions of US\$. Source: OCC

- Large banks: More than the total assets
- WF: Successful national franchise without an active role in derivatives markets
- Total credit exposure to risk based capital (%):
 - JPM: 218, BofA: 129, C: 169, GS: 703
- M. Foot, fmr. head of banking supervision at the BofE: “I used to look at Citibank and I wondered how a group of human beings could actually run that entity”

Are big BHCs getting bigger?

- Some trends
 - Nearly all US banking assets are controlled by BHC
 - Consolidation:
 - Share of BHC assets of top ten companies: 1991: 30% 2011: >60%
 - 1984-2008: Number of US Commercial banks down 50%
 - Complexity: Number of separate legal entities in a BHC
 - Four most complex firms have more than 2,000 subsidiaries
 - Two have more than 3,000
 - Trend: Only one firm had >500 subsidiaries in 1991
- Evidence: Avraham, Selvaggi, and Vickery (2012) and Wheelock and Wilson (2011)

Why are BHCs getting bigger?

1) Economies of scope

- What is the source of exogenous variation that has produced an increase in these economies of scope? IT? How?
 - Evidence for IRS: Wheelock and Wilson (2011)
 - Evidence against: Allen and Rai (1999), Vander Venet (1999)

2) Regulatory changes

- Banking Act 1933 → BHCA 1956, 1970 → IBBEA 1994 → Gramm, Leach, Biley Act, 1999 → Dodd-Franck 2010
- The panic of 1907 and Federal Reserve Act 1913:
 - “An act to provide for the establishment of Federal Reserve Banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking and for other purposes.”

Why are BHCs getting bigger?

3) Agency problems

- The bigger the size, the higher the managerial compensation
 - Evidence: Gabaix and Landier (2008)
- To grow one needs to attract capital: leverage not enough.
- Need to offer investors higher ROE: Better investment opportunities, expansion to riskier activities, leverage

4) International expansion

- US banks are uniquely positioned to be the world's banker
- International expansion due to globalization
- The growth of the House of Morgan during the baronial age

What do big banks do?

- Three functions:
 1. Retail and Commercial banking
 2. Payments, clearing, custodial services, ...
 3. Capital market activities (underwriting, OTC dealership activities, ...)
- Pricing power follows from (local) monopolies
 - Information about borrowers (households & firms) as a source of profits
 - Clear barriers to entry and competitive advantages
 - This is why bank failures matter for economic activity
 - Evidence: Ashcraft (2005), Campello, Graham and Harvey (2010), Huidan and Paravisini (2012), ...
 - *We care about banks because something is lost when they are gone and this something is costly information about local investment opportunities*
- Payments and capital market: Commodity like business
 - No source of (risk corrected) profits
 - Capital markets as a source of potentially destabilizing losses
 - Why should all these activities be bundled under the same umbrella?
 - Why are we risking what we care about (the flow of credit) to preserve a particular banking model?
 - The role of innovations

Is size the matter?

- We care about credit to the real economy
 - Size is not the issue.
 - The issue is whether there is an interaction between size and the flow of credit
 - Good times: Monopolies and the restriction of credit
 - Bad times: Effects of depleted bank capital on the availability of credit
 - A definition of systemic that is functionally oriented:
 - How does the failure of this financial institution affect the flow of credit and real activity?
- It is not that (traditional) banks do not get into trouble
 - Spanish banking crisis as an ongoing example
 - It is that they get in trouble in a way we understand and we have well established and well functioning resolution methods

Is size the matter?

- A word on insurance companies:
 - Consolidation waves in the insurance business driven by IT improvements
 - Evidence: Cummins, Tennyson, and Weiss (1998)
 - Systemic consequences of a large failed insurance company
 - Loss of hedge for both households and firms: Substantial in certainty equivalent terms
 - Similarity with banks:
 - Maturity transformation vs. state space transformation
 - Bundling of traditional insurance business with capital market activity (AIG)
 - Again: Why do we jeopardize the activity we (perhaps should) care about (traditional insurance, AIG) by bundling it with OTC activities (AIG FP)? Why should these two activities be bundled under the same umbrella?
 - Clear identification of supermodular features of production function:

$$f(x + y) > f(x) + f(y)$$

Is there are a TBTF subsidy?

- Does the implicit government guarantee translate into lower funding costs? Yes
 - Avery, Belton and Goldberg (1988): Bank bond spreads are barely related to ratings and unrelated to accounting or bank balance sheets risk measures
 - O'Hara and Shaw (1990): Banks identified as TBTF by the Comptroller of the Currency & the WSJ after the rescue of Continental Illinois saw their stock increase by 1.3%.
 - Morgan and Stiroh (2005): Flat relation between spreads and ratings for the TBTF even after passage of FDICIA (1991)
 - Ueda and Weder di Mauro (2012) use a worldwide sample of banks and estimate the value of the subsidy to be 60 bps in 2007 and 80 in 2009.
 - Goldman Sachs (2013): Comparison of spreads across large and small bank
 - Uninformative: Endogeneity of risk
 - Sample period comparison: 2000s: Credit bubble: Just think of the spreads Greece was paying
 - Recovery rates higher for larger banks
 - Thomas (NYT, June 10th 2013): Piraeus bank: "Not long ago, Michalis Sallas, the chairman of Piraeus Bank in Greece, had a dream: to make his bank to big to fail"

Why is the failure of large financial institutions problematic?

- Why is bankruptcy not an option?
- FDIC (2011) and the Lehman (LBHI) Ch. 11 filing:
 - i. Some creditors were special: Reserve Primary Fund had \$785m (out of \$62bn in assets) of Lehman CP on the day of the filing: Run.
 - ii. Disruptions in swaps and derivatives markets: LBHI's filing affected negatively LBI, as its guarantor: Options CC threatened to liquidate all LBI positions unless a third party was willing to guarantee; DTCC liquidated positions.
 - iii. Creditors could have obtained more if LBHI had remained operational, LBI had not been placed under SIPA liquidation, and the hedges had remained in place.

Why is the failure of large financial institutions problematic?

- Three things come across from the description above:
 - ① Some deposit like institution was at risk because it (implicitly) promised redemption of liabilities at par
 - This is a problem of fixed liabilities, typically held by uninformed investors, being too close to complex sources of risk
 - ② Derivatives
 - There is value for creditors of maintenance of the hedges but institutionally this is not possible under bankruptcy
 - This is something that can be avoided by changing how we treat derivatives in bankruptcy, which is what Dodd-Frank effectively does
 - Discovery of losses in the system is complex as there are thousands of counterparties
 - Positions need to be funded and guaranteed
 - ③ It is an expensive process for creditors:
 - A problem of transfers not of wealth destruction per se.
 - Delay of payments

LBHI failure under DF Title II

- Under section 203 of DF Treasury appoints the FDIC as receiver of SIFI
- DF provides for an efficient mechanism to preserve a valuable ongoing concern for the distressed SIFI: the bridge financial company
 - Not possible under bankruptcy
- DF expressly permits the FDIC to transfer qualified financial contracts to the bridge financial company, in which case counterparties are prohibited from terminating contracts
- Solves problem 2 and makes progress on 3

LBHI failure under DF Title II

- Funding
 - Bankruptcy: DIP financing with court approval; uncertainty
 - Under DF the FDIC can obtain funding from the Treasury to make loans, guarantee operations of the bridge financial company.
 - US senior
 - If asset sales are insufficient then a subsequent assessment of the industry to repay amounts lent by the taxpayer: No losses
 - The FDIC is allowed to make periodic payments to creditors based on expected recoveries
 - More difficult to do under bankruptcy and addresses problem 3 above.

LBHI failure under DF Title I

- Title I of DF also gives the regulator the possibility of advanced planning through resolution plans (living wills)
- FDIC will have access to SIFIs and real time data
 - For instance, since Bear Sterns FDIC would have been closely monitoring LBHI and perhaps on site presence to plan for Title II OLA
 - Does the FDIC have the human capital and experience to handle LBHI?
 - DF approach: Extend the resolution mechanism used for deposit taking institutions to SIFIs: Is LBHI like a standard commercial bank, for example?
 - After that the FDIC would have been able to set a bridge financial company, including LBI and the qualified financial contracts and transfer it to an interested party (Barclays)

LBHI failure under DF

- DF extends the FDIC powers to SIFs
- Triggering important:
 - Would initiation of Title II start a systemic crisis?
 - How informative is the first case about what is to come?
 - Bank of Spain and early resolution of cajas (CCM and Cajasur)
- Does the FDIC have the knowledge and experience to handle the next Lehman?
 - On the job training
 - Partnership with the Fed
- A rational expectations critique:
 - How would the industry evolve under DF?
 - How would the derivatives market evolve under DF?
 - So far partial equilibrium exercises

LBHI failure under DF

- Under DF the FDIC has enormous discretion of, for instance, what to place in the bridge financial company and what to “leave behind”
- This discretion adds uncertainty particularly given the enormous complexity of the liability side of a SIFI’s balance sheet
 - Qualified financial contracts: All or none
- Boxer Amendment: If Title II is applied to an institution, it must be liquidated:
 - To what extent is the bridge financial institution completely consistent with this? (Jackson and Skeel, 2012)
- DF is heavy handed: The FDIC is vested with enormous powers

Resolution: A taxonomy

- Four resolution regimes (Jackson and Skeel, 2012):
 - ① Bankruptcy
 - ② OLA
 - ③ Bail ins: Europe
 - Deleveraging without full blown resolution: Creditors are part of the restructuring without the need of liquidating the company
 - Ireland: Credit Institutions (Stabilization) Bill 2010
 - Spain: Ley 9/2012 of November 14th
 - European Resolution Mechanism
 - OLA can be used as a bail-in device: Use of the bridge financial company and issue equity to the creditors that have been left behind.
 - Advantage: Resolution at the speed of light
 - ④ Forced sales

TBTF: Some final comments

- ① Size as a proxy for political influence and access to regulator susceptible to capture
 - Gormley, Johnson and Rhee (2011), Johnson (2009)
- ② In general
 - i. TBTF
 - ii. TMTF (Acharya and Yorulmazer, 2007): Spain
 - iii. TBTS (Demirgüç-Kunt and Huizinga, 2011): Ireland
 - iv. TPCTF: Spain, cajas
- ③ A quixotic comment:
 - Intervention in bad times but not in good, but it is in good times when the bad mortgage is issued, the bad pool is securitized, ...
 - Prices are distorted at the bottom and at the top of the cycle