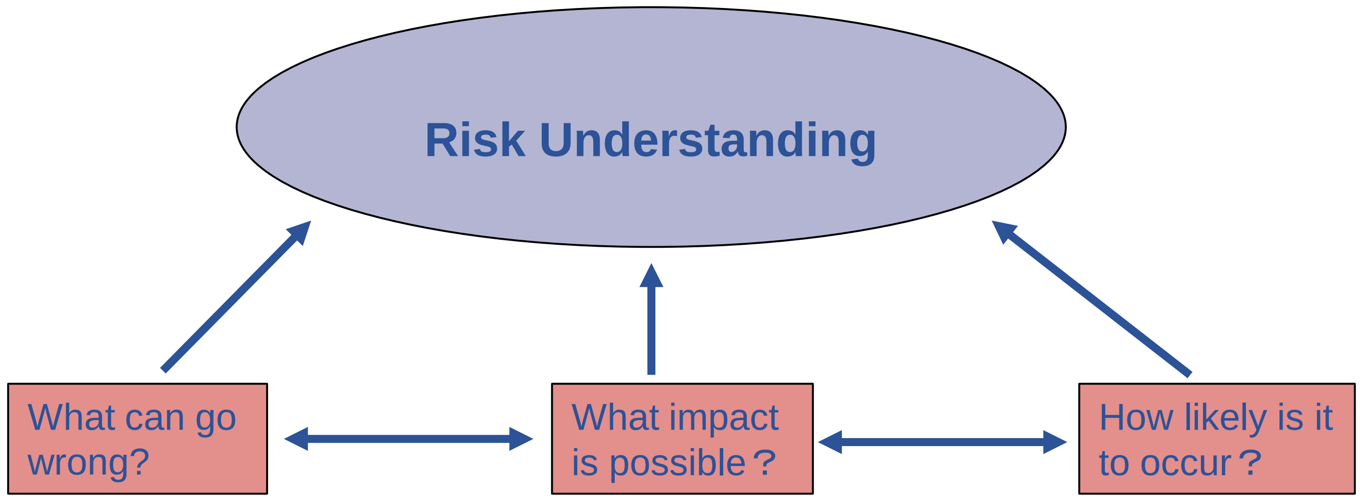
Risk Management post Financial Crisis

October 24, 2016

By Jinfeng Tang

What is Risk Management

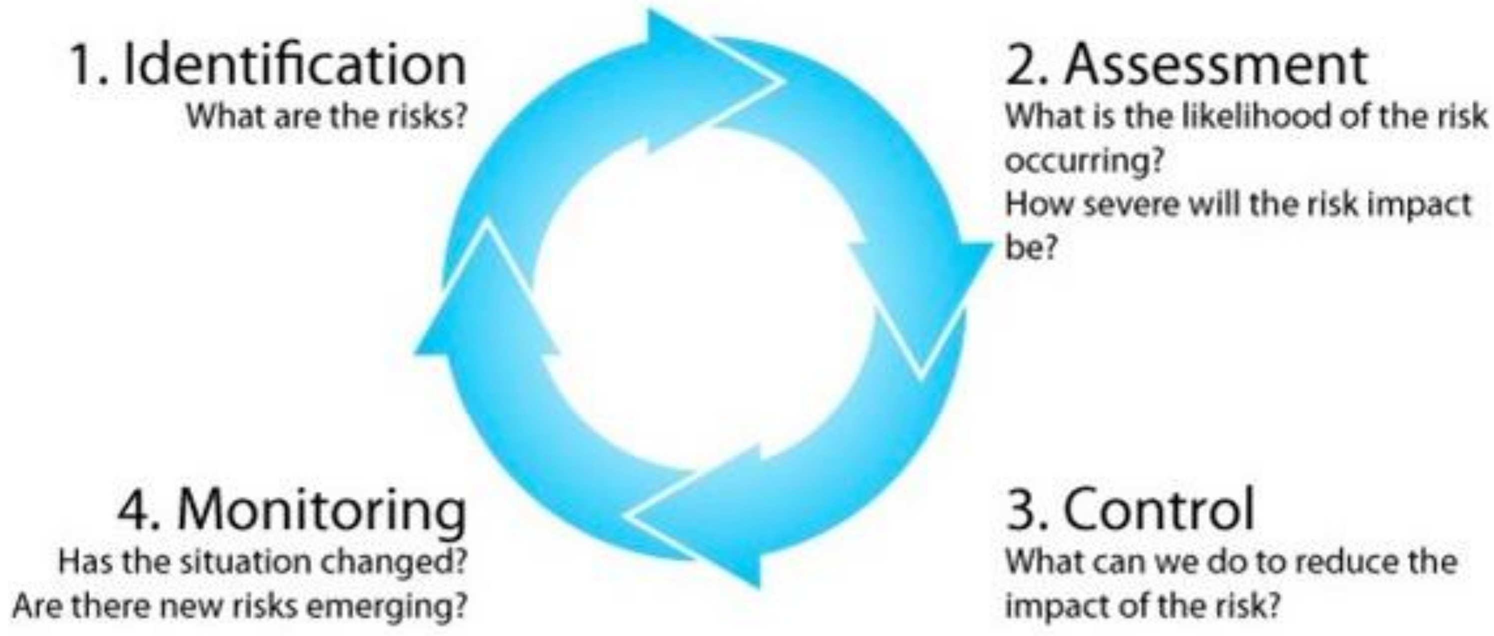
- **Risk is measurable uncertainty**
- **Risk management is defense, not offense**



Foundation for Risk Assessment		
Historical Experience	Analytic Method	Knowledge & Experience

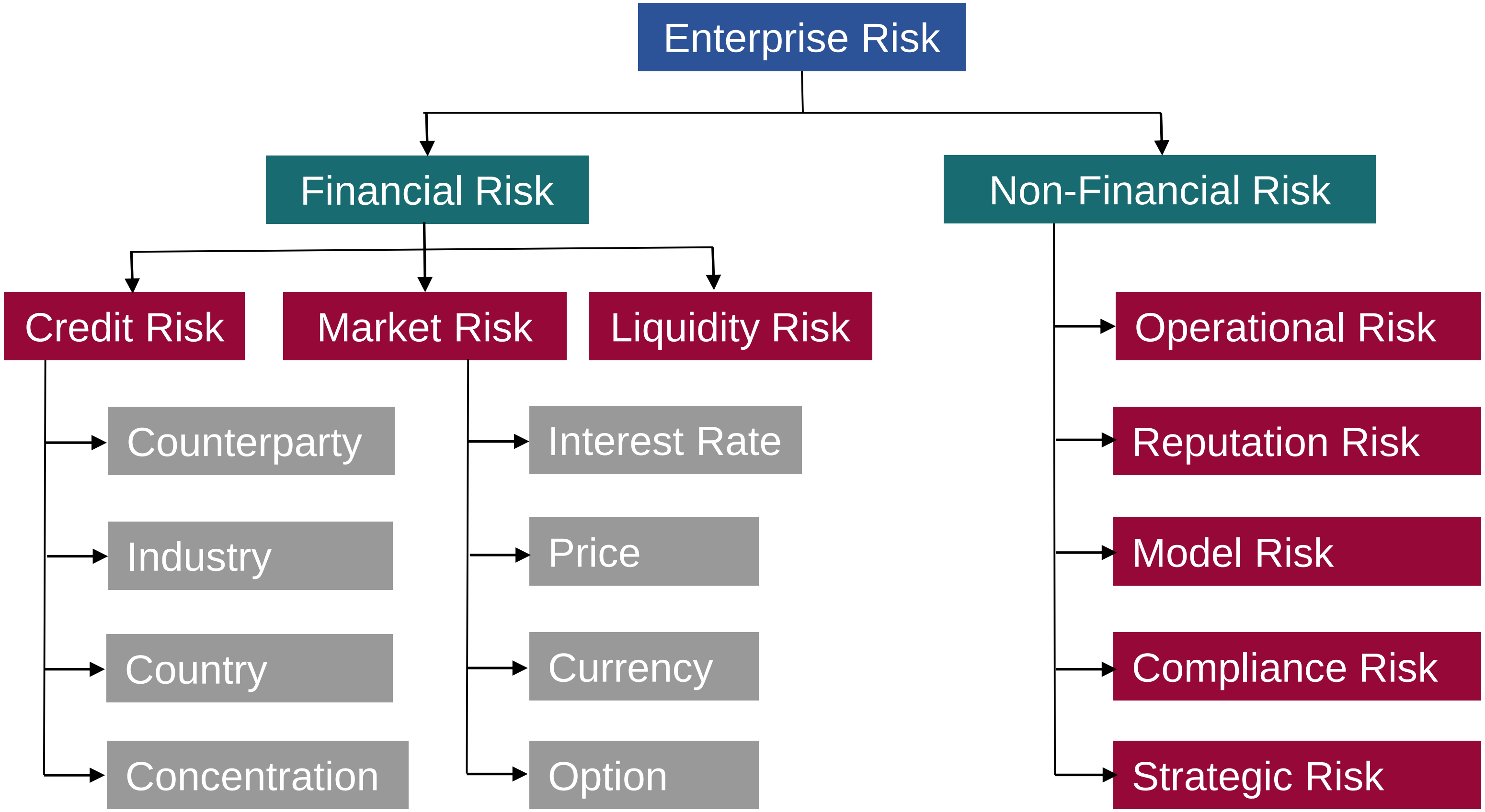
Risk Management Process

- **A planned and systematic process consisting of 4 defined stages**



Risk Type

- **Risk management has become more granular, as companies move to the enterprise risk management framework**



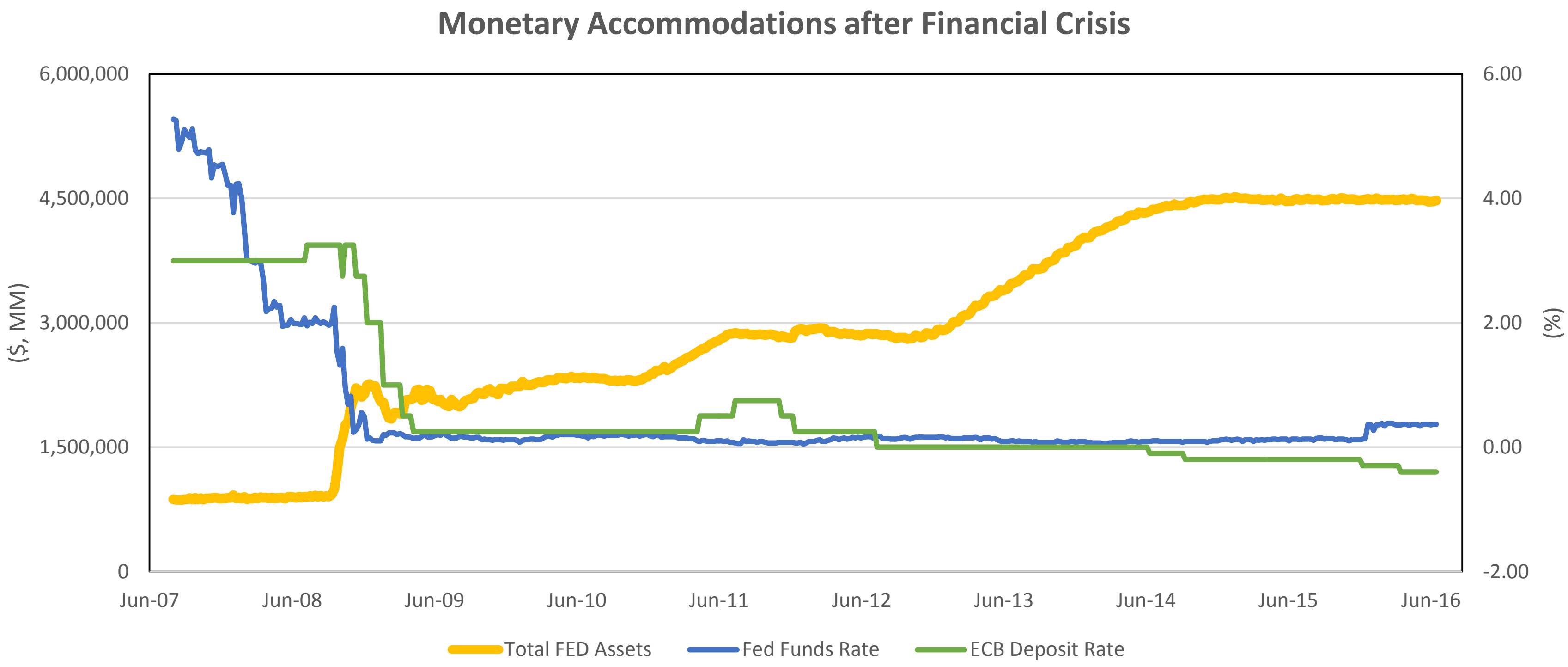
Financial Crisis 2007-2008

➢ "Great Recession"

- Started as the subprime mortgage crisis in the US, and quickly expanded to the global financial market and economy

➢ Largest Government Bailouts

➢ Unprecedented Monetary Accommodations



Tougher Regulations

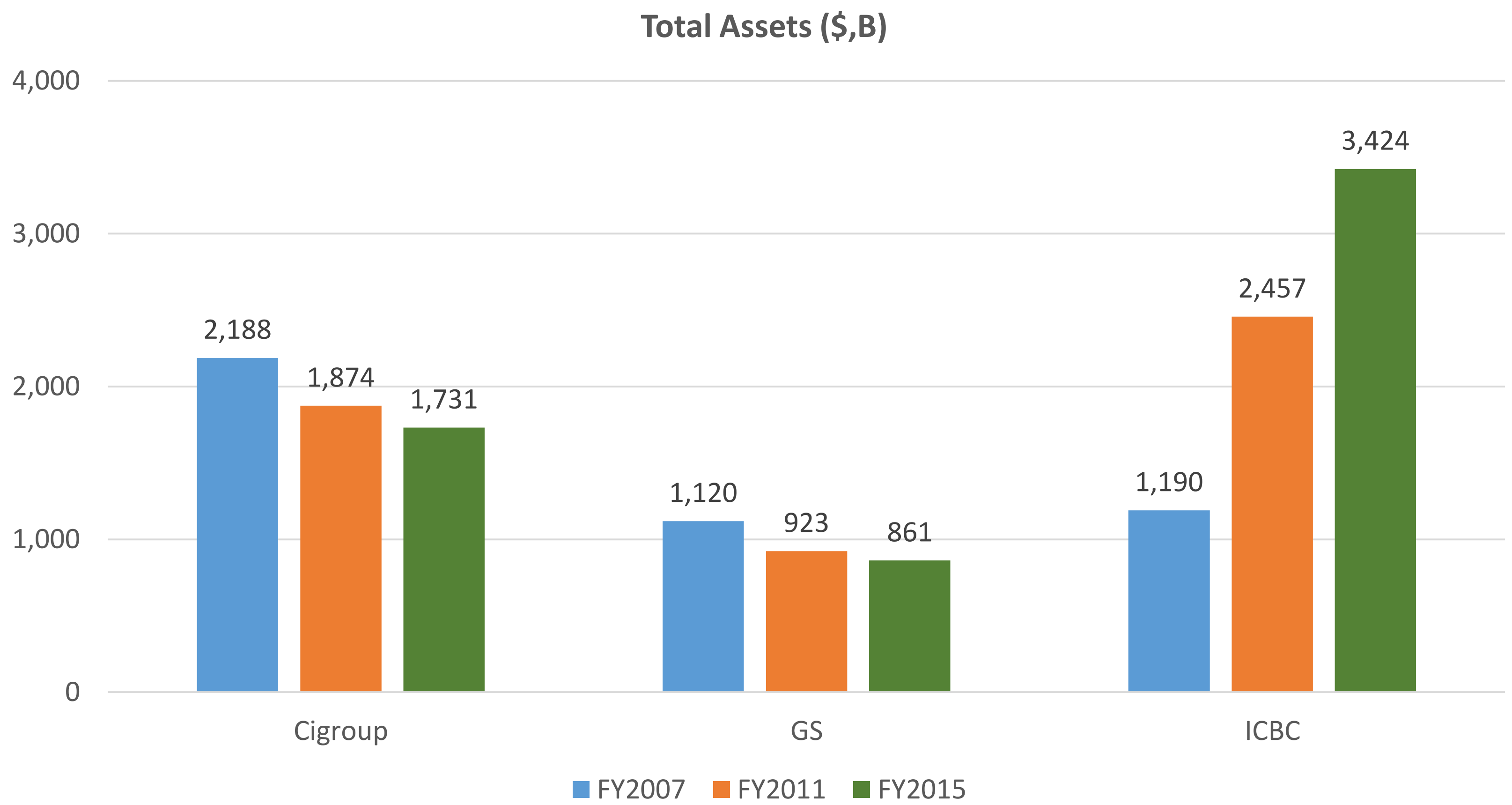
- **Basel Committee on Banking Supervision (BCBS)**
  - Basel III Accord: capital, liquidity and leverage
  - Revisions to the Basel II market risk framework
  - Interest rate risk in banking book

- **Dodd-Frank Wall Street Reform and Consumer Protection Act (USA)**
  - Stress Testing
  - Comprehensive Capital Analysis and Review (CCAR)
  - Comprehensive Liquidity Analysis and Review (CLAR)
  - Recovery and Resolution Plan (Living Will)
  - Volcker Rule
  - Enhanced Prudential Standards (EPS) - FED
  - Heightened Standards (HS) - OCC

- **Globally Systematically Important Financial Institutions (G-SIFIs)**
  - Published by the Financial Stability Board (FSB) since 2011
  - Asia: 7 (4 in China) Europe: 19 Americas: 8
  - Capital surcharge
  - Additional oversight and regulatory requirements

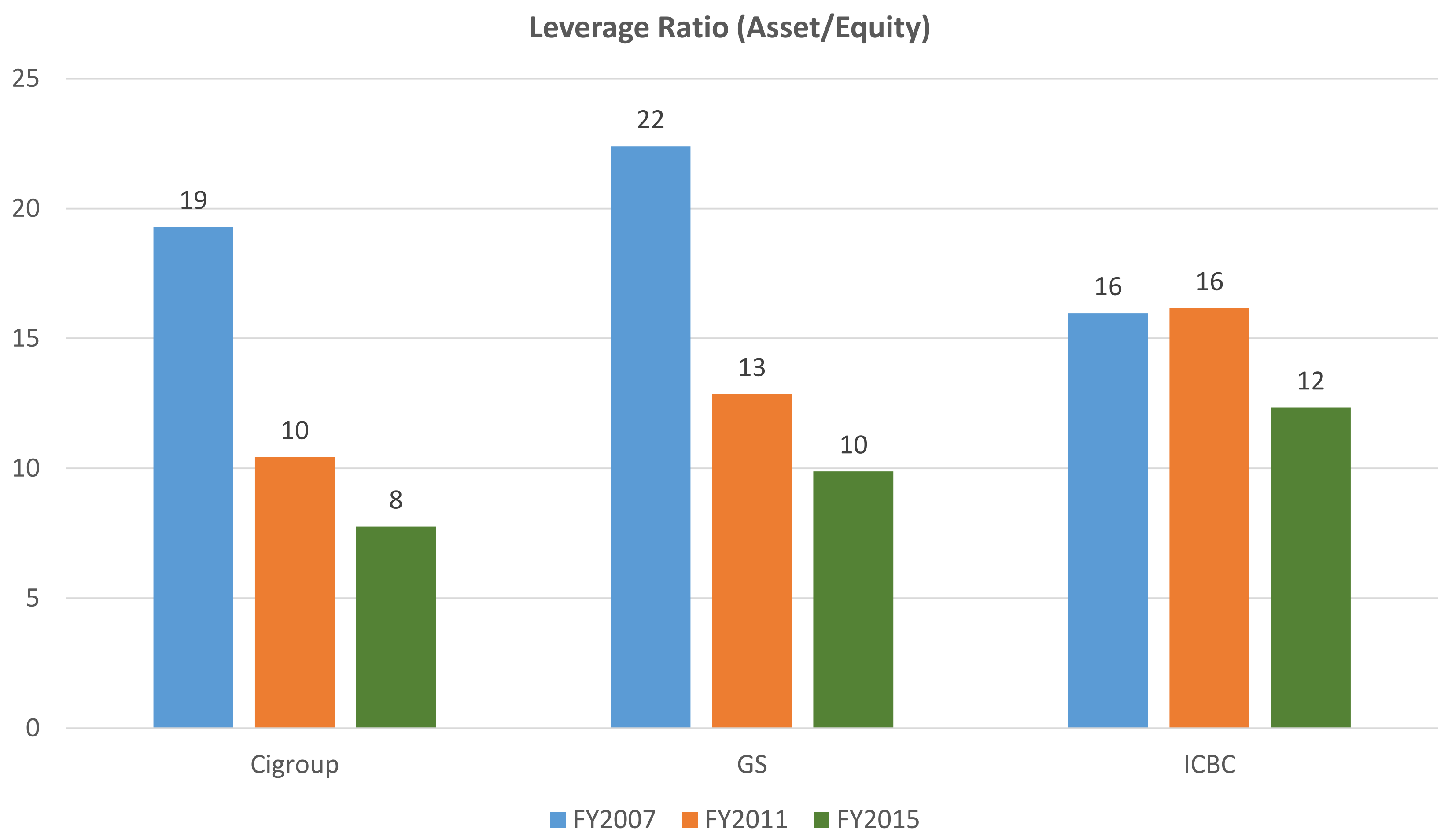
Smaller Balance Sheet

- **US banks have been reducing their balance sheet size since the financial crisis**
  - In contrast to the Chinese banks who have been dramatically growing their balance sheet



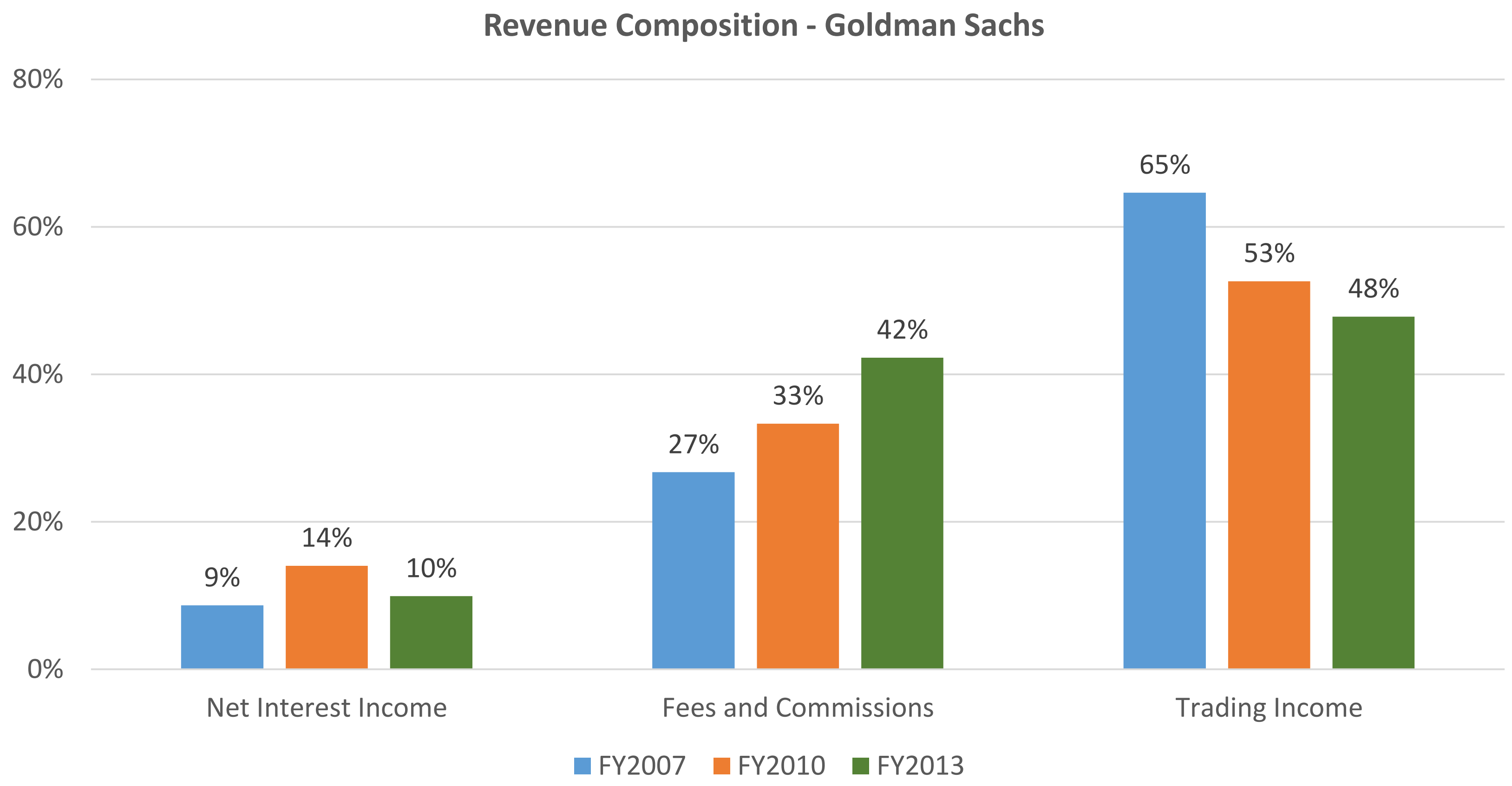
Lower Leverage

- **US banks have dramatically lowered their leverage**



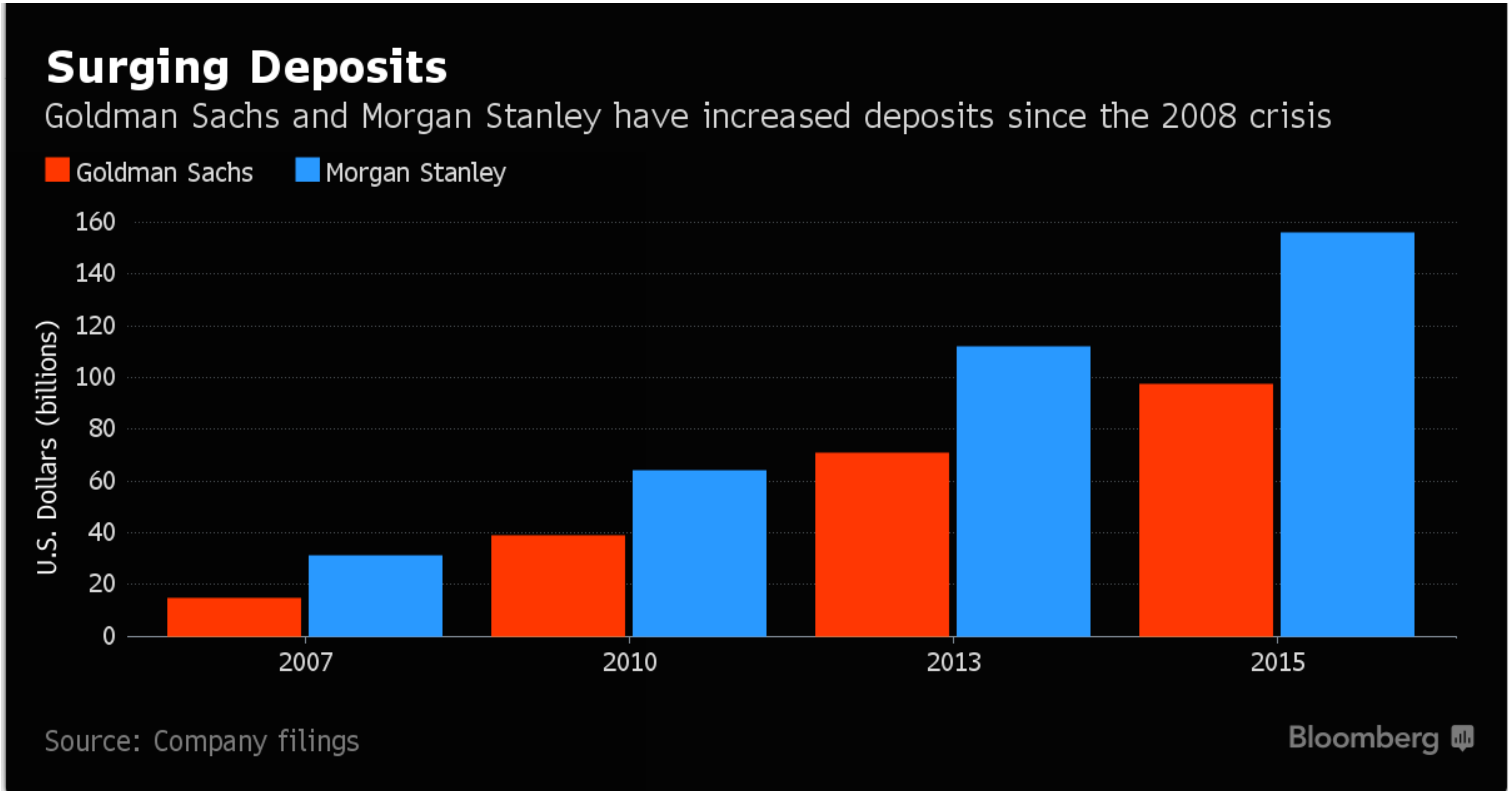
More Stable Revenue

- More revenue from stable sources (fees/commissions) and less from volatile sources (trading revenue)



More Stable Funding Source

- ➢ **NO MORE independent large investment bank in the US**



Risk Culture

- **Strengthening risk culture has become the top priority for board and senior management**
  - "Tone from Top" is critical in creating a strong risk culture

- **Balance between a sales-driven front- office culture and a risk-focused culture**

Risk Governance

➢ Three Lines of Defense

Risk Governance

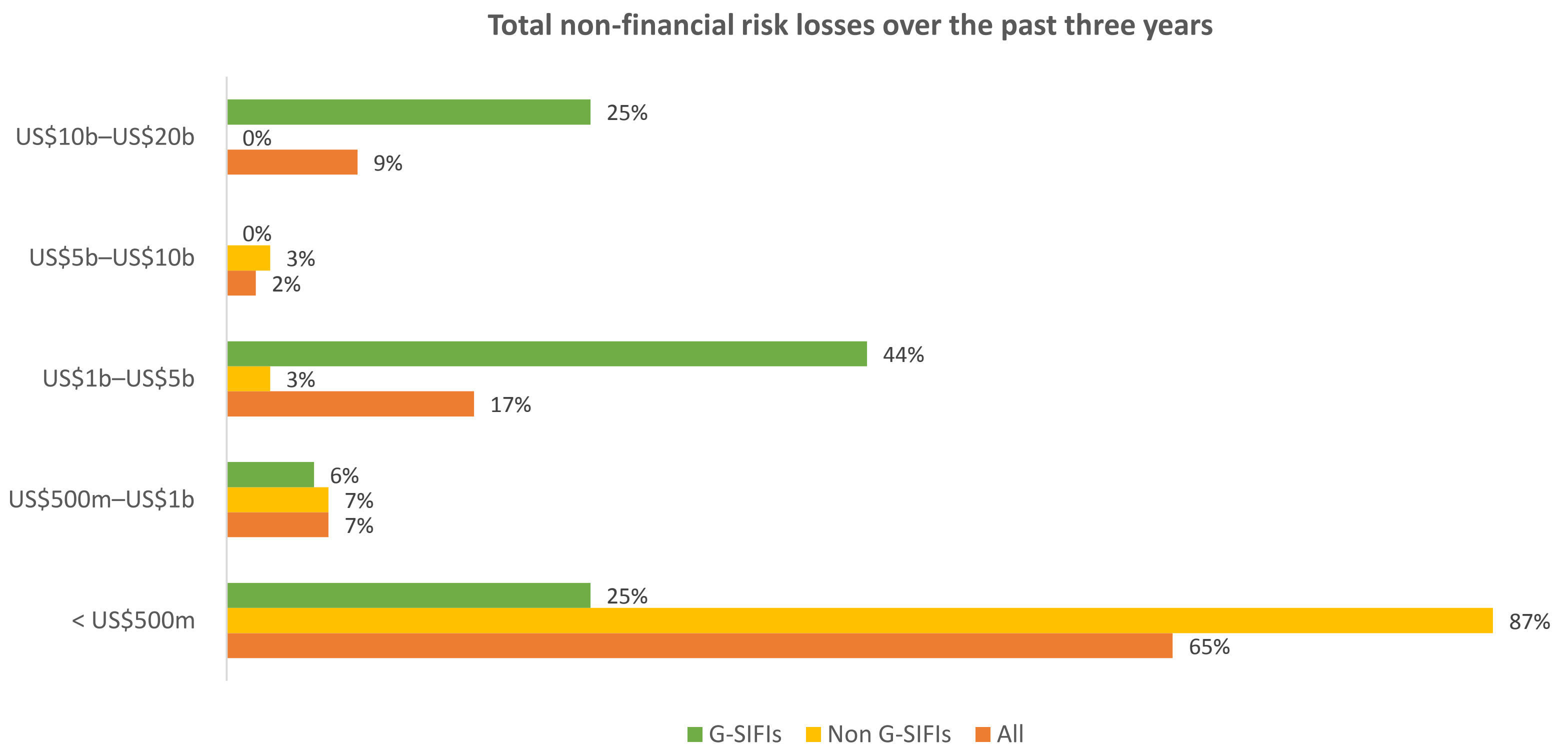
- Increasing focus of board and board risk committee in defining and managing risks

- Continue expansion and more stature, authority and independence of the risk management function

Non-Financial Risks

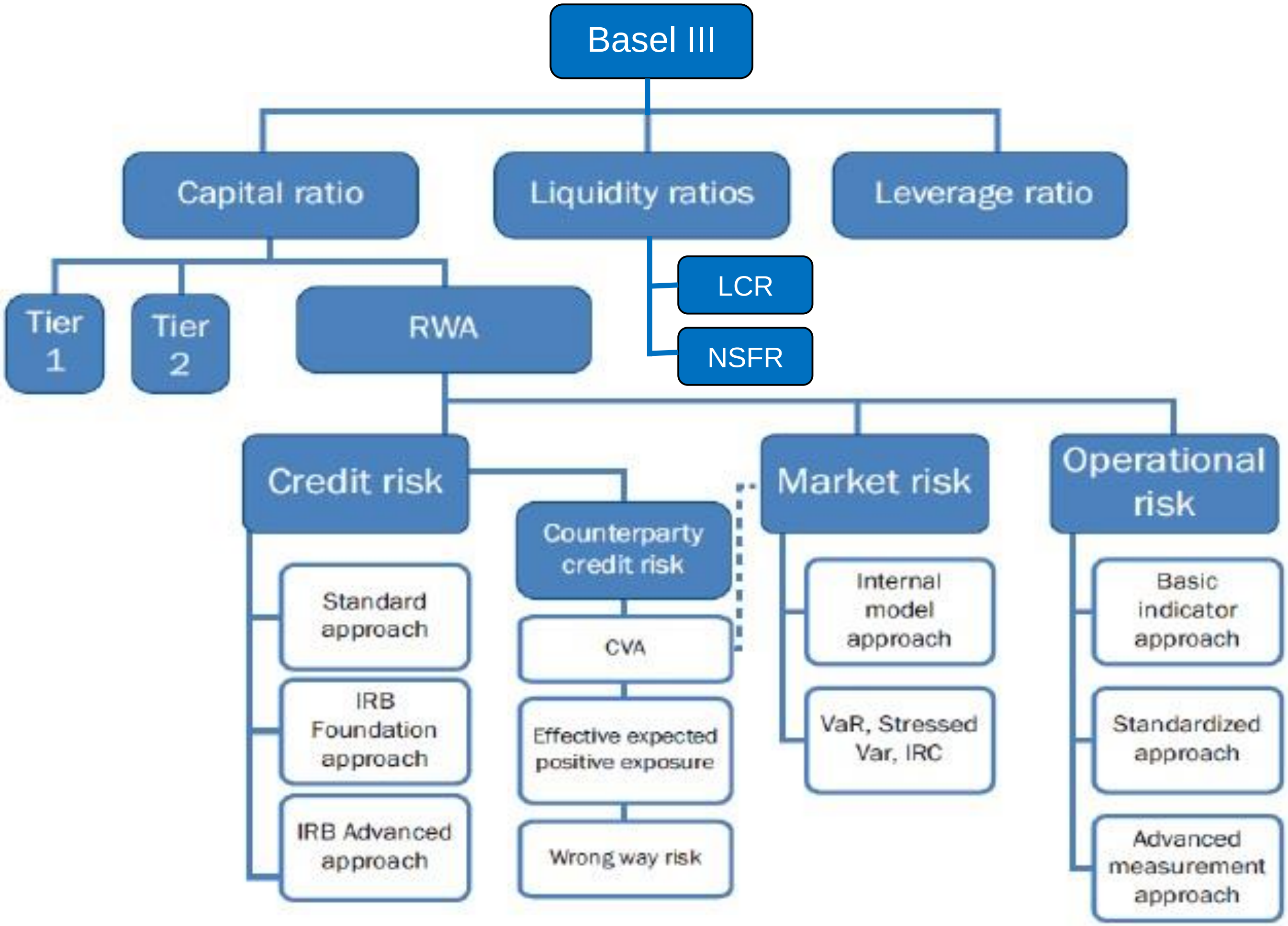
➢ **Non-financial risks have become a top focus, given the huge losses recently from non-financial risks, especially for G-SIFIs**

- Bank litigation costs have exceeded $300B since the financial crisis



Basel III

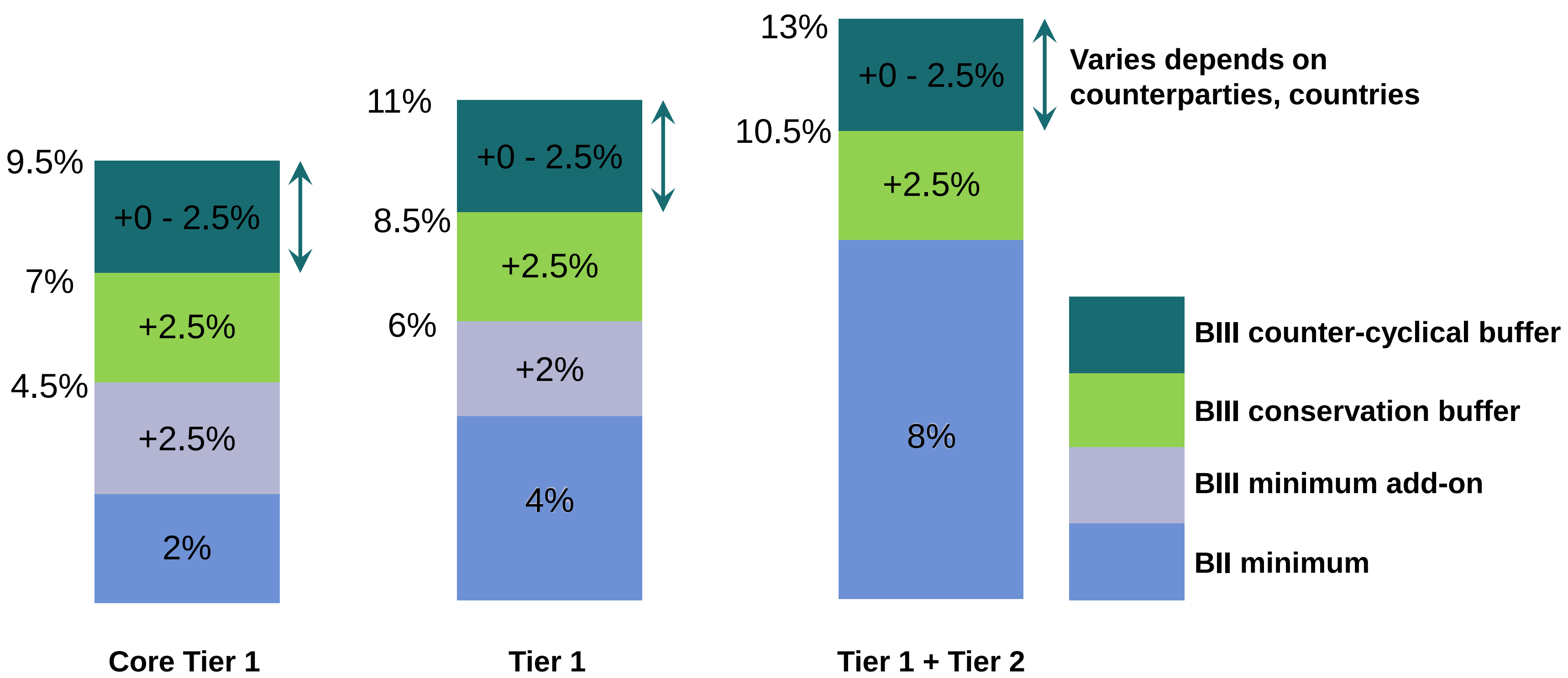
- For the first time, Basel III added additional requirements on bank's liquidity ratios and leverage ratio



Basel III

- **As compared to Basel II, Basel III greatly increased the minimum bank capital capital requirements**

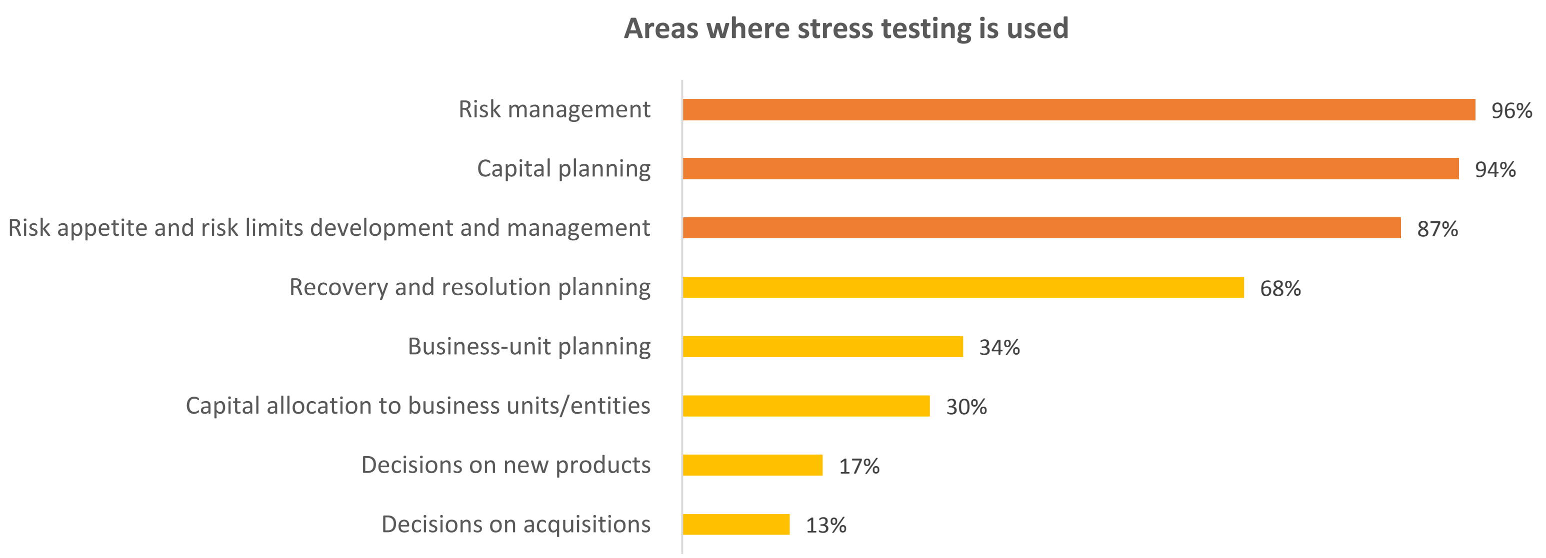
Additional capital ratio buffer (up to 2.5% CET1) for specified G-SIBs



Stress Testing

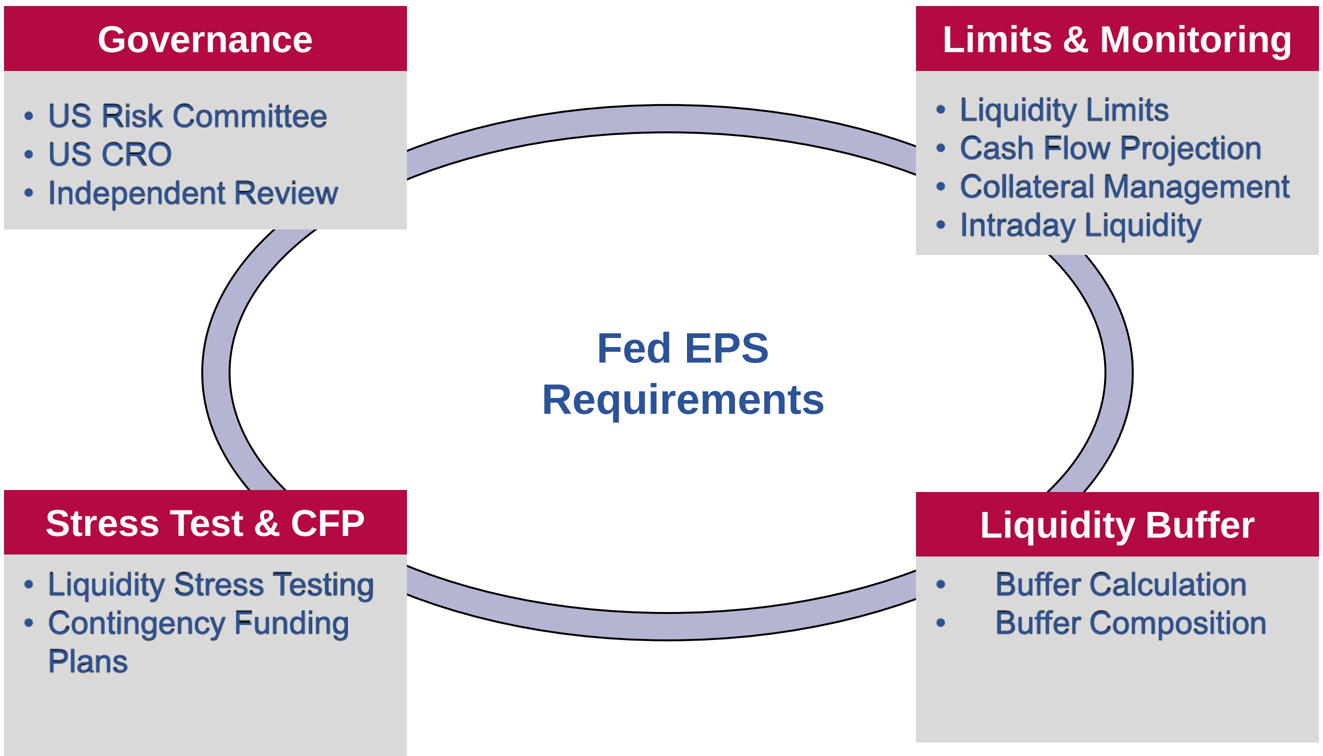
- **Regulatory exercise to assess whether financial institutions have sufficient capital to survive during periods of economic and financial stress**
  - Scenarios: baseline, adverse, and severely adverse
  - Comprehensive Capital Analysis and Review (CCAR)
  - Dodd-Frank Act Stress Testing (DFAST)

- **An important tool for internal risk management and capital planning**



Liquidity Management

- **Regulators have much stricter requirements on bank's liquidity management process**



Risk Job: Key Qualifications

- **Knowledge about financial products**
  - Dependent on the complexity of business activities
- **Understanding of pricing and risk models**
  - Risk drivers and risk metrics
  - Assumptions and limitations
- **Technical and quantitative skills**
  - Programming languages, e.g. C/C++, SAS, etc.
  - Excel, SQL, and data management tools
  - Risk analytic systems, e.g. Risk Metrics, Aladdin, Yield Book, Polypaths, etc.
- **Capability to communicate and work with key stakeholders**
  - Front office, finance, treasury, IT, as well as regulators
- **Professional Certificate**
  - Financial Risk Manager (FRM)
  - Professional Risk Manager (PRM)
  - Chartered Financial Analyst (CFA)