Systemic Risk and Financial Markets

A Survey of Recent Regulatory Reforms

Pieter Bierkens
Executive Director – Rates Regulatory Strategy
Commonwealth Bank of Australia
Pieter.Bierkens@cba.com.au

Global Association of Risk Professionals

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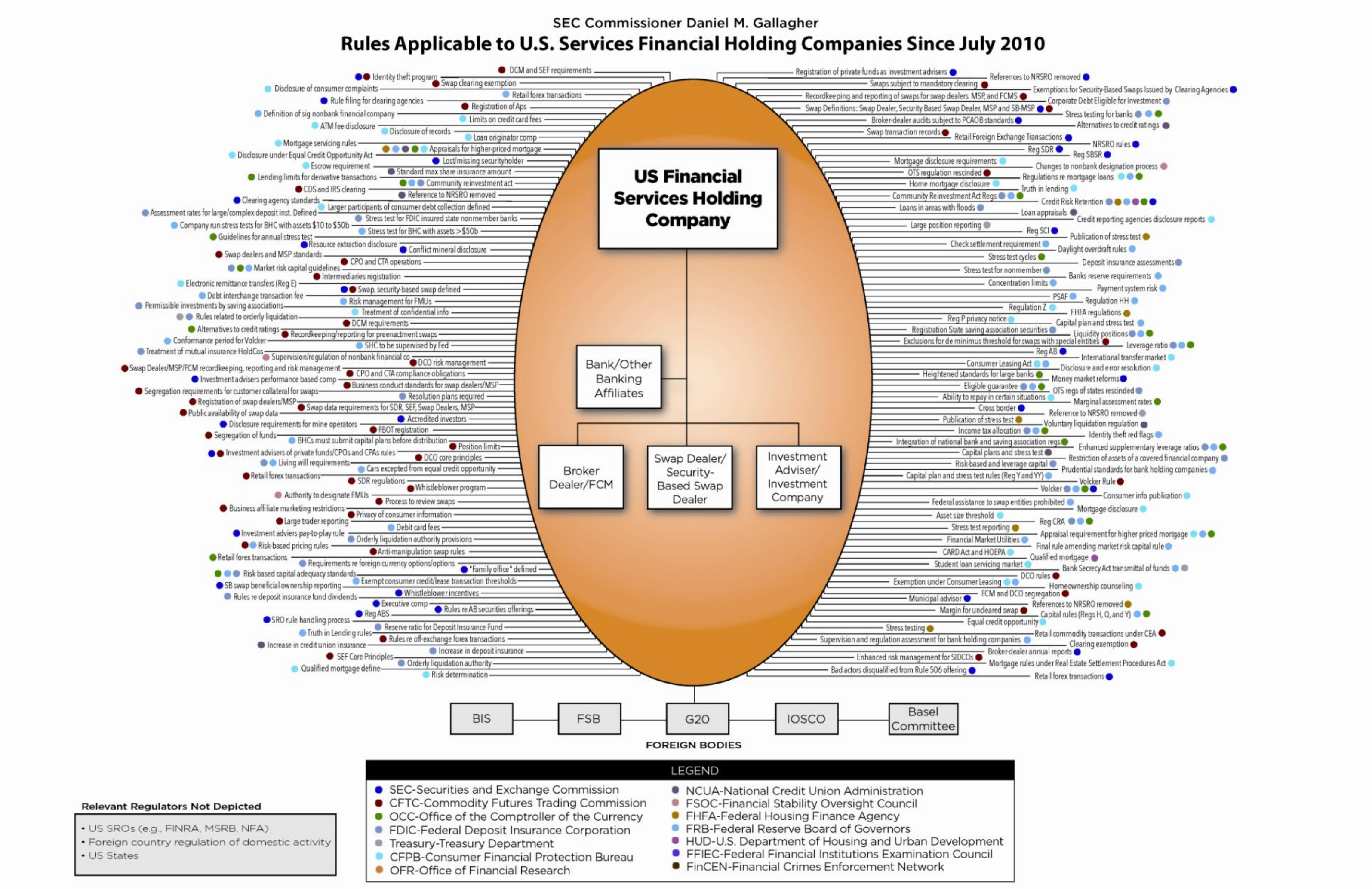
Spaghetti of Rules



Source: Commissioner Daniel M. Gallagher –
Statement on the Aggregate Impact of Financial Services Regulations
(U.S. Securities and Exchange Commission)

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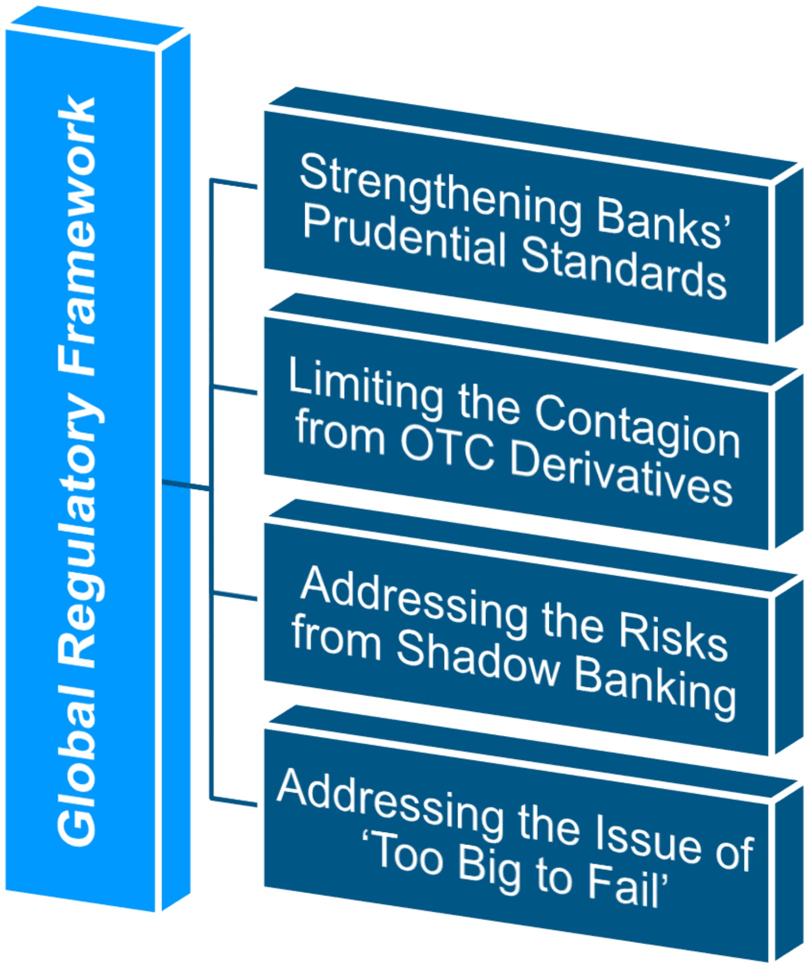
14/15 2008 November ,Washington: G-20, FSB and Basel

The Four Pillars of the Global Regulatory Framework



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Minimum Capital Requirements – Basel II to III

	CET1 Requirement	Multiple of Basel II Minimum
Basel II CT1 Minimum using Basel III Definitions[1]	1.0	0.5x
Basel II CT1 Minimum	2.0	1.0x
Basel III CET1 Minimum	4.5	4.5x
+ Capital Conservation Buffer	7.0	7.0x
+ G-SIB Buffer	8 to 10.5	8 to 10.5x
Countercyclical Capital Buffer	8 to 13	8 to 13x

- LCR
- Leverage Ratio
- NSFR

[1] Based on Basel Committee on Banking Supervision quantitative impact study (LINK) which found that for large internationally active banks the application of Basel III definitions reduced measured core capital by an average of 41%, and increased risk weighted assets by an average of 23%. After making those adjustments the Basel II Core Tier 1 minimum of 2% is broadly equivalent to 1% under Basel II (as noted by Jaime Caruana – LINK).

Source: Carney, Mark; The Bank of England (2014)

2009 G-20 Pittsburgh

- All standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by the end of 2012. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements.
- With the aim of:
  - Improving transparency in the derivatives markets
  - Mitigating systemic risk
  - Protecting against market abuse

2011 G-20 Cannes

- We call on the Basel Committee on Banking Supervision (BCBS), the International Organization for Securities Commission (IOSCO) together with other relevant organisations to develop for consultation standards on margining for non-centrally cleared OTC derivatives by June 2012
- ‘Complementary risk mitigants’

Margining of Uncleared Swaps

The Revised 2015 BCBS-IOSCO Framework

- Exchange of IM with a threshold of up to €50 million to be staged as follows:

Implementation Timeline

- Exchange of variation margin (VM) from December 2015 for all covered entities.
- The requirements apply to new contracts entered into during the periods described above.
  - Applying the initial margin to existing derivatives contracts is not required.

Sep 2016	Sep 2017	Sep 2018	Sep 2019	Sep 2020+
Any covered entity with a derivatives portfolio of over €3 trillion	Any covered entity with a derivatives portfolio of over €2.25 trillion	Any covered entity with a derivatives portfolio of over €1.5 trillion	Any covered entity with a derivatives portfolio of over €0.75 trillion	Any covered entity with a derivatives portfolio of over €8 trillion

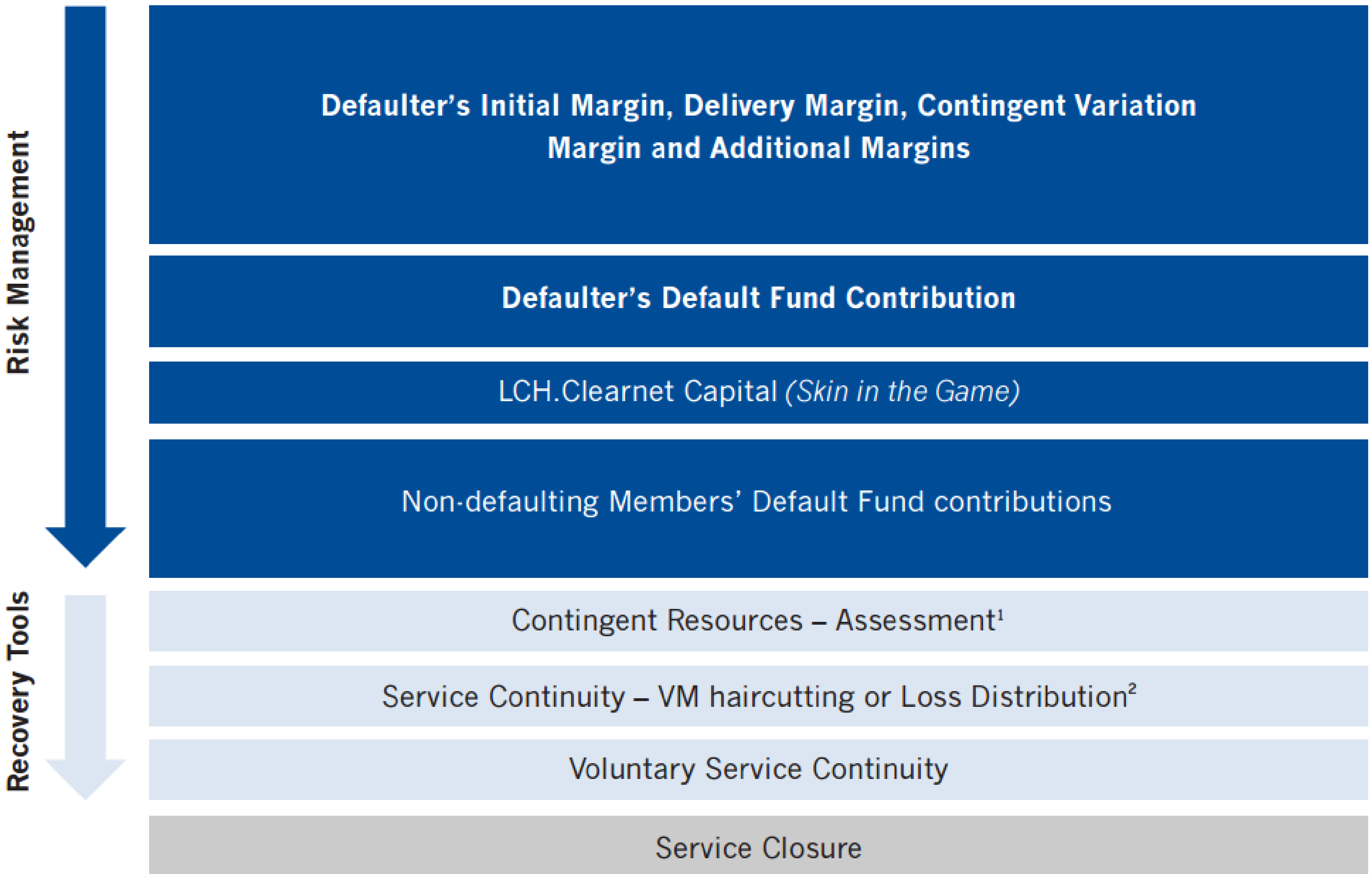
Asset Class	Initial Margin Requirement (% of Notional Exposure)
Credit: 0-2 Year Duration	2
Credit: 2-5 Year Duration	5
Credit: 5+ Year Duration	10
Commodity	15
Equity	15
Foreign Exchange	6
Interest Rate: 0-2 Year Duration	1
Interest Rate: 2-5 Year Duration	2
Interest Rate: 5+ Year Duration	4
Other	15

‘Ongoing work to assess jurisdictions’ progress in implementing the framework, review industry’s progress in implementing the reforms, and review whether the framework remains consistent with other international regulatory initiatives is also planned. The Regulators remain closely engaged with this work’.

(Council of Financial Regulators, 2014)

Source: BCBS-IOSCO (2015)

CCPs and the Default Waterfall



[1] Callable up to the value of each member's Default Fund contribution at the time of the default.
[2] The resources available in the service continuity phase are determined by the LCH.Clearnet Rulebooks.

Source: LCH.Clearnet (2014)

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Clearing Mandates and SEF Trading

- Will the CFTC mandate the clearing of Australian swaps?

- Australian regulators have no immediate plans to implement platform trading, but:

'Will nevertheless continue to monitor developments to gauge the implications of overseas regimes for methods of execution and liquidity in the Australian OTC derivatives market, and more generally monitor evolving trends in the utilisation of electronic trading platforms. It is noted that international consistency may become a higher priority if overseas jurisdictions were to implement mandatory platform trading obligations for products or asset classes widely traded in Australia'.

- Anonymity and Client Limit Order Book (CLOB)

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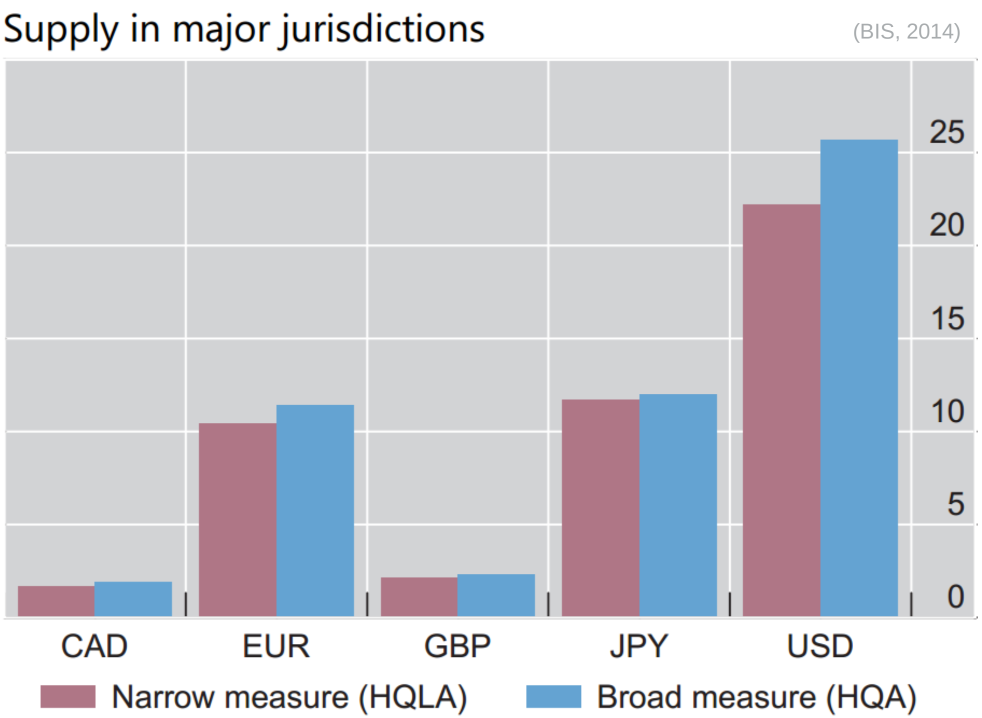
Are We Running out of Collateral?

- Regulatory reform adds a total of about US$4 trillion (not $10 trillion) in global demand (BIS, 2013)
- Annual 'available supply' coming to market is US$1 trillion (IMF, 2013)
- 'No aggregate collateral shortages, but differences amongst jurisdictions' (BIS, 2014)
- Collateral supply in Australia 'would appear sufficient' (RBA)



'Requirements are new and interact with a large number of existing regulatory initiatives that, over time, should be reviewed and harmonised as appropriate.'

(BIS, 2014)

'Supervisors should be aware of the growing need for high-quality liquid collateral to meet margin requirements for OTC derivatives sectors, and if any issues arise in this regard they should respond appropriately. The Joint Forum's Parent Committees (BCBS, IAIS and IOSCO) should consider taking appropriate steps to promote the monitoring and evaluation of the availability of such collateral in their future work'.

(BIS, 2015)

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‘Too Big to Fail’ – The ISDA Protocol

September 2013
FSB Report to the G-20
‘Progress and Next Steps Towards Ending Too Big to Fail’

September 2014
Cross-border Recognition of Resolution Action

November 2014
18 major banks sign the new ISDA Resolution Stay Protocol

End of 2015
FSB members to take official action to promote widespread adoption

September 2014: FSB consultative document on recognition of resolution action:

- ‘Contractual arrangements, if properly crafted and widely adopted, offer a workable interim solution’.
- ‘The options for reaching such entities by regulatory or other official action are thus reduced to indirect means through requirements on firms that are subject to prudential regulation or direct requirements through market-based regulation’.

- G-18 signed a new ISDA resolution on November 18 2014. The Protocol will impose a stay on cross-default and early termination rights within standard ISDA derivatives contracts between G-18 firms in the event one of them is subject to resolution action in its jurisdiction.
- The Protocol will take effect from 1 January 2015 and will govern both new and existing trades between adhering parties.
- **Managed Funds Association:** Fiduciary duty. Increasing systemic risk?

‘Too Big to Fail’ – TLAC

September 2013

FSB Report to the G-20
‘Progress and Next Steps Towards Ending Too Big to Fail’

1 January 2019

- TLAC proposed to be implemented.
- Minimum TLAC requirement of 16-20% of RWA
- At a minimum, twice the Basel III leverage requirement

November 2014

FSB consults on a common international standard on TLAC

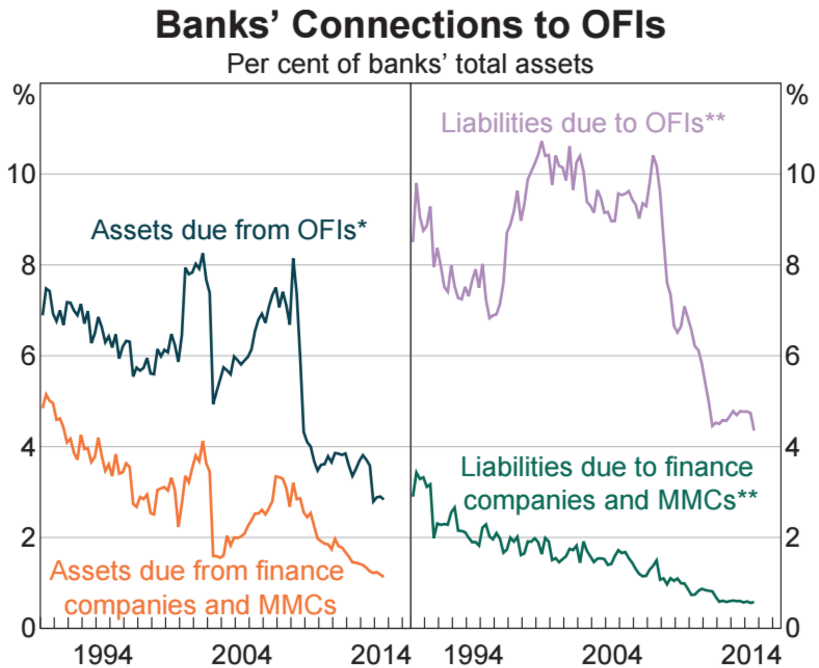
RBA

- ‘The Final Report of the FSI recommended that APRA should develop a framework for minimum loss-absorbing capacity for Australian authorised deposit-taking institutions (ADIs) in line with emerging international practice’.

APRA

- ‘The TLAC concept is emerging for a group of global systemically important banks. There are no Australian banks in this group. It would be unsurprising, however, if over several years the TLAC concept extended to a wider set of banks, as was suggested by the recent report of the Financial System Inquiry’.

Shadow Banking



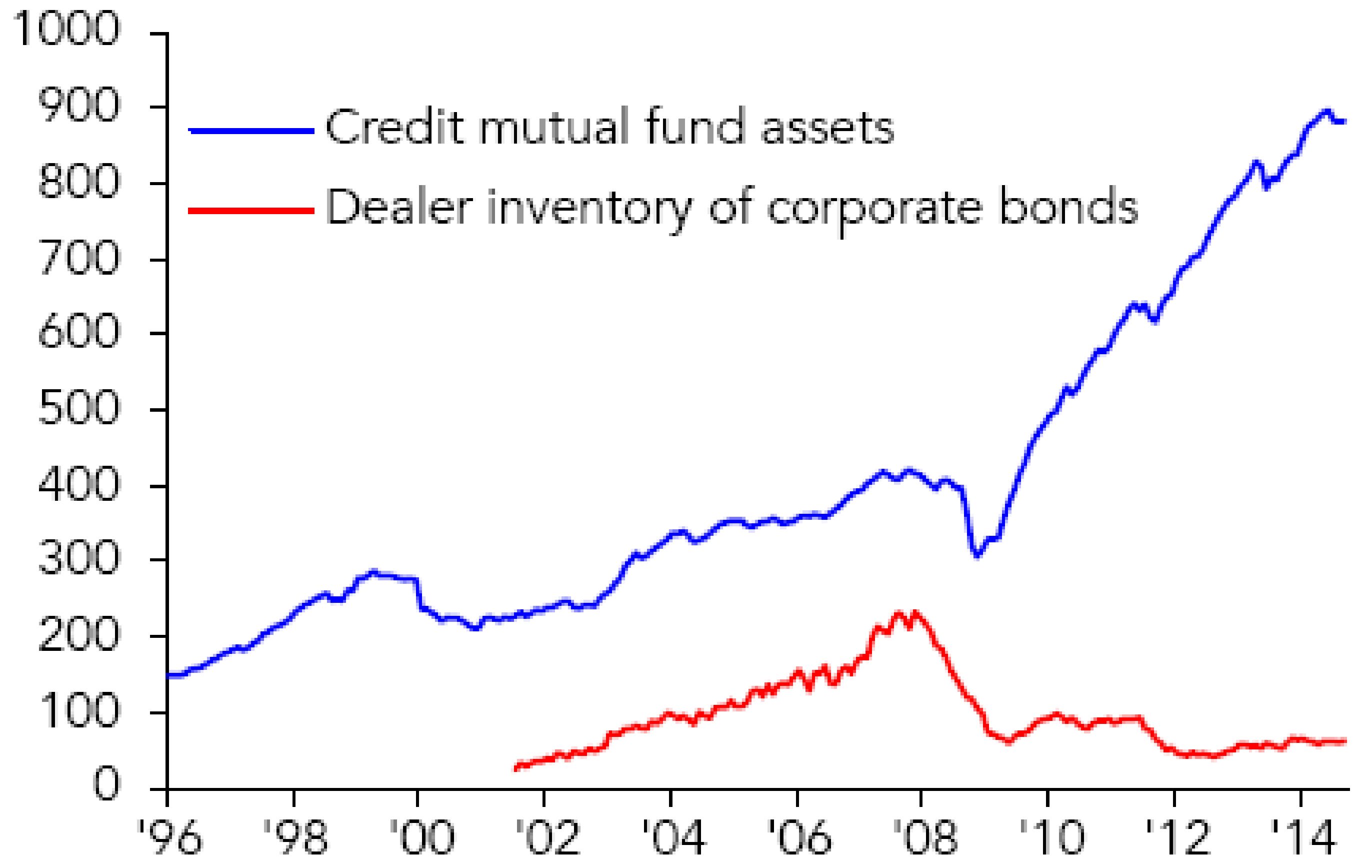
* Excludes self-securitisation

** Includes equity funding

- **RBA:** 'In Australia, systemic risks arising from shadow banking appear limited given its relatively small size and minimal links to the banking system, but it remains an area for regulators to monitor and better understand'.
- Consultation Paper on the clearing of repos
- Money market reform
- Hedge fund collateralisation

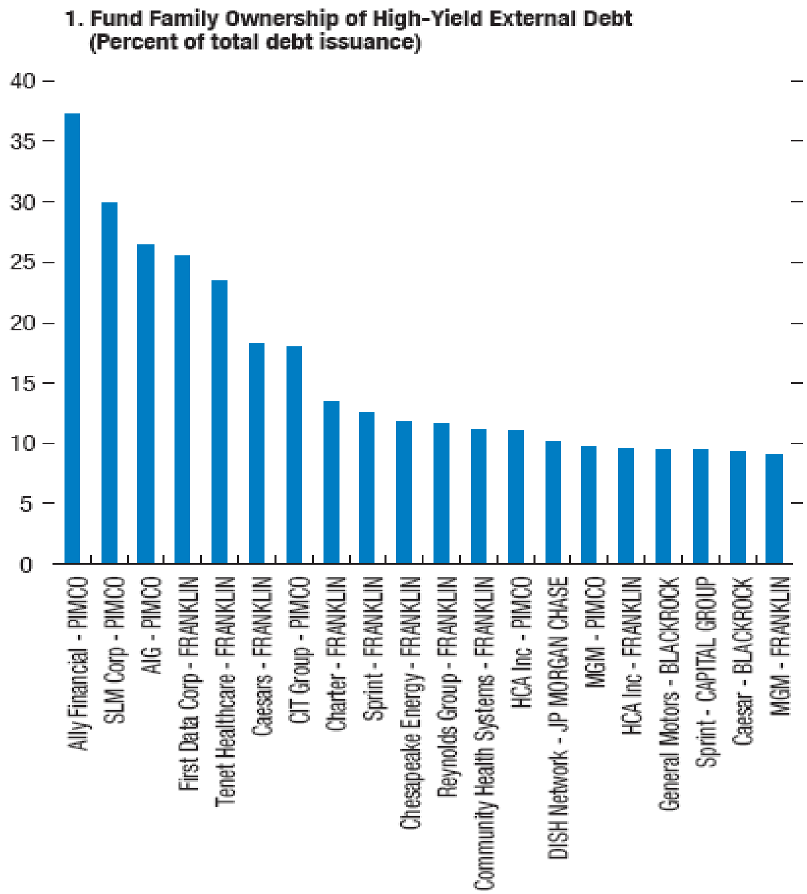
Sources: ABS, APRA, RBA (2015)

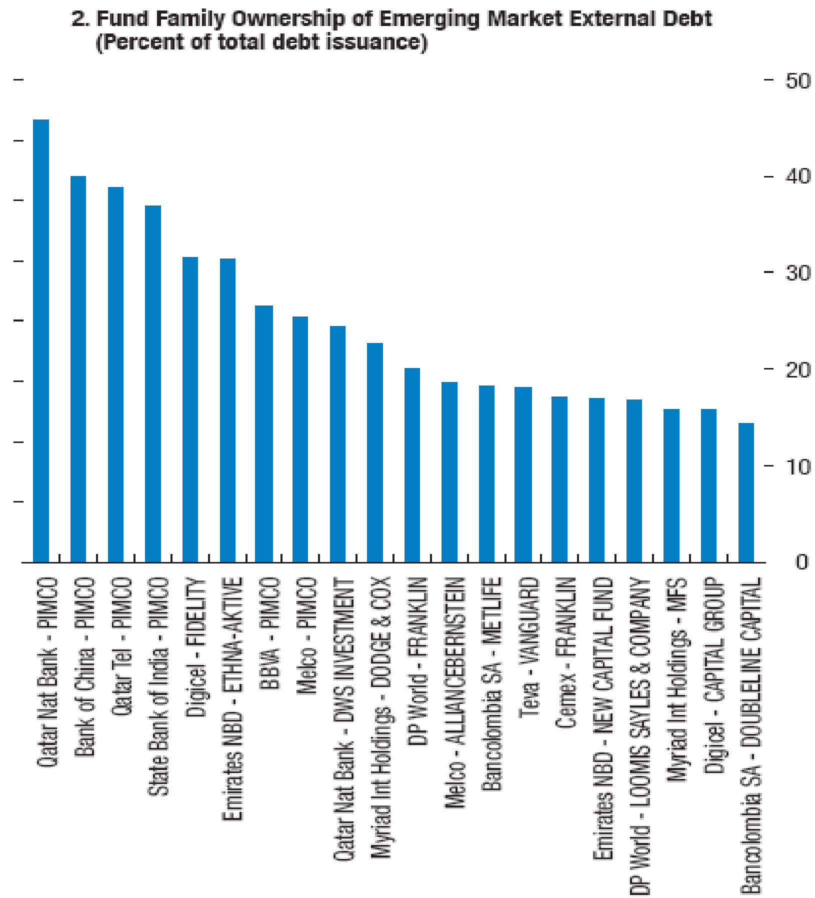
U.S. Credit Mutual Fund Assets and Dealer Corporate Bond Inventories
In USD



Source: IIF (2014)

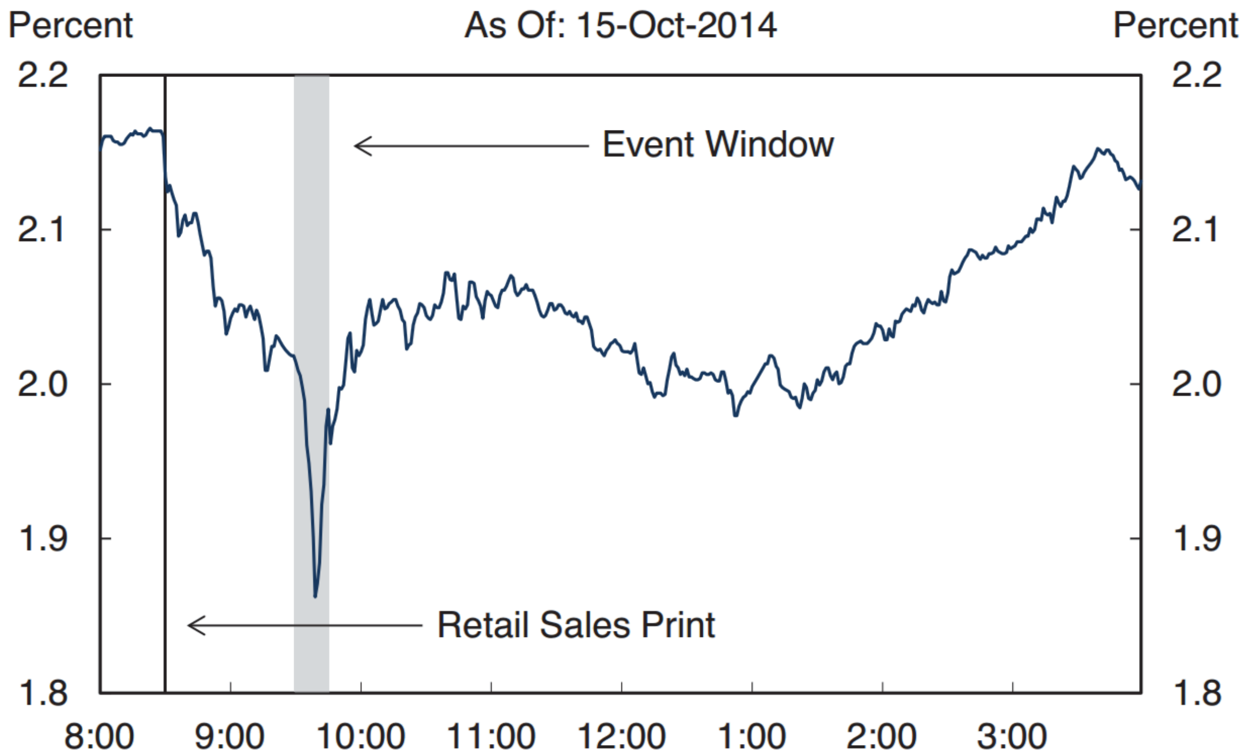
Concentration of Managers and Assets





Source: IMF (2014)

10 Year Treasury Yield on 15 October 2014



While Treasury cash and futures trading volume on the day hit record highs, other measures of liquidity showed signs of deterioration.

Although market activity dropped during the fifteen minute window, transactions 'continued to occur in a highly continuous manner during the window, which stands in contrast to some past episodes of sharp volatility that were marked by highly discontinuous trading'.

(FSOC Annual Report – 2015)

Sources: Bloomberg, L.P. & FSOC Annual Report (2015)

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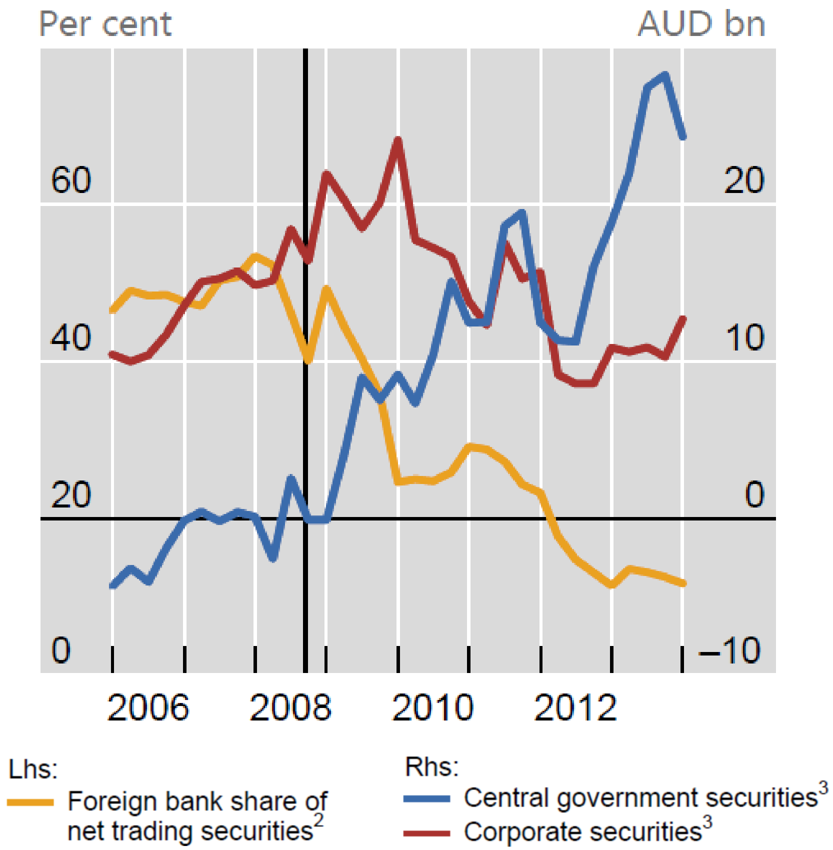
Market Making in Australia

Australian and Foreign Banks Active in Australian Markets



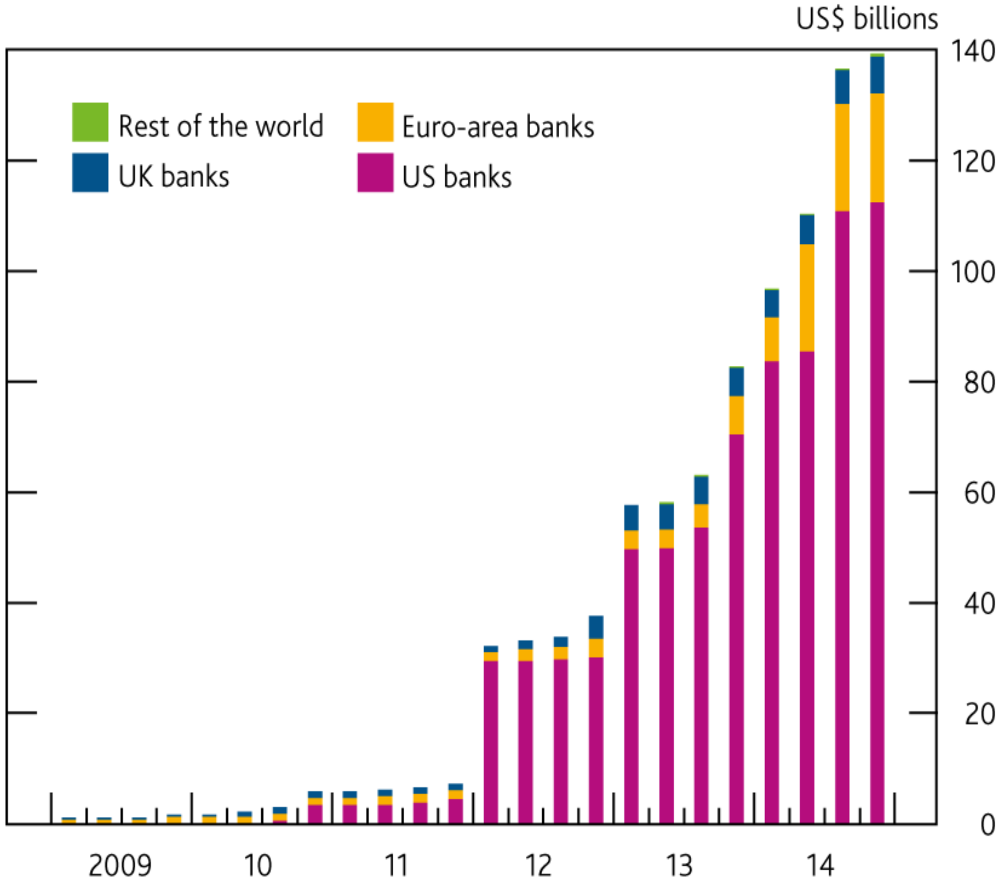
The black vertical lines correspond to 15 September 2008 (Lehman Brothers bankruptcy)

[2] Four-quarter rolling averages. [3] Australian banks' net holdings.

Source: BIS (2014)

‘Good Business Practice’

Cumulative Misconduct Fines Paid by Banks to U.S. Authorities[1]



[1] Includes fines, penalties and redress greater than US$250 million.

Source: Financial Times, The Bank of England (2014)

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111 Town Square Place
14th Floor
Jersey City, New Jersey 07310
U.S.A.
+ 1 201.719.7210

2nd Floor
Bengal Wing
9A Devonshire Square
London, EC2M 4YN
U.K.
+ 44 (0) 20 7397 9630

www.garp.org

Pieter Bierkens, FRM

Executive Director – Rates Regulatory Strategy,
Institutional Banking and Markets
Commonwealth Bank of Australia

Level 24, 201 Sussex St Sydney NSW 2000

P: 02 9303 1818

M: 045 505 2565

E: Pieter.Bierkens@cba.com.au

Pieter Bierkens is an Executive Director at The Commonwealth Bank of Australia (CBA), where he is responsible for establishing, developing, and articulating the CBA's strategic views on global regulation to its internal stakeholders and clients. Based in CBA's head office since February of 2014, Mr. Bierkens previously spent eleven years with CBA in New York in a variety of roles. Most recently, Mr. Bierkens was Head of Markets Americas, Acting Head of CBA Americas, and Chief Executive Officer of CBA's U.S.-registered broker dealer.

Prior to CBA, Mr. Bierkens worked ten years in London and New York, advising institutional investors on global fixed income markets.

In 2009, Mr. Bierkens earned his Financial Risk Manager (FRM®) from the Global Association of Risk Professionals.

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