

Managing Risk in a Changing Environment



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September 14, 2010

Managing Risks in a Changing Environment

Coverage:

- Why manage risks?
- GFC reflections
- Managing risks at the ASX

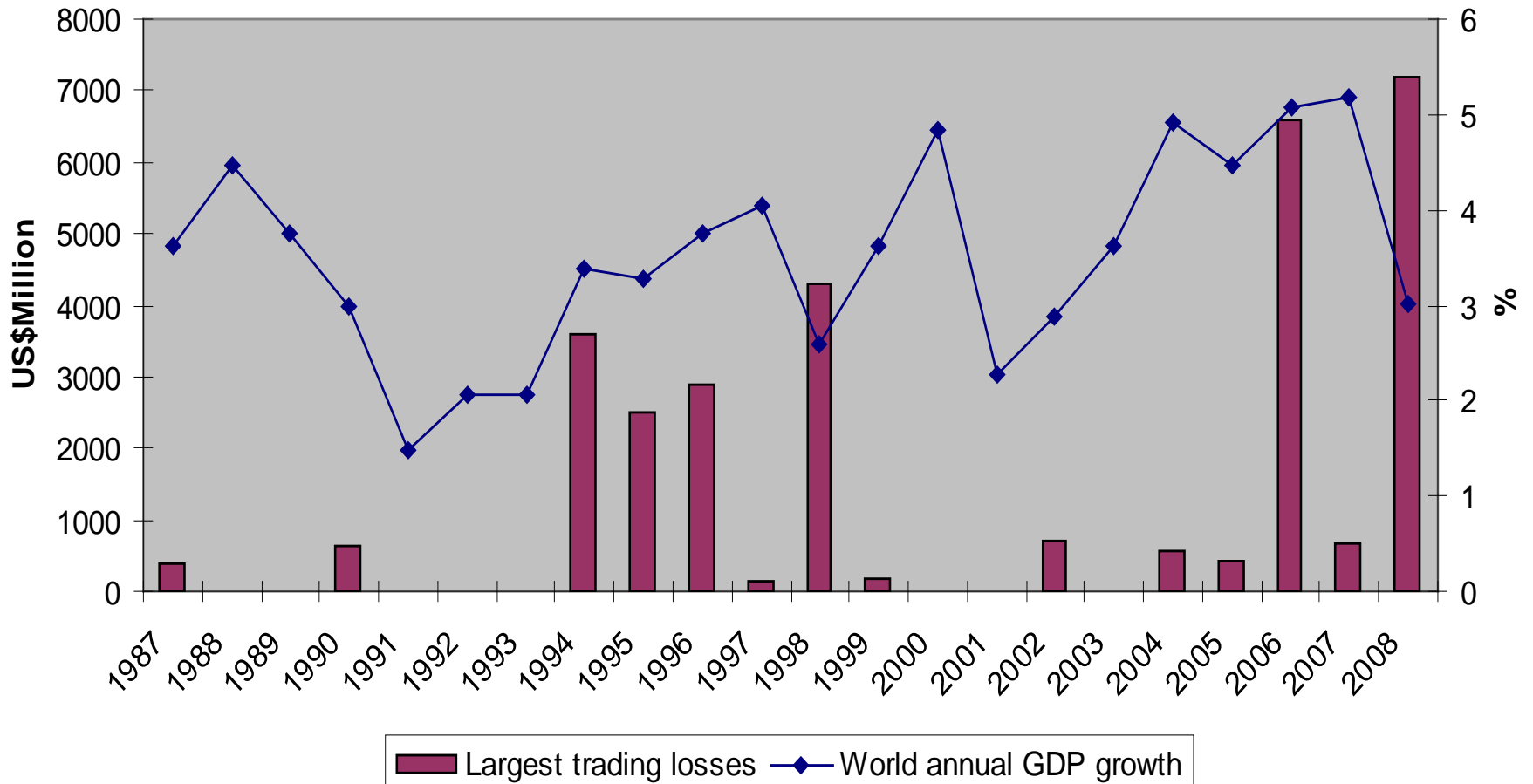
Earnings versus Losses

Top 12 Largest Annual Corporate Profits and losses



Distribution of Trading Losses

Top 20 Largest Trading Losses in History



GFC Reflections

Observation #1 – Understand the limitations in your numbers.

Quantitative modelling including stress testing can be an extremely valuable exercise but the results are only as good as the data and assumptions underlying them. Knowing their limitations is fundamental to good risk management

Chart 1: One Day Price Change in All Ordinaries Index May 2007 to August 2010

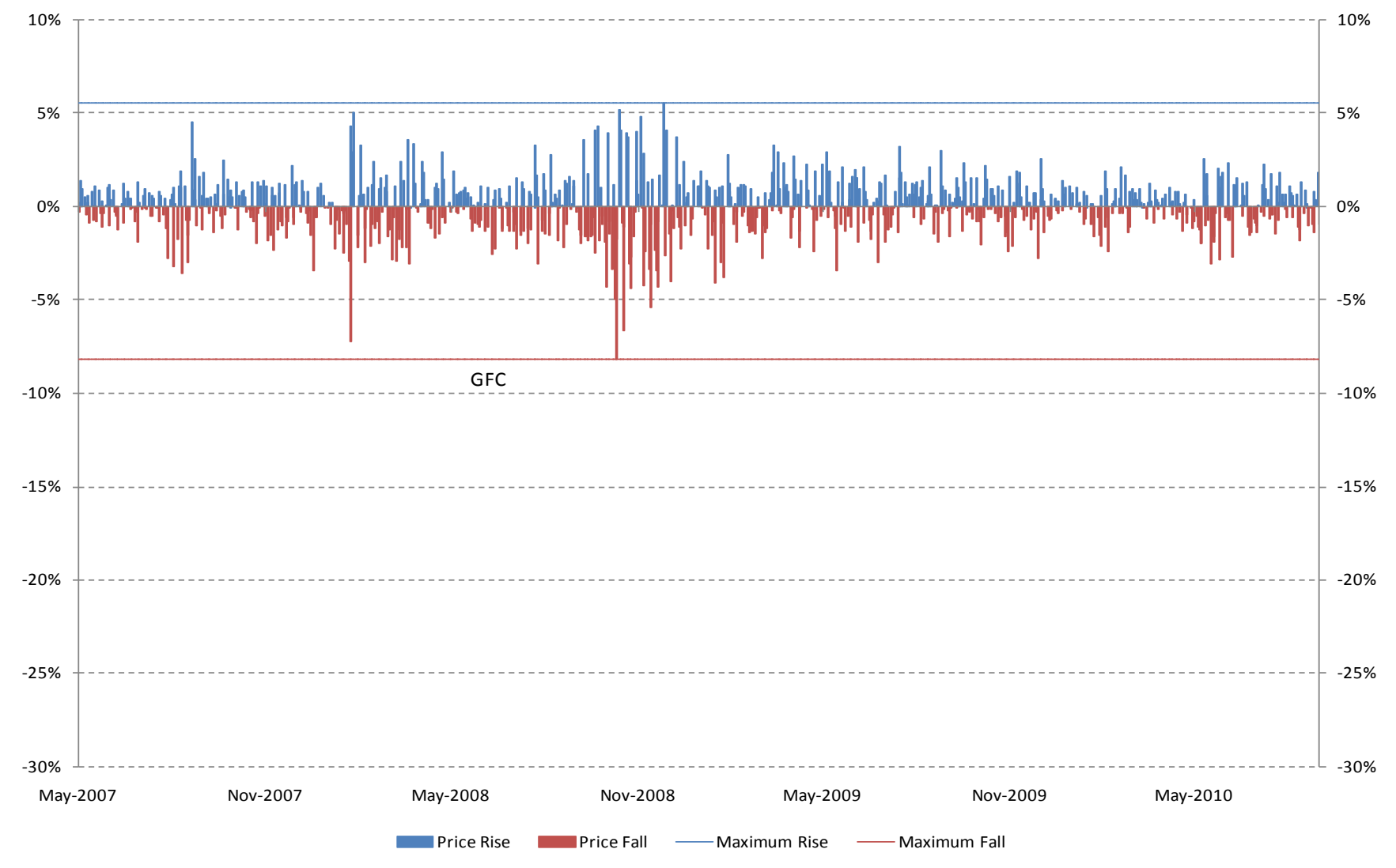


Chart 2: One Day Price Change in All Ordinaries Index May 2002 to August 2010. Maximum Rise and Fall May 2002 to May 2007

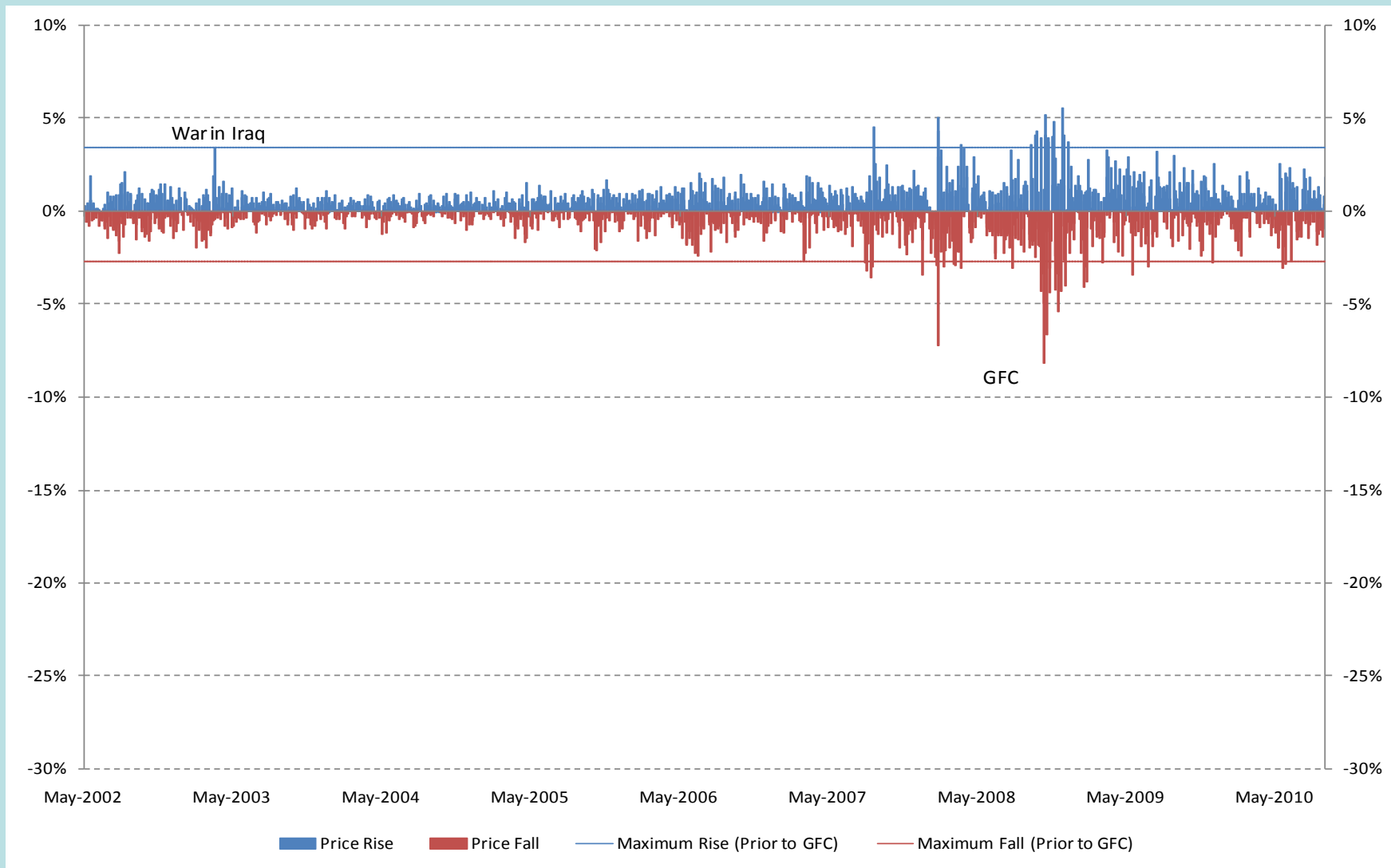


Chart 3: One Day Price Change in All Ordinaries Index May 1999 to August 2010. Maximum Rise and Fall May 1999 to May 2007

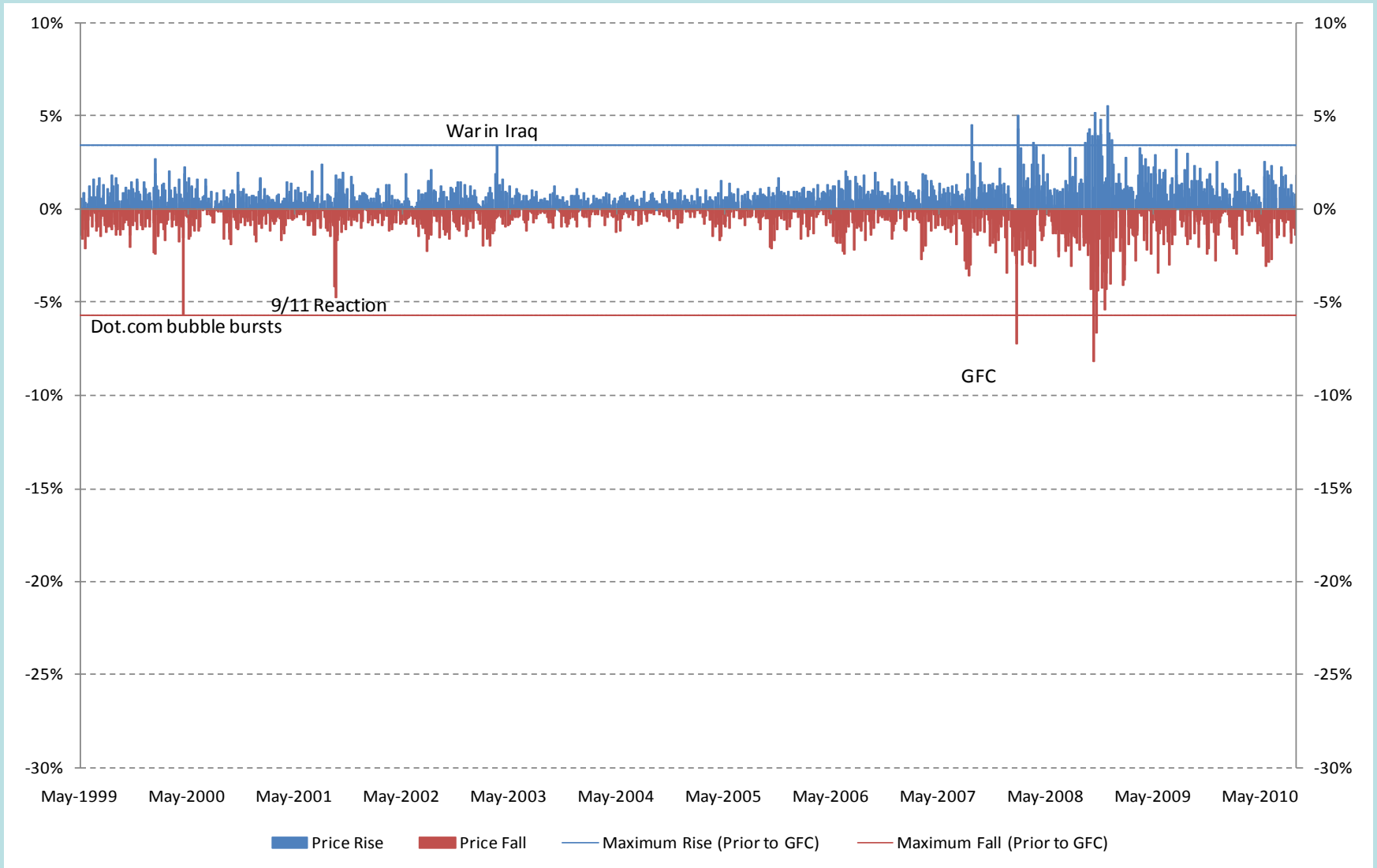


Chart 4: One Day Price Change in All Ordinaries Index May 1997 to August 2010. Maximum Rise and Fall May 1997 to May 2007.

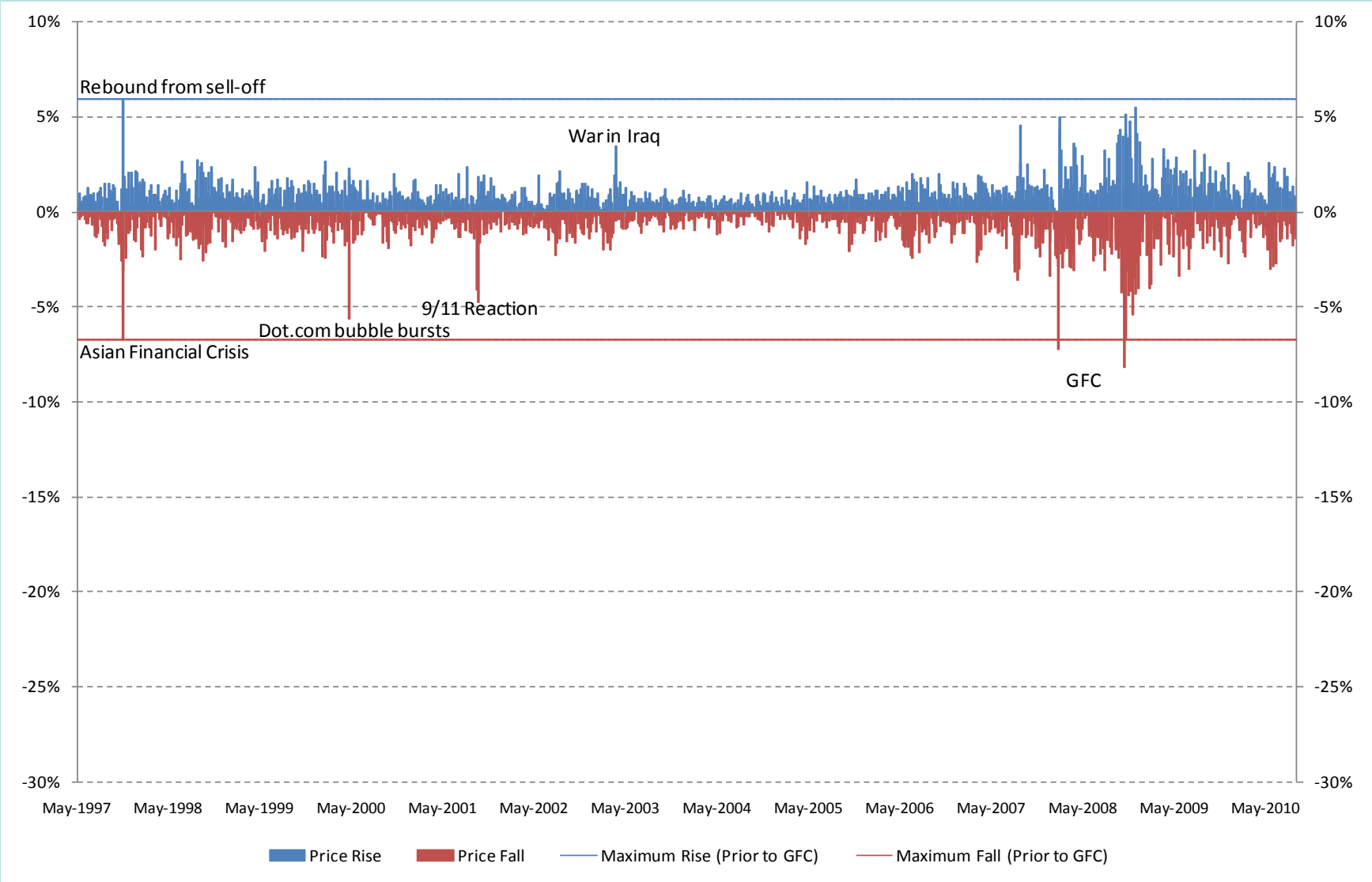


Chart 5: One Day Price Change in All Ordinaries Index May 1985 to August 2010. Maximum Rise and Fall May 1985 to May 2007.

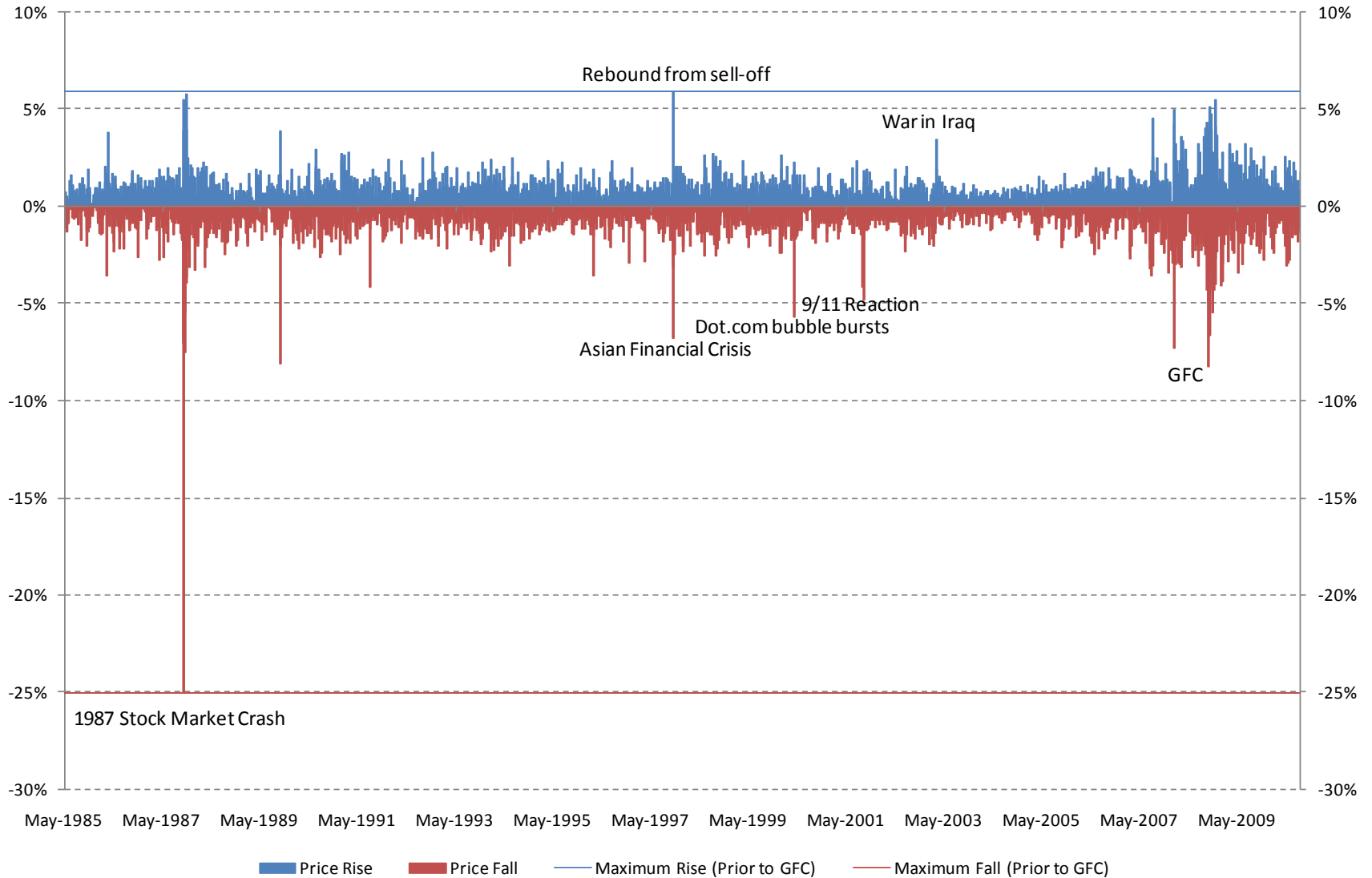
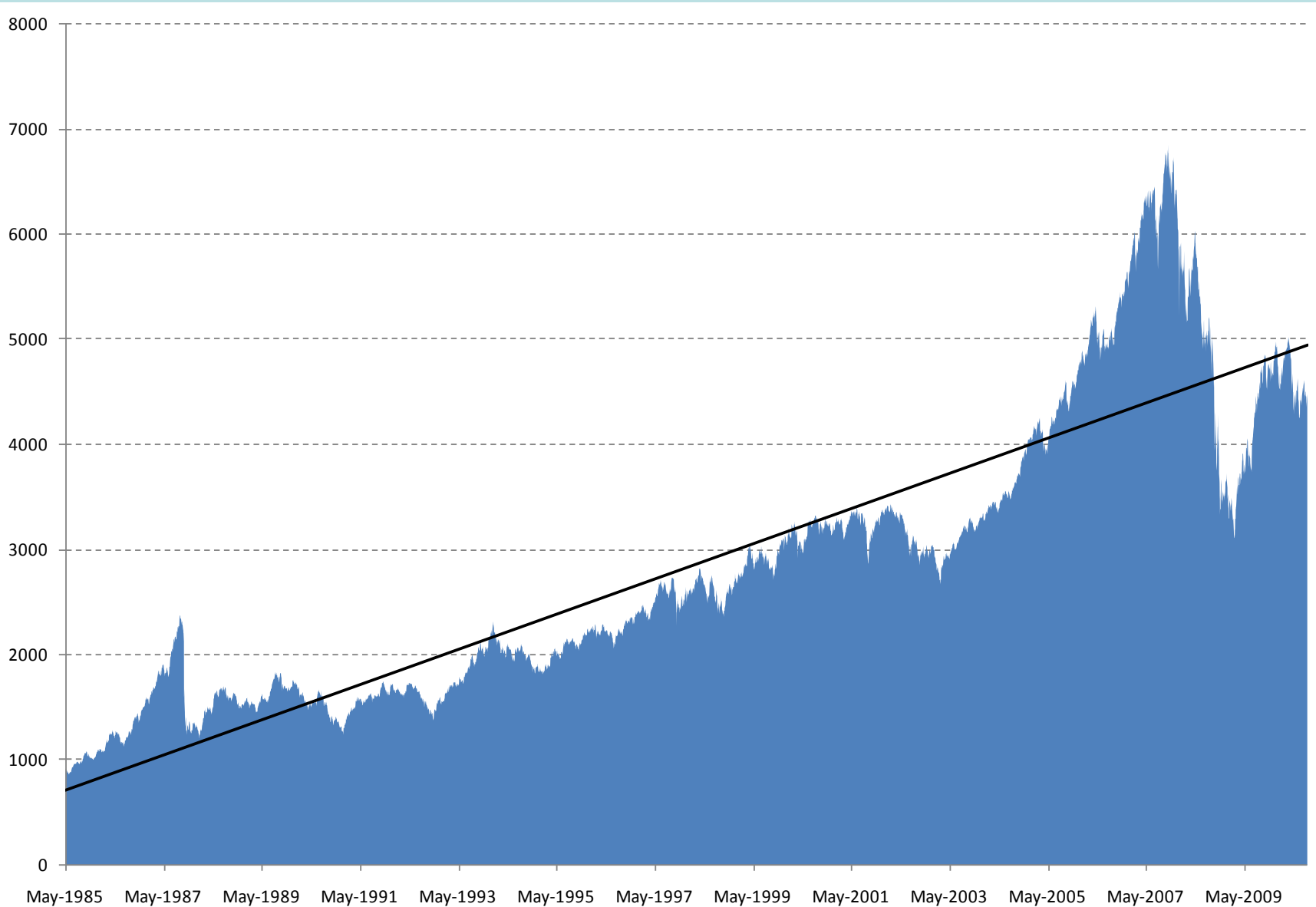


Chart 6: Closing Price All Ordinaries Index May 1985 to August 2010



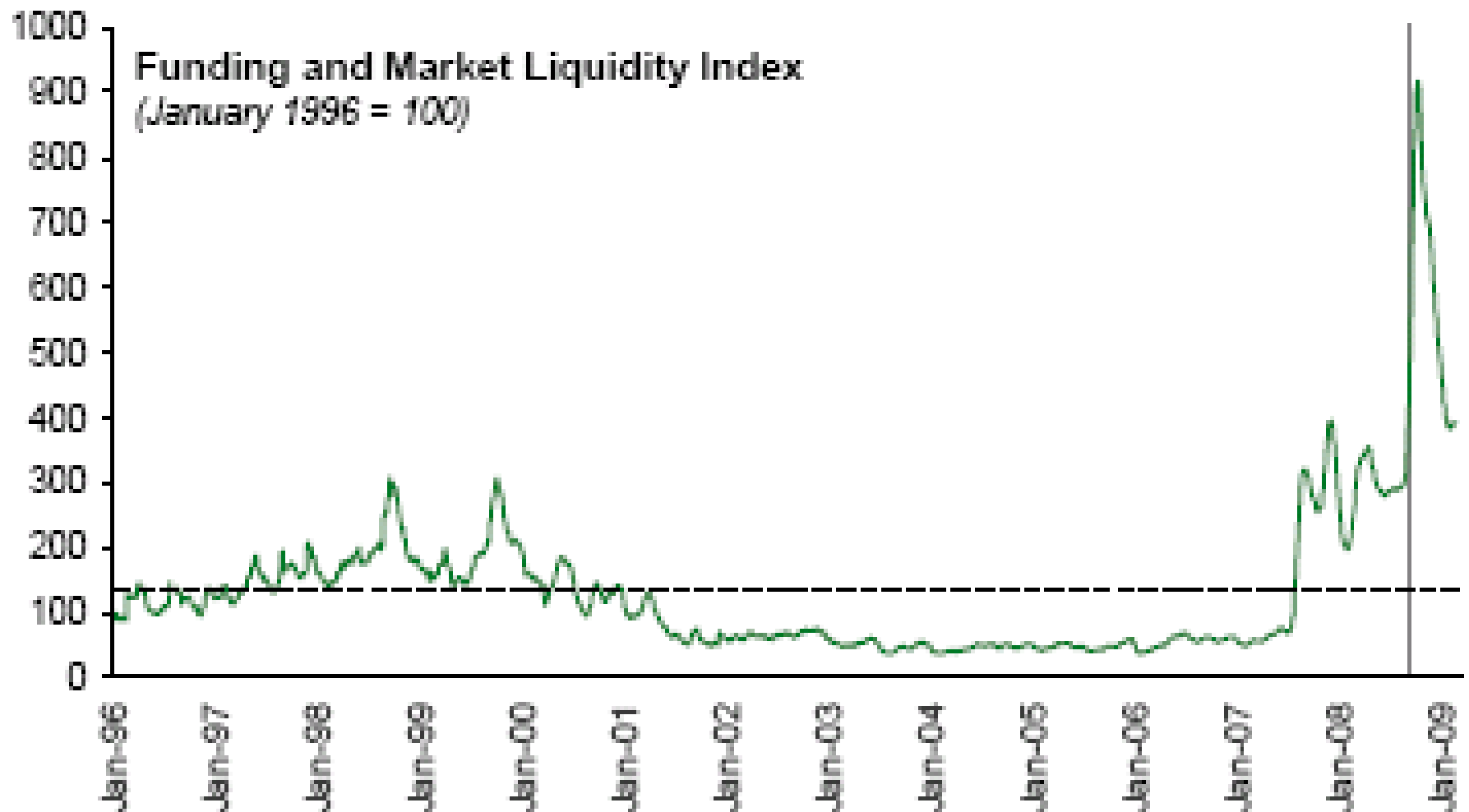
GFC Reflections

Observation #2 – The importance of stress based liquidity testing (market and funding liquidity) was given new emphasis.

“Finally, and perhaps most importantly, there have been shortcomings regarding the full appreciation of the tight linkages and interdependencies between capital adequacy and liquidity – both market liquidity and funding liquidity.”

Corrigan Report "Containing Systemic Risk: The Road to Reform." August 2008.

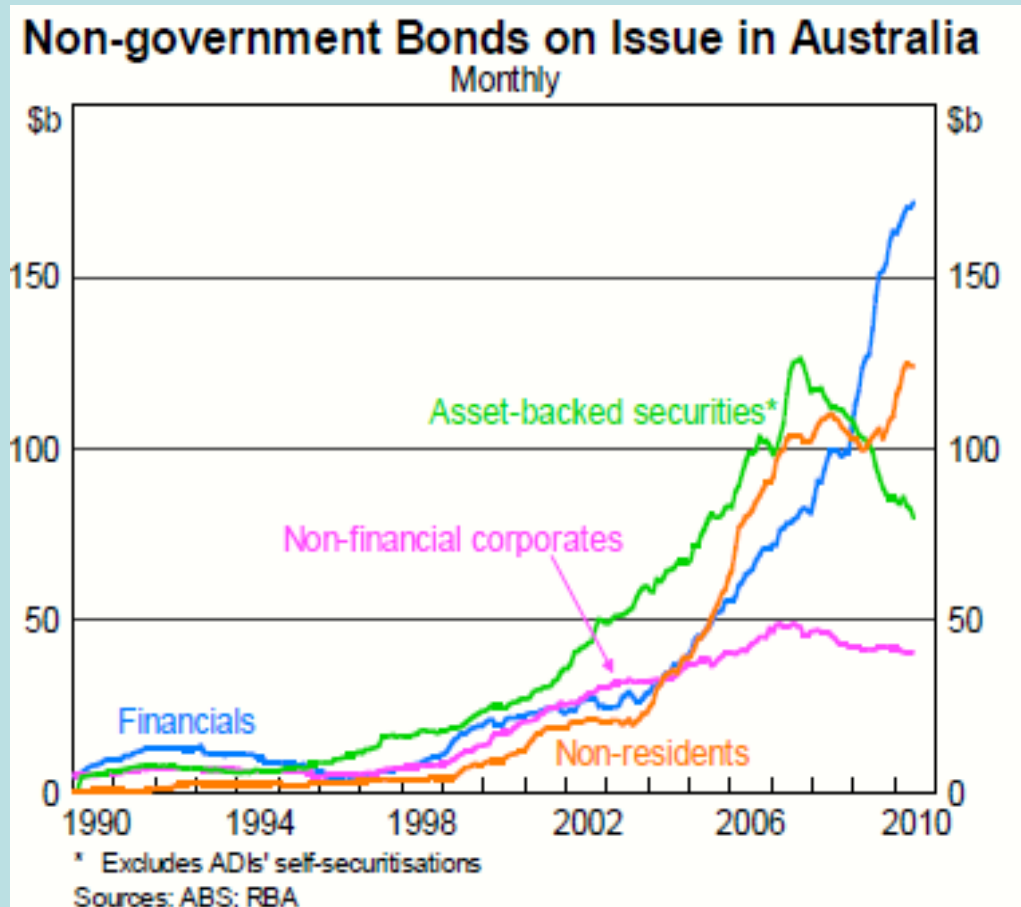
Liquidity risk impact Chart 1



Sources: Bloomberg L.P.; and IMF staff estimates.

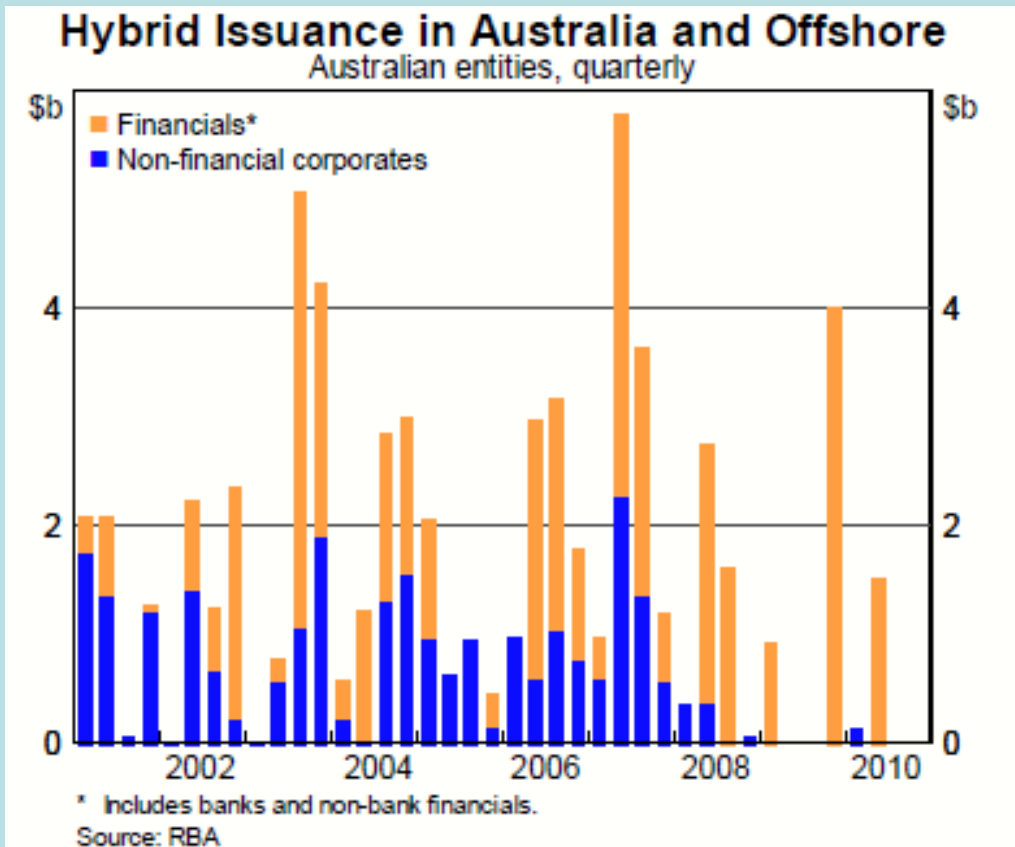
Note: Based on the spread between yields on government securities and interbank rates, spread between term and overnight interbank rates, currency bid-ask spreads, and daily return-to-volume ratios of equity markets. A higher value indicates tighter market liquidity conditions.

Liquidity Risk Impact Chart 2



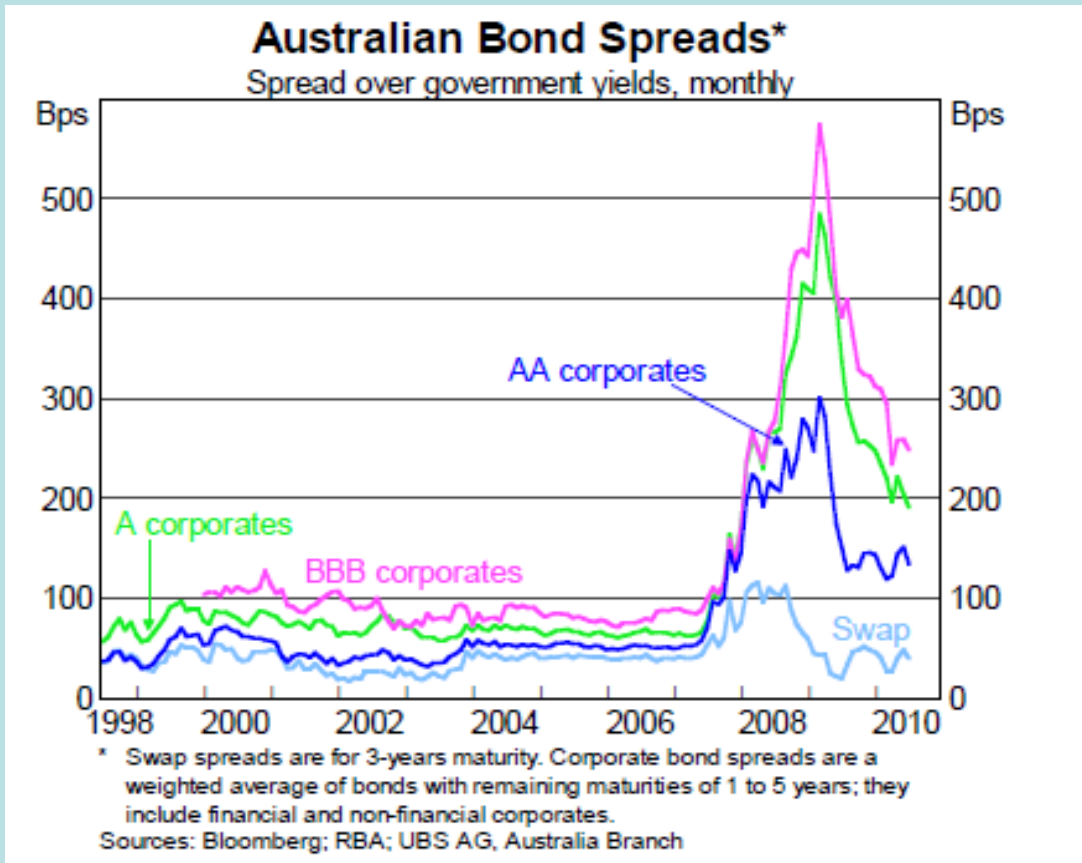
- Asset portfolios run up (1998 – 2007) using Bond and securitised funding.
- These funding sources collapsed (2007 – 2009)
- Government guarantee necessary to source domestic and offshore funding

Liquidity Risk Impact Chart 3



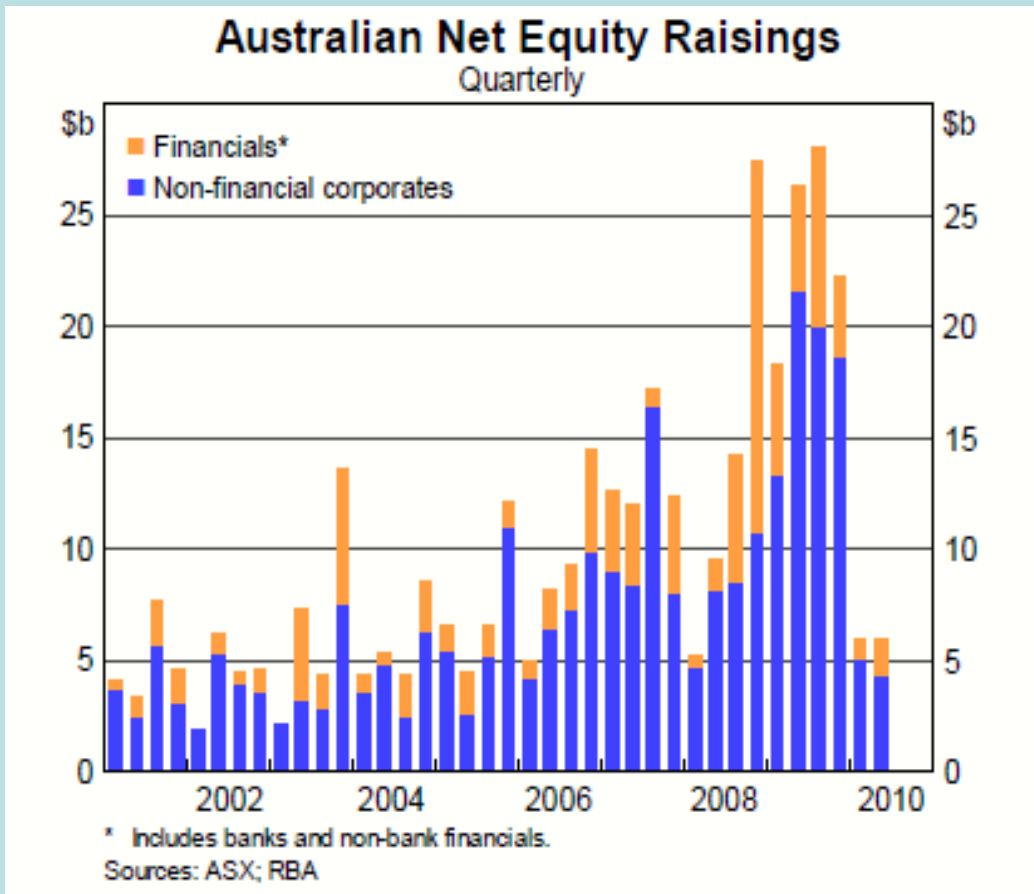
- Hybrid market also collapsed as a funding source

Liquidity Risk Impact Chart 4



- As funding sources dried up, credit spreads blew out

Liquidity Risk Impact Chart 5



- Companies had to access the Equity market to restore both capital and liquidity levels

Corrigan Report Liquidity recommendation

- Large integrated financial intermediaries should, on a regular basis, conduct liquidity stress tests to measure their Maximum Liquidity Outflow (MLO)
- Stress scenarios, both for purposes of stress testing and calculation of MLO, should:
 - Include both firm-specific and systemic events and their overlapping nature.
 - Consider extreme shocks as well as progressive events.
 - Take into account implicit as well as explicit risks and potential damage of a firm's actions to its franchise.

GFC Reflections

Observation #3 – Consider Velocity

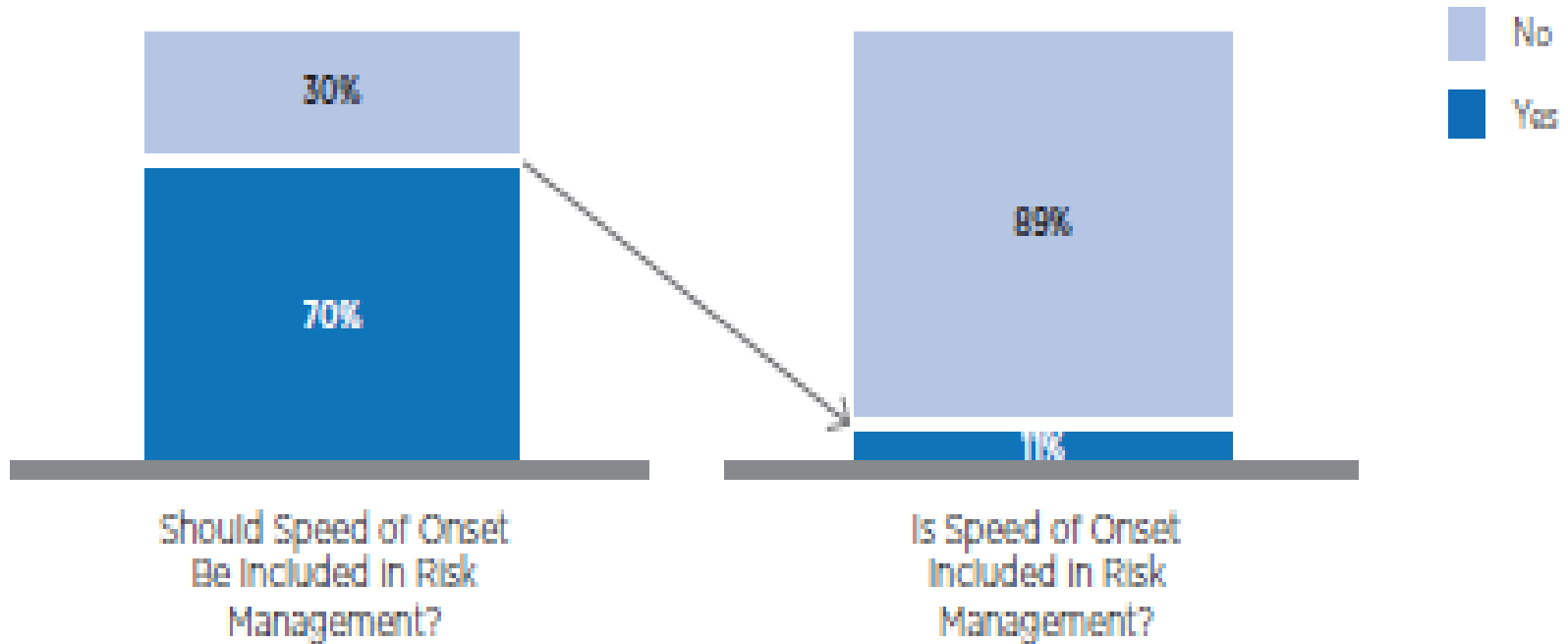
“Traditional risk assessments that prioritize risk on probability and impact are outpaced by the speed at which risks move throughout the organization. Companies should consider the speed at which risks will impact the organisation as a third category of assessment when prioritising and escalating risks across the organisation”

*Corporate Executive Board “The Risk Management Value Blueprint”
2010.*

Consider Velocity Chart 1

Not Walking the Talk

Percentage of Executives That Believe Speed of Onset Should Be Part of Risk Management Versus Prevalence of Inclusion

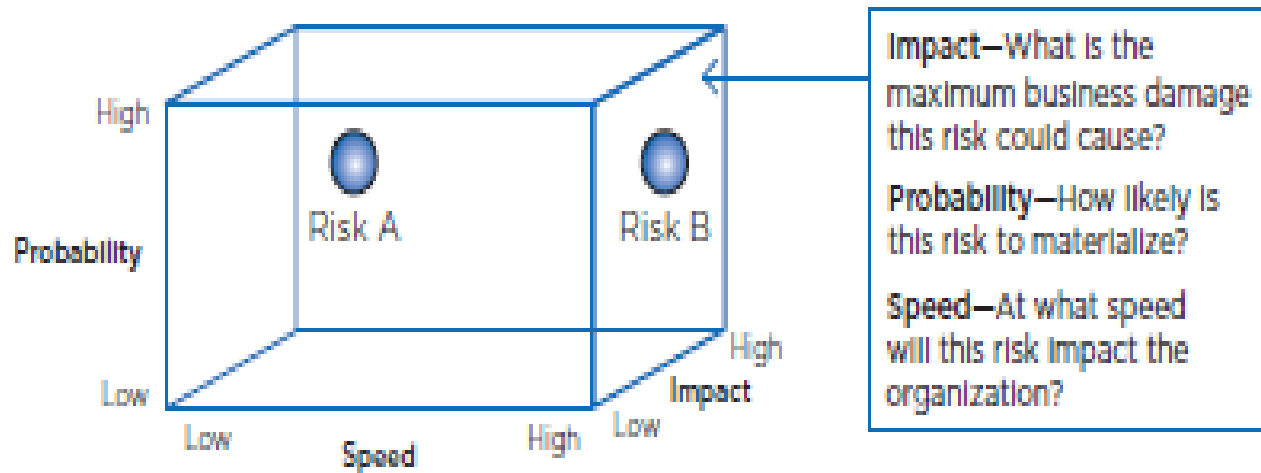


Source: Deloitte, "What It Means to Be Risk Intelligent" (2009).

Consider Velocity Chart 2

Risk Prioritization Matrix Incorporating Speed of Onset

Illustrative



RISK A—High Severity and Likelihood but Low Speed of Onset

Increased employee attrition will have a significant impact on the organization and is very likely to happen. The risk is forecast to materialize across the course of the next 18 months.

RISK B—High Severity and Likelihood and High Speed of Onset

A new competitor will have a significant impact on the organization and is very likely to happen. The risk is forecast to materialize within the next two months when the new competitor begins trading.

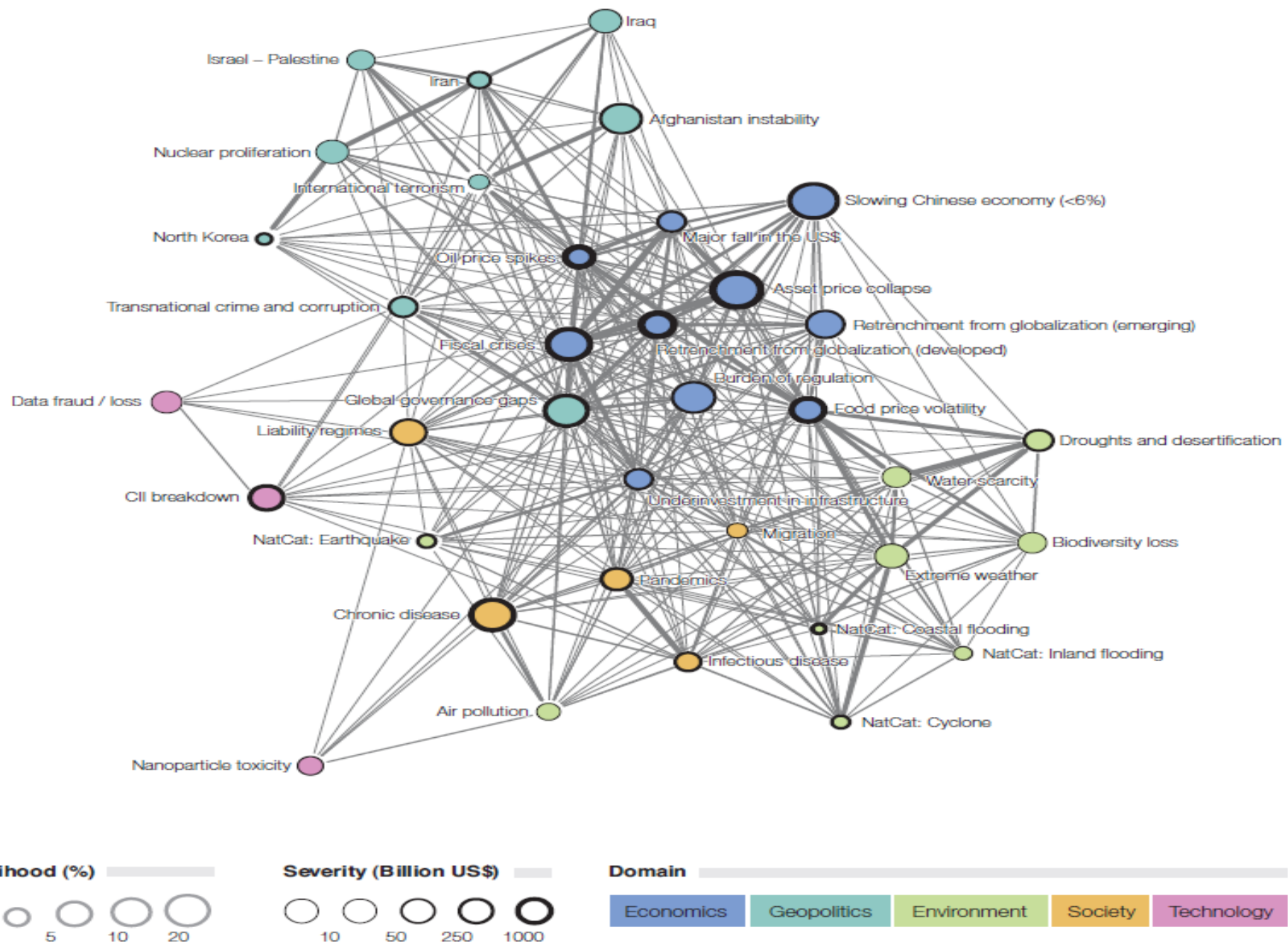
GFC Reflections

Observation #4 – Interconnections magnify risk impact

“What has changed dramatically is the level of recognition that global risks, like the world, are now tightly interconnected and shocks and vulnerabilities are truly global, even if impact and response can still differ at the “local” level”.

World Economic Forum Risk Report January 2010.

Figure 14 Risks Interconnection Map (RIM) 2010



Source: World Economic Forum 2010

GFC Reflections Summary

1. Need to understand the limitations in your numbers.
2. Emphasised importance of liquidity stress testing
3. To “Likelihood” and “Impact” add “Velocity”
4. Interconnections magnify risk impact
5. Get the right balance between numbers and judgement
6. Don't discount the impossible

The Corrigan Report

- August 2008 - The Counterparty Risk Management Policy Group III released its report entitled: "Containing Systemic Risk: The Road to Reform." (The Corrigan Report <http://www.crmpolicygroup.org>)
- The Report laid out five "Core Precepts," which are relatively simple, readily understandable and forward-looking standards upon which the management of large integrated financial intermediaries must rest. The precepts are:
 - Precept I: The Basics of Corporate Governance
 - Precept II: The Basics of Risk Monitoring
 - Precept III: The Basics of Estimating Risk Appetite
 - Precept IV: Focusing on Contagion
 - Precept V: Enhanced Oversight

Precept I: The Basics of Corporate Governance

- “...all large integrated financial intermediaries must examine their framework of corporate governance in order to ensure that it is fostering the incentives that will properly balance commercial success and disciplined behaviour over the cycle while ensuring the true decision making independence of key control personnel from business unit personnel.”

At ASX;

- Board and Audit and RISK Committee with non-Executive Directors
- Clearing and Settlement Boards with non-Executive Directors
- Management committees – Executive Committee, Capital and Liquidity Committee, Enterprise Risk Management Committee, Enterprise Project Steering Committee
- CRO is Group Executive reporting direct to the CEO
- Separate Risk function comprising Clearing Risk Policy, Clearing Risk Management, Enterprise risk management, internal audit and portfolio risk management.

Precept II: The Basics of Risk Monitoring

- “...all large integrated financial intermediaries must have, or be developing, the capacity (1) to monitor risk concentrations to asset classes as well as estimated exposures, both gross and net, to all counterparties in a matter of hours and (2) to provide effective and coherent reports to institutional senior management regarding such exposures to high-risk counterparties.”

At ASX:

Best Illustrated by our approach to Clearing Risk Management

- *“The operator of a CCP must ensure, through the use of stress testing, that in all but the most extreme circumstances, it will be able to meet its obligations to participants in the event that the participant with the largest obligations is unable to meet them.”*
(RBA Financial Stability Standard for CCPs - guidance)
- Counterparty monitoring, capital and liquidity stress testing, collateral management
- Cash margin investment mandate
- Daily, monthly and quarterly reporting to management/Board.

Precept III: The Basics of Estimating Risk Appetite

- “...all large integrated financial intermediaries must periodically conduct comprehensive exercises aimed at estimating risk appetite. The results of such exercises should be shared with the highest level of management, the board of directors and the institution’s primary supervisor.”

At ASX;

- Risk Appetite agreed with Board via Audit and Risk Committee and Enterprise Risk Management Committee
- Quantitative and qualitative criteria
- Warnings if assessed risk exposures at or exceed risk appetite

Precept IV: Focusing on Contagion

- “Looking to the future...all large integrated financial intermediaries must engage in a periodic process of systemic “brainstorming” aimed at identifying potential contagion “hot spots” and analyzing how such “hot spots” might play out in the future.”

At ASX;

- Enterprise Risk Management Framework
- Quarterly Bottoms up and Top down approach
- Four risk categories (Strategic, Financial, Legal and Regulatory, Operational), 19 sub-categories.
- Bottoms up – self assessment, compliance, audit, internal and external incidents/issues, key risk indicators
- Tops down – Full Executive Committee review of Enterprise Risk assessment with focus on validating bottoms up and using judgement to identify emerging “Hot Spots”.
- Actions where assessed exposure at or exceeds risk appetite.

Precept V: Enhanced Oversight

- “The Policy Group recommends arrangements whereby the highest level officials from primary supervisory bodies should meet at least annually with the boards of directors of large integrated financial intermediaries...this recommendation may have to be adapted to accommodate local legal and cultural considerations.”

At ASX;

- Regulated by RBA and ASIC
- Annual regulatory assessments
- Quarterly Executive Liaison meetings and regular dialogue
- Periodic meeting with Board of Directors

Questions?