

## Australian Business Economists



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*Where Are We In The Financial Crisis  
& Reform Process? July 2010*

Thursday 15 July 2010 Swissotel Sydney



## Where Are We In The Financial Crisis & Reform Process? July 2010

**Adrian Blundell-Wignall**  
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### The Titanic

- Speeding to fast.
- A badly made ship, with no fully watertight compartments.
- Not enough life boats.
- Too big to sink



## Hallmarks of the Crisis

- Its what banks do not how big they are.
- Contagion risk.
- Counterparty risk.

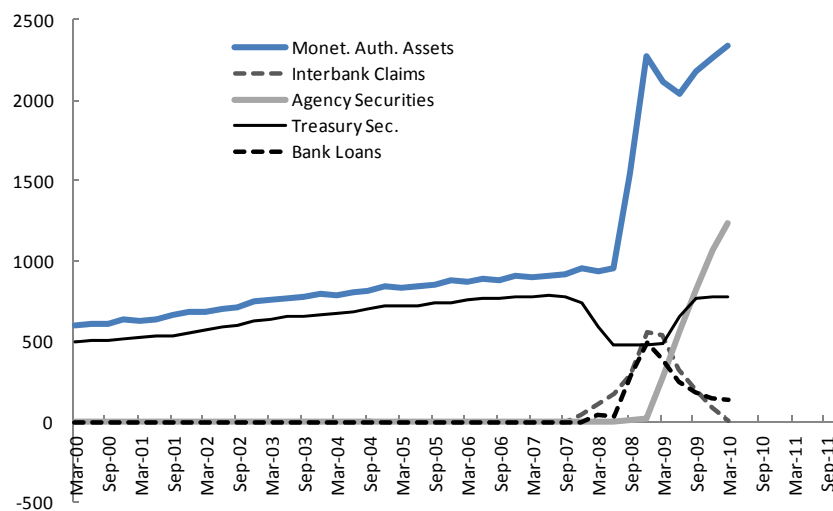


## The Rescue

- Worst fiscal deficits since the War.
- Zero Rates/quant easing.
- Taxpayer transfers & losses.
- Extraordinary guarantees.
- Fed & ECB balance sheets take the toxic assets.
- Nationalisation— Fannie Freddie.



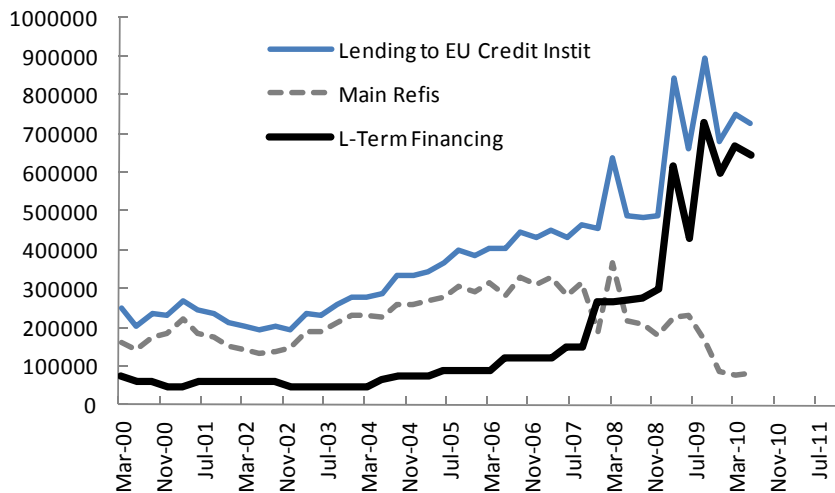
Fig. 1: Federal Reserve Balance Sheet: Prayers Answered



Source: , OECD, Datastream. .



Fig. 2: ECB Balance Sheet—Prayers Answered



Source: , OECD, Datastream. .



### The hazards to negotiate

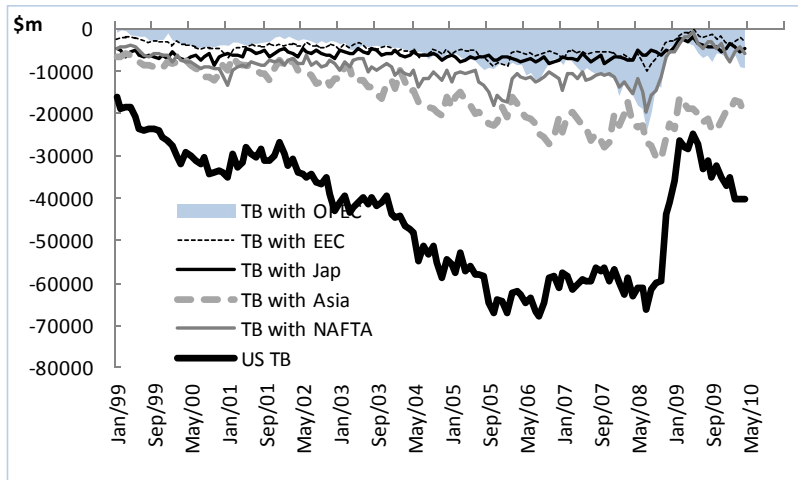
- China & the trade balance.
- Hidden losses not dealt with in accounting & SPV's.
- The Greek situation and the Fiscal more generally.
- The recession and PHASE 2 credit cycle to hit ordinary commercial banks. Fannie & Freddie?
- Interest rate risk & the \$.
- Central bank balance sheets where sits much of the problem assets.
- Credit is not accommodating the cycle;
- The new capital rules have yet to come into play.
- China slump??

### • There are so many icebergs in front of this Titanic





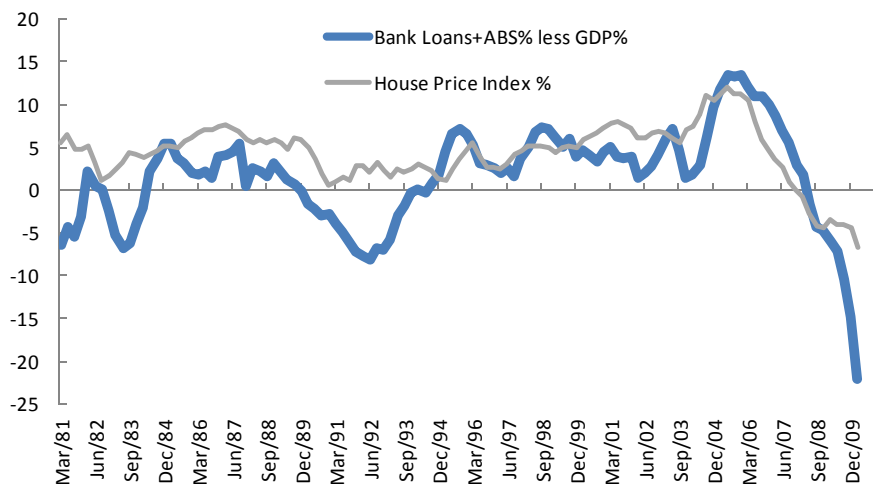
Fig. 3: US Monthly Trade Balance, Bilateral Comparisons



Source: Datastream, OECD



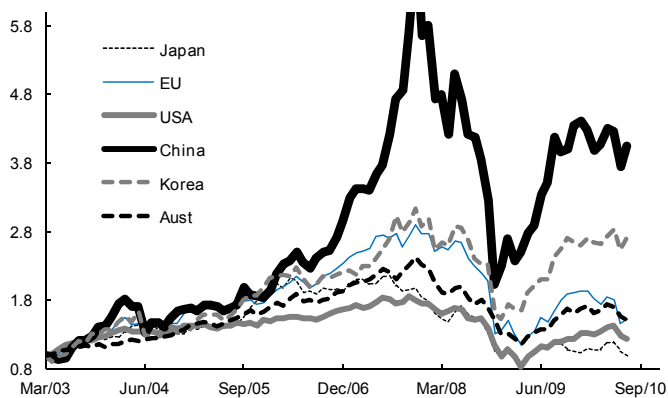
Fig. 4: US Loans + Securitisation, HPI



Source: , OECD, Datastream. .



Fig. 5: Stock Markets: Monetary Policy Too Easy



Source: Datastream, OECD



## The Europe Issues

- Sovereign debt.
- Bank exposure to problem countries.
- The SPV.
- The ECB.

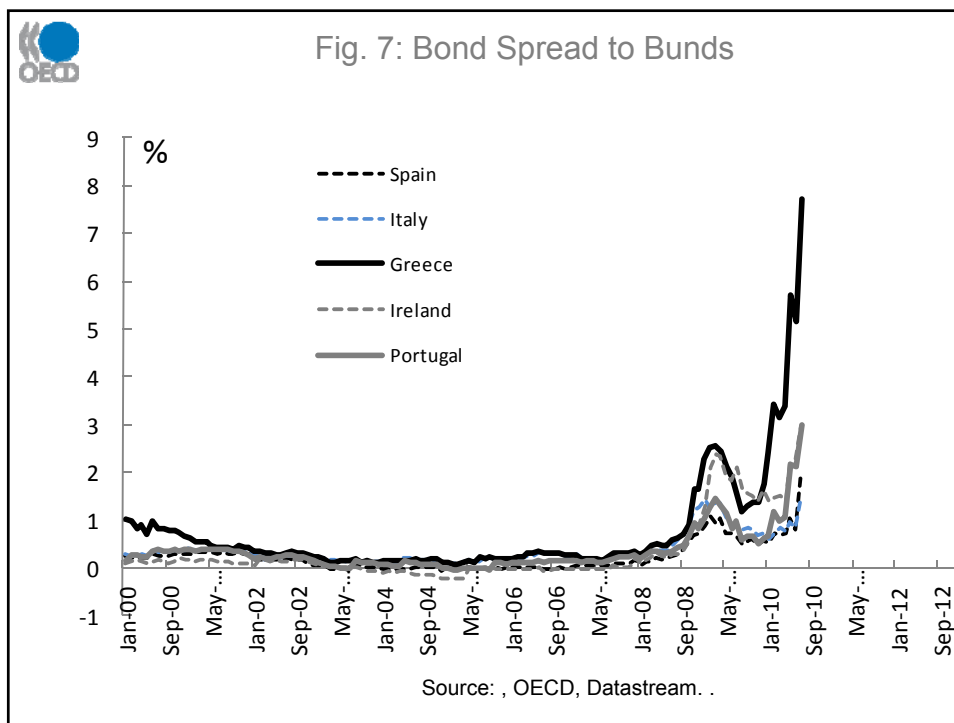
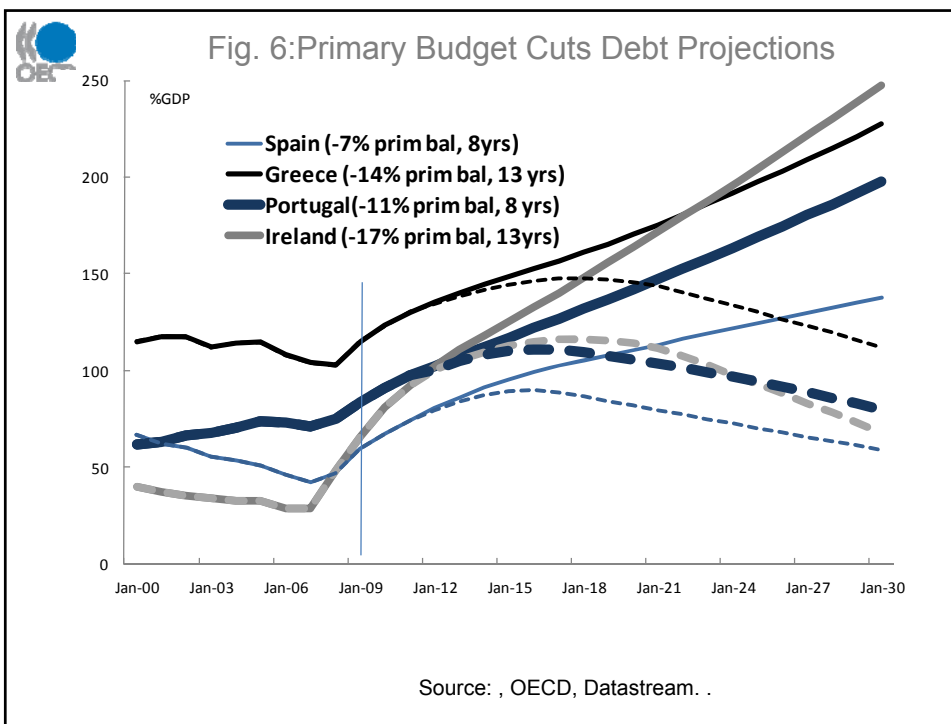




Fig. 8: Sovereign Debt Became a Europe-wide Issue; it Did Not Need to be!

| Examples of Greek Default Policies to Stabilise the Debt |                   |                               |                                     |               |                                     |               |
|--|-------------------|-------------------------------|-------------------------------------|---------------|-------------------------------------|---------------|
| YEAR   | Prim Def.<br>%GDP | Int Rate minus<br>Growth Rate | Debt Default<br>2014 -19%<br>Euro m | Debt/GDP<br>% | Debt Default<br>2014 -30%<br>Euro m | Debt/GDP<br>% |
| 2009   | -8.81             | 4.64                          | 282556                              | 119           | 282556                              | 119           |
| 2010   | -2.72             | 6.18                          | 300426                              | 129           | 300426                              | 129           |
| 2011   | -1.36             | 4.78                          | 320692                              | 139           | 320692                              | 139           |
| 2012   | -2.00             | 1.13                          | 339140                              | 142           | 339140                              | 142           |
| 2013   | 0.00              | 0.53                          | 363061                              | 143           | 363061                              | 143           |
| 2014   | 1.00              | 1.13                          | 301219                              | 116           | 259961                              | 100           |
| 2015   | 2.00              | 1.23                          | 314707                              | 116           | 271145                              | 100           |
| 2016   | 3.00              | 1.33                          | 328851                              | 117           | 282812                              | 100           |
| 2017   | 4.00              | 1.43                          | 343687                              | 117           | 294981                              | 100           |
| 2018   | 4.00              | 1.53                          | 359252                              | 117           | 307674                              | 100           |
| 2019   | 4.00              | 1.63                          | 375587                              | 117           | 320914                              | 100           |
| 2020   | 4.00              | 1.73                          | 392735                              | 118           | 334725                              | 100           |

Source: , OECD, Datastream. .



Fig. 9: Bank Exposures to the Danger Countries: Who Are They?

| vs a vis:    | BIS REPORTING BANKS CLAIMS (millions USD) |               |              |               |               |               |              |                |
|--------------|---|---------------|--------------|---------------|---------------|---------------|--------------|----------------|
|              | France                                    | Germany       | Switzerland  | USA           | UK            | Netherlands   | Belgium      | EU Banks       |
| Spain        | 219636                                    | 237983        | 18263        | 52696         | 114139        | 119730        | 21524        | 851069         |
| Ireland      | 60326                                     | 183757        | 16526        | 58553         | 187506        | 30824         | 60769        | 634560         |
| Greece       | 75172                                     | 45003         | 3642         | 16647         | 15089         | 11892         | 3624         | 188598         |
| Portugal     | 44739                                     | 47377         | 3860         | 4955          | 24259         | 12414         | 3116         | 240616         |
| <b>TOTAL</b> | <b>399873</b>                             | <b>514120</b> | <b>42291</b> | <b>132851</b> | <b>340993</b> | <b>174860</b> | <b>89033</b> | <b>1914843</b> |

Source: , OECD, BIS.





Fig. 10: European SPV €440bn: Save the Banks, Fund the Governments, & Give the Risk to the Taxpayer

| European Bank  |     |           |     | SPV       |           | Government     |           |
|----------------|-----|-----------|-----|-----------|-----------|----------------|-----------|
| Asset          |     | Liability |     | Asset     | Liability | Asset          | Liability |
| Loans          | 90  | Deposit   | 95  | 0         | 0         | Infrastructure | 10        |
| Sovereign Debt | 10  | Capital   | 5   |           |           | Sovereign Debt | 10        |
|                | 100 |           | 100 |           |           |                |           |
| <hr/>          |     |           |     |           |           |                |           |
| Loans          | 90  | Deposit   | 95  | Govt Loan | 10        | SPV Bond       | 10        |
| SPV Bond       | 10  | Capital   | 5   |           |           | Infrastructure | 10        |
|                | 100 |           | 100 |           |           | Govt Loan      | 10        |

Source: , OECD, BIS.



## Financial Re-regulation

- USA goes solo
- Separation
- Basel 3



## Fig 11: The Dodd Bill

- A financial stability oversight council.
- A Consumer Financial Protection Bureau (in the Fed).
- A Resolution Mechanism: TBTF (\$50bn paid by banks).
- Regulation of OTC derivatives by SEC & Commodity Futures Trading Commission.
- Restriction on risk taking by banks using depositors funds.
- SEC to regulate rating agencies.
- Restructure US bank regulators.
- Creation of an Office of National Insurance in Treasury; to propose regulation of insurance.



## Separation Makes Good Firewalls For Banks Too

- What is Proprietary trading?
  - Origination?
  - OTC derivatives?
  - Directional prop trading
  - RV prop trading?
  - L-term security holdings?
- Hedge funds, private equity & SPV's?
- OECD version better than Glass-Steagall





Fig. 12: Basel I & Basel II

| Selected Risk Weights Under Basel I and Basel II (Pillar I), % |         |                                  |  |   |   |   |
|--|---------|----------------------------------|--|---|---|---|
| SECURITY   | BASEL I | BASEL II Simplified Standardised | BASEL I Standardised based on External Ratings | BASEL II Advanced: Internal Ratings Based (IRB) |   | BASEL II Advanced IRB   |
|  |         |                                  |  | 2004-05 Q1 S 4 Av % Chq in Portf. MRC           | 2004-05 Q1 S 4 Median % Chq in Portf. MRC |   |
| Most Government/central bank                                   | 0       | 0                                | 0  | 0   | 0   | Comes close to letting banks set their own Pillar 1 capital, with supervisory oversight. Risk weights depend on internal estimates of a loan's probability of default, loss-given-default, exposure to loss. These are based on the banks' own complex risk models, relying on substantial inputs and often on unobservable (e.g. OTC illiquid securities) prices. Pillar 2 provides for supervisory oversight. With stress testing, and guidance from supervisors, banks can be made to hold capital for risks not adequately captured under Pillar 1. |
| AAA to AA-   |         |                                  | 0  |   |   |   |
| A+ to A-   |         |                                  | 20   |   |   |   |
| BBB+ to BBB-   |         |                                  | 50   |   |   |   |
| BB+ to B- (& unrated)  |         |                                  | 100  |   |   |   |
| Below B-   |         |                                  | 150  |   |   |   |
| Other public (supervisors discretion)                          | 0-50    | 0                                |  | 0   | 0   | Pillar 3 is disclosure and market discipline which relies on some notion of market efficiency. Retail markets punish poor risk managers.  |
| Claims on MBEs   | 20      | 0                                |  | -21.9   | -29.7                                     |   |
| Most OECD Banks & Securities firms                             | 20      | 20                               | <90days  | Other   | -21.9                                     |   |
| AAA to AA-   |         |                                  | 20   | 20  |   |   |
| A+ to A-   |         |                                  | 50   | 50  |   |   |
| BBB+ to BBB- (& unrated)                                       |         |                                  | 100  | 100   |   |   |
| BB+ to B-  |         |                                  | 150  | 150   |   |   |
| Below B-   |         |                                  |  |   |   |   |
| Residential Mortgages-fully secured                            | 50      | 35                               | 25   | -61.4   | -72.7                                     |   |
| Retail Lending (consumer)                                      | 100     | 75                               | 75   | (-6.6 to -74.3)                                 | (-35.2 to -75.6)                          |   |
| Corporate & Commercial RF                                      | 100     | 100                              |  | (-21.9 to -41.4)                                | (-29.7 to -50.6)                          |   |
| AAA to AA-   |         |                                  | 20   |   |   |   |
| A+ to A-   |         |                                  | 50   |   |   |   |
| BBB+ to BB- (& unrated)  |         |                                  | 100  |   |   |   |
| Ratw RR  |         |                                  | 150  |   |   |   |



Fig. 13: US & UK Bank Capital Adequacy

### US & UK Banks

|                        | Assets | Risk wtd | Equity less | Tier 1 Eq.-Gdwll  | Tier 1 vs | Tier 1 |
|------------------------|--------|----------|-------------|-------------------|-----------|--------|
|                        | Assets | Assets   | Goodwill    | Capital vs Assets | Assets    | vs RWA |
| Q4 2009                | USD bn | USD bn   | USD bn      | USD bn            | %         | %      |
| <b>United States</b>   |        |          |             |                   |           |        |
| JPMORGAN CHASE         | 2,032  | 1,196    | 109         | 133               | 5.4       | 11.1   |
| CITIGROUP              | 1,857  | 1,088    | 127         | 127               | 6.8       | 11.7   |
| BANK OF AMERICA        | 2,223  | 1,542    | 107         | 160               | 4.8       | 10.4   |
| WELLS FARGO            | 1,240  | 1,014    | 78          | 94                | 6.3       | 9.3    |
| US Bancor              | 281    | 236      | 15          | 23                | 5.5       | 9.6    |
| <b>UK</b>              |        |          |             |                   |           |        |
| ROYAL BANK OF SCTL.GP. | 2,728  | 630      | 90          | 110               | 3.3       | 17.4   |
| HSBC HDG. (ORD \$0.50) | 2,355  | 1,008    | 90          | 109               | 3.8       | 10.8   |
| BARCLAYS               | 2,223  | 550      | 59          | 71                | 2.7       | 13.0   |
| LLOYDS BANKING GROUP   | 1,651  | 709      | 53          | 68                | 3.2       | 9.6    |

Source: , OECD, Datastream. .



Fig. 14: European bank Capital Adequacy

European Banks

| Q4 2009                   | Assets | Risk wtd | Equity less | Tier 1 Capital | Eq.-Gdwll | Tier 1 vs | Tier 1 |
|---------------------------|--------|----------|-------------|----------------|-----------|-----------|--------|
|                           | Assets | Assets   | Goodwill    | vs Assets      | Assets    | vs RWA    |        |
| UBS                       | USD bn | USD bn   | USD bn      | USD bn         | %         | %         | %      |
| <b>Germany</b>            |        |          |             |                |           |           |        |
| DEUTSCHE BANK             | 2,143  | 380      | 41          | 48             | 1.9       | 2.2       | 12.6   |
| COMMERZBANK               | 1,205  | 389      | 33          | 41             | 2.8       | 3.4       | 10.5   |
| DEUTSCHE POSTBANK         | 324    | 90       | 5           | 7              | 1.5       | 2.1       | 7.6    |
| LANDESBANK BL.HLDG.       | 205    | #N/A     | 3           | #N/A           | 1.3       | #N/A      | #N/A   |
| IKB DEUTSCHE INDSTRBK.    | 64     | 37       | 2           | 3              | 3.8       | 5.0       | 8.5    |
| OLDENBURGISCHE LB.        | 18     | 8        | 1           | 1              | 4.5       | 3.8       | 8.0    |
| <b>France</b>             |        |          |             |                |           |           |        |
| BNP PARIBAS               | 2,938  | 863      | 81          | 87             | 2.8       | 3.0       | 10.1   |
| CREDIT AGRICOLE           | 2,227  | 454      | 36          | 43             | 1.6       | 1.9       | 9.5    |
| SOCIETE GENERALE          | 1,462  | 450      | 49          | 48             | 3.4       | 3.3       | 10.7   |
| NATIXIS                   | 640    | 182      | 25          | 18             | 4.0       | 2.7       | 9.6    |
| CIC 'A'                   | 337    | #N/A     | 12          | 14             | 3.5       | 4.2       | #N/A   |
| <b>Spain</b>              |        |          |             |                |           |           |        |
| BANCO SANTANDER           | 1,571  | 781      | 64          | 67             | 4.1       | 4.3       | 8.6    |
| BBV.ARGENTARIA            | 760    | 405      | 32          | 38             | 4.2       | 5.0       | 9.4    |
| BANCO POPULAR ESPANOL     | 185    | 129      | 11          | 12             | 6.0       | 6.4       | 9.1    |
| BANCO DE SABADELL         | 118    | 82       | 7           | 7              | 5.6       | 6.3       | 9.1    |
| CAJA DE AHORROS DEL MEDI. | 107    | #N/A     | 4           | #N/A           | 4.0       | #N/A      | #N/A   |

Source: , OECD, Datastream. .



Fig. 15: Macro Impact of Regulatory Change

HYPOTHETICAL BANK

| ASSETS \$ |     | LIABILITIES \$         |    |
|-----------|-----|------------------------|----|
| Loans     | 100 | Deposit/funding        | 95 |
|           |     | Capital Leverage Ratio | 5  |

SCENARIOS

|                            | 5% Lev/R<br>Sprd 3.5 | 7% Lev/R<br>Sprd 3.5 | 40bp Sprd Rise<br>7% Lev/R |
|----------------------------|----------------------|----------------------|----------------------------|
| Loan Income 5.5%, \$       | 5.50                 | 5.50                 | 5.90                       |
| Deposit costs 2%, \$       | 1.90                 | 1.86                 | 1.86                       |
| Other Costs & Loan Loss \$ | 2.50                 | 2.50                 | 2.50                       |
| Net Income                 | 1.10                 | 1.14                 | 1.54                       |
| Return on Equity %         | 22.00                | 16.29                | 22.00                      |

IMPACT

**\*\*Capital rule spread rise 40bp to keep return on capital the same.**  
**\*\*Funding cost rise 1% leads to 0.95% lending rate rise to keep sprd constant**  
**\*\*Capital rule change only causes a -0.4% GDP Decline**  
**\*\*Plus 1% funding cost rise -1.35% GDP decline.**  
**NB: Decide your monetary policy and funding mix with the capital rule.**

Source: , OECD. .



Fig 16: Problems With Basel II

- Portfolio invariance.
- Single global risk factor.
- Financial system “promises” are not treated equally—regulatory arbitrage facilitated by “complete markets” in credit (the CDS market particularly).
- Pro-cyclicality.
- Subjective inputs.
- Unclear and inconsistent definitions.



Fig. 17: The Arbitrage Process In Complete Markets For Credit—Promises Aren’t Treated the

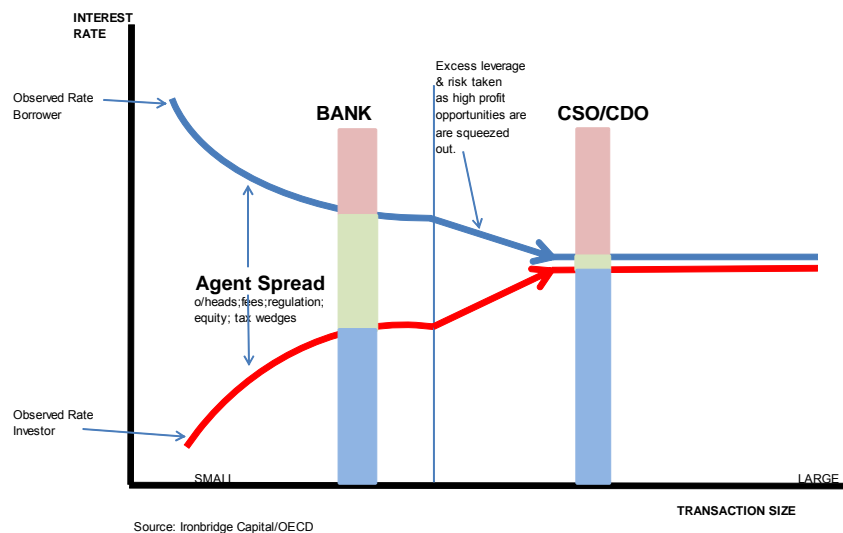




Fig. 18: Shifting the Promises

| Promise Transformations                                 | Bank A           |                               | Bank A                       | Bank B   |
|---|------------------|-------------------------------|------------------------------|--|
|   | Round Face Value | 100% Cap Weight 8% Required K | 20% Cap Weight 8% Required K | Regulatory adjustment 50% Off B/sheet Wt 1.5% surcharge coef & 8% Req K. |
| <b>Bank A</b><br>Face value BBB bond                    | 1000             | 80                            |                              |  |
| Buy CDS on BBB bond from bank B                         |                  |                               | 16                           |  |
| <b>Bank B</b><br>Underwrites to Re-insurance \$50 prem. |                  |                               |                              | 2.6  |
| <b>Total Banking Capital</b>                            |                  | 80                            | 16                           | 2.6  |
| <b>Reinsurer</b>  |                  | ?                             | ?                            | ?  |



Fig. 19: \$70.6bn Payments to AIG Counterparties (\$45.7bn to EU!): Sept. 16 to 31 December 2008

| Institution   | (billions of US dollars)                     |   | Total | As a share of capital*** at end-2008 |
|---|--|---|-------|--------------------------------------|
|   | Collateral postings for credit default swaps | Payments to securities lending counterparties** |       |                                      |
| Goldman Sachs   | 8.1  | 4.8   | 12.9  | 29.1%                                |
| Societe Generale  | 11.0   | 0.9   | 11.9  | 28.9%                                |
| Deutsche Bank   | 5.4  | 6.4   | 11.9  | 37.4%                                |
| Barclays  | 1.5  | 7.0   | 8.5   | 20.0%                                |
| Merrill Lynch   | 4.9  | 1.9   | 6.8   | 77.4%                                |
| Bank of America   | 0.7  | 4.5   | 5.2   | 9.1%                                 |
| UBS   | 3.3  | 1.7   | 5.0   | 25.2%                                |
| BNP Paribas   | ...  | 4.9   | 4.9   | 8.3%                                 |
| HSBC  | 0.2  | 3.3   | 3.5   | 5.3%                                 |
| [memo: Bank of America after its merger with Merrill Lynch] |  |   | 12.0  | [18.1%]                              |

\*Direct payments from AIG through end-2008 plus payments by Maiden Lane III, a financing entity established by AIG and the New York Federal Reserve Bank to purchase underlying securities.

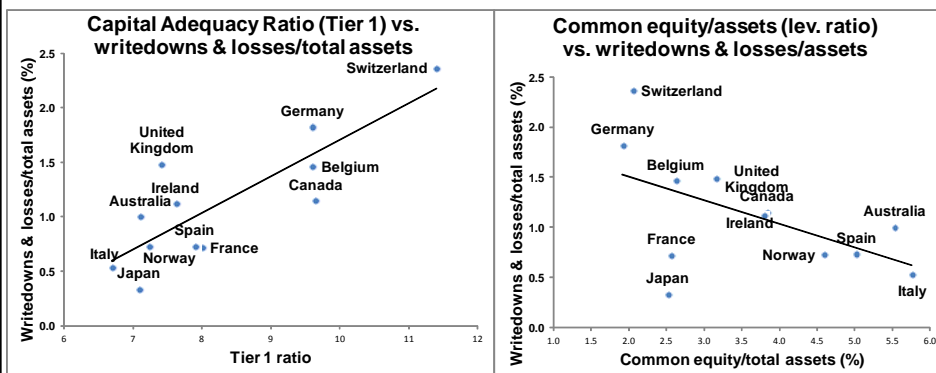
\*\*September 18-December 12, 2008.

\*\*\*Common equity net of goodwill; net of all intangible assets for Merrill Lynch and HSBC.

Source: Fed, US Treasury



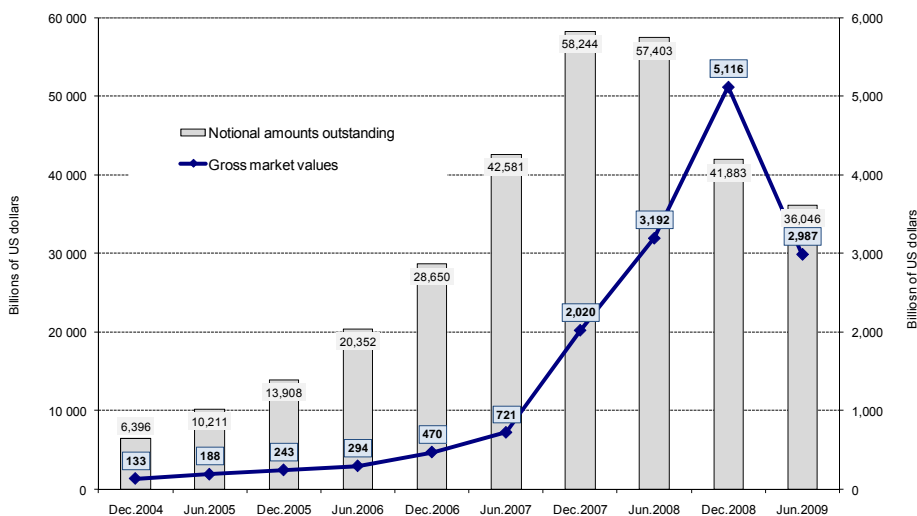
Fig. 20: Basel Capital Adequacy vs Leverage Ratio & Losses---Basel is Perverse



Source: , OECD; Thomson Reuters; Bloomberg, Worldscope, Datastream.  
Cum. Losses Jan 2007 to mid 2009. Regulatory ratios 2006-2008 averages.



Fig. 21: The Explosion of CDS Contracts



Source: BIS



Fig 22: Basel III Proposed Capital Reforms

- Quality, consistency & transparency of the capital base.
- Enhance risk coverage.
- Introduce a leverage ratio.
- Deal with Pro-cyclicality.
- Address systemic risk & interconnectedness.



Fig 23: Basel III Best Points

- Leverage ratio notion.
- Dynamic provisioning on expected loss.
- Capital buffer to ensure minima are not violated in a crisis.
- Better capital definitions.
- Some improvement in subjective inputs likely.





Fig 24: Basel III Not Dealt With

- The main issue has always been the lack of capital. Where the leverage ratio will be set.
- The RWA approach & a leverage ratio wont work well together.
- Promises will still be treated differently depending on where they sit, so regulatory arbitrage will continue.
- The framework still relies on portfolio invariance & a single global risk factor+ pillar 2 filling the holes.



Fig 25: Basel III Not Dealt With

$$(1) \text{Min.CAP(RWA)} = 0.08 * \{12.5(\text{OR} + \text{MR}) + \text{SUM}[w(i)A(i)]\}$$

$$(2) \text{Min.CAP(LR)} = \beta \text{SUM}[A(i)]$$

$$(3) \text{Min.CAP(RWA)} \leq \text{Min.CAP(LR)}$$

NB. Setting 'maximum' capital requirements via the LR and leading to distortions



Fig 26: The Liquidity Proposals

- The liquidity coverage ratio LCR, 30 day focus.
- The Net Stable Funding ratio, focusing on the liquidity characteristics of liability and asset structure.
- Other monitoring.



Fig 27: Problems with the Liquidity Proposals

- Solvent banks should manage their own liquidity with the bank payment system process & central banks having a key role— cause & effect in the crisis was from insolvency fear to liquidity.
- Bias to government bonds – crowding out lending to the private sector implications.
- Not practical—stable versus unstable funding (its all unstable in a crisis).
- Lowers returns causing banks to take on more risk.



## Fig 28: Basel Conclusions

- There are no stable risk “buckets” for weighting assets when promises in the financial system are not treated equally—risk easily transformed in complete markets for credit.
- Leverage ratio to centre stage.
- Diversification issues need to be dealt with in pillar 1 (quadratic capital penalty for deviations from benchmark).
- Treating promises equally has implications for the structure of regulatory authorities.
- And how to treat the shadow banking system.



## The Market Environment

- Bonds case
- Equity case
- Cash case

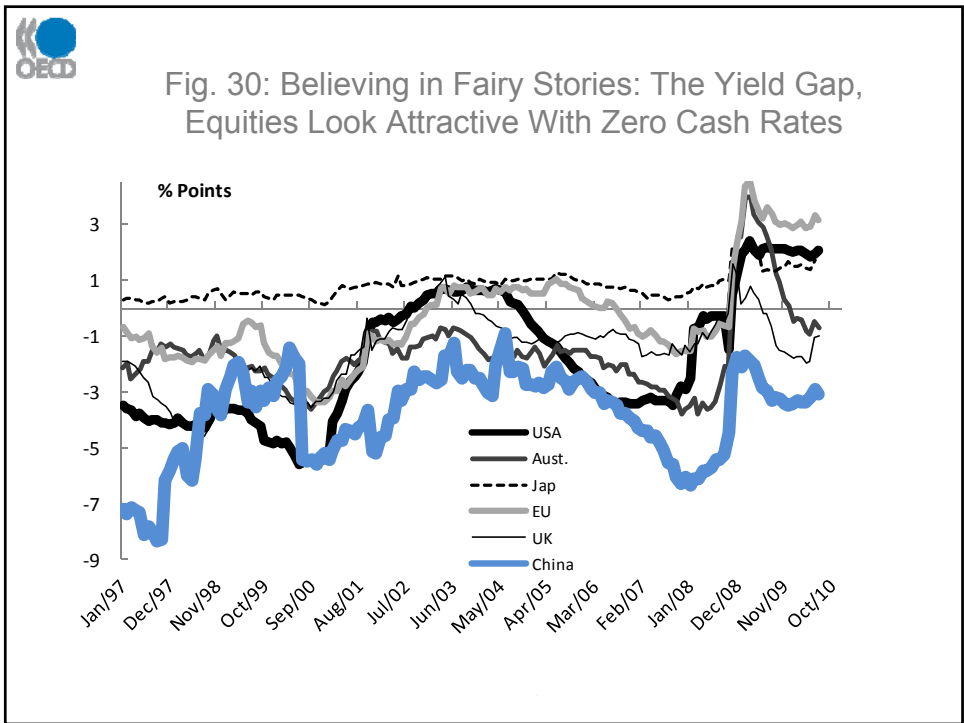
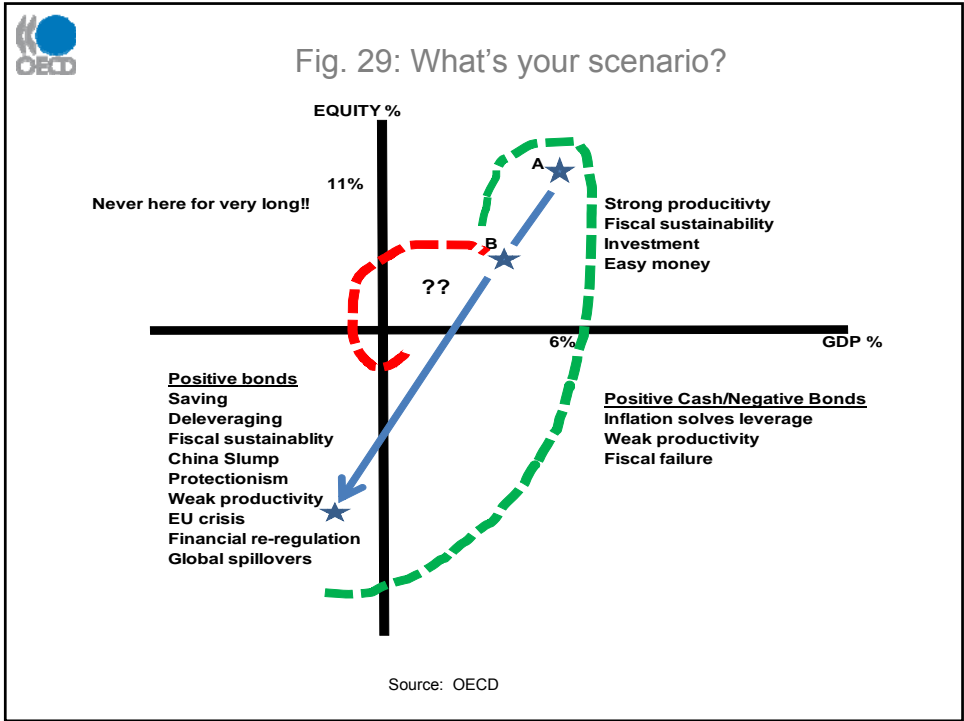




Fig. 31: VIX, S&P & Exch. Rate

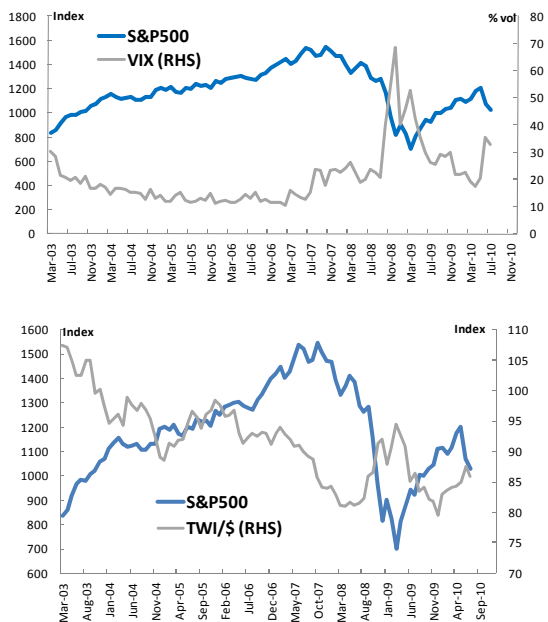
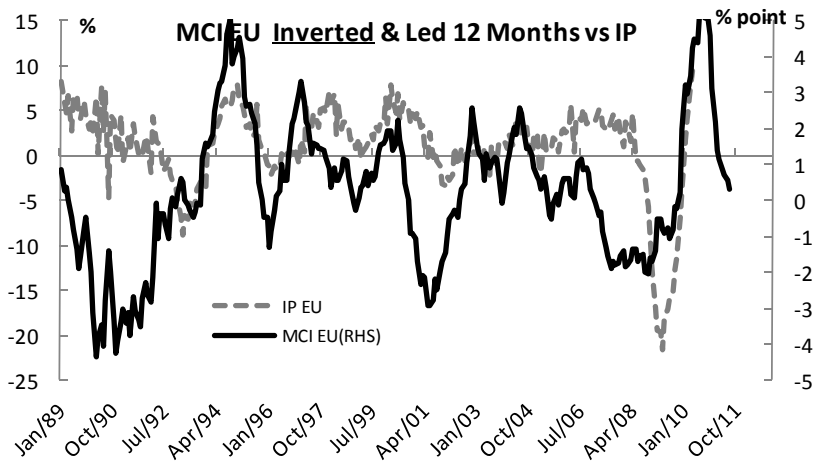


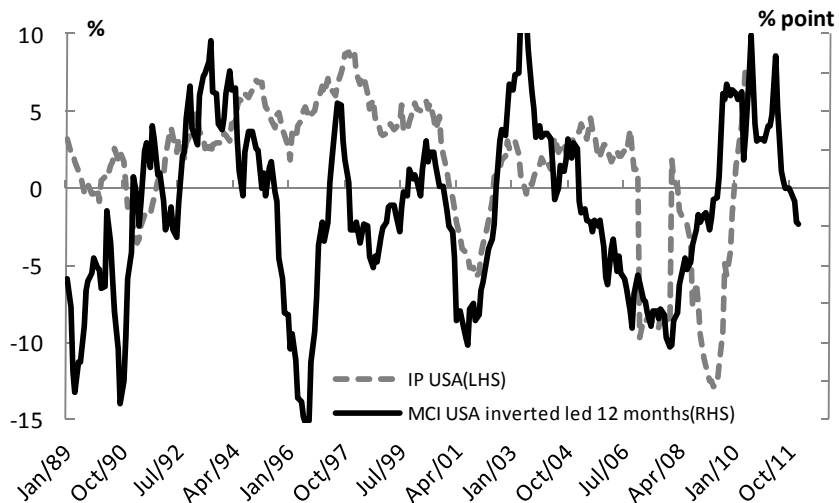
Fig. 32: EU Double Dip? MCI (cash, currency, oil, bonds, equity), Inverted, Led 1 year



Source: Datastream, OECD



Fig. 33: USA Double Dip? MCI (cash, currency, oil, bonds, equity), Inverted, Led 1 year



Source: Datastream, OECD

## Australian Business Economists



Anika Foundation Fundraiser  
Mr Glenn Stevens  
Governor, Reserve Bank of Australia  
Tuesday 20 July Four Seasons

Hon Bill English  
Deputy Prime Minister, Finance Minister, New Zealand  
Wednesday 04 August The Mint

Mr Antony Green  
Election Specialist, Australian Broadcasting Corporation  
Tuesday 10 August Four Seasons