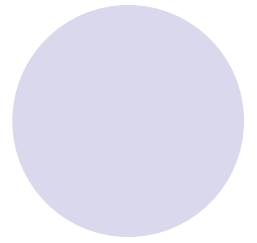
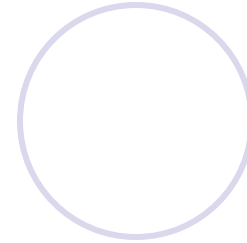
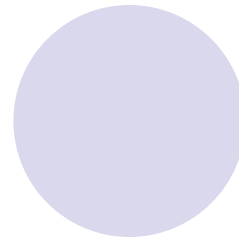
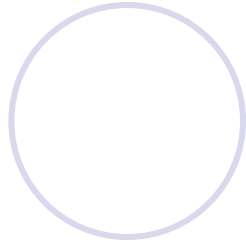
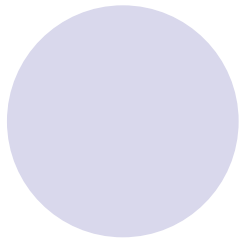


LESSONS FROM THE CREDIT CRISIS

Caribbean Actuarial Association Conference
Hyatt Regency Hotel
Trinidad & Tobago

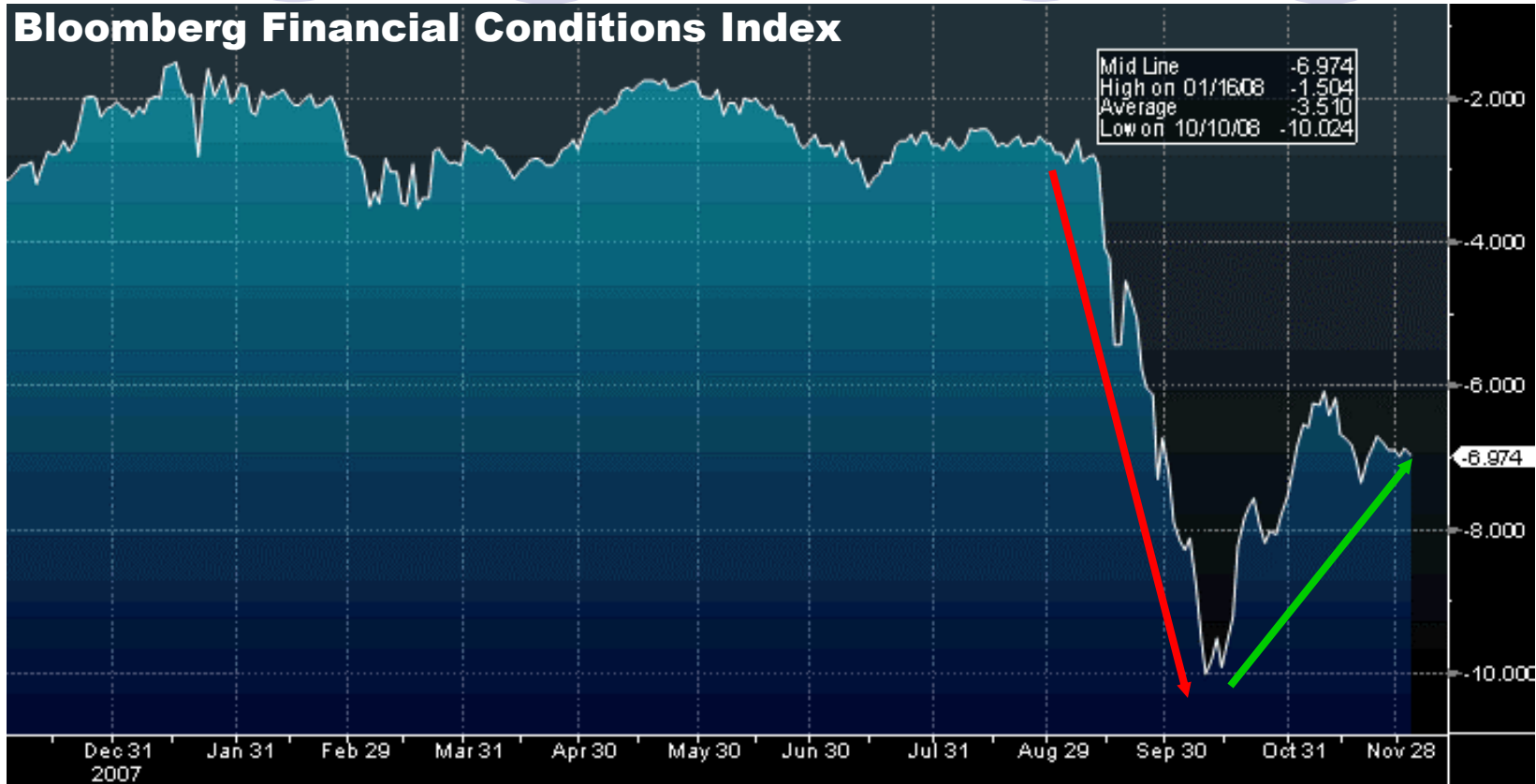
Presented by: Jason Julien

December 5, 2008



THE NATURE OF THE CREDIT CRISIS

Global Financial Conditions

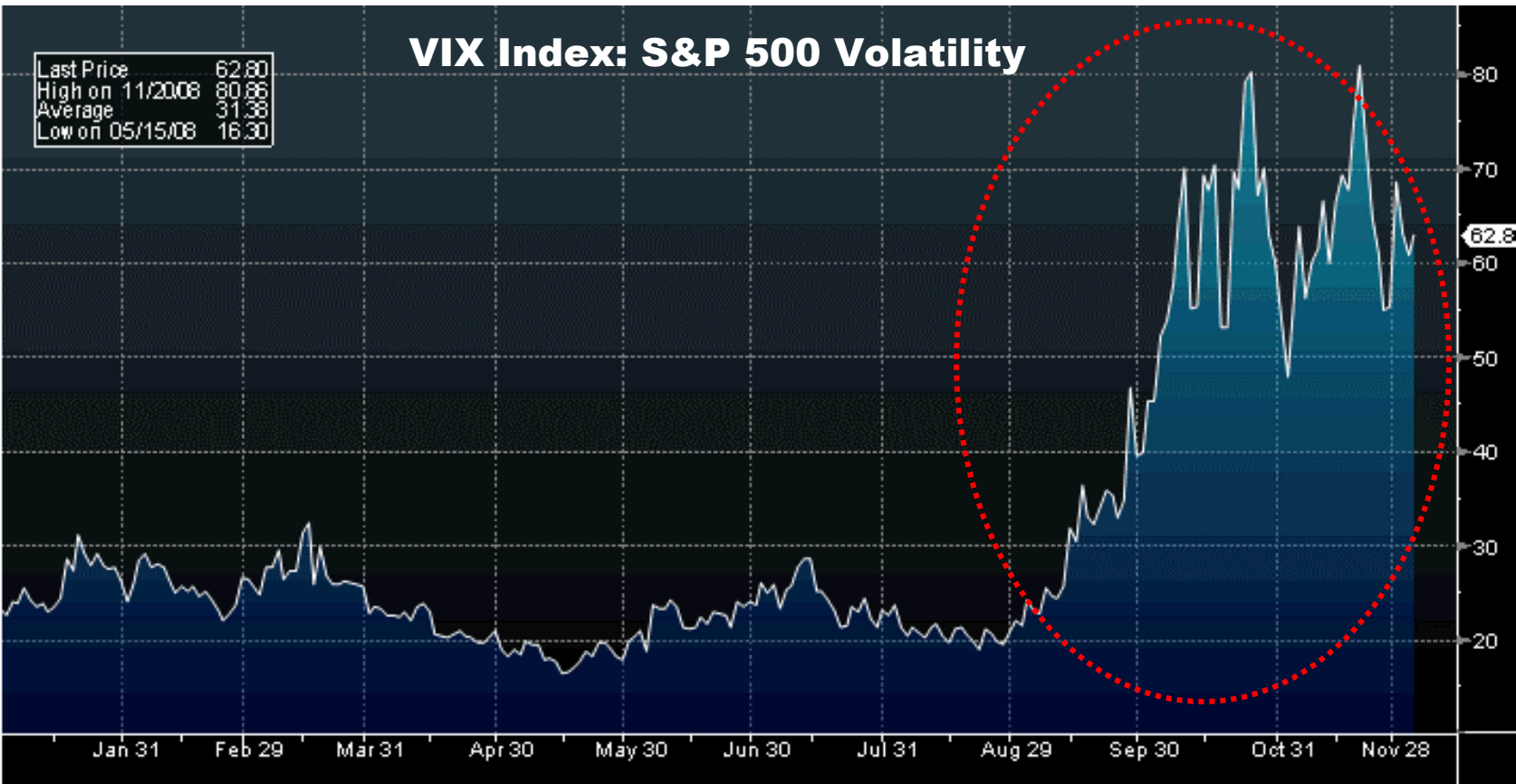


- Over the last 3 months the Crisis has intensified.
- But signs of a recovery provide hope.

Equity Market Volatility

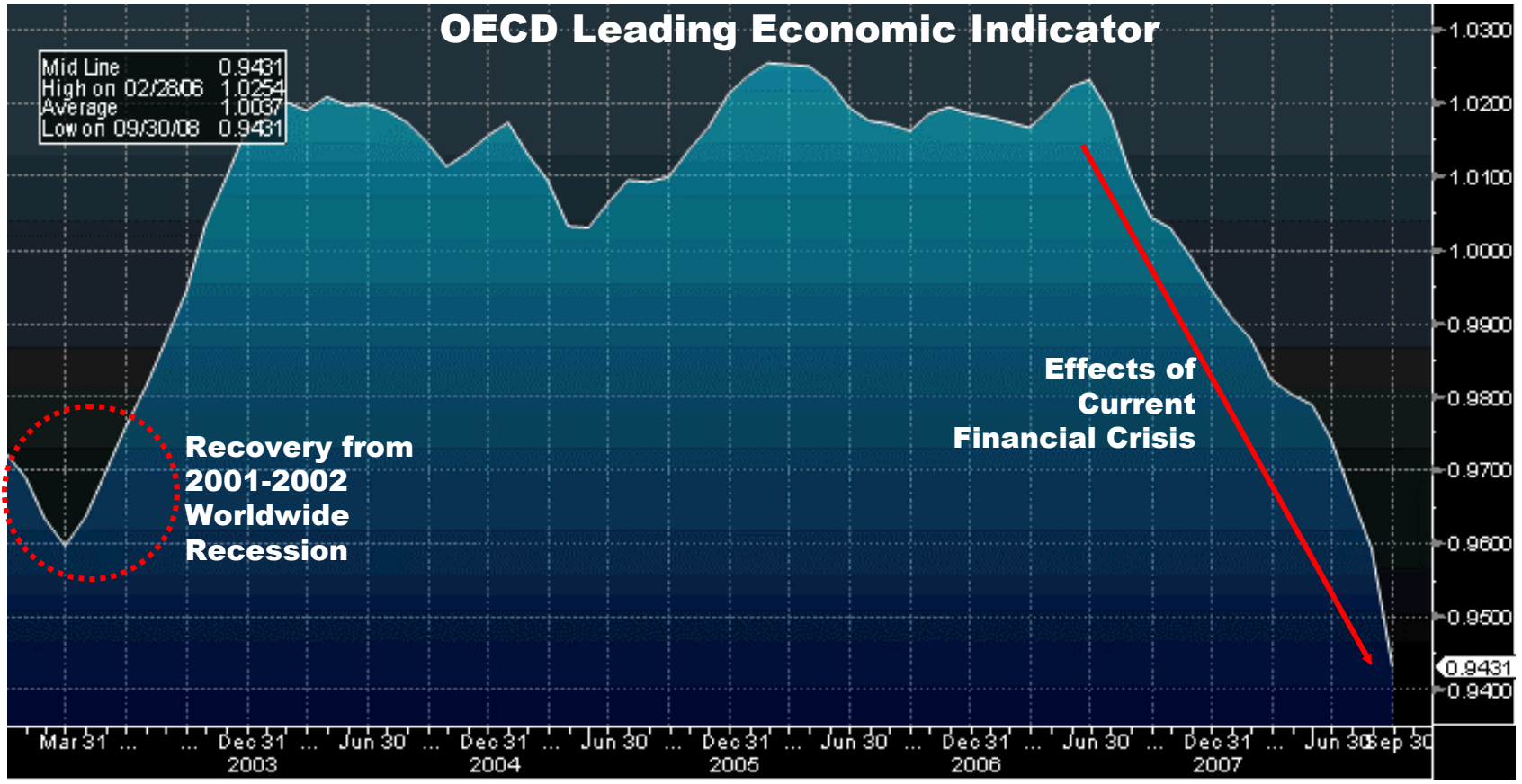
VIX Index: S&P 500 Volatility

Last Price	62.80
High on 11/20/08	80.86
Average	31.38
Low on 05/15/08	16.30



•Significant increase in the volatility of equity markets

Global Economic Growth

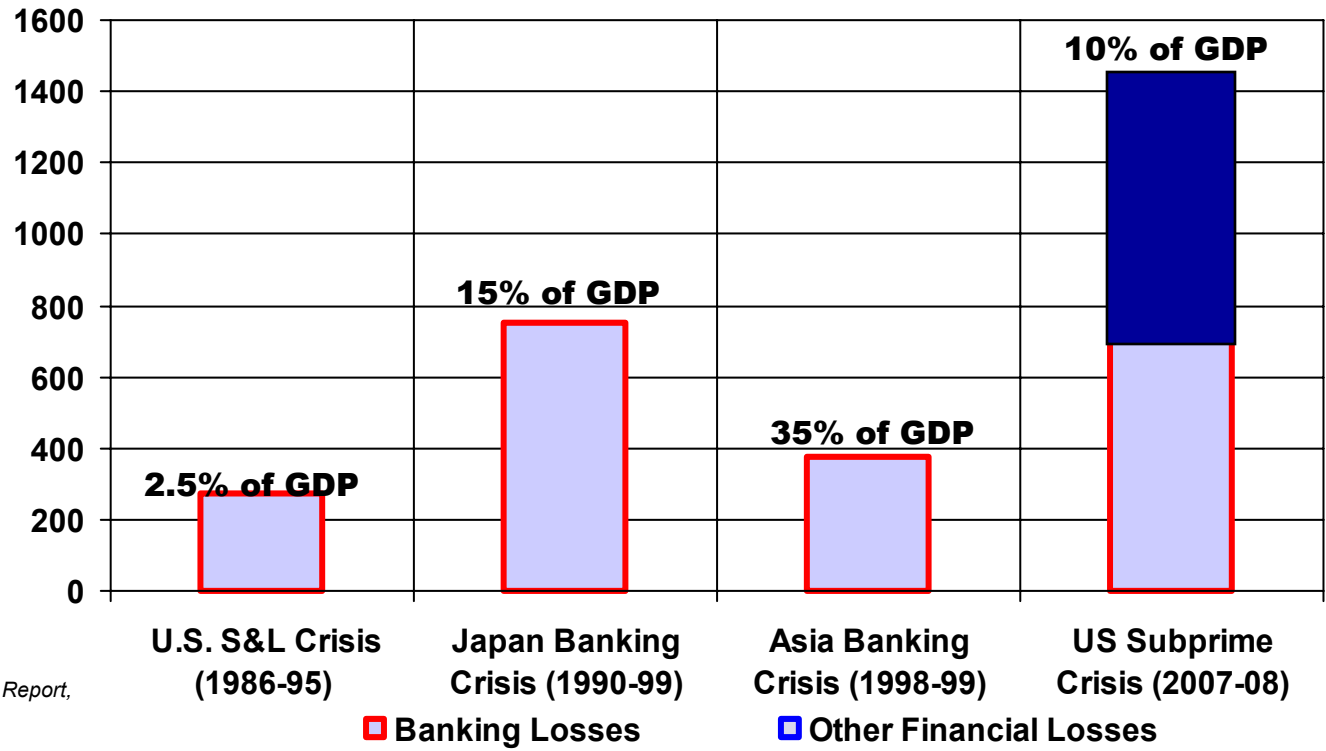


•Leading indicators point to a drastic slow down in global economic growth

Comparison to Previous Financial Crises

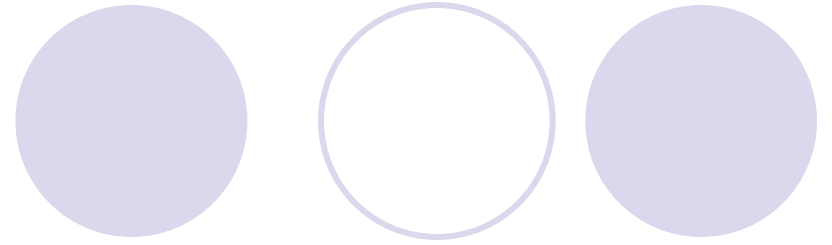
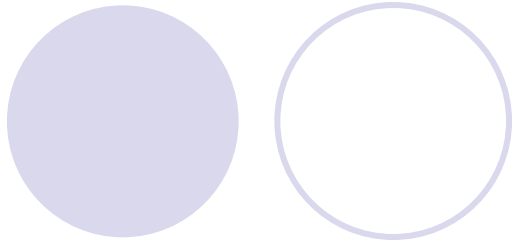
Banking Losses in Constant US\$ Terms (and as a Percentage of GDP)

In 2007 U.S. Dollar Terms (US\$ bn.)



Source: IMF Global Financial Stability Report, October 2008, Chapter 1, p. 16.

- Other Financial Crises have had a relatively larger impact
- But this Crisis is the largest in terms of magnitude and scale

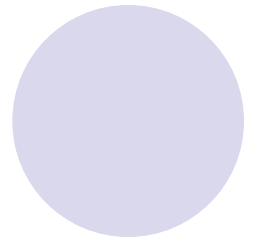
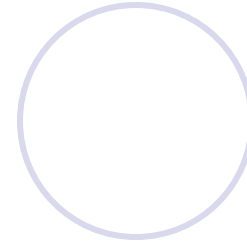
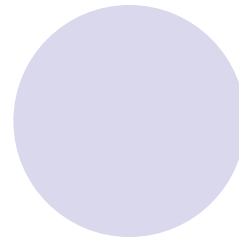
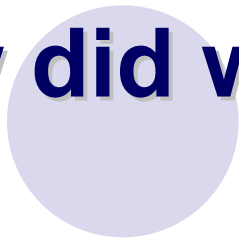


HOW DID WE GET HERE?

Global Macro conditions at the time...

1. **Global Savings Glut — Low *long-term* interest rates**
2. **Search for Yield — Narrow credit spreads**
3. **Easy Monetary Policy — Low *Nominal* and *Real short-term* interest rates**
4. **Great Moderation — Trend decline in volatility of world output and inflation**
5. **Increased Risk Appetite — Greater leverage**

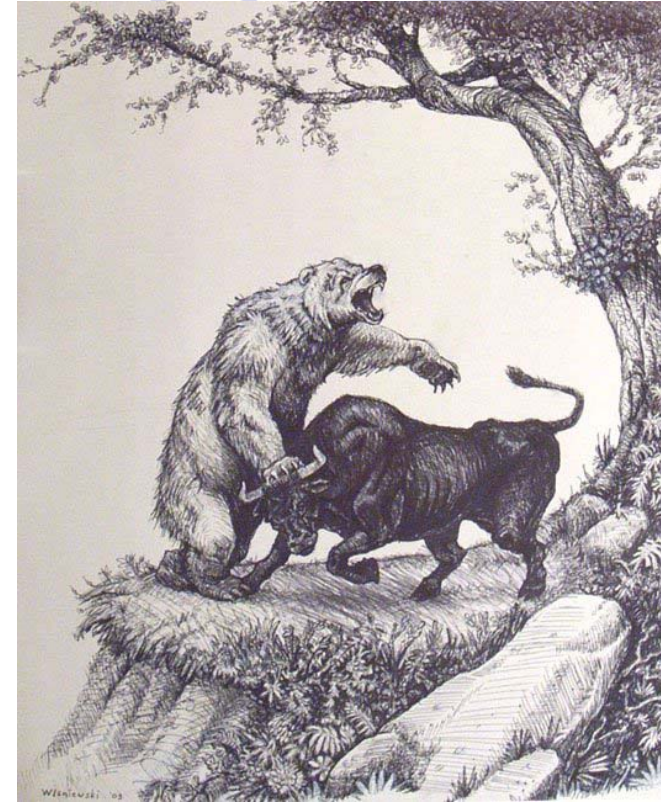
How did we get here?



GREED!!!

How did we get here?

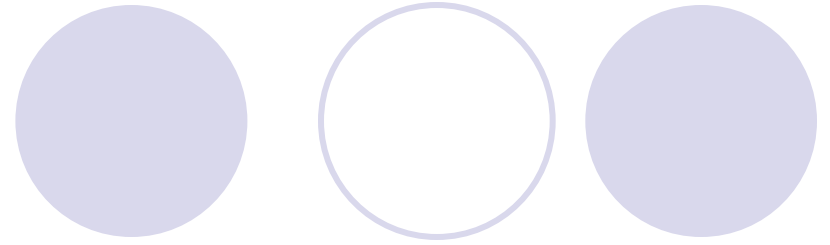
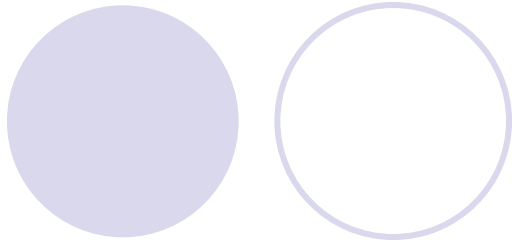
- **GREED!**
- Subprime lending
- Risky Loans repackaged as AAA investments
- Globally Investors demanded these high yield repackaged loans
- Home values reached a peak then began to fall
- Homeowners began defaulting on these high risk loans
- Banks became reluctant to extend credit to consumers, businesses and each other
- This credit crunch has led to a slowdown in the US economy which triggered job losses and further loan defaults
- And the downward spiral continues...



In Bernake's own words...

- “The financial crisis...was sparked by the end of the U.S. housing boom, which revealed the...excesses that occurred in subprime mortgage lending.
- “However,...the problem was much broader than subprime lending.
- “*Large inflows of capital into the United States ...stimulated a reaching for yield, an underpricing of risk, excessive leverage, and the development of complex and opaque financial instruments that seemed to work well during the credit boom but have been shown to be fragile under stress.*”

Federal Reserve Chairman Ben Bernanke,
“Stabilizing the Financial Markets and the Economy”,
October 15, 2008



WHAT ARE THE LESSONS LEARNED?

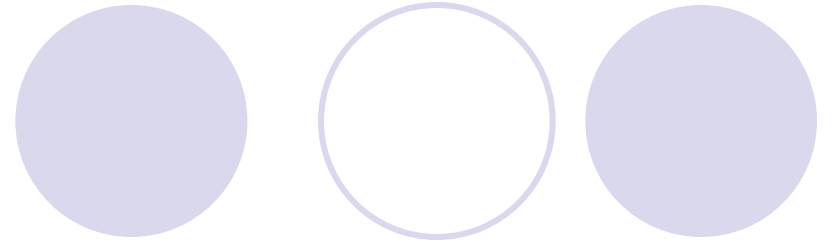
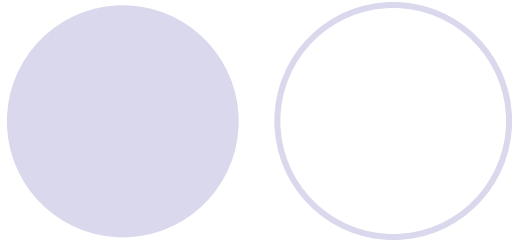
Top Ten Lessons from the Credit Crisis

1. Risk governance matters
2. Risk management and strategy are inexorably linked
3. Top-down risk management needs to be actionable and forward looking
4. Risk needs respect
5. Models have their limits
6. Regulation has its limits too
7. Liquidity is the ultimate killer
8. If leverage looks too good to be true, that's because it is
9. Accounting can change everything
10. The infrastructure must keep up

The Federal Reserve's Prognosis

- “I see the most probable scenario as one in which the performance of the economy remains sub-par well into next year and then gradually improves in late 2009 and 2010.
- “I would caution, however, that the uncertainty around my forecast is substantial. The path of the economy will depend critically on how quickly the current stresses in financial markets abate. But these events have few if any precedents, and thus we can have even less confidence than usual in our economic forecasts”

Federal Reserve Vice Chairman Donald L. Kohn,
“Economic Outlook”,
October 15, 2008



QUESTIONS?