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The Financial Crisis: Its Causes, Its Cures, and Prospects for the Geographic Landscape of the Future

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Innovation and Structural Funds:
Stimulation Policies to Boost Innovation in Times of Crisis

3&4 November 2010
Bilbao, Spain

My charge

- To provide some general background about how the economic events and policy interventions of the past three years are changing the business landscape, which has implications for regional development
  - Specifically drawing on
    - My experience in America and the UK
    - My scholarly background in technology-led economic development
    - My role as Dean of the largest B-School in the UK, which gives me access to many business and government leaders

My charge

- I am happy to give my impressions, but do not have the hubris that I know more than anyone else here
  - 2007 Bloomberg interview
  - Believer in Random Walks (Malkiel) and Black Swans (Taleb)

My charge

- Perhaps my strongest qualification to opine on the topic is my age: having lived through several major economic downturns and recoveries, and numerous financial crises… gives me some perspective that not everything is new, and prospects may not be as bleak as pundits fear– since economies are resilient.

Logical flow

- First, to outline the contours of the crisis that is the backdrop for this conference
- Second, to try to put it into some historical perspective, asking what is the same as past crises and what is unique
- Then, to review some of the consequences not just of the crises, but of the policy interventions, as well
- And finally, to apply all this to the challenges regions in the US and Europe will be facing

Contours of the crisis

- The **financial crisis of 2007 to the present** was triggered by a liquidity shortfall in the United States banking system. It has resulted in the collapse of large financial institutions, the bailout of banks by national governments, and downturns in stock markets around the world. In many areas, the housing market has also suffered, resulting in numerous evictions, foreclosures and prolonged vacancies. It is considered by many economists to be the worst financial crisis since the Great Depression of the 1930s. It contributed to the failure of key businesses, declines in consumer wealth estimated in the hundreds of billions of U.S. dollars, substantial financial commitments incurred by governments, and a significant decline in economic activity. Many causes have been suggested. Both market-based and regulatory solutions have been advanced, while significant risks remain for the world economy over the 2010–2011 periods.
- The bursting of the housing bubble in the US after 2006 caused the values of securities tied to real estate pricing to plummet, damaging financial institutions globally. Questions regarding bank solvency, declines in credit availability, and investor confidence had an impact on global stock markets, which suffered large losses during late 2008 and early 2009. Economies worldwide slowed during this period as credit tightened and international trade declined. Critics argued that credit rating agencies and investors failed to accurately price the risk involved with mortgage-related financial products, and that governments did not adjust their regulatory practices to address 21st century financial markets. Governments and central banks responded with unprecedented fiscal stimulus, monetary policy expansion, and institutional bailouts.

en.wikipedia.org/.../**Financial_crisis_of_2007–2010**

Contours of the crisis

- The four distinct phases of the recent crisis were:
  - The initial disruption in money markets in the summer of 2007 (the "what are these securities worth?" phase);
  - The abrupt takeover of Bears Stearns by JPMorgan Chase (the "unusual and exigent" phase);
  - The 30 days following the bankruptcy of Lehman Brothers (the "panic" phase);
  - And the period from mid-November 2008 to early May 2009 (the "viability of large U.S. banking organizations" phase).

Simon M. Potter, "Remarks at the 3rd Annual Connecticut Bank & Trust Co. Economic Outlook Breakfast, Hartford, CT. , June 7, 2010

Contours of the crisis

And in this interconnected world, crises cannot be contained to one country; Northern Rock went under, HBOS faltered, Iceland and Ireland had bubbles burst, then Greece had its liquidity crisis, and so forth. I know that Spain has not escaped the fallout.

Key dimensions of the "crisis"

- The failure of the banking sector → a reduced availability of debt capital and less private investment and real estate activity – *despite large infusions of public bail-out monies*
- Slow economic growth and the flattening of capital gains → reduced flow of equity capital and consequently fewer start-ups, fewer exits
- The growth of public sector employment (in the UK) and public spending (in US and UK) at a time when tax revenues were falling, and when sizable government-led bailouts were done → large cutbacks in public spending and a rise in taxes (in the UK) – both depressing growth further.

Fewer loans, Less investment

Table 1.A Lending to UK businesses[a]

	Averages		2009		
	2007	2008	Jan.	Feb.	Mar.
Net monthly flow (£ billions)	7.0	4.0	1.9	0.3	1.5
Three-month annualised growth rate (per cent)	19.4	10.8	2.1	2.2	2.6
Twelve-month growth rate (per cent)	16.5	17.1	8.1	5.7	4.1

(a) Lending by monetary financial institutions to private non-financial corporations. Investments and holdings of securities are not included. Seasonally adjusted data.

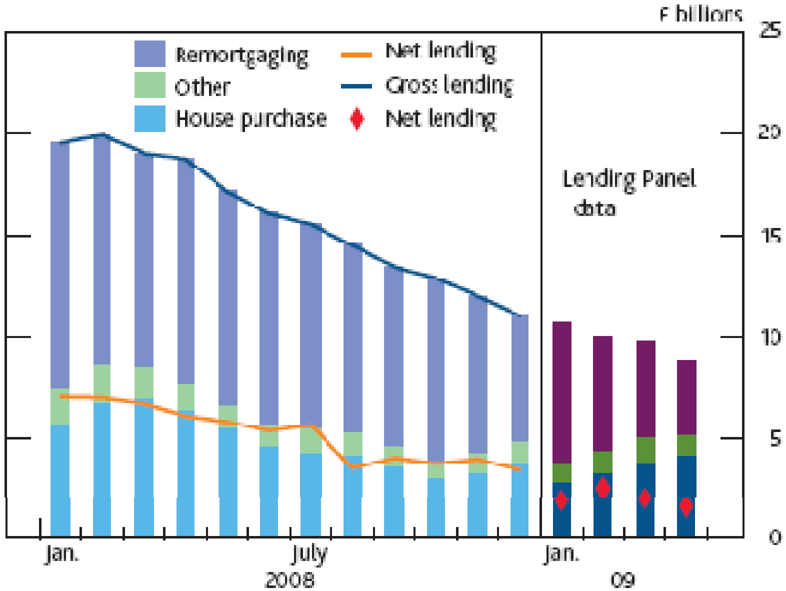
Table 3.A Unsecured lending to individuals[a]

	Averages		2009		
	2007	2008	Jan.	Feb.	Mar.
Net monthly flow (£ billions)	1.1	1.0	0.1	0.1	0.1
Three-month annualised growth rate (per cent)	6.4	5.3	2.1	1.0	0.6
Twelve-month growth rate (per cent)	6.1	6.3	4.7	3.7	3.2

(a) Lending by monetary financial institutions and other lenders to UK individuals. Seasonally adjusted data.

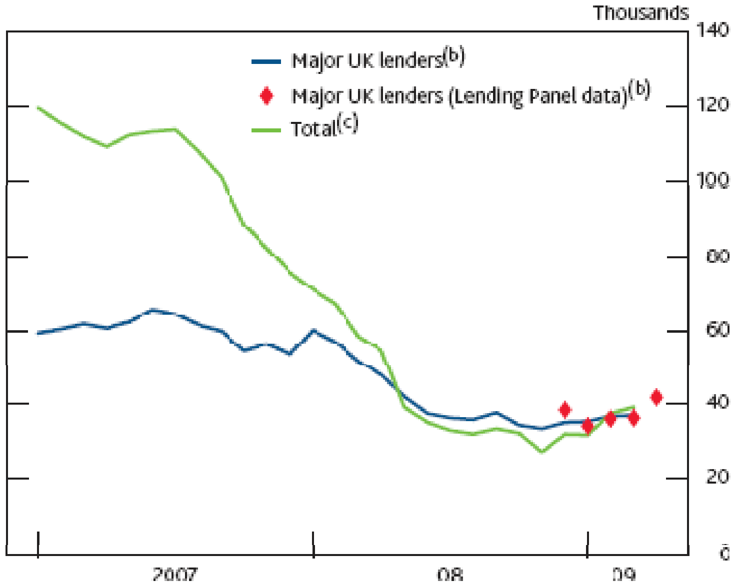
Fewer loans, Less investment

Chart 2.1 Gross mortgage lending by the major UK lenders[(a)(b)]



(a) The split in 2008 is estimated using gross lending data and the split of loan approval values between house purchase, remortgaging and other advances. The split using Lending Panel data in 2009 is reported, rather than estimated, data. Seasonally adjusted data.
(b) Lending Panel data are generally of lower quality than existing data sources.

Chart 2.3 Approvals for mortgages for house purchase[(a)]



(a) Seasonally adjusted.
(b) Gross approvals data.
(c) Monetary financial institutions and other lenders. These data are net of cancellations and hence the total can fall below the gross approvals data shown for the major UK lenders.

Fewer loans, Less investment

Dataset: Principal Global Indicators

GROSS FIXED CAPITAL FORMATION

Economic Concept											
Data Source											
Unit Of Measure	Percent change over previous period										
Frequency	Annual										
Time	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Country and Group											
Australia	4.84	4.43	-0.02	16.69	10.94	8.53	12.06	8.41	12.26	12.13	-1.80
Canada	6.73	8.31	4.72	3.34	4.40	9.18	8.13	10.39	10.43	6.11	-8.18
Euro Area	7.17	7.83	1.99	-0.08	2.49	4.42	6.01	8.72	7.40	1.31	-11.86
France	..	9.69	3.81	-0.31	3.35	6.27	7.61	8.70	8.84	4.26	-7.57
Germany	..	3.95	-4.17	-7.15	-1.59	-0.90	1.01	9.24	7.60	2.91	-10.21
Italy	..	10.21	4.51	6.74	0.63	4.26	4.40	5.93	4.29	-0.88	-11.54
Japan	-2.88	-0.12	-3.02	-6.90	-2.23	1.23	3.29	1.35	-0.19	-0.41	-17.08
Mexico	21.12	20.59	-1.05	3.79	18.65	18.04	10.61	15.98	10.48	11.86	-3.72
South Africa	-0.91	11.05	9.94	14.37	14.19	12.42	17.01	22.87	25.56	26.25	5.77
United Kingdom	7.41	2.64	3.43	2.98	3.80	7.67	4.18	8.83	9.87	-5.65	-20.97
United States	9.25	8.24	0.01	-2.17	4.58	10.00	10.47	7.08	1.13	-3.28	-15.71

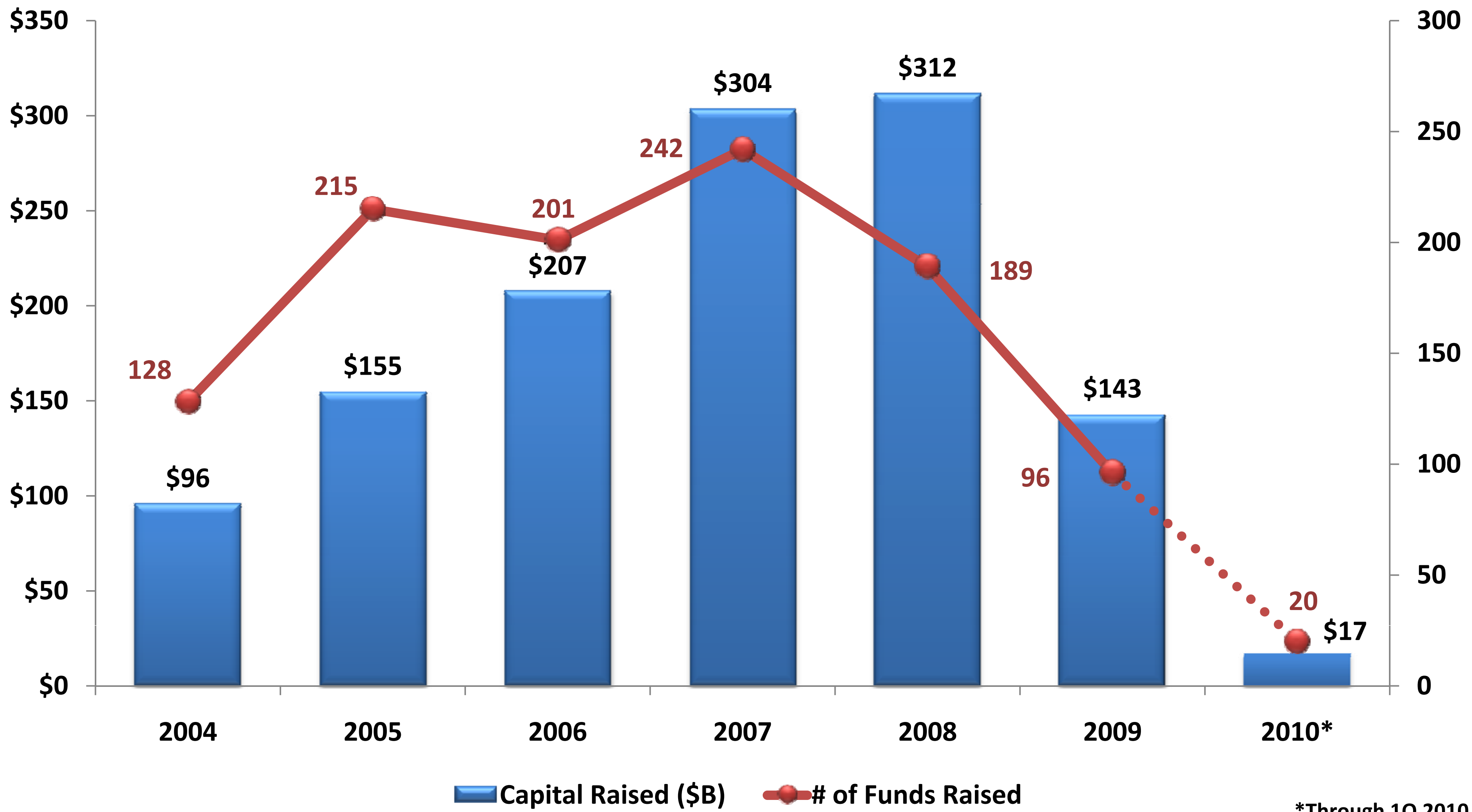
data extracted on 2010/11/01 16:32 from IMF.Stat

…these grim numbers despite historically low interest rates

Less equity growth, Fewer exits

PE fundraising

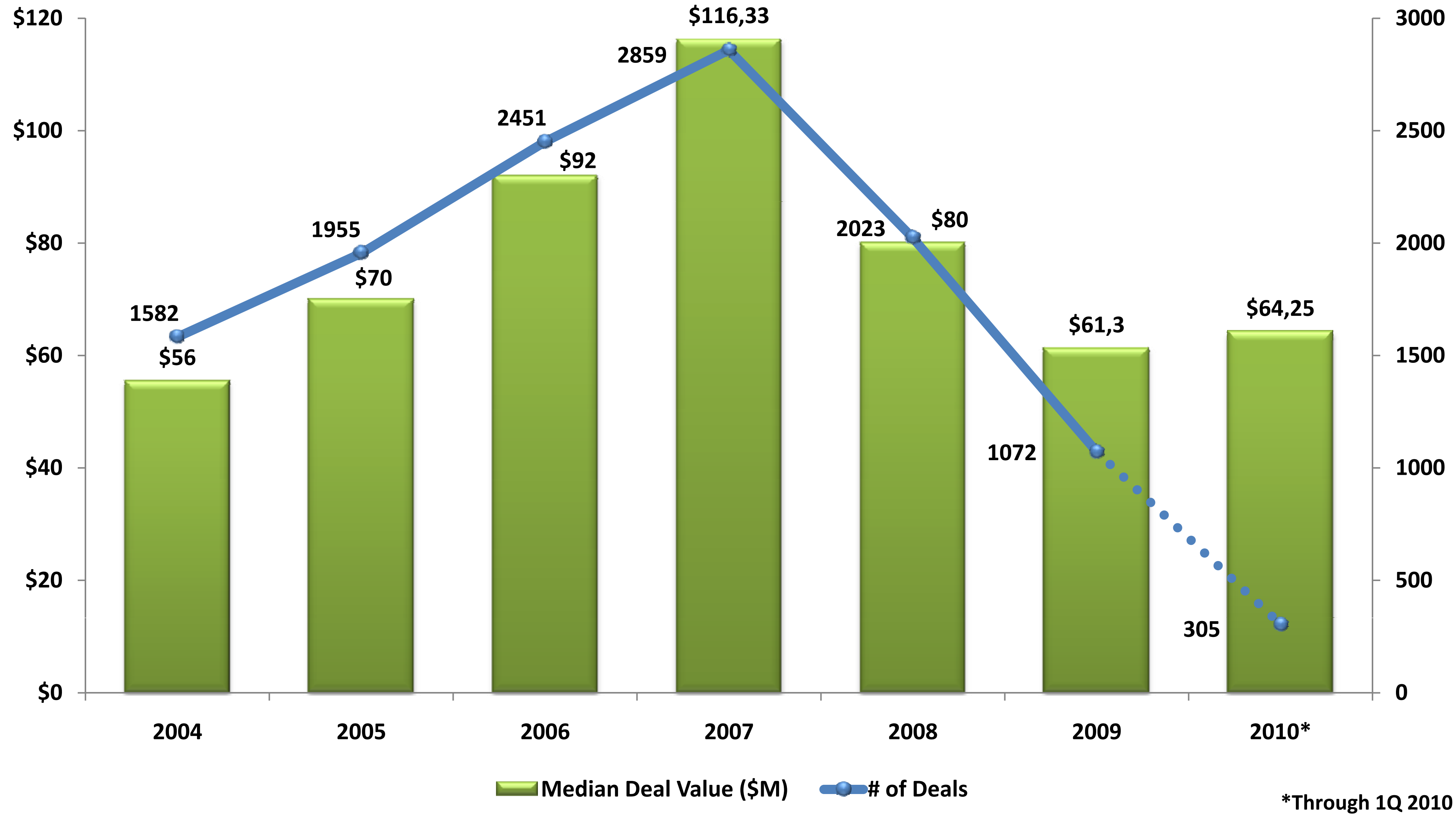
Number of Funds Closed and Total Capital Raised by Year



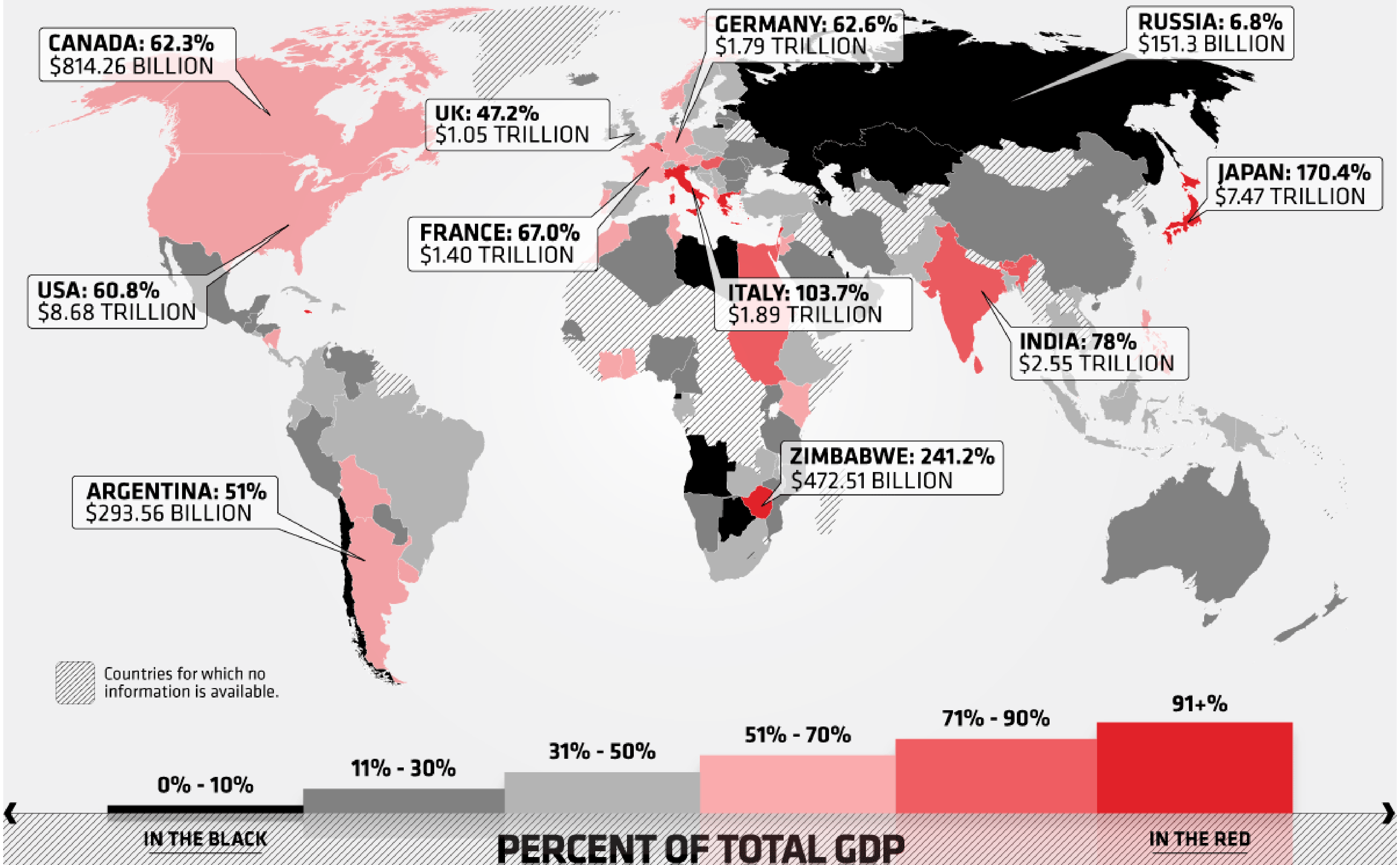
*Through 1Q 2010

Median valuation continues 2009 trend

PE Deal Activity (count) and Median Valuations by Year



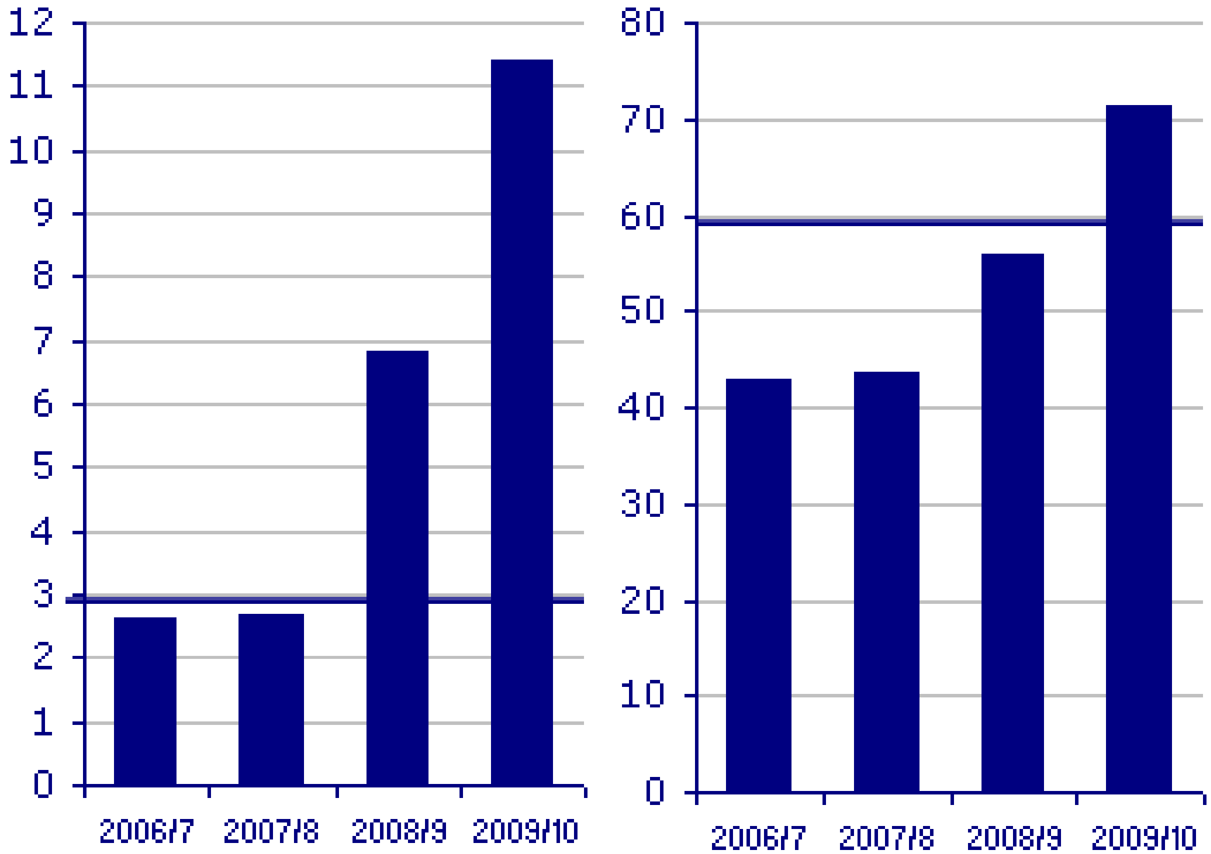
National Debt by Country



CONVERTED TO US DOLLARS // SOURCE: CIA WORLD FACTBOOK

High debt, higher taxes, less spending

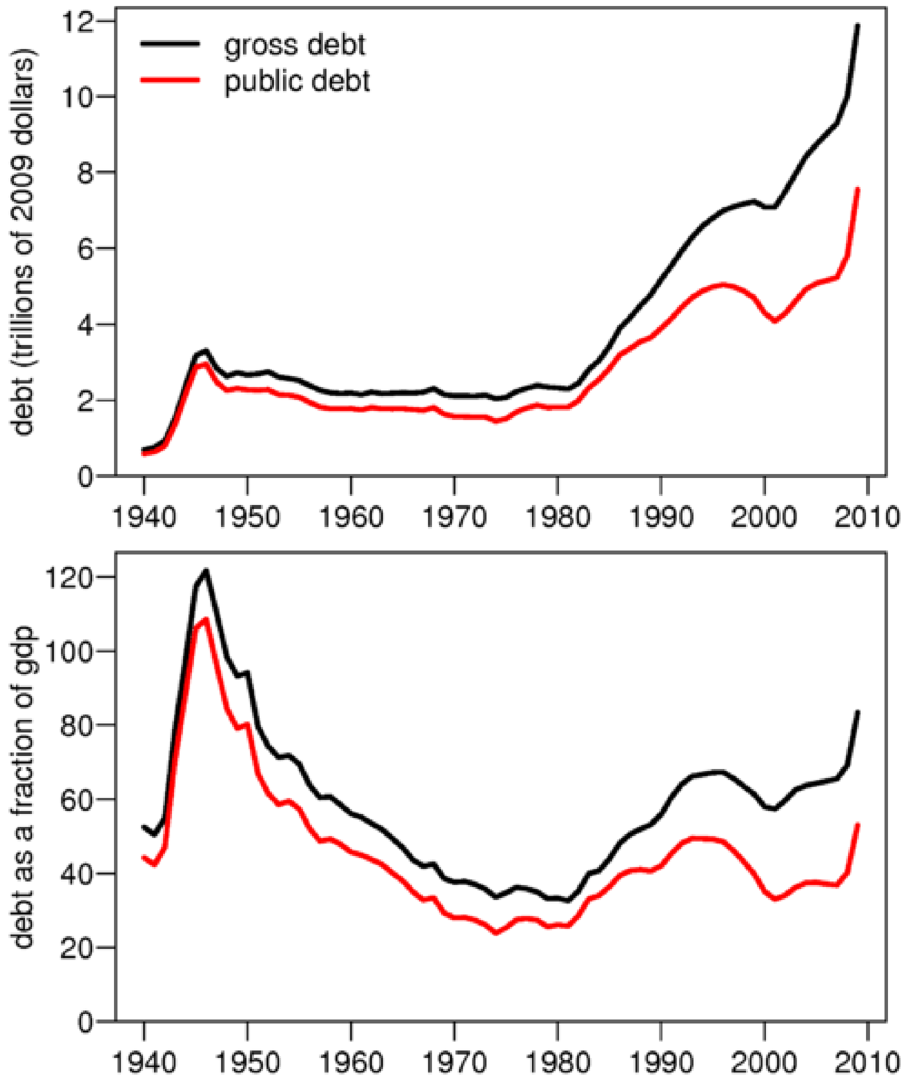
UK Government Debt & Deficit Deficit 11.4% of GDP



High debt, higher taxes, less spending

UK

Private as well as pubic debt



So is doom and gloom justified?

- Gloom yes; doom not necessarily

1 As bad as economy is, there is a lot of hyperbole. For example:

  - what is represented as government spending might be considered investments (government injection of liquidity in return for equity). Not all assets will become valueless, and there will be some positive returns (Chrysler ex.; now banks, GM, others)
  - We talk about the trillions of dollars in lost wealth, but not about the thousands of trillions of remaining fixed and liquid asset value. The balance sheets of governments really are very robust.

So is doom and gloom justified?

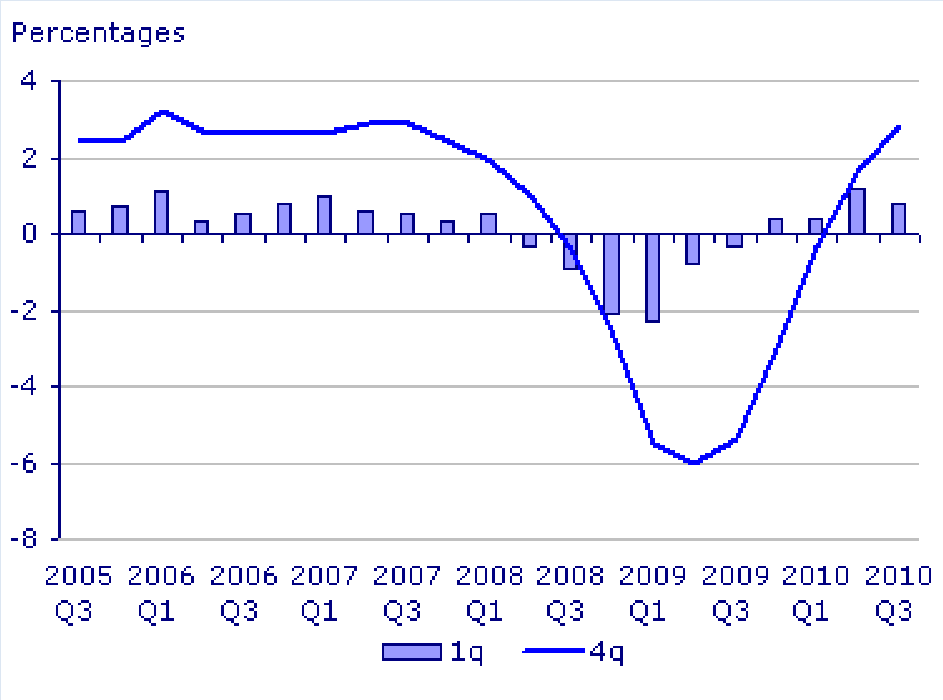
- Gloom, yes; doom, not necessarily

2. Things are bad today, but in many cases economies are self-correcting

   - Excess supply => price drops => more demand
   - When there are bargains, buyers rush in

Indeed, we already are starting to see some rebound due to self-correction

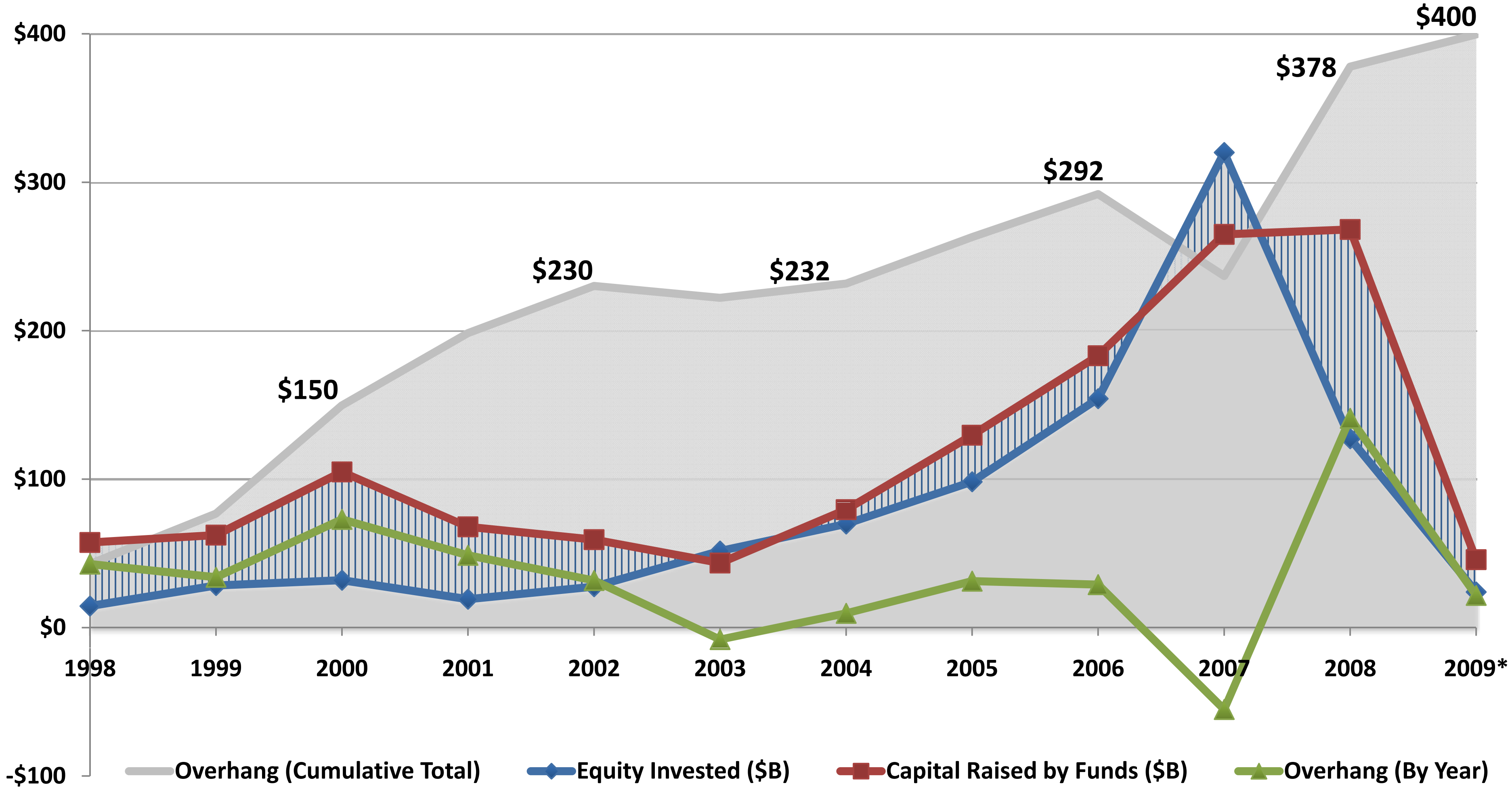
- Forecasts for GDP growth are positive in US and UK (and elsewhere), if anemic



Real GDP growth, UK

Record levels of dry powder; $400B

Capital Overhang for US-Focused Funds Raised by US Investors

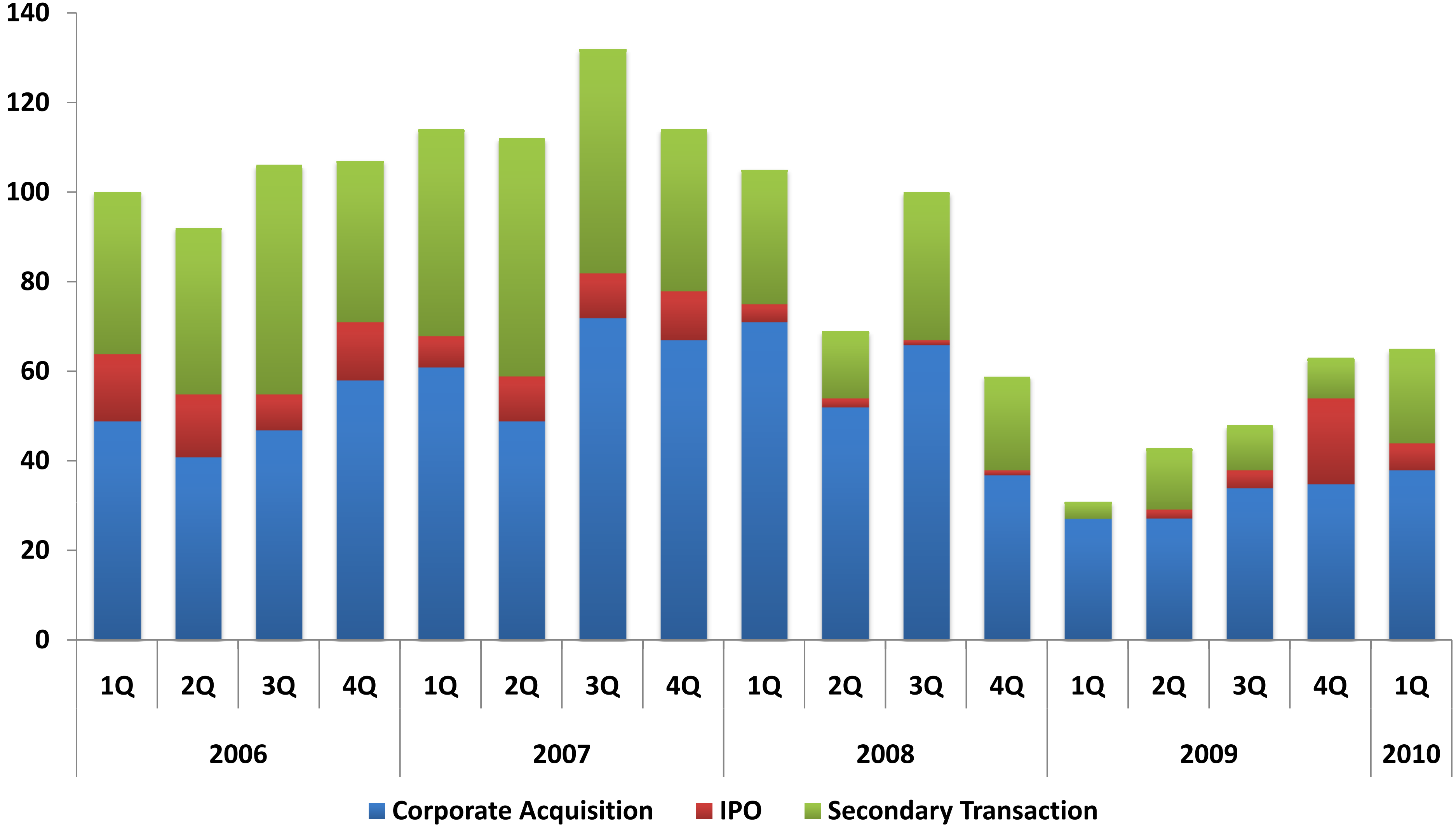


*Through 4/2009

Source: PitchBook

Exits and IPOs

Quarterly PE Exits by Corporate Acquisition, IPO and Secondary Sale

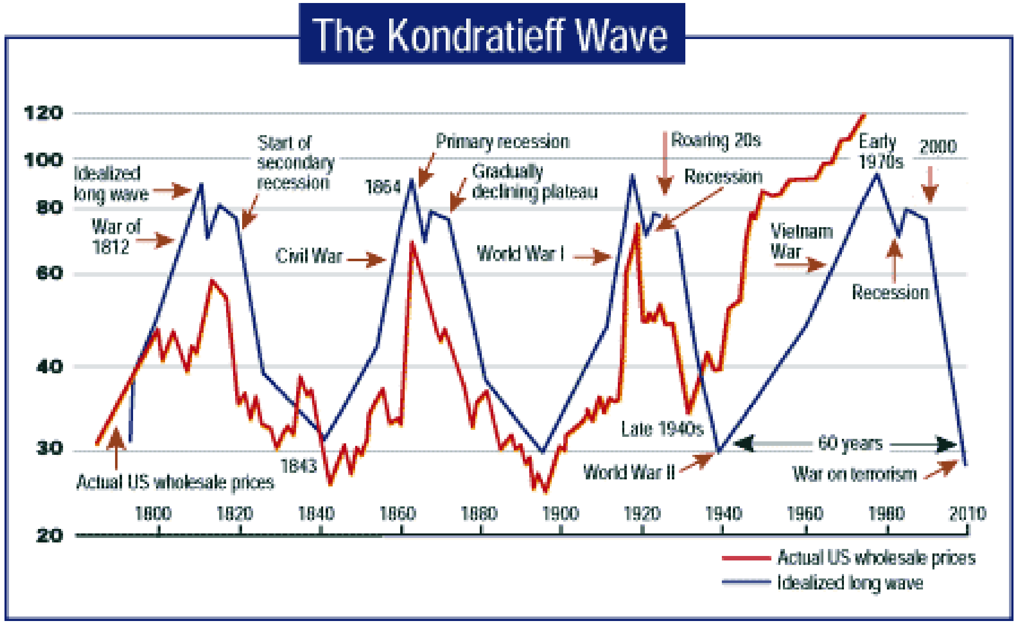


So is doom and gloom justified?

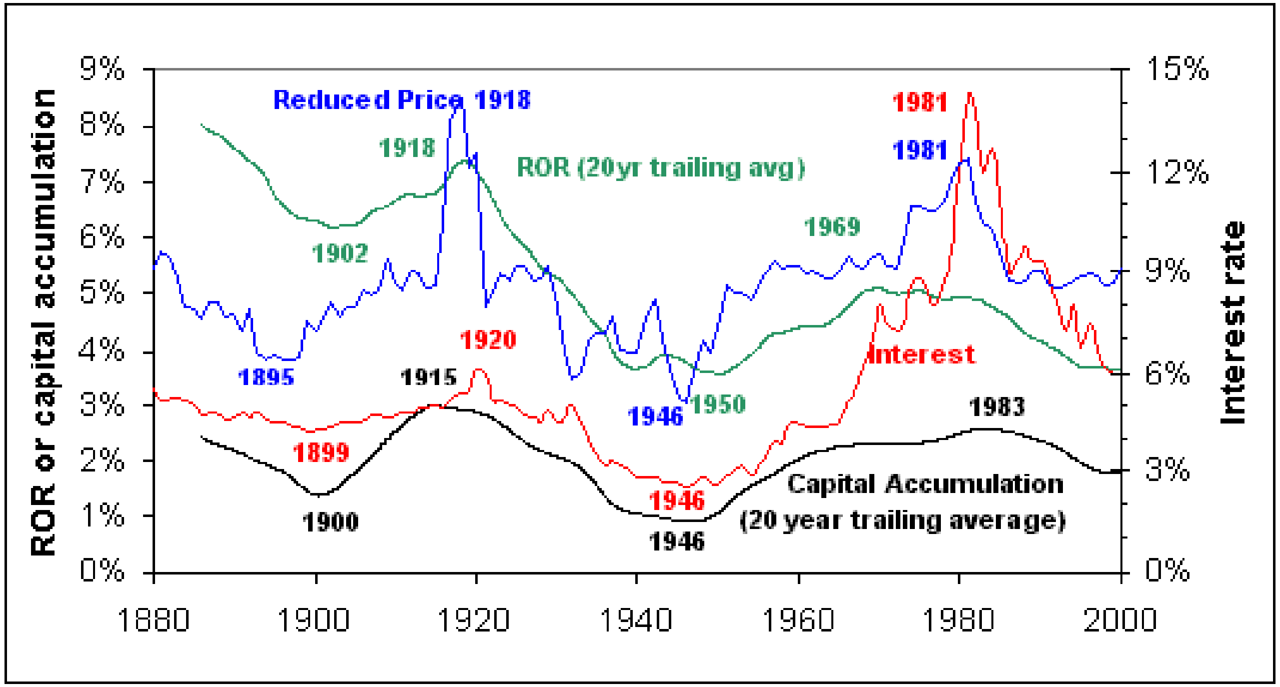
- Gloom, yes; doom, not necessarily
  3. Outcomes are not uniformly bad: some sectors and some places are doing well economically, as are some companies within troubled sectors
     - Value retailing, energy, health services, domestic tourism
     - China, Brasil, Australia, South Africa….
     - London vs. Leeds; Bilbao vs. (name of stuggling Spanish town)?
     - BoNY-M, Coller Capital, Ford MC, BP (!), Ryan Air

So is doom and gloom justified?

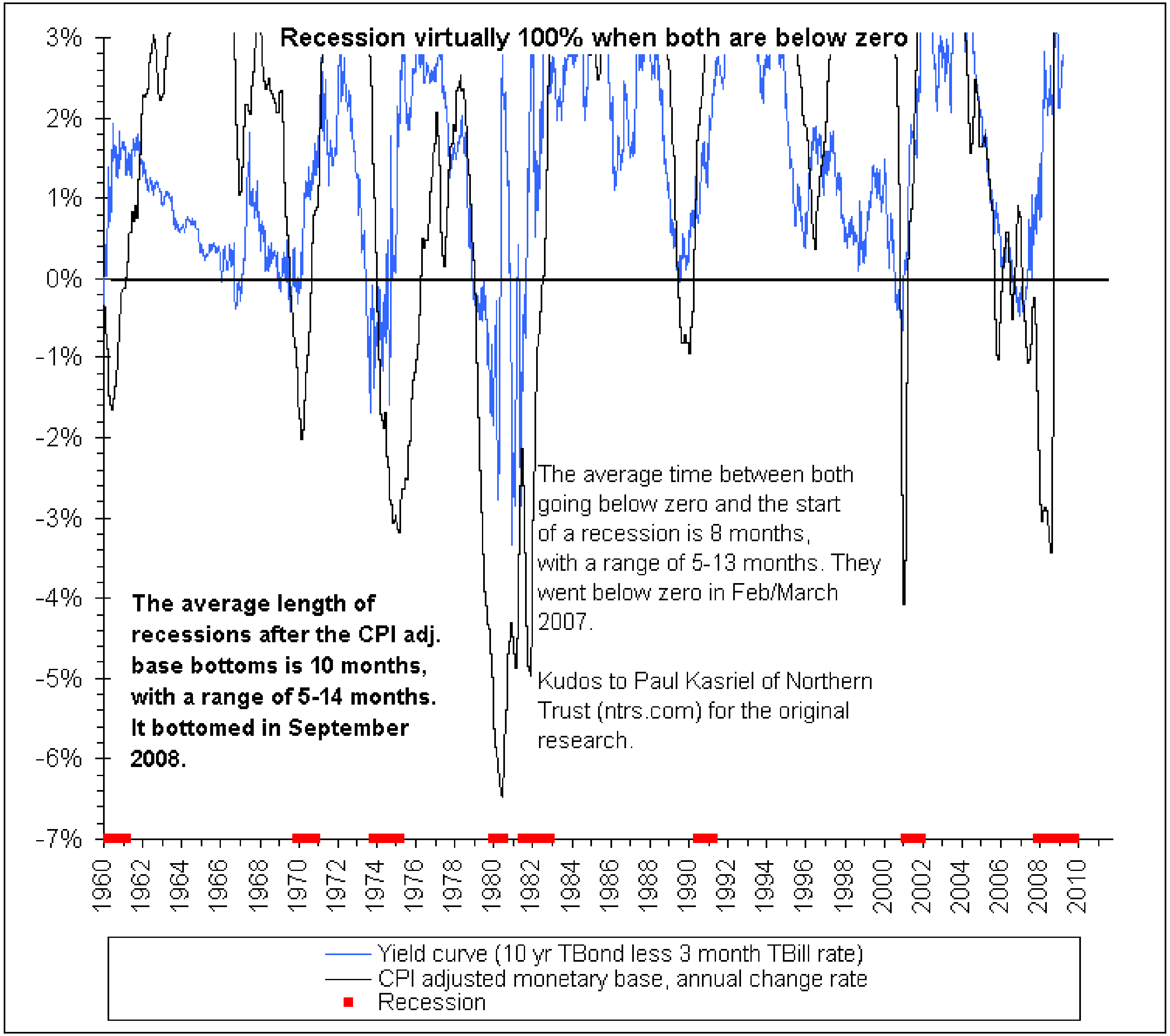
- Gloom, yes; doom, not necessarily
  4. We’ve been there before, and will be there again
  - Asian fiscal crisis (mid-’90s)
  - dot-com bubble (’95-’01)
  - collapse of Enron and speculative bubble (2001)
  - the credit crunch and financial meltdown (2008-10)



The Kondratieff Wave
120
100
80
60
40
30
20
Idealized long wave
War of 1812
Start of secondary recession
1864
Primary recession
Gradually declining plateau
Civil War
World War I
Roaring 20s
Recession
Early 1970s
2000
Vietnam War
Recession
Late 1940s
60 years
World War II
War on terrorism
Actual US wholesale prices
1843
1800
1820
1840
1860
1880
1900
1920
1940
1960
1980
2010
Actual US wholesale prices
Idealized long wave



ROR or capital accumulation
Interest rate
9%
8%
7%
6%
5%
4%
3%
2%
1%
0%
15%
12%
9%
6%
3%
0%
Reduced Price 1918
1918
ROR (20yr trailing avg)
1981
1981
1969
1902
1895
1915
1920
Interest
1946
1950
1983
1899
1900
1946
1946
Capital Accumulation
(20 year trailing average)
1880
1900
1920
1940
1960
1980
2000



Recession virtually 100% when both are below zero
3%
2%
1%
0%
-1%
-2%
-3%
-4%
-5%
-6%
-7%
The average time between both going below zero and the start of a recession is 8 months, with a range of 5-13 months. They went below zero in Feb/March 2007.
Kudos to Paul Kasriel of Northern Trust (ntrs.com) for the original research.
The average length of recessions after the CPI adj. base bottoms is 10 months, with a range of 5-14 months. It bottomed in September 2008.
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
Yield curve (10 yr TBond less 3 month TBill rate)
CPI adjusted monetary base, annual change rate
Recession

So is doom and gloom justified?

- Gloom, yes; doom, not necessarily
  4. We've been there before, and will be there again
     - At the end of the day, there is no escaping the fact that economies are unstable and unpredictable, and difficult to manage
     - Modern history has been a race, back and forth, between regulation/taxation and innovation to avoid regulation/taxation *(why we haven't learned from Enron)*

- Market-based economies always adjust toward equilibrium, and equilibrium is unstable
- Even centrally planned economies with price and quantity controls always are unstable; outside changes require re-planning

So is doom and gloom justified?

- Gloom, yes; doom, not necessarily
  4. We’ve been there before, and will be there again
  - This may be the deepest and longest recession for a while, but it is not the only one in modern history, and won’t be the last.
  - Some (foolish?) pundits believed that in the late 1990s onward, careful management of the economy essentially had gotten rid of cycles… or at least had muted them

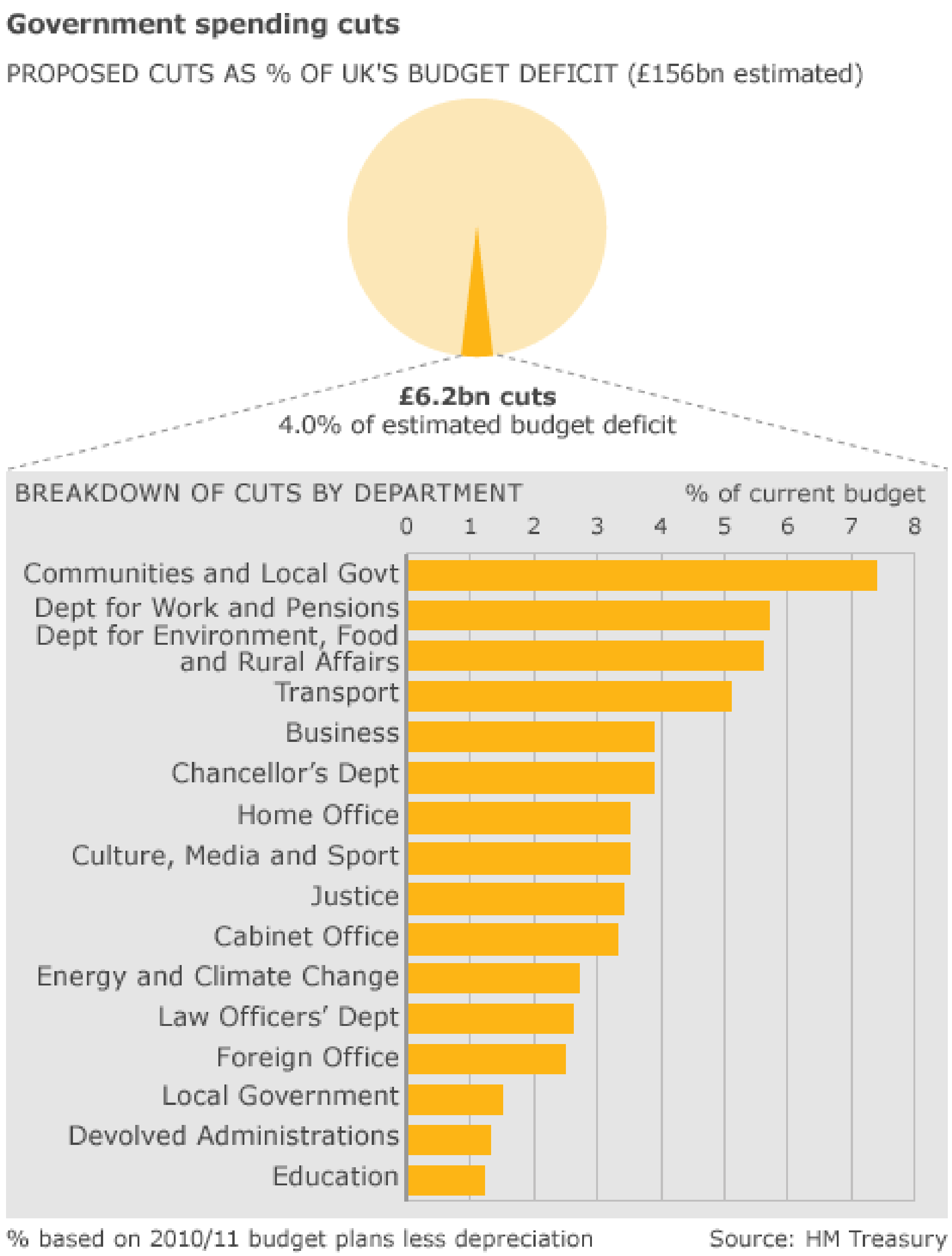
Which gets us to the question: *can* these downturns be managed?

- Focusing on US and UK we are watching a great natural experiment: two very different approaches to a very similar set of problems:
  - First: some similarities in approach
    - QE, increased regulation/oversight of financial sector, some budget cuts

Which gets us to the question: can these downturns be managed?

- Focusing on US and UK we are watching a great natural experiment: two very different approaches to a very similar set of problems:
  - But the differences are more striking

US	UK
2010 total budget: \$3.55 trillion \$10.2 trillion in cuts over 10 years (-33%) \$ 300 million in tax cuts now \$17 billion increase in university loans \$4 billion on new infrastructure \$13 billion more on education eliminate cap gains on small business \$6 billion more for clean energy	2010 total budget: \$1.05 trillion \$1.3 trillion in 4 years (-31%) Top personal tax bracket increased 45-50% VAT increased 17.5 – 20% Capital spending cut by 30% \$3.7 billion in public infrastructure spending *(above includes funds for regional projects to partially replace RDA funding)* Increase in retirement age to 66



Government spending cuts
PROPOSED CUTS AS % OF UK'S BUDGET DEFICIT (£156bn estimated)
£6.2bn cuts
4.0% of estimated budget deficit
BREAKDOWN OF CUTS BY DEPARTMENT
% of current budget
0
1
2
3
4
5
6
7
8
Communities and Local Govt
Dept for Work and Pensions
Dept for Environment, Food and Rural Affairs
Transport
Business
Chancellor's Dept
Home Office
Culture, Media and Sport
Justice
Cabinet Office
Energy and Climate Change
Law Officers' Dept
Foreign Office
Local Government
Devolved Administrations
Education
% based on 2010/11 budget plans less depreciation
Source: HM Treasury

High debt, higher taxes, less spending

- VAT rise from 17.5 to 20%
- Top marginal rate rise to 50%+ from 45%
- Exemptions curtailed
- Some excise taxes hiked

Which gets us to the question: can these downturns be managed?

US	UK
In general – US is relying on public spending, low interest rates, and low taxes to stimulate demand and grow the economy out of recession. Key to the strategy is a sustained level of spending on HE, research, and public infrastructure *(Yesterday's election may change this)*	The UK's approach is to suffer more pain over a compressed period of time to lower more quickly the interest burden of debt, so that from 2015 onward it can increase its investments *(This also hedges better against a possible rise in interest rates during the period)*

Which, if either, approach will work?

- There is general agreement that:
    - Governments should intervene to prime the pump and provide stability
    - There is a role for monetary and fiscal policy
  - But reasonable people disagree on how much intervention, when to intervene, and what mix of monetary and fiscal policy to use.
  - The truth is that there is no simple recipe– especially in the global world of 2010 where there are capital and labour flows across borders and many uncertainties due to terrorism, weather, and other natural occurrences.

Which, if either, approach will work?

- Despite having been embarrassed after the Bloomberg interview, I still am willing to make a prediction
  - Neither the US nor Europe will have a double-dip recession. The US, UK, and EU responses have been too vigorous, and markets are too resilient, for that to happen
  - Less sanguine about secular trend – Western economies won't return to a robust growth path in foreseeable future
    - Continuing large public debt; even worse if interest rates rise
    - Historic lack of personal savings, plus low returns on savings now, plus underfunded pensions, plus loss of home equity, raise questions about future purchasing power
    - Population growth – strains on food and water
      - 8 bn people in 2030; "perfect storm"
    - Energy crunch
    - Environmental quality/carbon
    - Escalating international security costs
  - Can we be saved by technology/innovation?

What will UK economy of 2010-2020 look like?

- Still less employment in mfg; that remaining (12-15% of employment) will be higher value, advanced at one end, and SME serving niche/local markets at the other
- Reconfigured set of corporations after new rounds of acquisitions and mergers
- Much more Gulf, Chinese, and Indian ownership (Will the sun set on the American era? – John Kao)

What will UK economy of 2010-2020 look like?

- Continued concentration of employment in personal and business services, including finance, but with slower growth in income

Again– come to key question: what will be role of innovation? New industries? Vibrant new companies?

  - what will be the Apple. Microsoft, Facebook, Amazon, YouTube, etc. of the next decade?

19/25 in top 25 in '08 not there in '55

in 1955?	2008	Company	Revenues ($ millions)	Profits ($ millions)	1955		Revenues ($ millions)	Profits ($ millions)
no	1	Wal-Mart Stores	378,799	12,731	1	General Motors	9,823.50	806
yes	2	Exxon Mobil	372,824	40,610	2	Exxon Mobil	5,661.40	584.8
yes	3	Royal Dutch Shell	355,782	31,331	3	U.S. Steel	3,250.40	195.4
no	4	BP	291,438	20,845	4	Electric	2,959.10	212.6
no	5	Toyota Motor	230,201	15,042	5	Esmark	2,510.80	19.1
no	6	Chevron	210,783	18,688	6	Chrysler	2,071.60	18.5
no	7	ING Group	201,516	12,649	7	Armour	2,056.10	1.6
no	8	Total	187,280	18,042	8	Gulf Oil	1,705.30	182.8
yes	9	General Motors	182,347	-38,732	9	Mobil	1,703.60	183.8
no	10	ConocoPhillips	178,558	11,891	10	DuPont	1,687.70	344.4
yes	11	Daimler	177,167	5,446	11	Amoco	1,667.40	132.8
yes	12	General Electric	176,656	22,208	12	Steel	1,660.30	117.2
no	13	Ford Motor	172,468	-2,723	13	CBS	1,631.00	84.6
no	14	Fortis	164,877	5,467	14	Texaco	1,574.40	226.1
no	15	AXA	162,762	7,755	15	Technologies	1,526.20	55.8
no	16	Sinopec	159,260	4,166	16	Shell Oil	1,312.10	121.1
no	17	Citigroup	159,229	3,617	17	Kraft	1,210.30	37.4
no	18	Volkswagen	149,054	5,639	18	ChevronTexaco	1,113.30	211.9
no	19	Dexia Group	147,648	3,467	19	& Rubber	1,090.10	48.1
no	20	HSBC Holdings	146,500	19,133	20	Boeing	1,033.20	37
no	21	BNP Paribas	140,726	10,706	21	Sinclair Oil	1,021.50	91.6
no	22	Allianz	140,618	10,904	22	International	994.1	36.3
no	23	Crédit Agricole	138,155	8,172	23	RCA	941	40.5
no	24	State Grid	132,885	4,423	24	Union Carbide	923.7	89.8
no	25	China National Petroleum	129,798	14,925	25	Rubber	916	40.5

What will UK economy of 2010-2020 look like?

- Related to that, there is heightened interest in entrepreneurial opportunities in this uncertain economy ("necessary" and "choice" e-ship)
  - Universities can play a key role (MBS example)
- Another opportunity is to develop the SME sectors of regions – often not seen to be as innovative.
  - There are large payoffs to making SMEs more dynamic, to introduce new products and processes
  - Another good role for universities

What will western economies of look like after 2010?

- Outcomes will be driven by cyclical and secular challenges, as they always have been
  - Cyclical – regions with the most vulnerable industries, weakest financial bases, and lack of diversity and scale will suffer most:
    - In US: regions like Charlotte, NC, metro population around 2.5 million, affected by downsizing and/or takeover of Wachovia and BankofAmerica. Execs and mid-mgers cannot sell homes, and are less mobile
    - Limerick – faced loss of 2000 people when Dell relocated to Poland to save money
      - E.g of many smaller towns with one large employer suffering – NC mill towns like Kannapolis, NC, or Bradford, UK
      - Vellejo, CA (116,000) declared bankruptcy in 2008; Orange Co., CA (3 million) did so in 1994.
      - I was told last night about the region around Toledo with persistent unemployment of 25% (tradition-bound, less mobile)

What will western economies of look like after 2010?

- What will happen to these places that are slammed in the downturn?
  - Some will be downsized to a new, lower level (Scranton, PA; New Orleans, LA; Dayton, OH) requiring generations (if at all) to rebuild
  - Some will be able to bounce back more quickly (New York City, Orange County)
- What determines resiliency?
  - Scale
  - Diversity
  - Strategic focus
  - Nimbleness (good planning, leadership): case of Kannapolis and Cannon Mills
  - Luck (e.g., sitting on top of a resource suddenly in demand)
  - Huge influxes of public money

What will western economies of look like after 2010?

- The cycle is accelerating/exacerbating adjustment processes that are part of historic market economy adjustments
  - Toward a different set of prominent sectors and different industrial leaders in each sector
  - Those leading sectors and industries are not uniformly spread across regions, so too will regional restructuring be accelerated.
  - But there will be exceptions to the rule – regions that act strategically, have natural advantage that is pertinent in the 21st century, and are lucky, will be able to thrive.
  - Most changes will not be among the world's primary cities that have diversity, scale, and draw to continue to dominate. Those places still have governance and economic development challenges that most be addressed to maintain their citizens' Q-of-L.

What will western economies of look like after 2010?

- There is no escaping the fact that there will be winners and losers:
  - Poland gains at Limerick's expense
    - This shows equilibration in market too, since Polish wages less than Irish and relocation will lead to closing of gap.
    - Same sort of equilibration happens secularly, for example, by production moving offshore to China and India.
  - As companies downsize, they often consolidate operations in one centre, which becomes larger (military base closings in the US, benefitting Fayetteville)

What will western economies of look like after 2010?

- Secular consequences: regions grow/decline over time due to many different reasons:
  - Built around emerging sectors (Houston-oil)
  - Built near new infrastructure (motorway cities, aerotropoli)
  - Built near new resources (Las Vegas and Hoover Dam)
  - Because of other technological advances (air conditioning, water desalinization and/or transport)
  - Due to changes in the structure of industry (disintegration allowing parts of the product to be made in many places), and globalisation, which makes it possible for manufacturers to seek lowest-cost sites anywhere. (Mexico and China)
- Regions without specific growth impulses may not decline (much) over time if they are large enough to have a ratchet due to rank-size effect – New York, Paris, London, ..

What will western economies of look like after 2010?

- Because of both cyclical and secular adjustments we will see a different set of secondary and tertiary world regions by mid-century than we do now.
  - The primary cities will remain primary (including capitals like Mumbai, Moscow, Rio, Shanghai,| Athens ...)
  - Consider the second tier of regions in the US today: Atlanta, Dallas, Phoenix, Charlotte, Nashville… Sunbelt cities that have eclipsed the older second cities of the US: Pittsburgh, Detroit, Cleveland, Buffalo.
    - Will these be replaced by others?

What will western economies of look like after 2010?

- The success of regions being able to emerge from this crisis in stronger relative position depends on their ability to exploit existing and emerging competitive advantage.
  - In industrial era proximity to raw materials, natural transportation resources (rivers and ports), and markets were key. Some of those amenities were created (canals), but most were endowed.
  - Today, businesses – especially knowledge businesses -- are more footloose, and locate where they can achieve a good quality of life.
    - Q of L is naturally endowed, but also, constructed: Las Vegas, Orlando, Dubai

What will western economies of look like after 2010?

- Stories of regions (re)inventing themselves:
  - Research Triangle, NC (vs. Triad, NC)
  - San Diego, CA (vs. Sacramento)
  - Manchester, UK (vs. Newcastle or Sheffield)

Summary/take-aways

- The world economy is in a constant state of change, going through cycles and long-wave changes that lead to different outcomes
- This latest episode has been more severe and protracted than others, but will also ease as a consequence of market resilience and aggressive (if varied) policy interventions

Summary/take-aways

- The long-term changes in the political economy, and the policies themselves, will present challenges for regions and accelerate regional shifts that would otherwise have happened
  - Those include the loss of regional funds in the UK, the reduction of public sector investments, reductions in public sector employment, and more

Summary/take-aways

- The regions that end up thriving in the near-term are those that have natural advantage or build competitive advantage, using good leadership, applying strategic vision, and employing the right policies to make SMEs stronger and entrepreneurs more successful
- But at the end of the day, there will be winners and losers, as there always have been