



EUROPEAN CENTRE FOR HEALTH ASSETS AND ARCHITECTURE

## **The future economic outlook for capital investment**

**Barrie Dowdeswell**

## Contents

- **The outcome of the ECHAA European workshop on the ‘credit crisis’ and other evidence**
  - **1. The impact on Capital investment**
  - **2. Revenue affordability of capital including trends in tariff payment systems**

## ECHAA policy seminars

- The Seminar on the credit crisis, held in London on 28th April, was the inaugural event of an ECHAA bi-annual series of policy seminars designed to generate and disseminate understanding about topical and policy-relevant health and healthcare issues, especially those linked to the estate and to capital investment.
- Web ref - [www.echaa.eu](http://www.echaa.eu)

## Summary of key points 1.

- The worse recession since 1930s
- Further decline and fitful erratic recovery
- Wholesale reform of the banking sector critical
- Health inequalities will worsen but not, by and large, health status overall
- Diseases of affluence will lessen
- Mental health disease, alcohol and drug poisoning will increase
- There is no precedent to predict duration or severity
- All models of healthcare funding and delivery seem equally affected
  - Welfare / taxation
  - Social / insurance funds

## Summary of key points 2.

There will be

- New debate about what healthcare investment is for
- Renewed debate about the relative values of healthcare investment – challenging existing priorities
- Emphasis on attempts to control demand
  - Restrictions on availability
  - Out of pocket payments
  - Incentives for personal insurance
- Greater incentive to find ways of improving efficiency, looking beyond the normal concepts of “productivity”
  - Work process systemisation
  - Clinical governance - outcomes

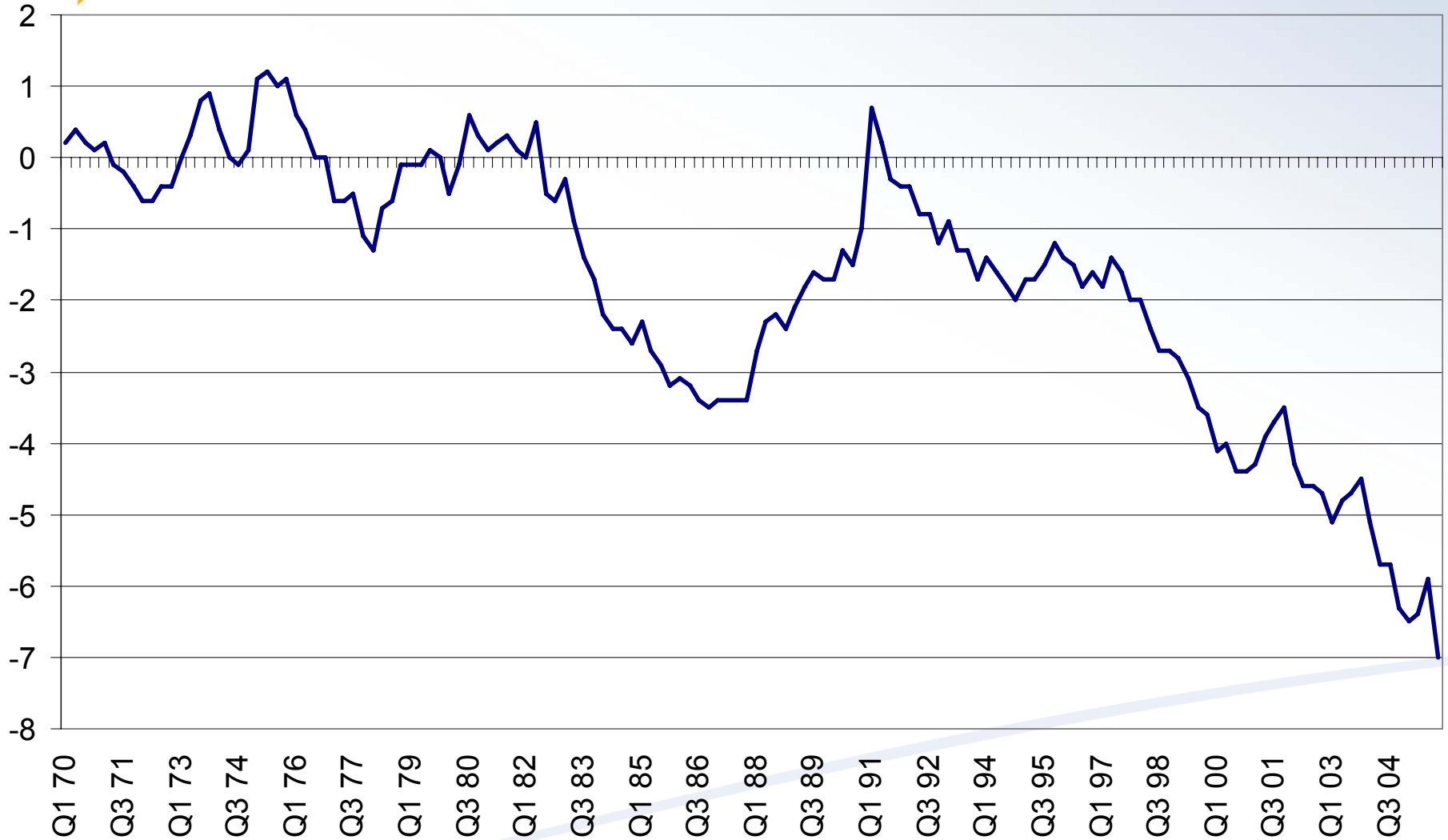
## Summary of key points 3 - Capital

- Normal capital supply will be severely disrupted
- Knee jerk reactions to spend capital to stimulate the economy may be ill advised for healthcare
  - ‘shovel ready’ projects may not be the right projects
- Capital will increasingly be used as a catalyst for change
- Disinvestment will be as important as investment, but more difficult
- Sources for capital will be more competitive
  - Structural aid – better value for money assessment, and outcome evidence
  - Conventional loans – more rigorous risk assurance
  - PPP – more ‘realistic’ business orientation
- Sustainability of debt repayment and fiscal management will become a critical factor – in various forms



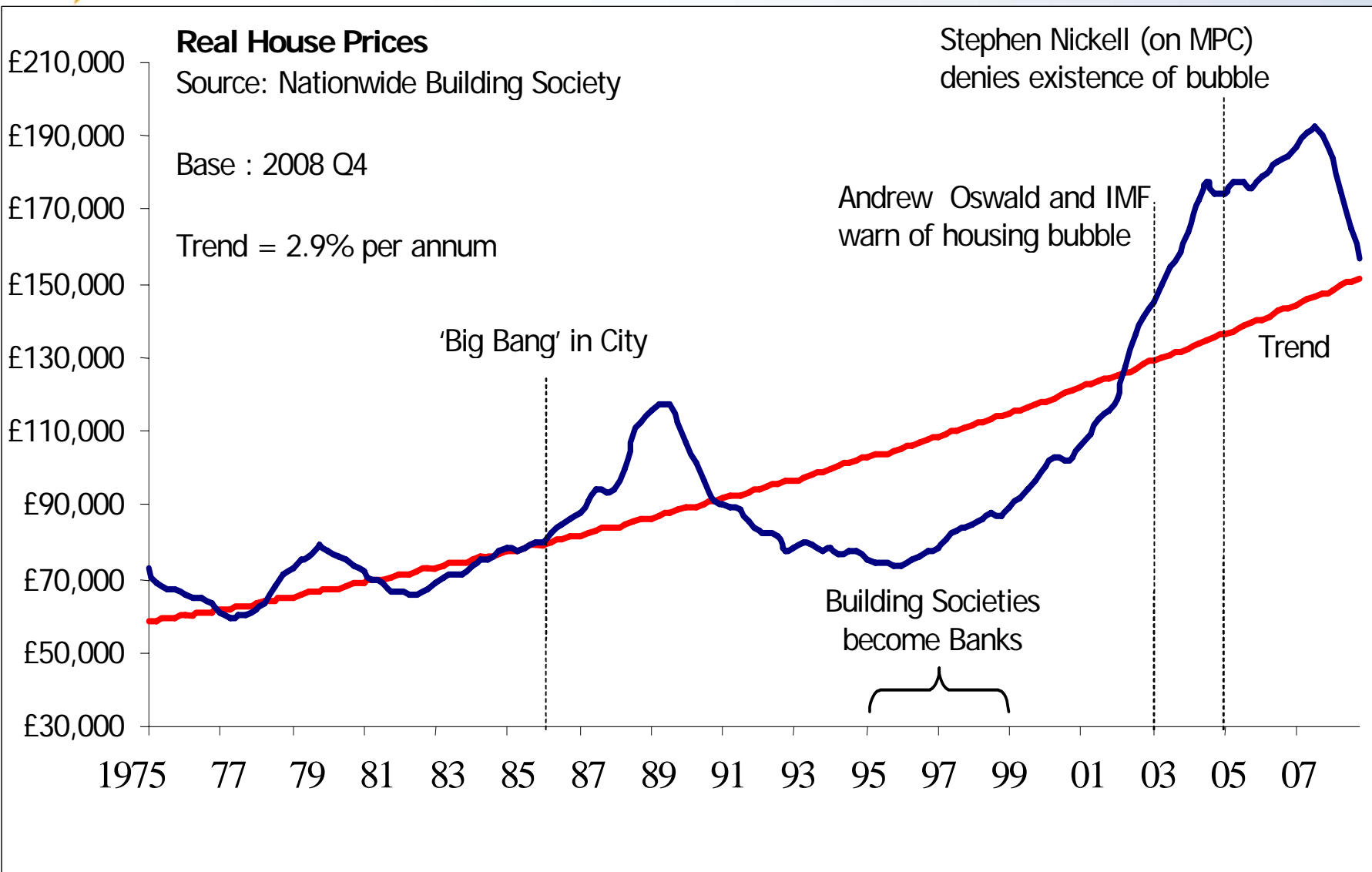
## Some relevant background

# Global imbalances: US Current Account Deficit (as % of GDP)

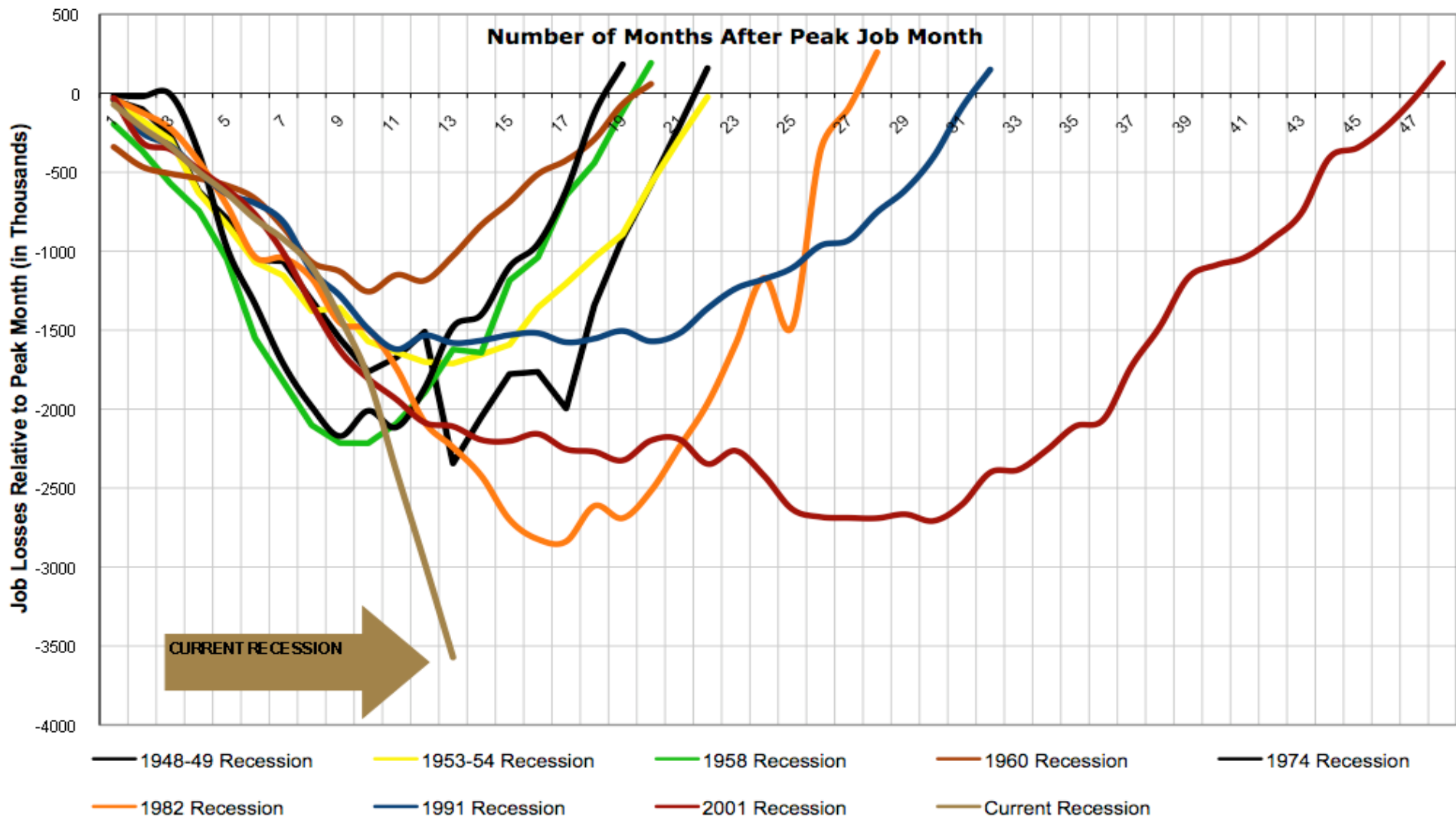


Source: Wolf (2006): "Fixing Global Finance"; IMF

# Shaky investments: The creation of a bubble (UK)



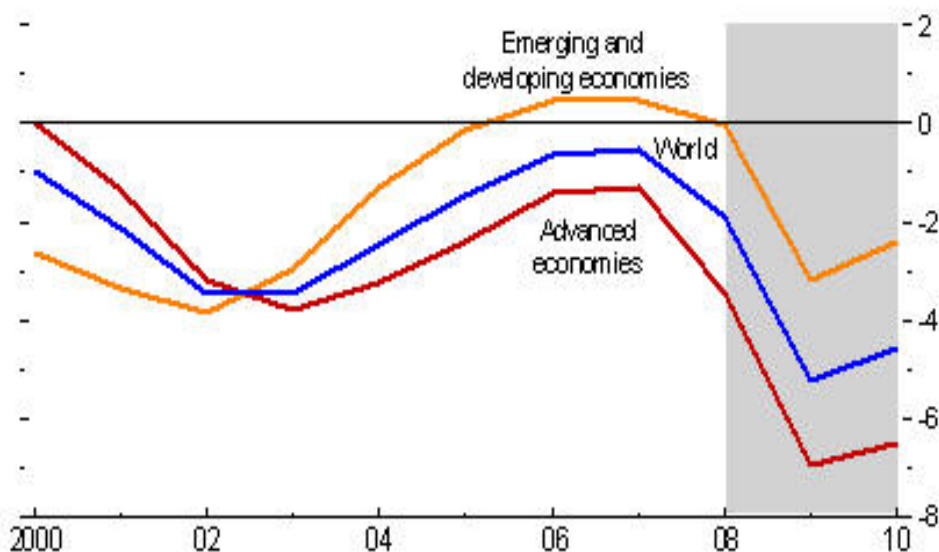
### Job Losses\* in Post WWII Recessions



\* Change in Nonfarm Payrolls, Reported Monthly, Bureau of Labor Statistics, US Dept. of Labor

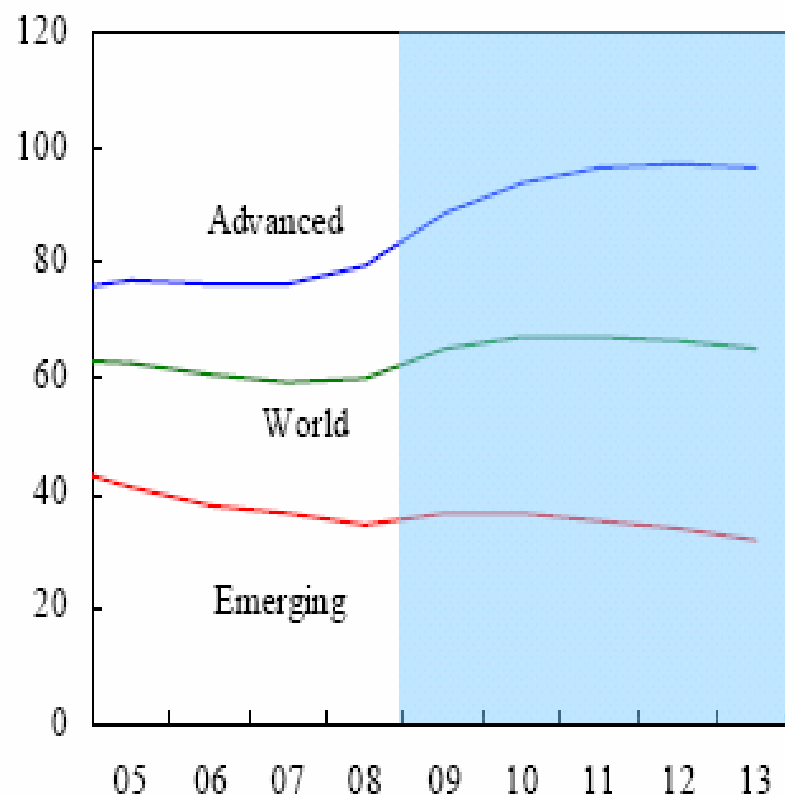
# Fiscal (in)balances

**Figure 6. General Government Fiscal Balances**  
(Percent of GDP)



Source IMF staff estimates.

**General Government Debt**  
(In percent of GDP)



**IMF says the fiscal stimulus should be “timely, large, lasting, diversified, contingent, collective”... but also “sustainable”: there is the question!**

## Weathering the storm

- Public debt of 10 leading (rich) countries will rise:
  - from 78% of GDP in 2007
  - to 114% by 2014.
  - They will owe around €36,000 for each citizen
    - The UK will need to attain 6% growth just to stabilise debt – the worse scenario in Europe
- Many recent hospitals have been financed by a borrowing binge
- Today's borrowing is taking place together with the slow motion car crash of the pensions and health-care costs of a greying population
- We seem intent on worsening the outlook with our predilection for self-induced chronic illness
- We should at some stage deal with the carbon crisis – hospitals are major polluters
- *Active Inertia* and the *Rush to Certainty* are no longer relevant or affordable characteristics of sustainable capital investment



## Health and Wealth

- **Debates on healthcare often dominated by cost containment We should instead consider health much more as a productive sector:**
  - Commission on Macroeconomics & Health (Sachs) – poor health status is a constraint on economic performance, & the return on investment in health is considerable
  - There has been dissenting work (Acemoglu & Johnson) that poor health does not have large effects on economic performance but is partly relative positioning & partly compensated by worsening labour-capital ratios (so, no +ve impact on per capita income)
  - On balance, there is enough evidence that the usual causation (wealth => health) is actually bidirectional

## Health & wealth 2

- Work by Suhrcke (WHO) identifies 4 potential pathways for effect of health on wealth in high-income countries:
  - Raised employment rates (lower sickness absence, longer working life)
  - Raised labour productivity
  - Human capital formation through investment in lifetime education
  - Raised saving rate (=>investment) for retirement
- Results show that:
  - Health status is a robust & sizeable predictor of economic growth
  - Gain in “health income” (essentially life longevity) in recent years is comparable to gain in GDP p.c. over the period
- For European countries, the evidence is that “health” is a good national investment

## Healthcare, via amenable mortality, matters for wealth

- Healthcare sector is not a “luxury good” (income elasticity  $\approx 1.0$ ), so expenditure on the sector is **not** a bottomless pit
- Efficiency of health systems will be crucially important in the current economic climate
- Benefit/cost ratios for reduction in **amenable mortality** from expenditures on healthcare are in range 1.5-3.7: high!
- Concept of amenable mortality can be differentiated into causes amenable to the health care system & those to public health policy
- Specific causes can be partitioned into the proportion to which reductions are attributable to primary, secondary & tertiary healthcare

**Focusing on the diseases where healthcare system has maximum impact will become crucial – capital investment will need to follow**

## Conclusions so far

- The crisis flowed from global savings imbalances, irresponsible financial system & regulatory behaviour
- The credit crisis is mostly over – but the economic crisis will deepen & endure for **much** longer
- Monetary & fiscal policy are in uncharted macroeconomic territory (worst since 1930s)
- The crisis impacts on health in surprising ways (*sometimes*, rising health status) – but health inequality will rise
- Public sector fiscal response depends if finance ministries run out of room before the crisis is over; impact on health sector is not clear despite rising crisis-induced demand
- The “human capital” argument for investing long term in *health* is robust, including in high-income countries
- Expending on *healthcare* is economically appropriate - especially in tackling “amenable mortality & morbidity”
- Capital spending choices will be more difficult – (later session)



# Sustainable Financing

## A real terms conflict

- Capital spending as a stimulant – immediate horizon
- Debt repayment as a burden – 2 to 3 years ahead and beyond – up to 40 years
- In most countries public sector funding looks vulnerable beyond 2011
- Health **as a cost** is particularly vulnerable
- Health **as an investment** is struggling to justify its case
- Recessional health impact may change demand, resulting in – the wrong kind of investment in the wrong place at the wrong time
- Governments (social / insurance funds) may change direction
- Can capital debt be repaid in face of changing priorities?

## The cost of capital – the models

- Government grant – free at point of issue to healthcare?
  - Capital charging
  - Loan repayment
  - Servicing costs
- Structural aid – free at point of handover
  - Servicing costs
- Commercial loan
  - Debt repayment agreement – income as collateral
  - Fixed vs flexible rates
- Public Private partnerships
  - PFI ? – dead in the water
  - Full service models – issues of privatisation, commercial risk and volatile government / social fund funding availability
- In all cases the embedded cost of equipment is becoming a critical issue
  - Running costs
  - depreciation

Included

FINANCING OF THE CAPITAL COSTS	
<b>Austria</b>	- Equivalents of consumption of fixed capital are included in the calculations of the DRG-weights
<b>Belgium</b>	- The cost of infrastructure is paid by a budget. This budget is due to individual negotiations between hospital and Ministry of Health. - Important medical equipment and installations are in most cases financed by surgeons and hospital. Sometimes, there is also remuneration from the government within the hospital budget. - Communication systems' and informatics' budgets are based on historical budgets.
<b>Denmark</b>	- It is financed outside the DRG-system
<b>England</b>	- The revenue consequences of capital expenditure are part of the HRGs as capital charges are part of the revenue element of budgets.
<b>Finland</b>	- All investment cost are included in DRG financing. There is no (any more) a direct investment support coming from the state
<b>France</b>	- All the costs are included but the length of damping of funded capital is not standardised
<b>Germany</b>	- The federal states generally cover the costs of infrastructure, important medical equipment and other equipment investments by subsidies
<b>Italy</b>	- DRG tariffs include reimbursement for all resources used during the process of care including equipment, personnel, drugs, room and board. However, some capital asset investments are financed according to specific programs strictly related to public functions and services.
<b>Portugal</b>	- With specific financing
<b>Spain</b>	- Not included in the DRG-system
<b>Sweden</b>	- All those costs are included in the DRG-system
<b>Switzerland</b>	- Currently investments are not included in the DRG-based reimbursement
<b>The Netherlands</b>	- All kinds of equipment are covered by DBCs, whether they are on list A or list B. - List B DBCs cover also the cost of capital.



Mechanisms	Retrospective/ Prospective	Fixed/ Variable	Incentives for Provider Behavior		
			Prevention	Delivery	Cost Containment
Line item budget	Prospective	Fixed	+/-		+++
Global budget	Prospective	Fixed	++	--	+++
Capitation (with competition)	Retrospective	Variable	+++	--	+++
Per case (diagnostic related payment)	Either	Variable	+/-	++	++
Fee-for-service	Retrospective	Variable	+/-	+++	---

Source: Adapted from WHO (2000) and Jegers, et al (2002).

## Examination of models

- Either separate budget:
  - Non-specific payment, global grants (Model 1)
  - Payments specific to intended use (Model 2)
- Or single activity budget, both capital & recurrent:
  - Capital payment included as fixed proportion of all case types (Model 3)
  - Estimated capital cost for each case type in a previous period, actual average (Model 4)
  - Estimated capital cost for each case type if good care methods used, “standard” cost (Model 5)
- Or free market – all the above are “administered prices” – US &... NL (Model 6)

## Model 1 - Separate budget: global, non-specific grants

Capital Fund

Recurrent Expenditure Fund

Amounts based on bed numbers,  
total patients, hospital type, etc

Payment by volume and case type

#1

#2

#3

#4

#5

#6

#7

#...

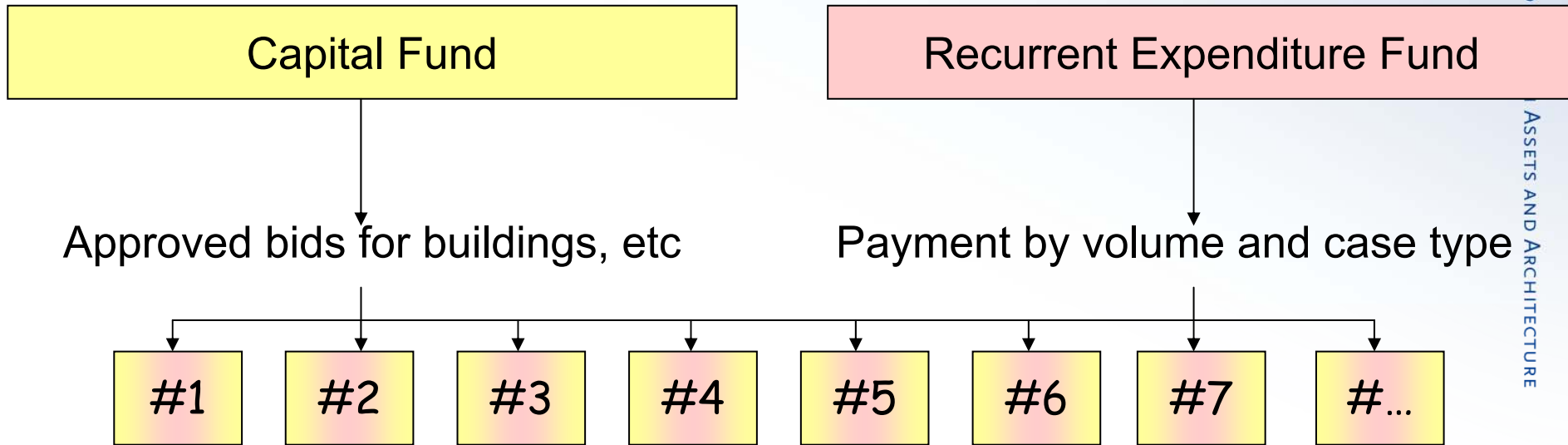
### Advantages

- Simple to operate
- Care providers have opportunity to innovate

### Disadvantages

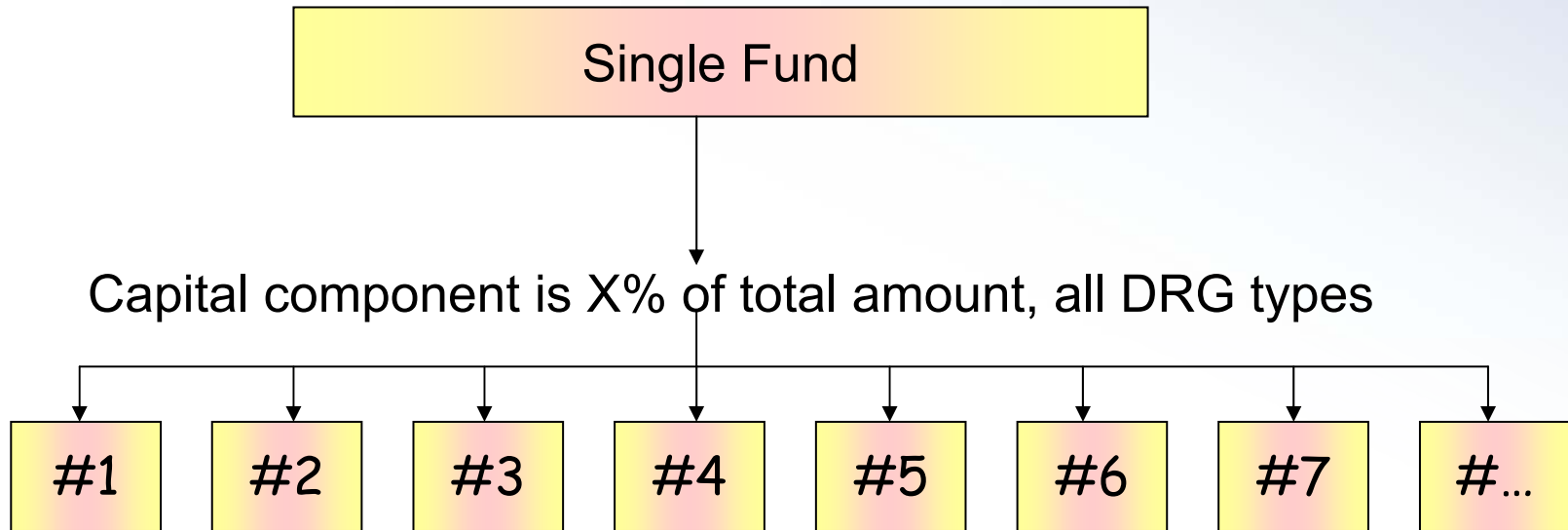
- No direct central control

## Model 2 - Separate budget: payment for specific investments



- **Advantages**
  - National (system) policies can be applied
  - Risk of idiosyncratic decisions is reduced
- **Disadvantages**
  - Difficult to operate (time-consuming)
  - Accountability taken away from care providers?

## Model 3 - Single budget: fixed proportion for capital costs



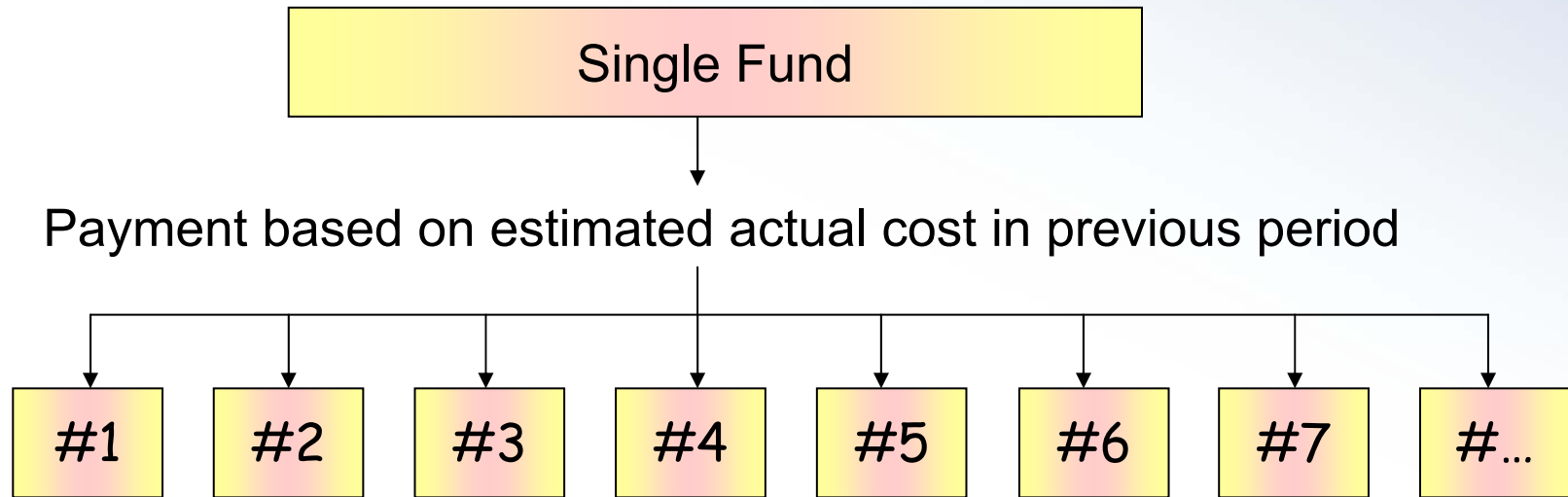
### ➤ Advantages

- Simple to operate (like global grants)
- Care providers have opportunity to innovate

### ➤ Disadvantages

- No central control
- Imprecise messages about real or desired cost
- Likely mismatch of hospital capital resources to **future** needs

## Model 4 - Single budget: different capital payments, each DRG type, based on actual average cost



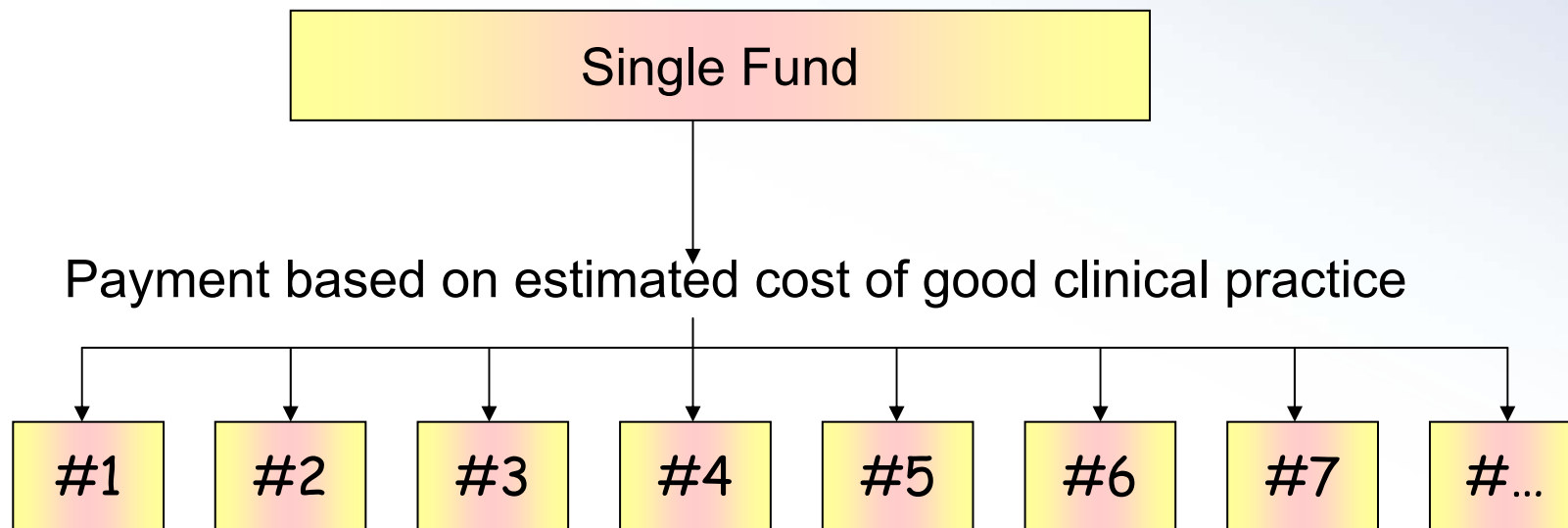
### Advantages

- Fairer allocation of payments among care providers
- Gives messages about actual past costs, therefore encourages attention to efficiency

### Disadvantages

- Difficult to operate (time-consuming)
- Discourages innovation (because based on previous care practices)
- Likely mismatch of hospital capital resources to **future** needs

## Model 5 - Single budget: different capital payments, each DRG type, based on “standard” cost



### ➤ Advantages

- Fairer allocation of payments among care providers
- Gives messages about appropriate costs, encourages efficiency & good clinical practice

### ➤ Disadvantages

- Difficult to operate (time-consuming)
- Still potential mismatch of hospital capital resources to **future** needs if “standard cost” not well-computed looking over the long term

## The right answer: probably, a mixed model

- Model 5 (different payments for each DRG, based on “standard costs”) is best, **theoretically**, but involves a lot of hard work to set up systems
- It does become easier to use over time because:
  - care providers establish data systems
  - best-practice information becomes more widely available
- But in the real world it might make sense to use:
  - Model 5 for those high-volume case types with evident room for improvement
  - A simpler approach for other case types, & in short term

## Conclusions 1

- DRGs were an answer to a US costing (& political) problem, avoiding “socialistic” global budgeting (even though latter achieved the desired cost control)
- All payment systems including case-mix types generate varied provider incentives
- There is a confused picture across Europe regarding inclusion of capital components in DRGs
- Variety of models to pay for capital, each with pros & cons – ideal would have (forward-looking) standard costs
- DRGs are not good descriptions of products or of technologies, so using them to pay for new capital stock is actually very dubious (though understandable)

In recessionary times sustaining capital debt repayment will be unpredictable

- Capital charges may be leveraged upwards
- DRG tariff models may be subject to manipulation
  - Cut costs – blunt weapon
  - Discourage (encourage) capital investment / disinvestment
  - Act as a catalyst for change
    - Priorities
    - Outcomes
    - Efficiency
- DRG payment systems facilitate rapid changes in spending priorities – if within term contracts but can have unintended consequences for capital
- Unpredictability may/will increase the availability / cost of capital
  - Commercial loans
  - PPPs

## Final Comment

- The ‘crisis’ will trigger major reappraisal of health investment
- Investment priorities – service and capital – will change
- Technology diffusion will become more important
- Diffusion will unlock major changes in capital configuration
- Accessing capital will be tougher and subject to more rigorous assessment
- Payment systems will become more sophisticated and will offer greater leverage/incentives for change
- Capital strategy must become more realistic and adaptable
- **Moving health investment from the ‘cost’ budget line to the ‘investment’ budget line will be critical to future investment levels**



Thank you

Barrie Dowdeswell

[barrie.dowdeswell@echaa.au](mailto:barrie.dowdeswell@echaa.au)