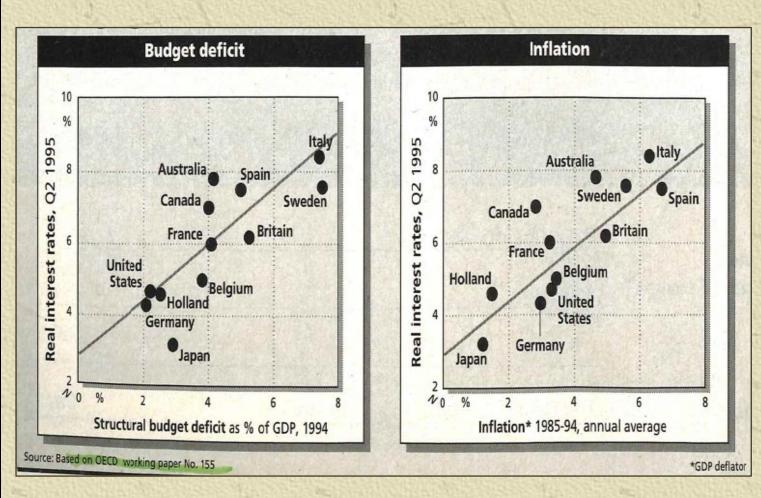
# Follow-up to exercise 3 \* Video clip (first 4 min of the 10-minute clip) \* https://www.stlouisfed.org/annual-report/2011

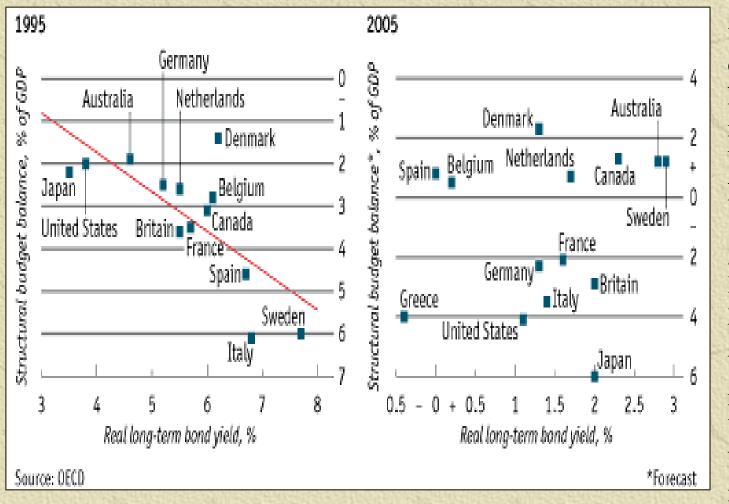
#### \* Real long term i-rates and budget deficit and inflation



Investors demand higher real i-rates from gov'ts that run big budget deficits or tolerate high inflation. Bond yields provided a signal to gov't about the soundness of their macro policy.

Economist, "School's brief: Pennies from hell", 3 Feb 1996, p. 60-62

**Budget deficits and interest rates**, 1995 and 2005



1995: countries with big budget deficits paid higher real interest rate (lower real bond yields from higher risk)

2005: There is no longer correlation between higher borrowing and real interest rates; US borrowing is being subsidized not punished

Economist, "World economy: World traffic lights on the blink?", 20 Aug 2005, p. 49-50.

- (G-T) and i-rates (2005, pre-crisis): K mkts seem to block global economic adjustment – reality defies basic theory
  - Financial and economic imbalances (-BOT)
    - Higher –BOT should signal higher real i-rates (↑ risk)
    - Real bond yields did not  $\uparrow$  ( $\uparrow$  bond yields  $\rightarrow$  cool  $D_{domestic}$ )
  - $\uparrow C \rightarrow \uparrow P$ , but  $\Pi^e$  were kept in check
  - (G-T), i-rates, GDP growth: CB able to keep i < g
    - Higher real rates  $\rightarrow \uparrow$  savings  $\rightarrow \uparrow$  potential growth (evidence mixed)
    - Fast growing US (high G-T) had real bond yields < low/no growth Japan
    - Euro area: same nominal i-rate across the area
      - Fast growing Spain/Greece had lower real i-rate than slow growth Germany
      - Convergence in yields reflects removal of E-rate risk with single currency, but default risk still exists!

### Dom macroeconomy targets – trilemma

- Fixed vs flexible
- MP independence vs dependence
- K-mkt liberalization vs controls

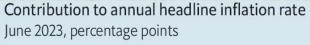
\* Advantage / disadvantage of choice of MP targets
• Fixed vs flexible E
• MS growth rate
• Inflation target
• Nominal GDP

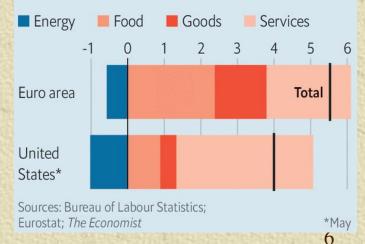
**\*** Generalizations on shifting macro theory consensus

- Inflation / deflation
  - Problem with inflation
  - Potential causes
    - Inflation trends and recent causes
      - MP and QE
      - Covid-related
        - Global S-chain disruptions
        - Post-pandemic C, savings
        - Fiscal stimulus / subsidies
      - Geopolitical tensions and war
      - L mkt imbalances
        - Employment
        - Wage growth
        - Wage-price spirals?
      - "Greed"-flation profiteering



Consumer prices, % increase on a year earlier

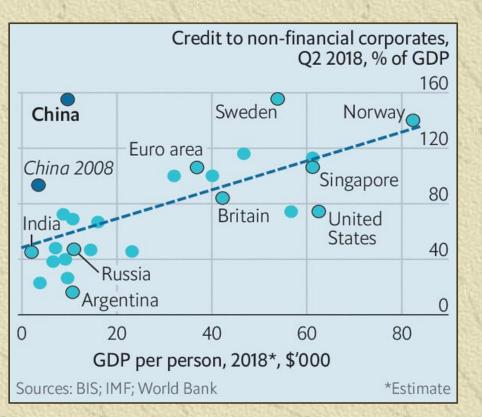




#### Deflation

- Problem: MP implication
- Potential causes
  - GFC
  - Pandemic lockdowns

#### China and debt



China's accumulation of physical K underpinned by cheap land (for development), tax breaks and low-cost L.

Role of debt in the strategy:

- Preferential access to credit from the beginning (state banks to state firms)
- GFC slowed X-led growth and fiscal stimulus was a response.
  - Local officials ran up debt;
  - Land was seized for development;
- property boom and infrastructure investment
   2008-19: Debt ↑, 150% to 250% of GDP

Economist, "China's future: The global centre", Essay on China, 23 Feb 2019, pp. 43-8.

#### Trade sector

During pandemic China's X grew for electronics for people to work from home in the West.

Global inflation has  $\downarrow X$ value in \$ terms by 12% (yr or yr to June 2023).

With both the main drivers of the economy struggling, China must find way to  $\uparrow C$ 

Policymakers have stopped short of large-scale stimulus, instead easing i-rates

No bailouts of firms teetering on default

China's June exports fell the most since the pandemic began

Monthly exports and imports in dollars, year-on-year change (%)



*Fin Times,* "Does Xi need a plan B for China's economy", J. Leahy, S. Yu and C. Ho-him, 18 Jul 2023, p.15.

# Domestic Macroeconomy Concerns # Business cycles, recession, and the "great moderation"



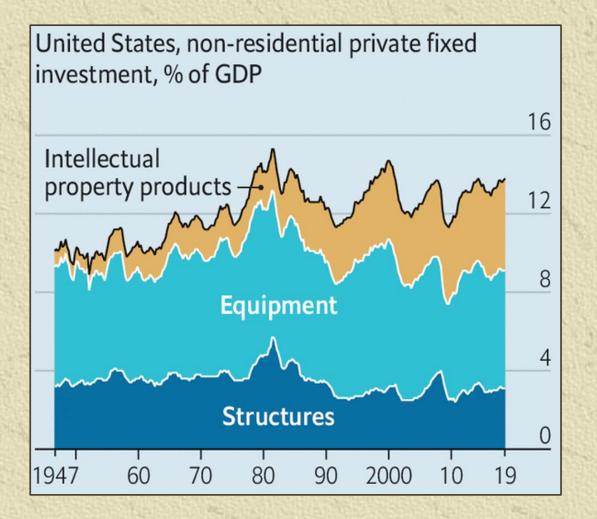
Before the GFC: a "great moderation" as the economy had tamed the boom and bust of the business cycle. Lucas (2003) boasted that the "central problem of depression-prevention has been resolved".

Longer expansions and shorter recessions

Economist, "The world economy: A strangely elastic expansion", 13 Jul 2019, p. 20-2.

- Why are booms surviving for longer?
  - Manu inventories used to predict recessions firms planned production months in advance and any ↓D → ↓ manufacturing
    - Supply-chain mgmt has \$\propto importance and size of inventories
    - Manu share of GDP  $\downarrow$  as services share  $\uparrow$
  - Blurring of manufacturing and services
    - Services replaced goods in supply chain where equipment is provided on demand rather than purchased
    - Manu goods have services-intensive inputs (design, software engineering); actual production outsourced
  - Rise of services changes nature of I
    - Private non-residential I in US is 14% of GDP, the L-T trend
    - $\downarrow$  in plant and equipment; more in intellectual property
    - I in intellectual property is dominated by tech firms

• Increased share of IP investment

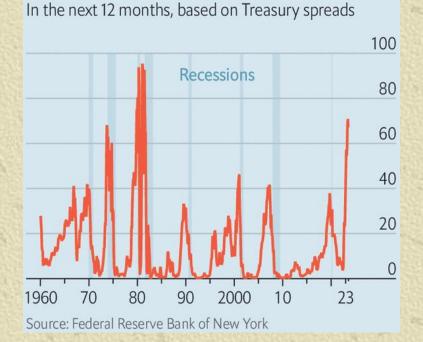


Economist, "The world economy: A strangely elastic expansion", 13 Jul 2019, p. 20-2.

#### Yield curve inversion and recessions

- L-T rates on bonds should be > S-T rates
- Investors expect higher compensation for risk of holding maturities into the future
- Inversions have near perfect record of foreshadowing recession in US

Could yield curve be misleading? L-T rates have fallen as Fed  $\downarrow \Pi$ . As MP has tightened, FP remains loose (US budget deficit is 5% of GDP)



United States, probability of recession, %

Economist, "The American economy: Turning a corner", 22 Jul 2023, p. 14-5.

- Revisiting the debate over MP and FP for GDP and employment objectives
  - Strengths / weaknesses
  - Why did policy makers give up control over MP?
  - Central bank independence

## Employment and inflation relationship