# Not the OBR

# A Macro-economic Policy Model of the UK Economy

## with insights from Godley & Lavoie

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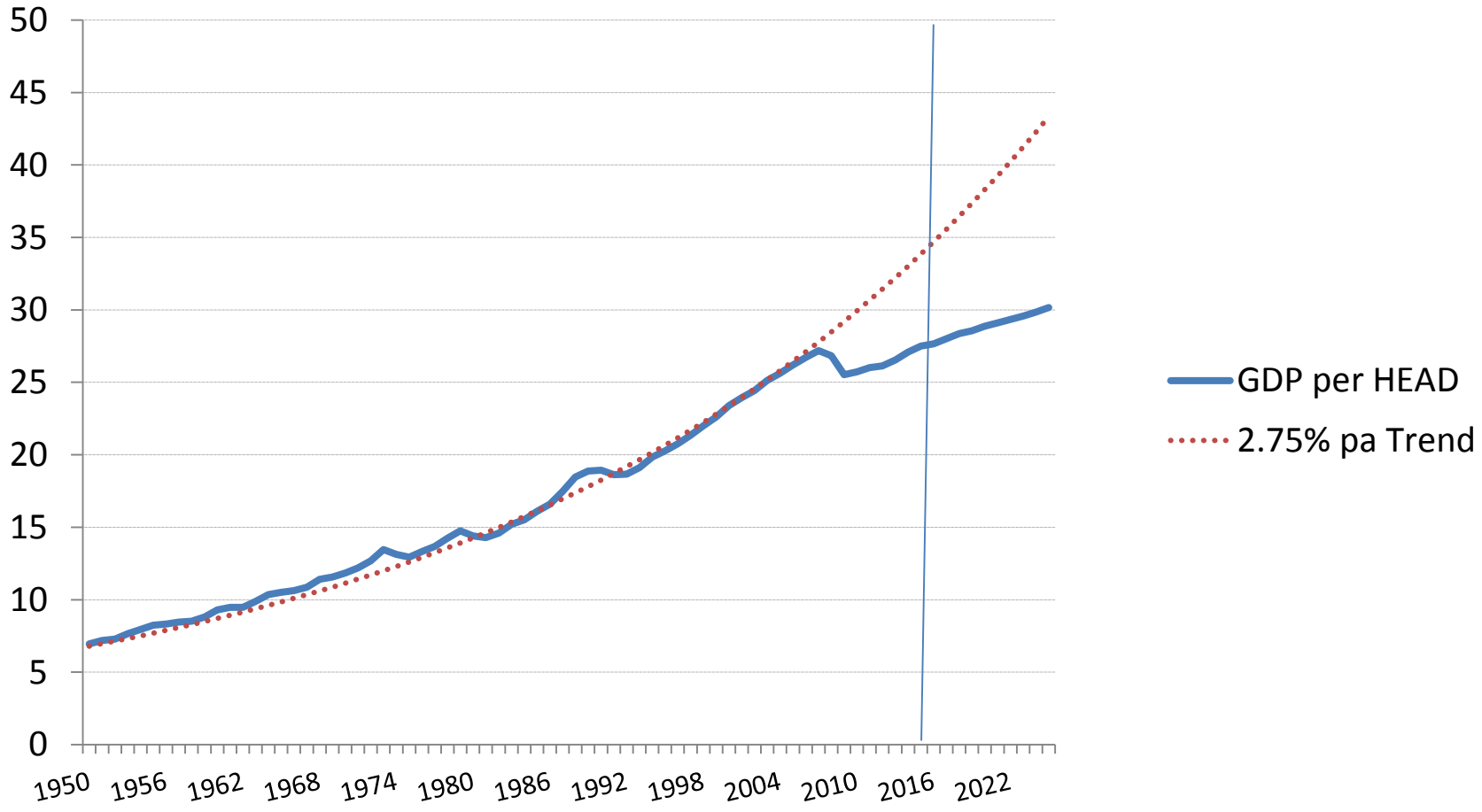
# Post-war Growth Trend Has Broken Down



# *The OBR Model*

- Much of the OBR model is recognisable to Keynesians
- But GDP is not determined as the sum of forecasts for the components of expenditure
- Instead medium term GDP is projected as assumed **productivity x labour supply** to give productive capacity.
- Short-term forecasts assume convergence to full-capacity trend in 3yrs. Demand 'messaged' to meet this condition.
- NB This means there is **no multiplier**

# *A Keynesian Model of the UK Economy*
## *(New, but not New-Keynesian)*

**The CBR model consists of**:

- 250 variables with data from 1950 to 2015
- 80 econometric equations (ECMs fitted on annual data 1950-2015)
- 145 identities

# *CBR Macro-Economic Model*
## *broad structure*

- **4 sector approach**: households, companies, government and foreign sectors.
- **Stock-flow consistent** with tendency for ratios of assets to incomes to stabilise
- **Consumer spending depends on household borrowing** as well as income, assets and liabilities
- **Endogenous investment** and capital stocks
- **Mark-up pricing** (i.e. consumer prices rise with wage and other costs)
- **Wages** determined as attempts to gain a traditional share of value-added but constrained by changes in the employment rate, minimum wage and migration
- **Employment (& hence productivity**) depend on GDP, capital stock, real wage & interest rate (i.e. more neo-classical as migration has grown)

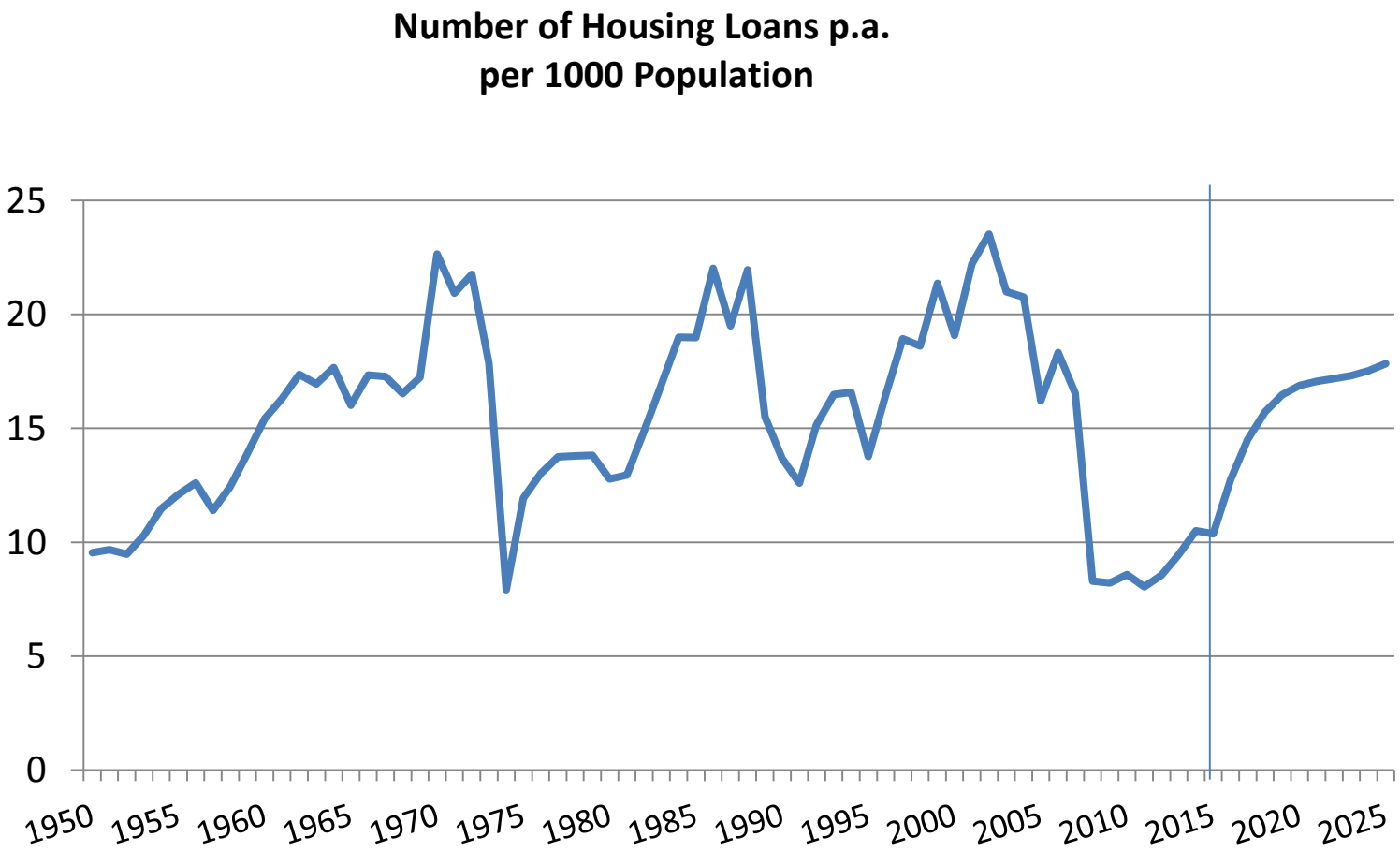
# *CBR Macro-Economic Model*
## *exogenous variables*

- **World trade** (weighted by UK markets)
- **Government fiscal policy plans** (tax rates and *nominal* spending plans).
- **Short-term interest rate** (used as a policy variable to target consumer price inflation)
- **Interest rates in the USA**
- **Global price of oil** and other raw materials

# *Consumption Function*

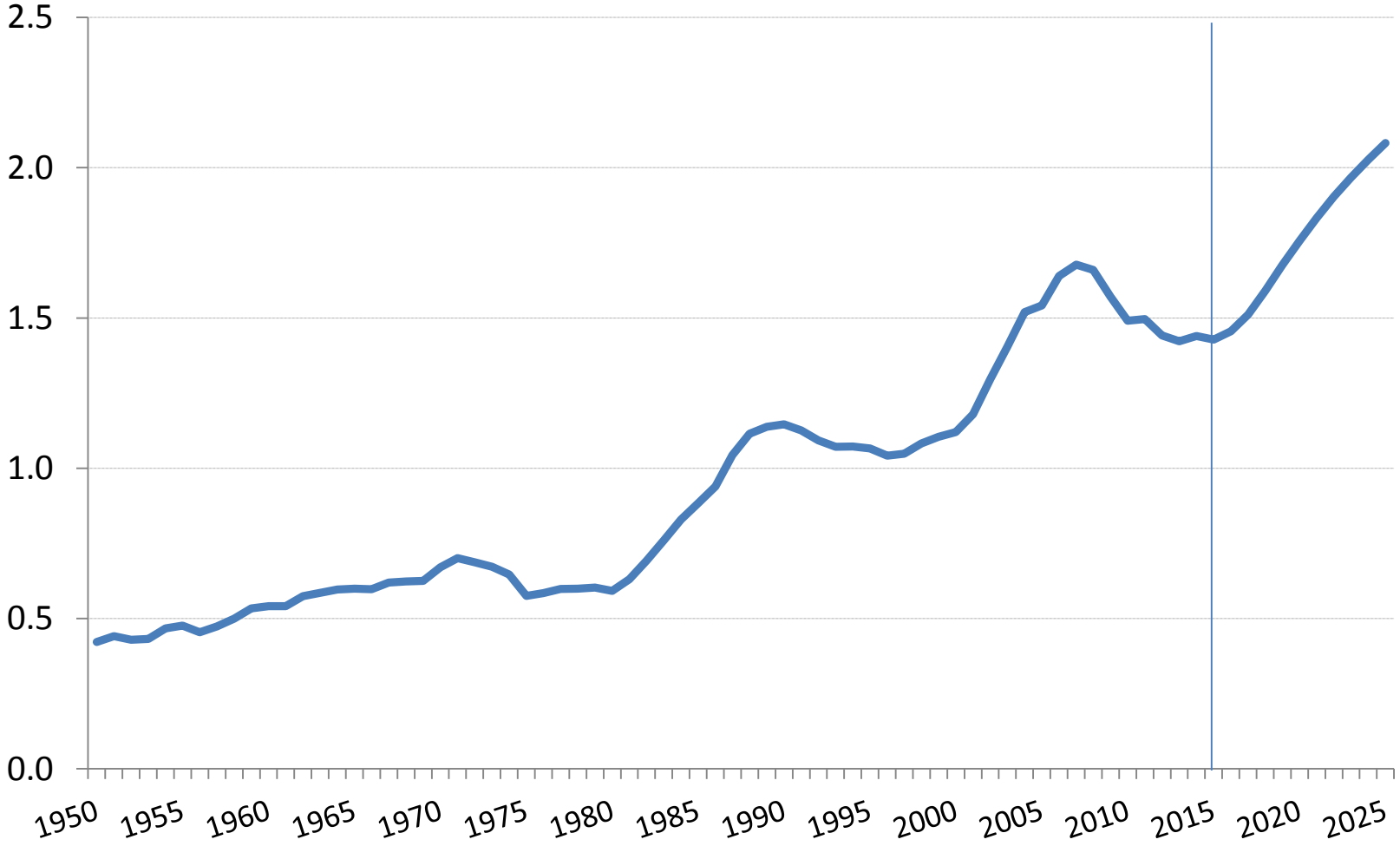
| **Dependent Variable: D(CV)** | | |
|---|---|---|
| Method: Least Squares | | |
| Sample: 1975 2015 | | |
| **Variable** | **Coefficient** | **t-Statistic** |
| | | |
| C | 14349 | 1.3 |
| CV(-1) | -0.43 | -5.8 |
| **YD**(-1) /CP(-1) | 0.34 | 5.2 |
| **FASN**(-1)/(CP(-1)) | 0.013 | 2.6 |
| (**KHN**(-1) - **DEBT_LT**(-1))/CP(-1) | 0.01 | 2.3 |
| **DEBT_ST**(-1)/CP(-1) | -0.29 | -4.9 |
| **NEW_HOUSING_LOANS**(-1)/CP(-1) | 0.35 | 6.5 |
| D(YD/CP) | 0.39 | 5.0 |
| D(FTSE/CP) | 1341 | 4.9 |
| DLOG(HPI) | 59481 | 3.0 |
| D(GINI_COEFF(-1)) | -75252 | -0.6 |
| R-squared | 0.95 | |
| F-statistic | 43.8 | Durbin-Watson 1.92 |

# *Credit Super-Cycles*

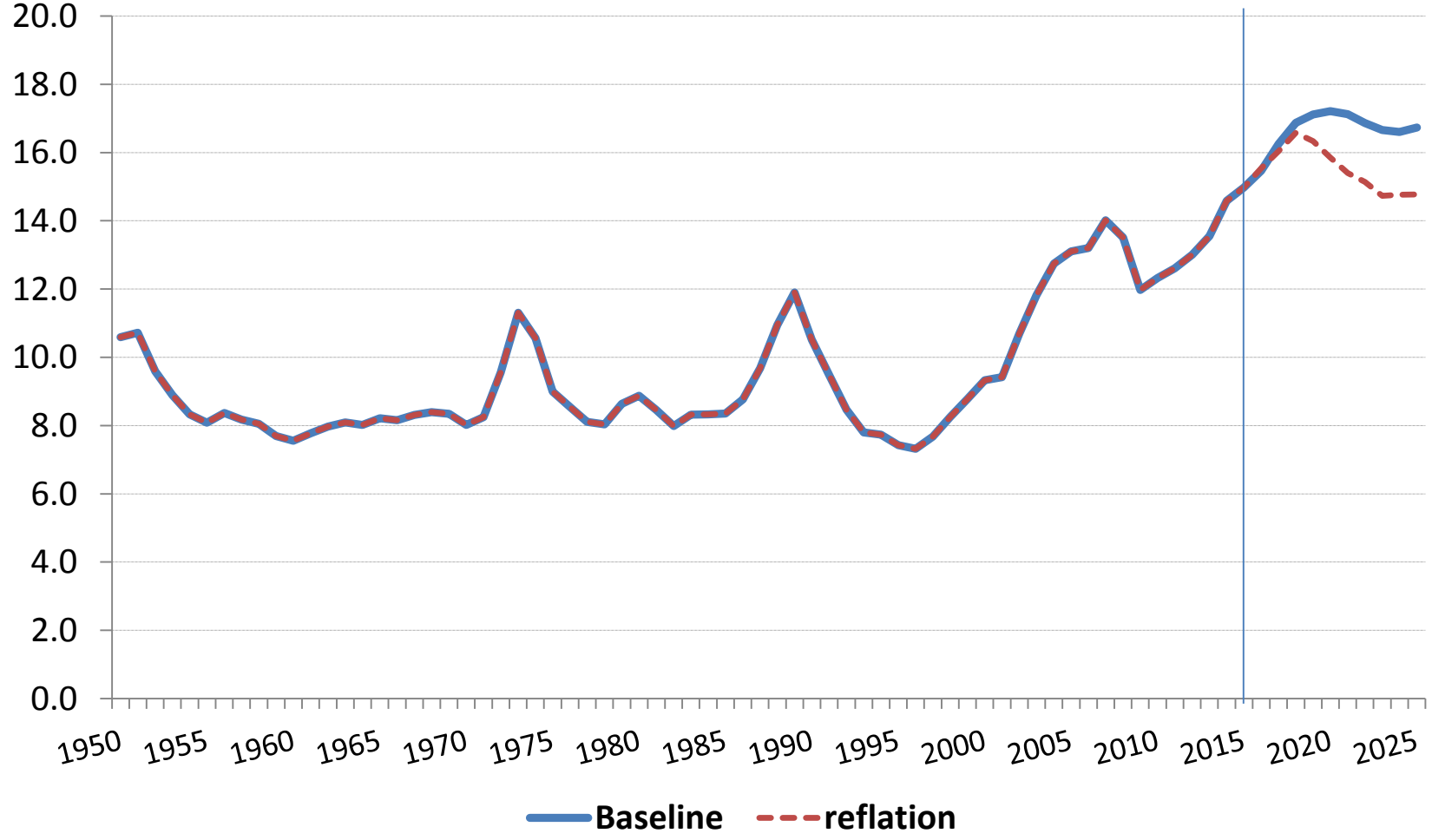


# Ratio of Debt to Disposable Income

## Household Sector

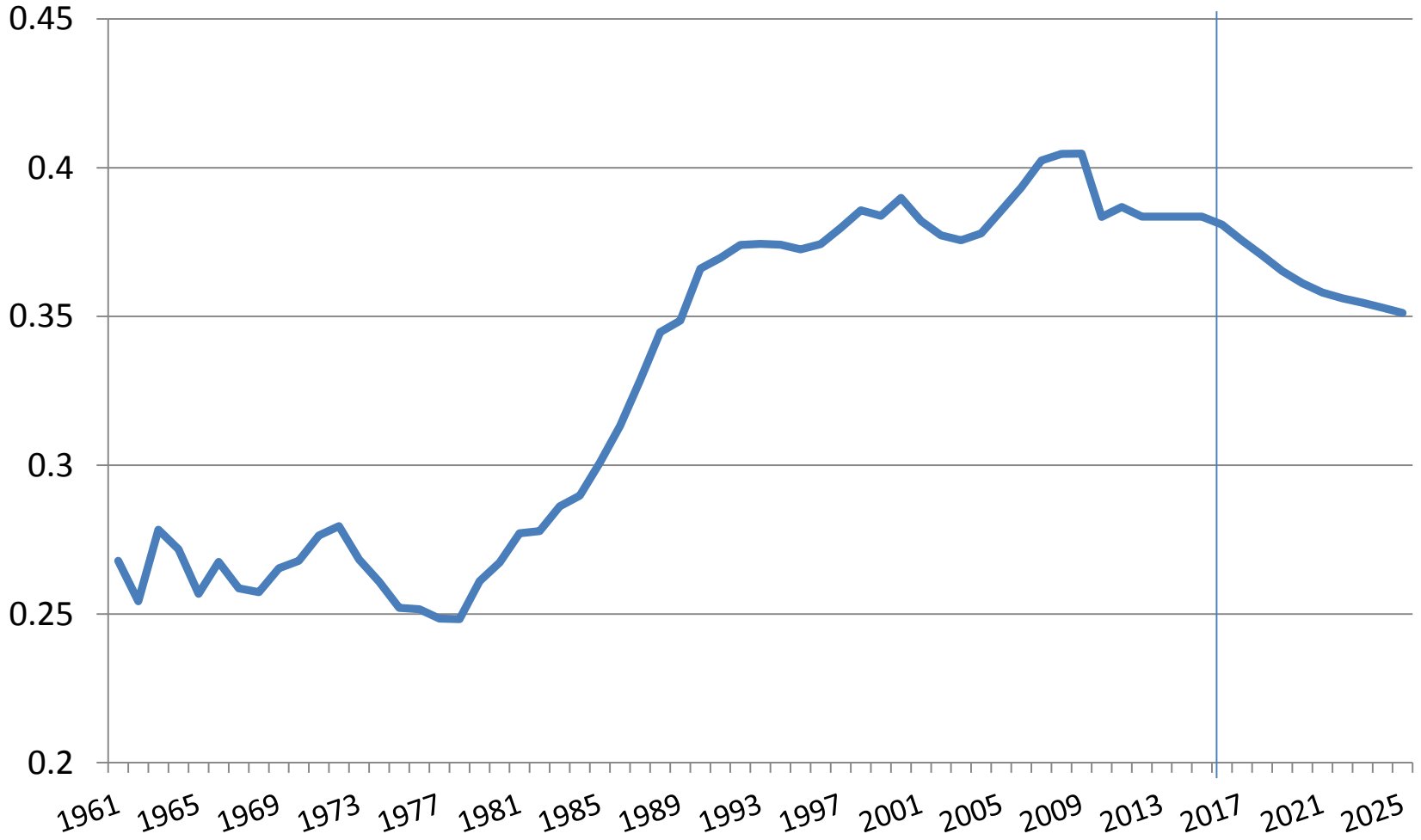


# *Ratio of Mean House Price to Disposable Income*



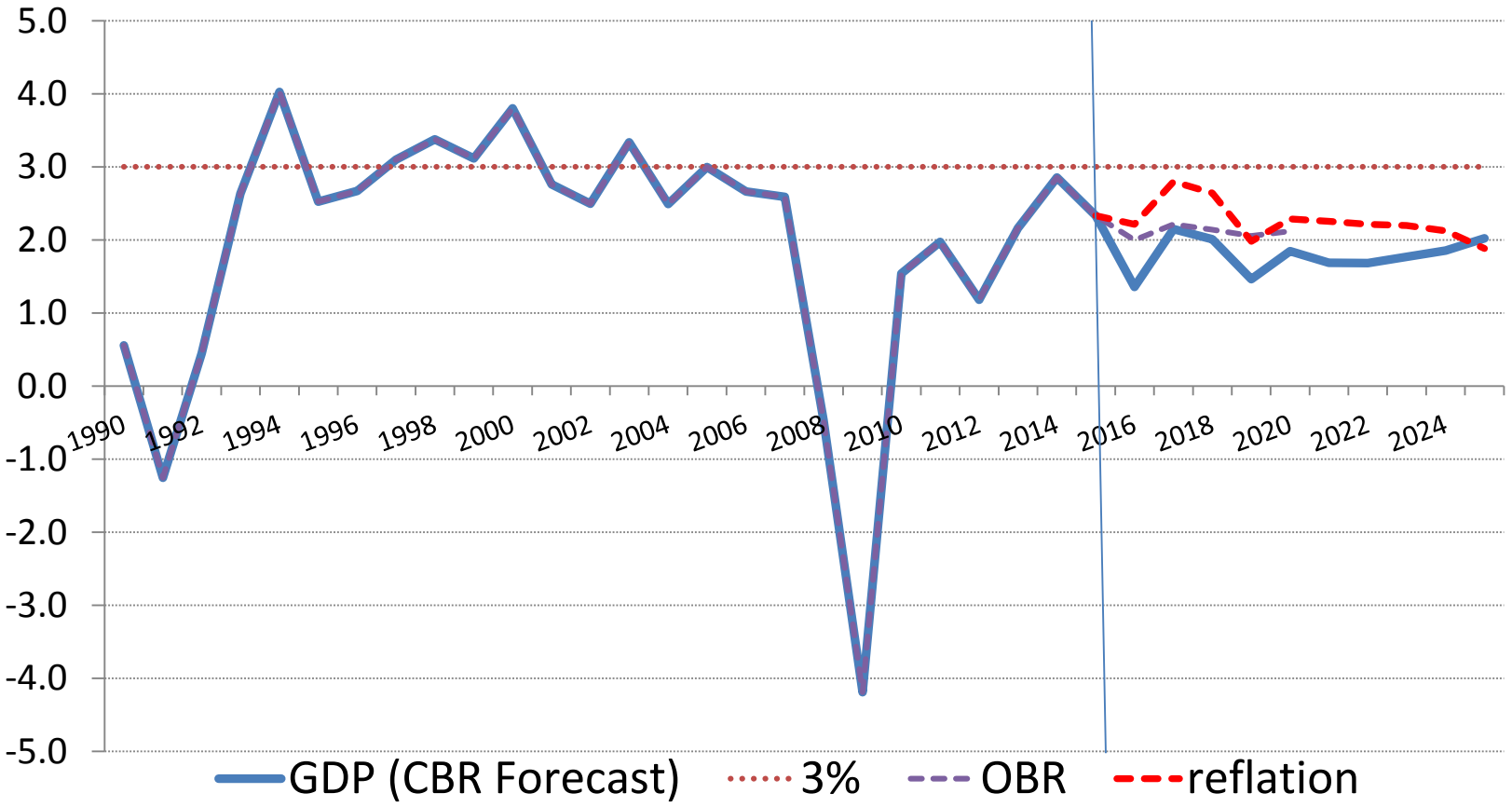
# *Inequality High but Stable*

## *Gini Coefficient (IFS measure)*



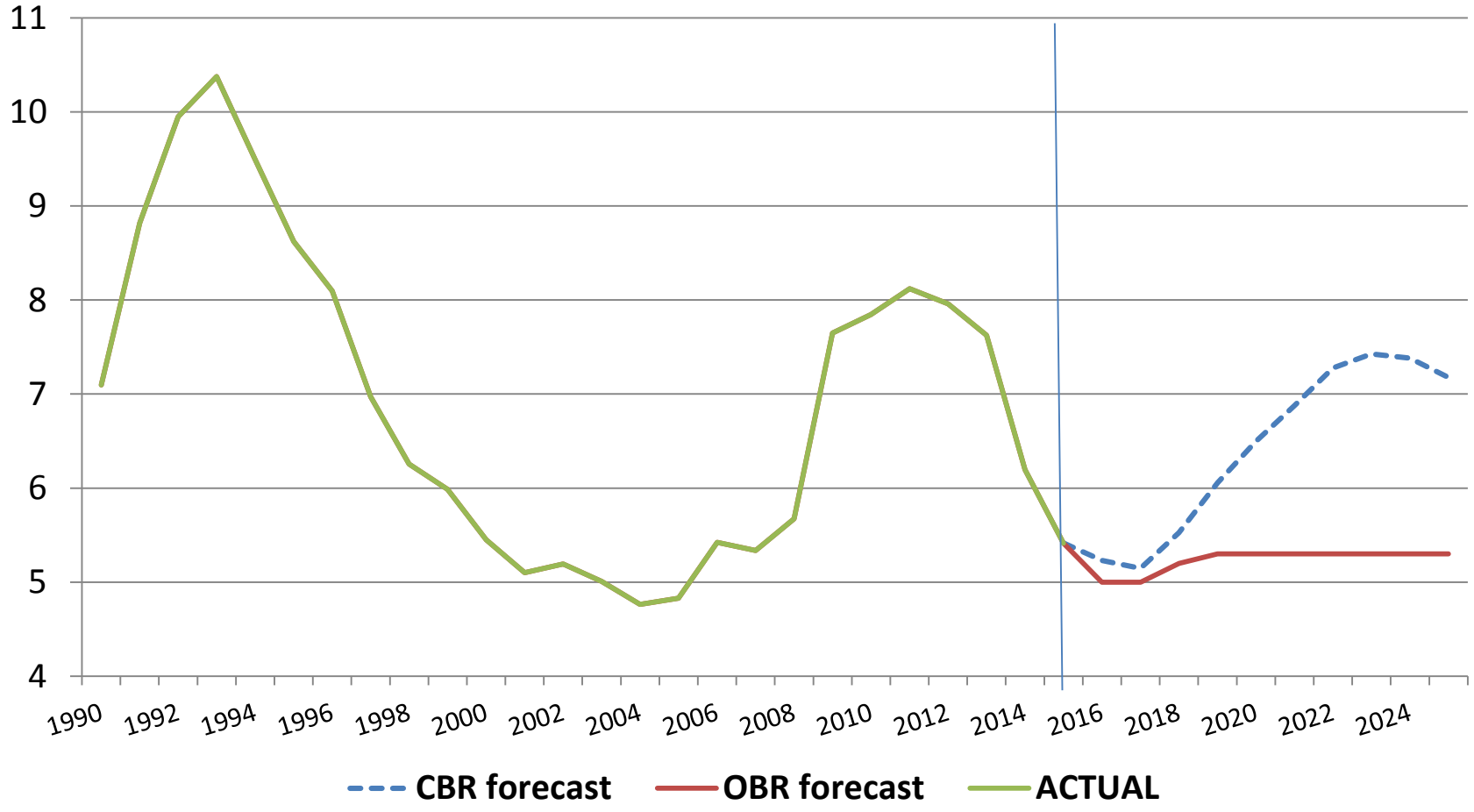
# *Real GDP Forecasts*

## *(% per annum)*



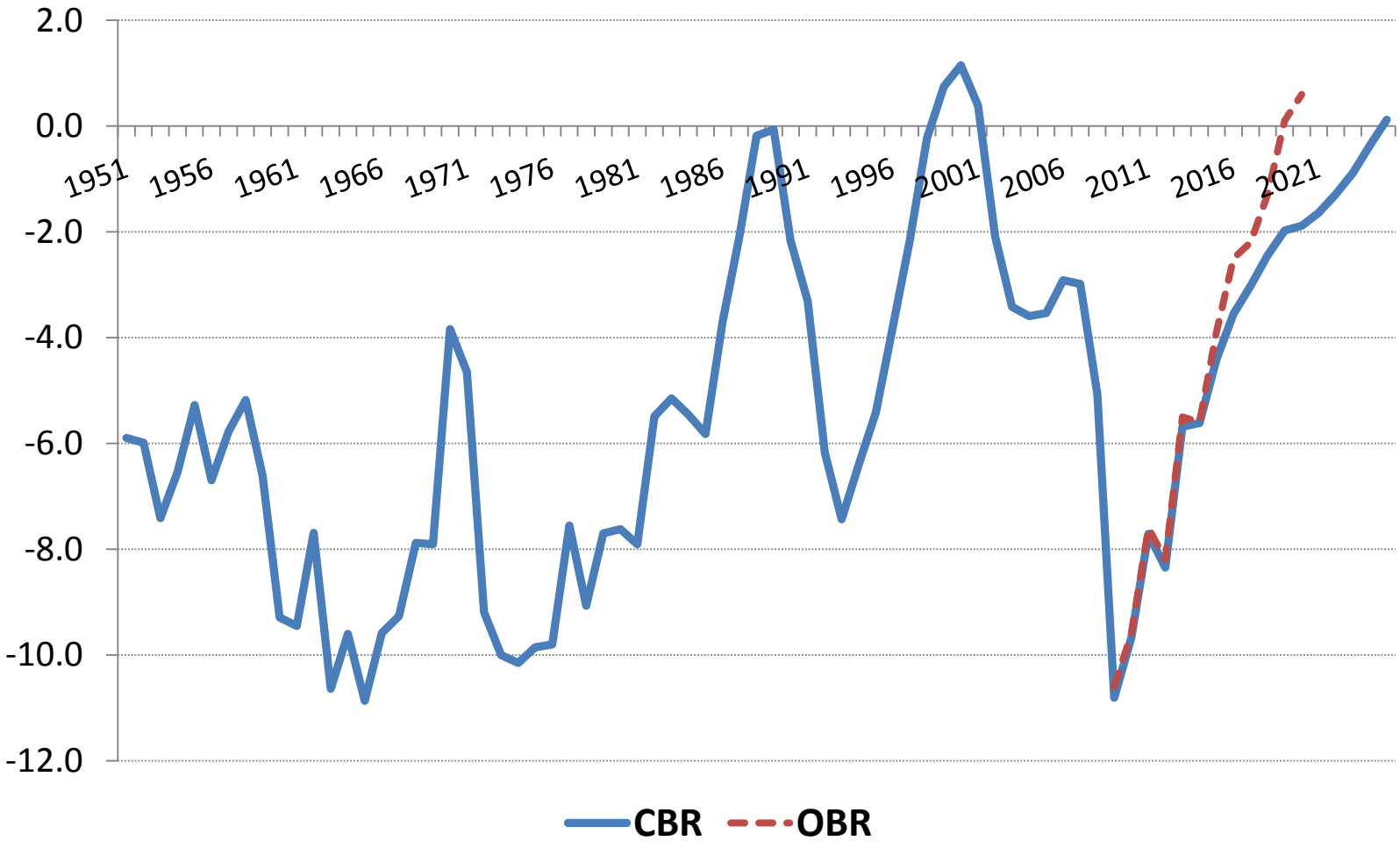
# *Unemployment Rate*

## *(% of labour force)*



# Government Financial Deficit

## (% of GDP)



# *Stock-Flow Consistency*

$$\boldsymbol{cv = \alpha yd + \beta v}$$

where:

$cv$ is real consumption
$yd$ is real disposable income
$v$ is real net wealth
$\dot{v}$ is the change in real wealth (defined to equal saving)

Disposable income, $yd$, is the Haig-Simon definition of regular disposable income plus capital gains.

$$\boldsymbol{\dot{v} = yd - cv}$$

In a stationary state, wealth is constant and consumption equals disposable income

# *Stationary state wealth-income ratio*

$$\frac{v^*}{yd^*} = \frac{1-\alpha}{\beta}$$

In a growing economy at rate *g*, the steady state wealth-income ratio is:

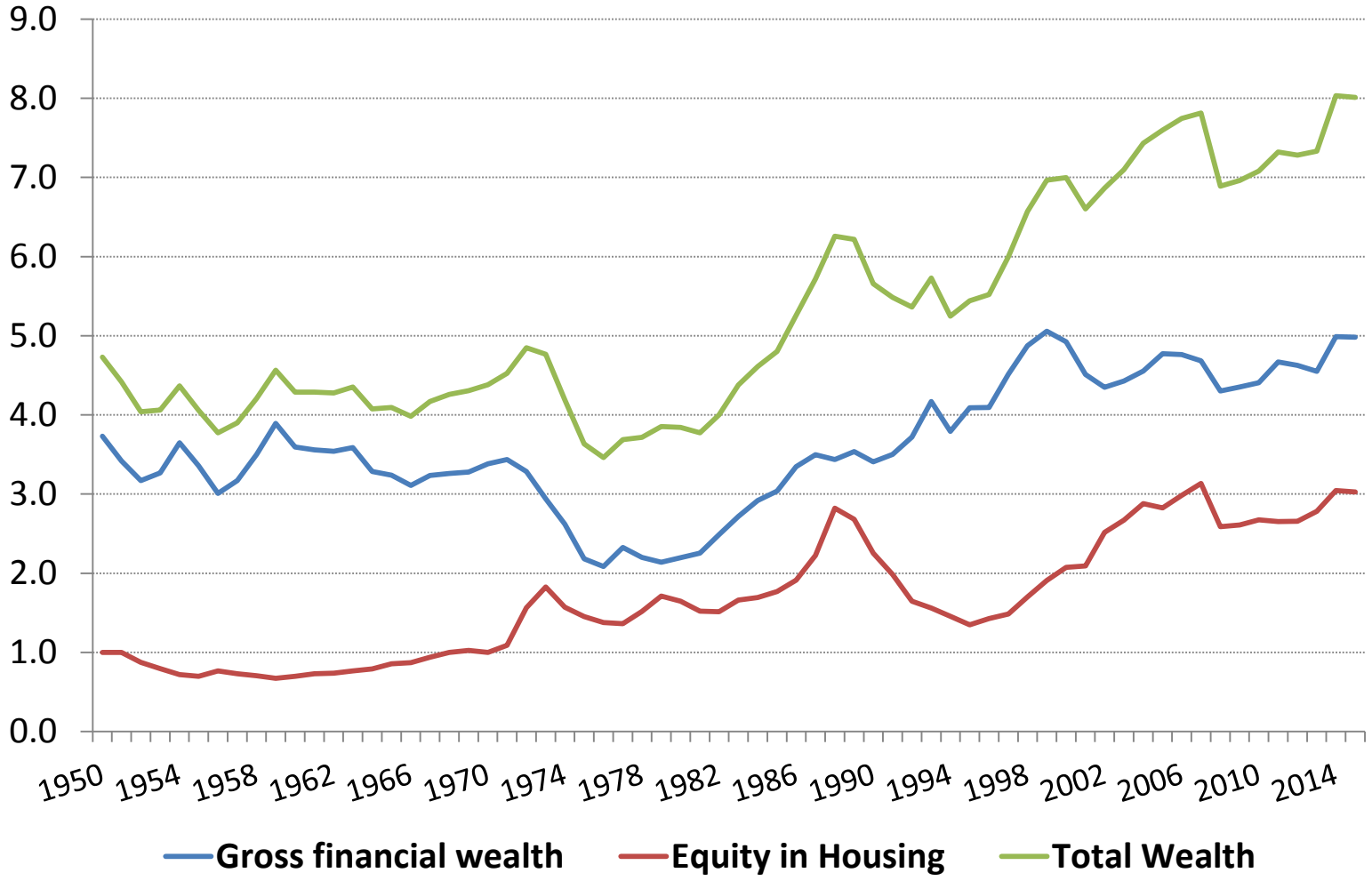
$$\frac{v}{yd} = \frac{\beta}{g+\beta}(1-\alpha)/\beta$$

The savings ratio is:

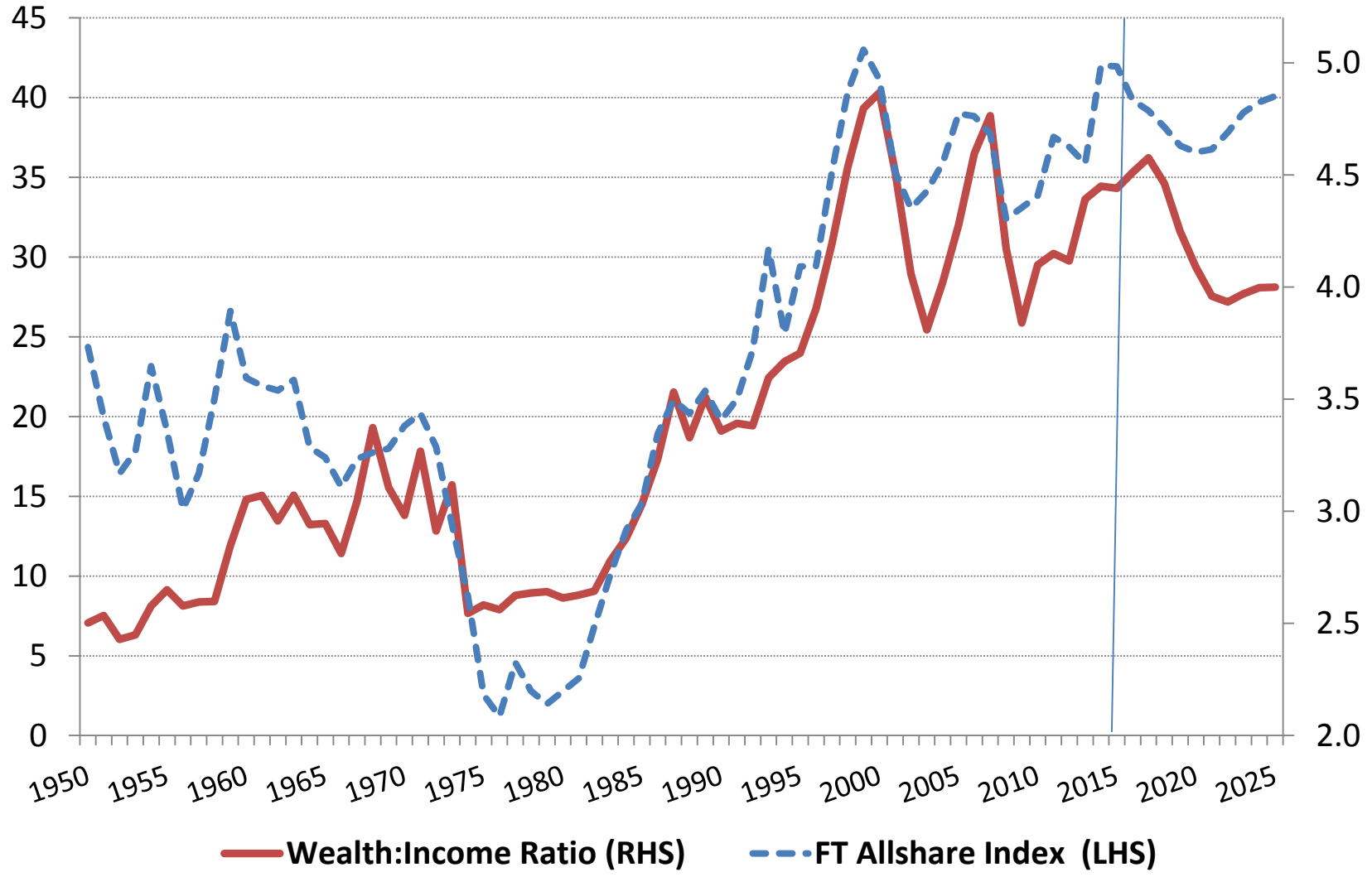
$$\frac{\dot{v}}{yd} = g\frac{\beta}{g+\beta}\,(1-\alpha)/\beta$$

# *Components of Household Wealth*

## *(% of* Disposable Income)



# *Ratio of Gross Financial Wealth to Disposable Incomes, and Real Equity Prices*



# *Conclusions*

- Models like the OBR are determined by supply-side assumptions and are unenlightening about real-world prospects
- Without a multiplier, the model fails to predict the impact of austerity
- Our Keynesian model forecasts slower growth in GDP, rising unemployment and missed target for budget balance by 2020
- Credit cycles and the build-up of debt are vital in understanding what will happen. This requires stock-flow consistency