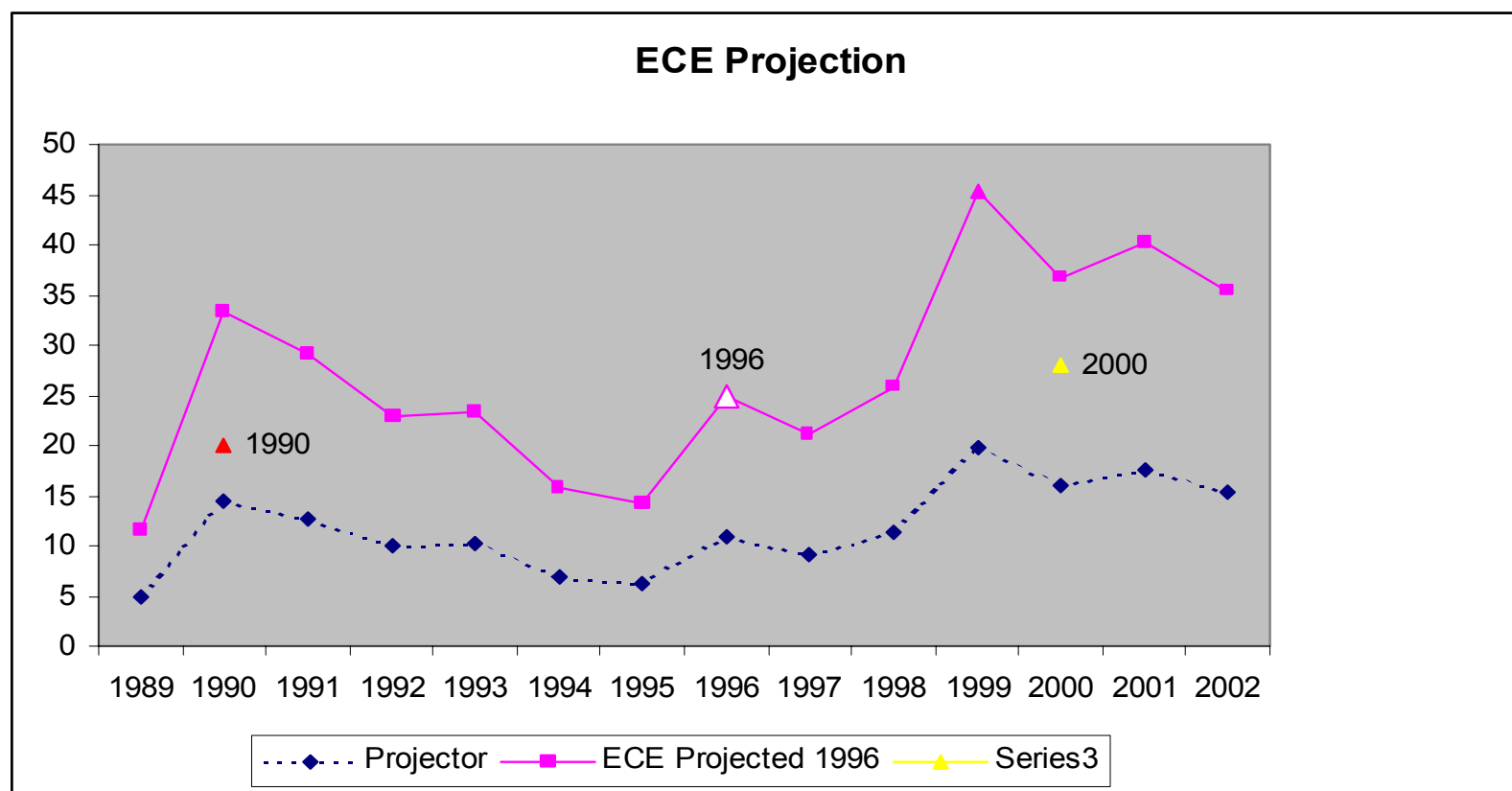


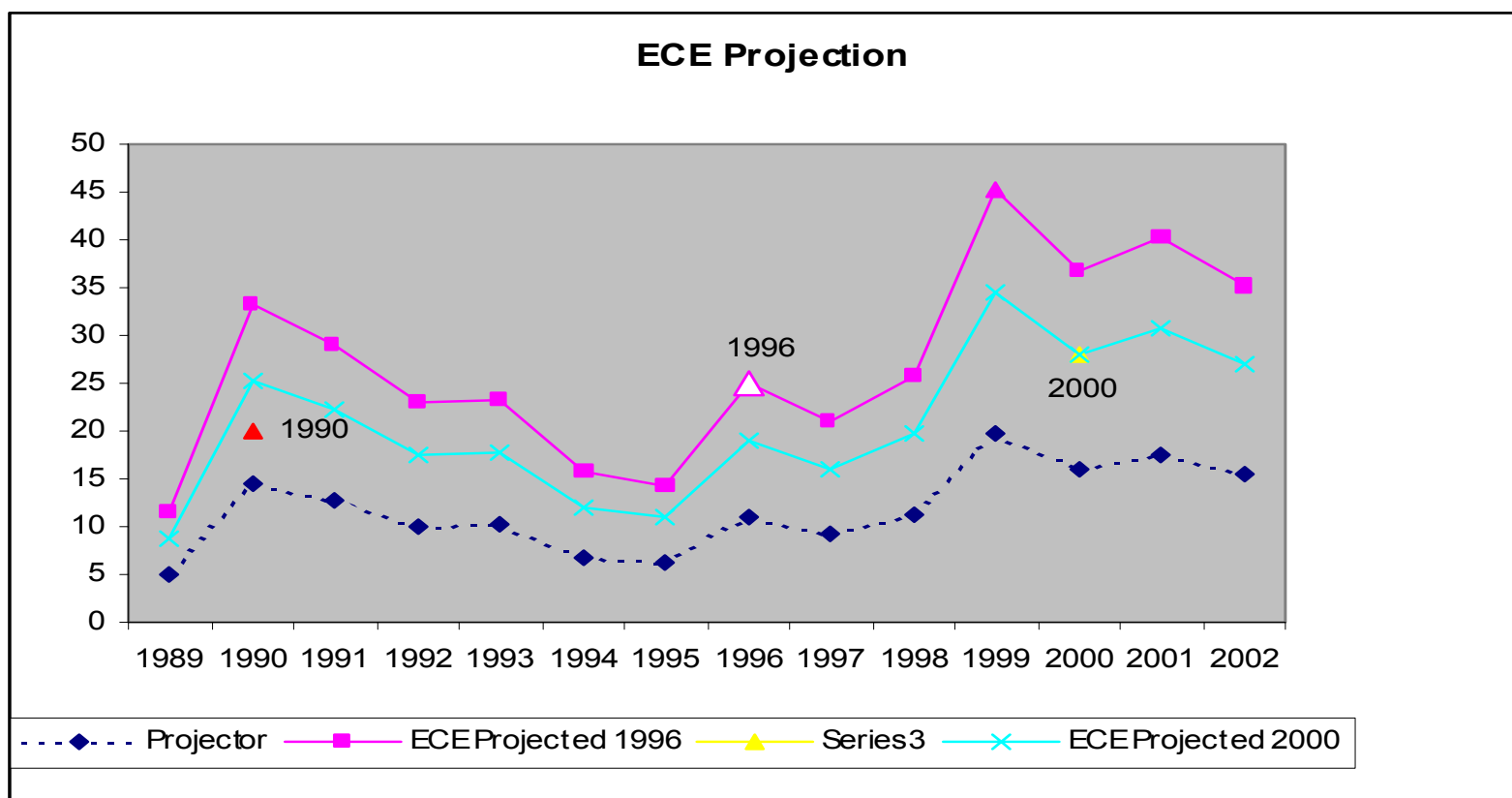
# Projecting PPPs

- **Overview of projection practices**
  - ECE
  - OECD
  - Eurostat
- **Implications of tri annual benchmarks**
- **Comparison of PPPs and projectors for selected countries**
  - Not what is expected from tri annual BMs and implicit deflators
- **How to overcome this problem**
- **Some Results**

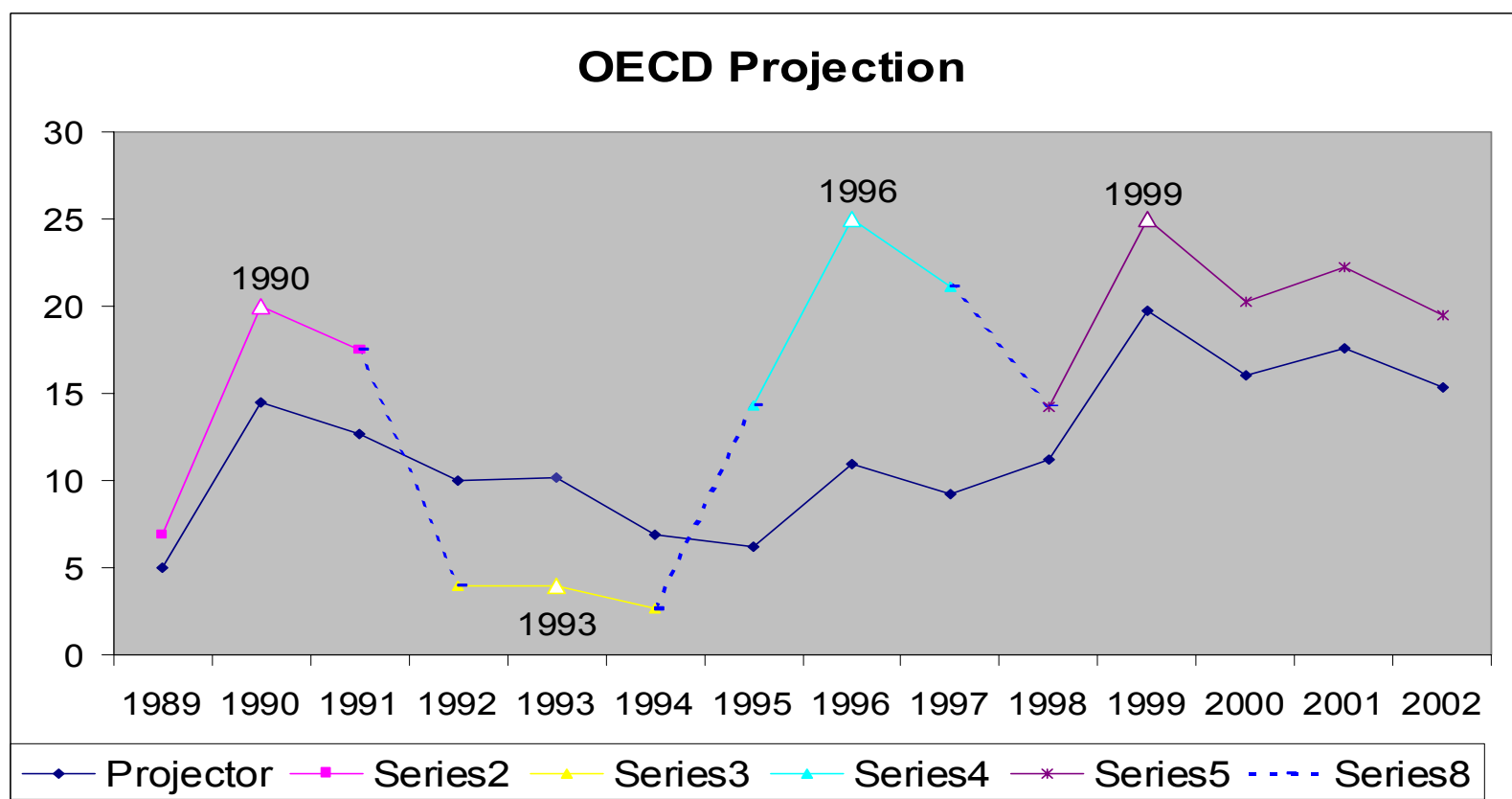
# Overview of projection practices: ECE



# Overview of projection practices: ECE



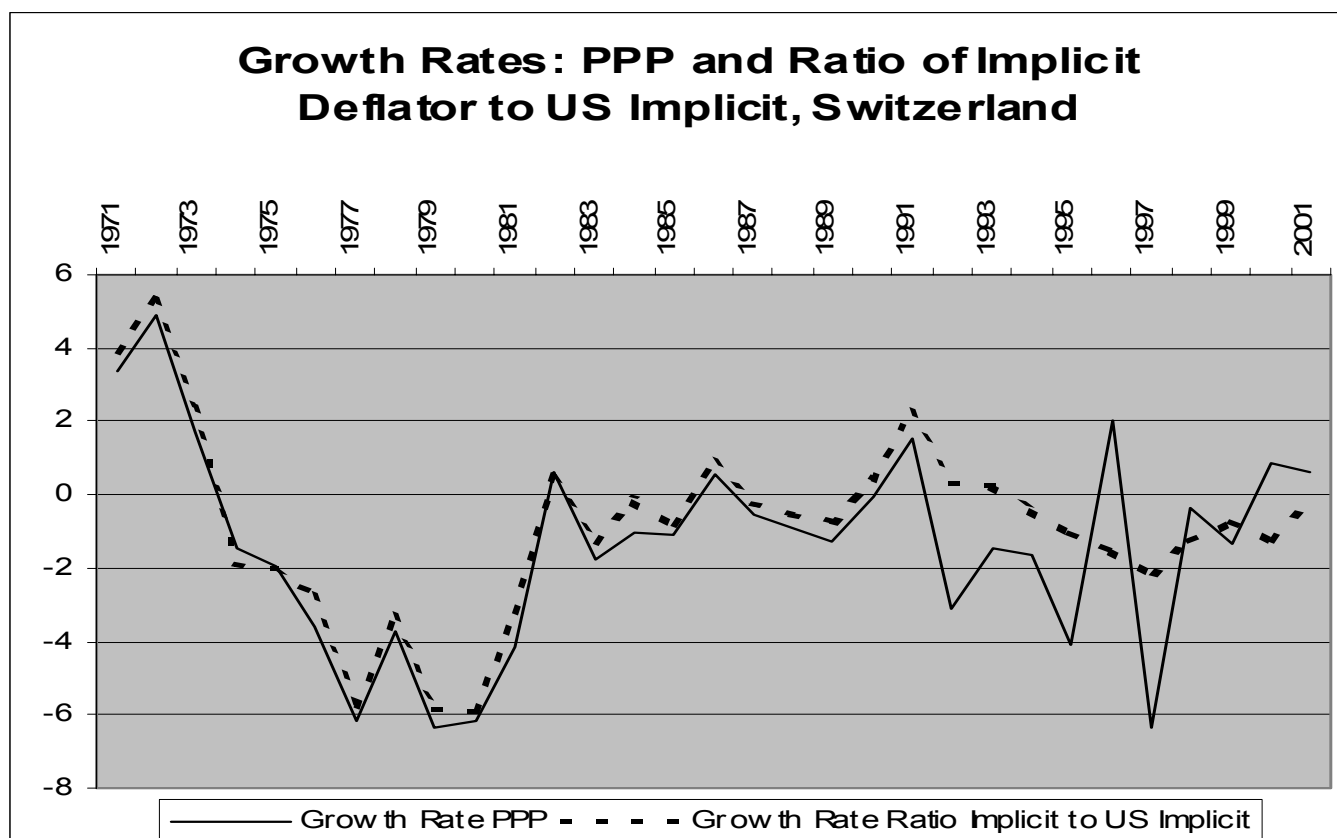
# Overview of projection practices: OECD/Eurostat



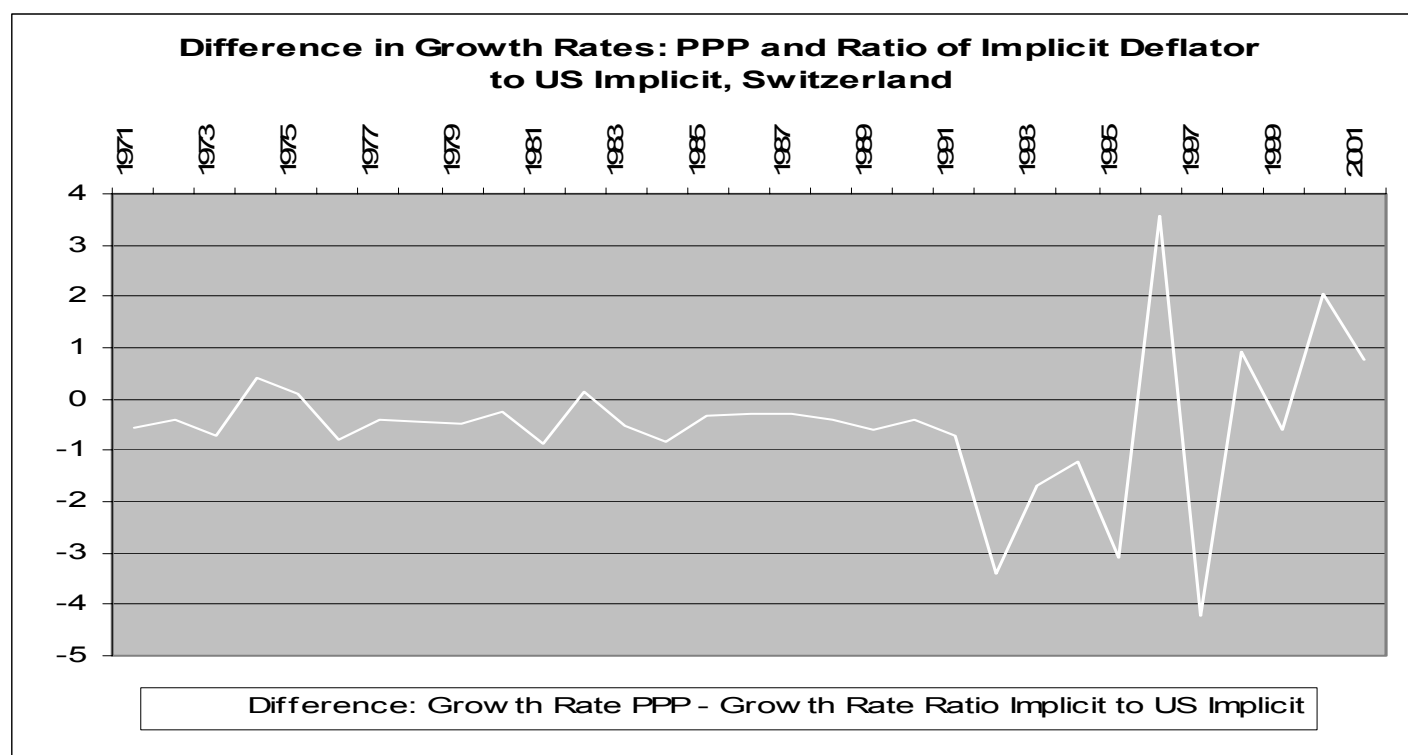
# Implications of Tri-annual Benchmarks

- **Information only about longer term trends**
  - More exactly about 6 year and longer cycles (Nyquist frequency)
  - no information about 6 year and shorter cycles
  - (does not imply data is deterministically cyclic)
- **Short-cycle (6 years and shorter) information evident in annual PPP**
  - Must come from another source
    - ✓ projector
    - ✓ or projection methodology
  - Ideally should mimic that of projector

# PPP and Projector for a non-EU OECD country

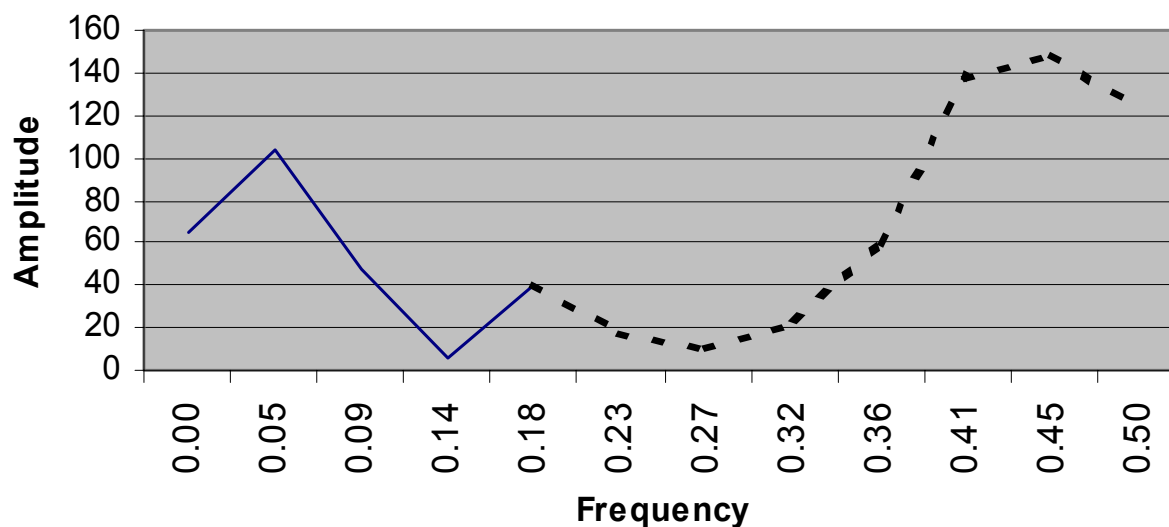


# PPP - projector spread, Switzerland



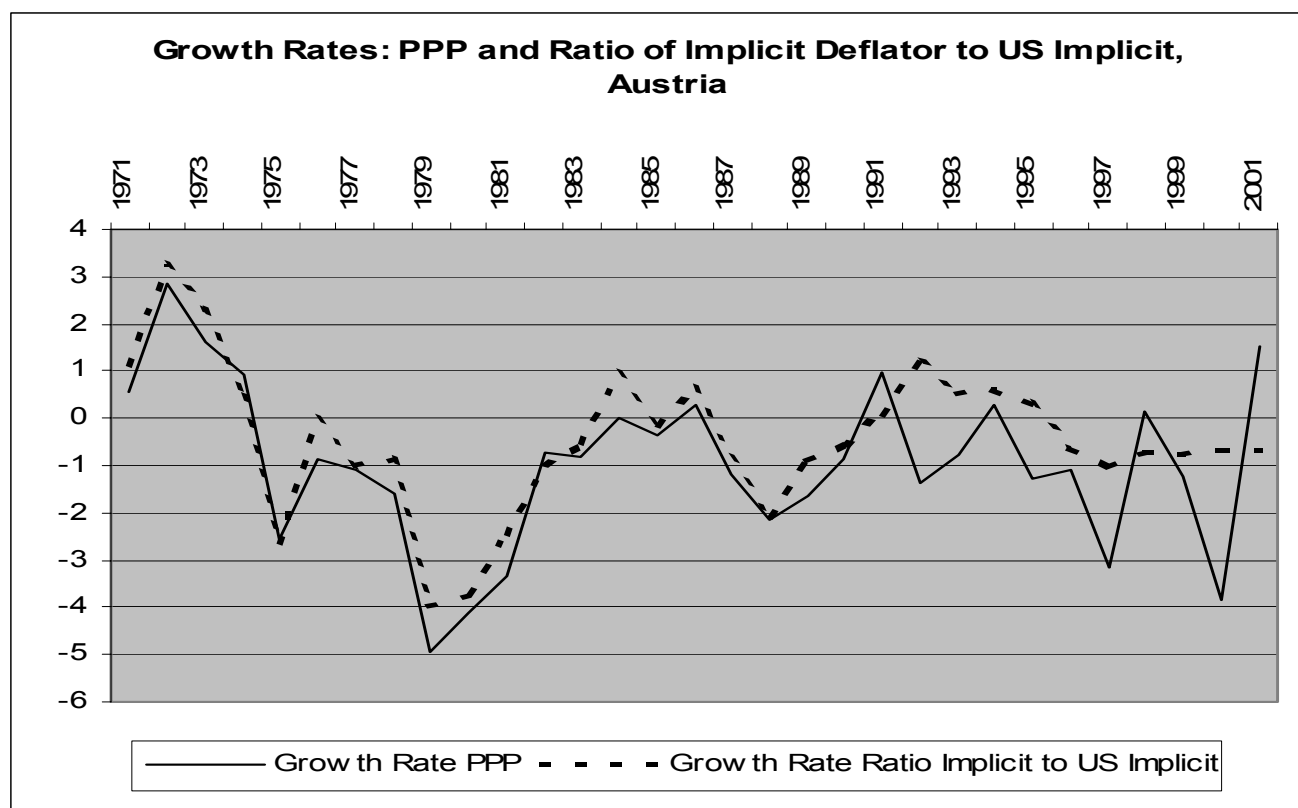
# Periodogram of PPP - projector spread, Switzerland

Periodogram of Difference in Growth Rates: PPP and Ratio of Implicit Deflator to US Implicit, Switzerland Switzerland





# PPP and projector for an EU country, Austria



# Eliminating Discontinuities

Minimize

$$\sum_t \left[ \left( \frac{\tilde{I}_t}{IGDP_t} - \frac{\tilde{I}_{t-1}}{IGDP_{t-1}} \right) \right]^2$$

subject to the constraints

$$\tilde{I}_{1990} = BM_{1990}$$

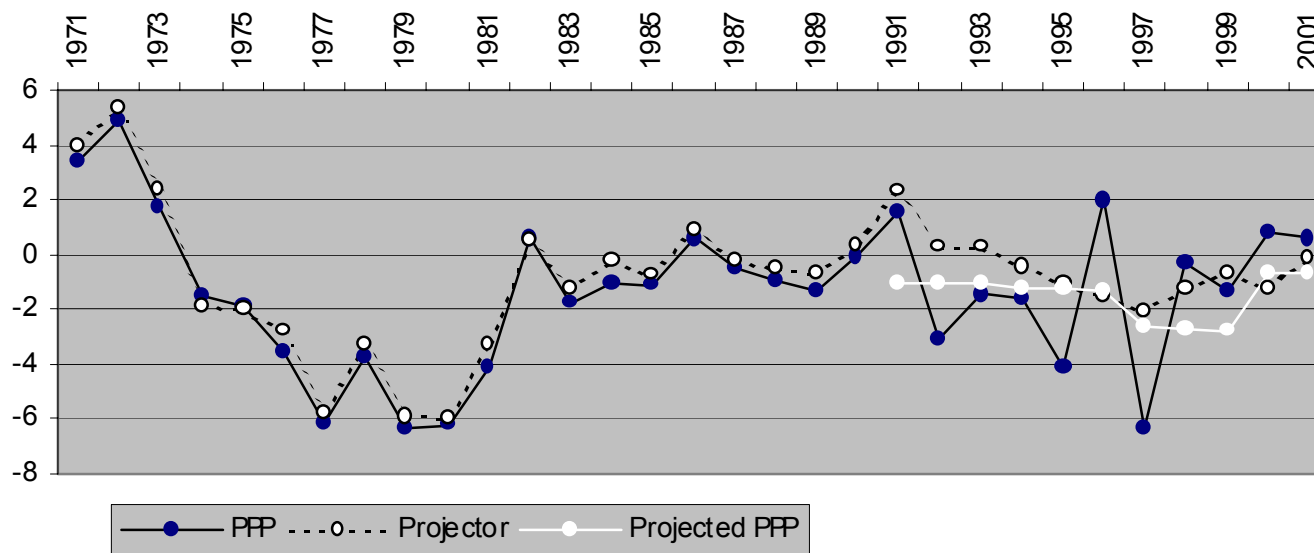
$$\tilde{I}_{1993} = BM_{1993}$$

$$\tilde{I}_{1996} = BM_{1996}$$

$$\tilde{I}_{2000} = BM_{2000}$$

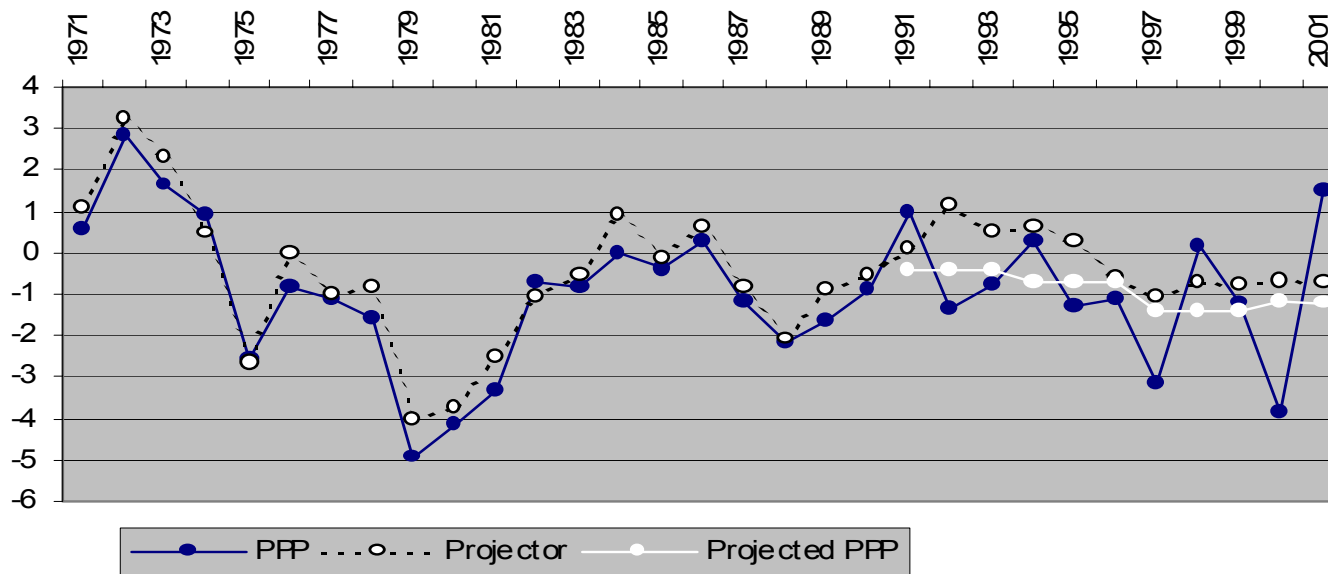
# Benchmarking Switzerland

**Chart 3. Switzerland, Growth Rates from Benchmarking the Ratio of Implicit GDP Deflators to 4 ECP Benchmarks 1990-2000**

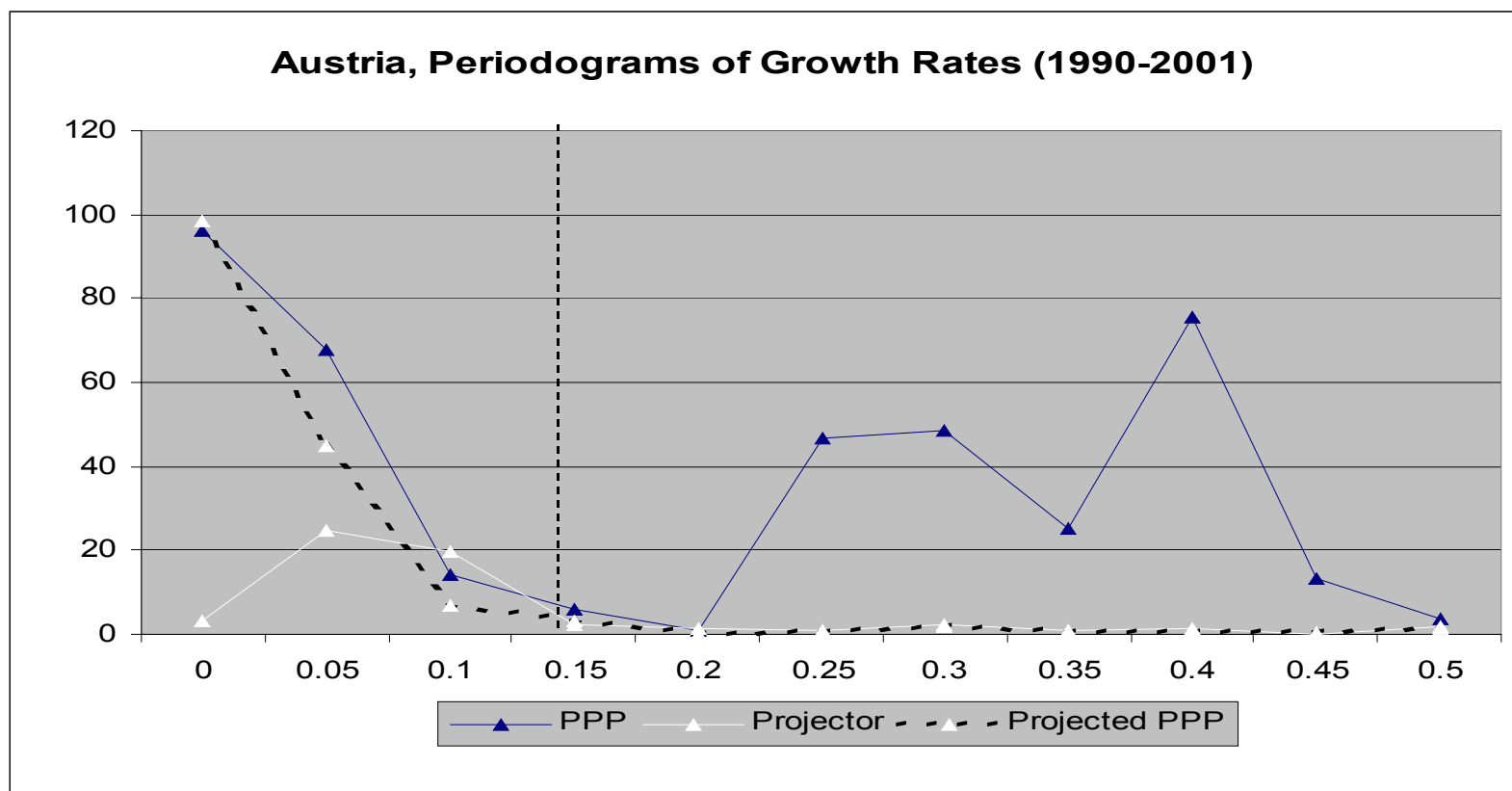


# Benchmarking Austria

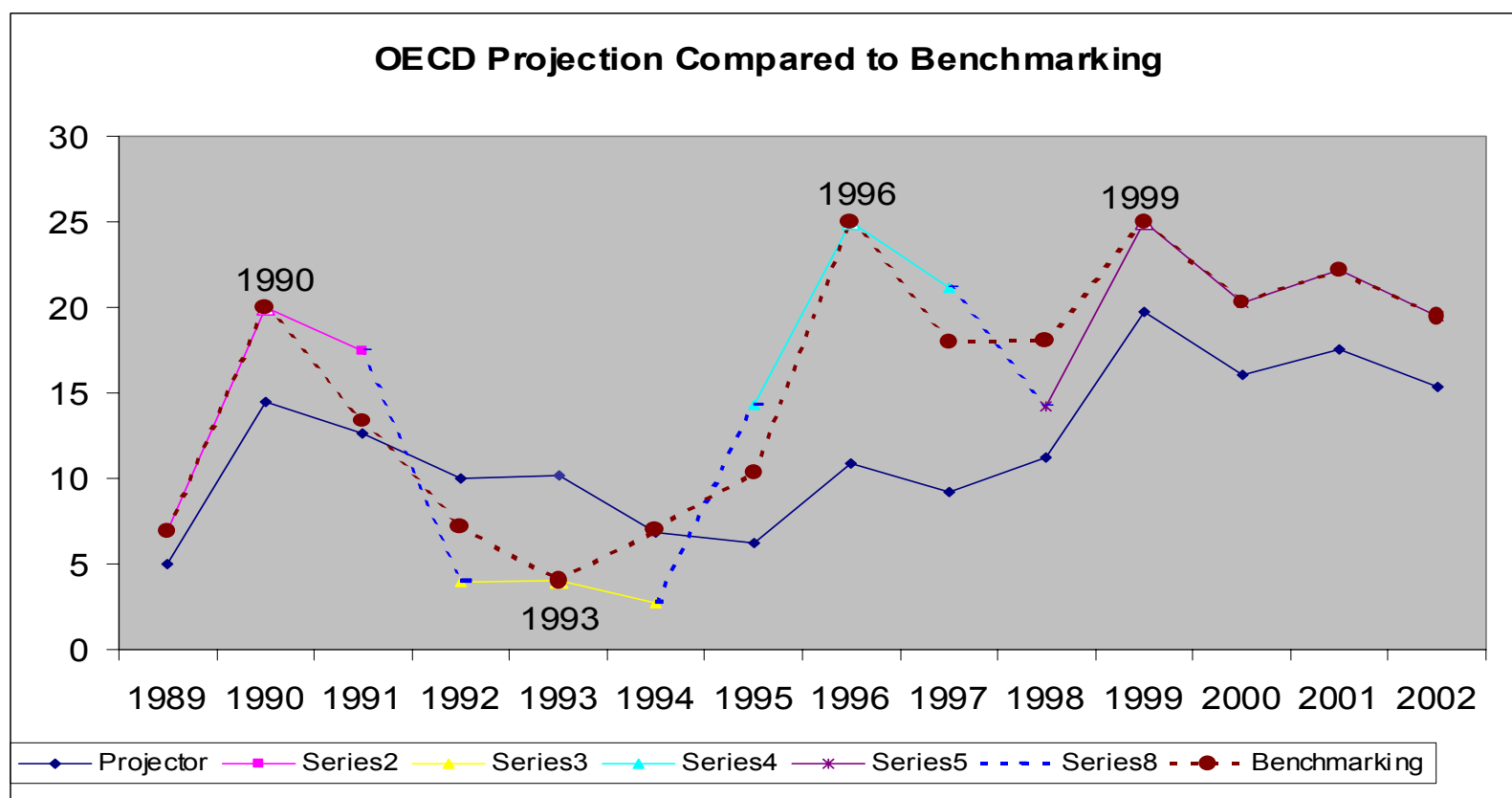
**Chart 5. Austria, Growth Rates from Benchmarking the Ratio of Implicit GDP Deflators to 4 ECP Benchmarks 1990-2000**



# Benchmarking Austria



# Recapitulation



## Final Point

- **Projection technique outlined is available in Excel/Visual Basic implementation to whoever would like to experiment with it.**