A short discussion of the paper

Fan charts of inflation and GDP growth projection

Workshop *on Experiences and Challenges of Forecasting at Central Banks, National Bank of Poland, 4 November 2009*

Positives:

- **Detailed and accurate account of various sources of uncertainty in forecasting**

- **Ingenious approach to building the fan chars, so that most of these sources contribute to the forecast uncertainty**

- **Careful identification of the uncertainties which affect forecast and those which affect projection**

More positives:

- **Original way of constructing the fan chart in such a way that different components of risk can be identified**

Disadvantage :

Either overcomplication: Why to bother with cross and time dependencies when the way they affect the charts is not discussed?

or

Underdevelopment: if there are cross and time dependencies built in, why not to utilize them and get a better, more informational, forecast?

Illustration: simple Monte Carlo experiment

Two autoregressive components to the fan chart

$$y_{it} = \mu_{it} + V_{it} \qquad V_{it} = \rho_i V_{it} + U_{it}$$

Where $\quad U_{it} \sim SN_2(\mathbf{0}, \Sigma, \beta_i)$
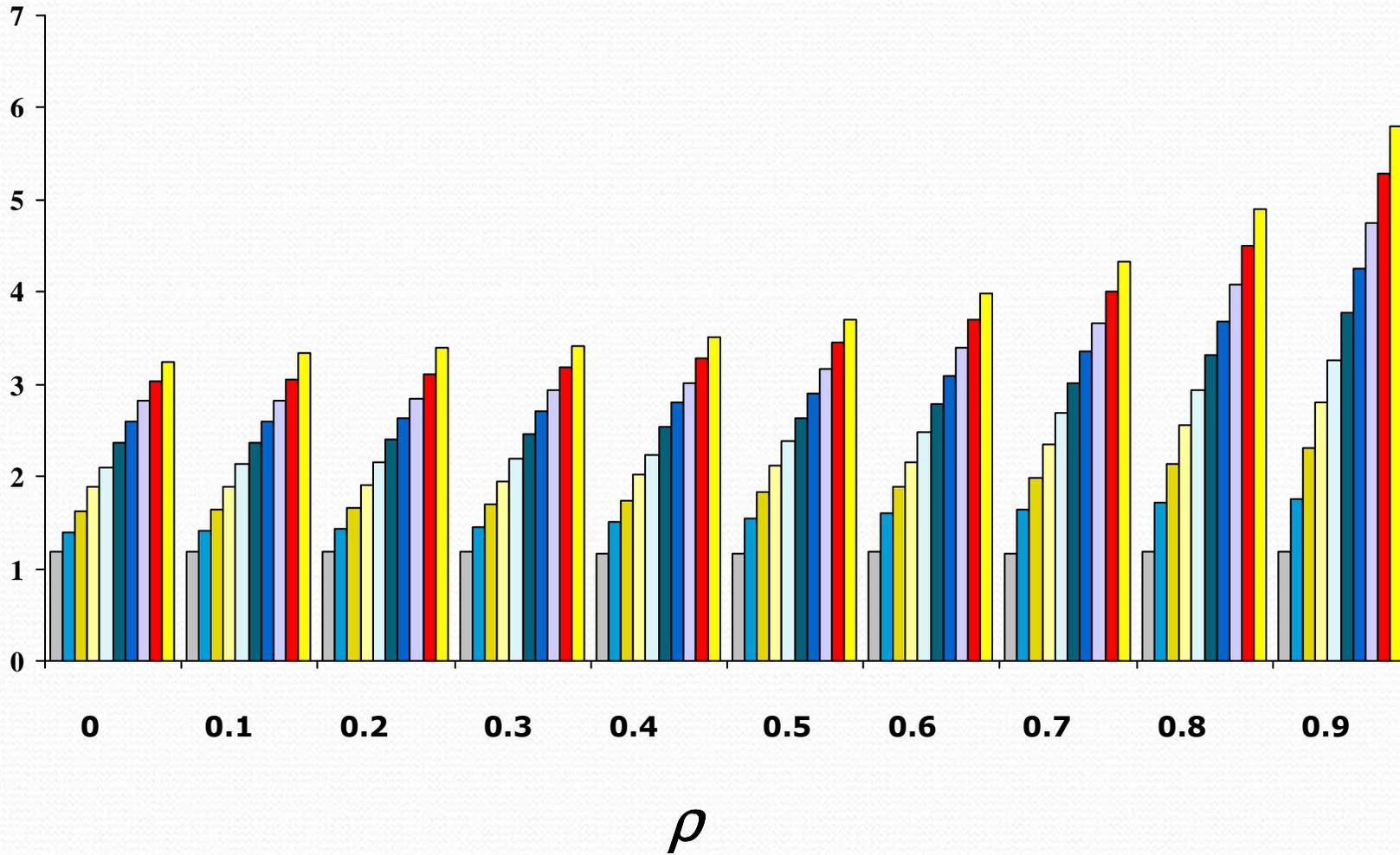
All parameters are fixed except of ρ_i

$$\rho_1 = \rho_2 = \rho = \{0, 0.1, \cdots, 0.9\}$$

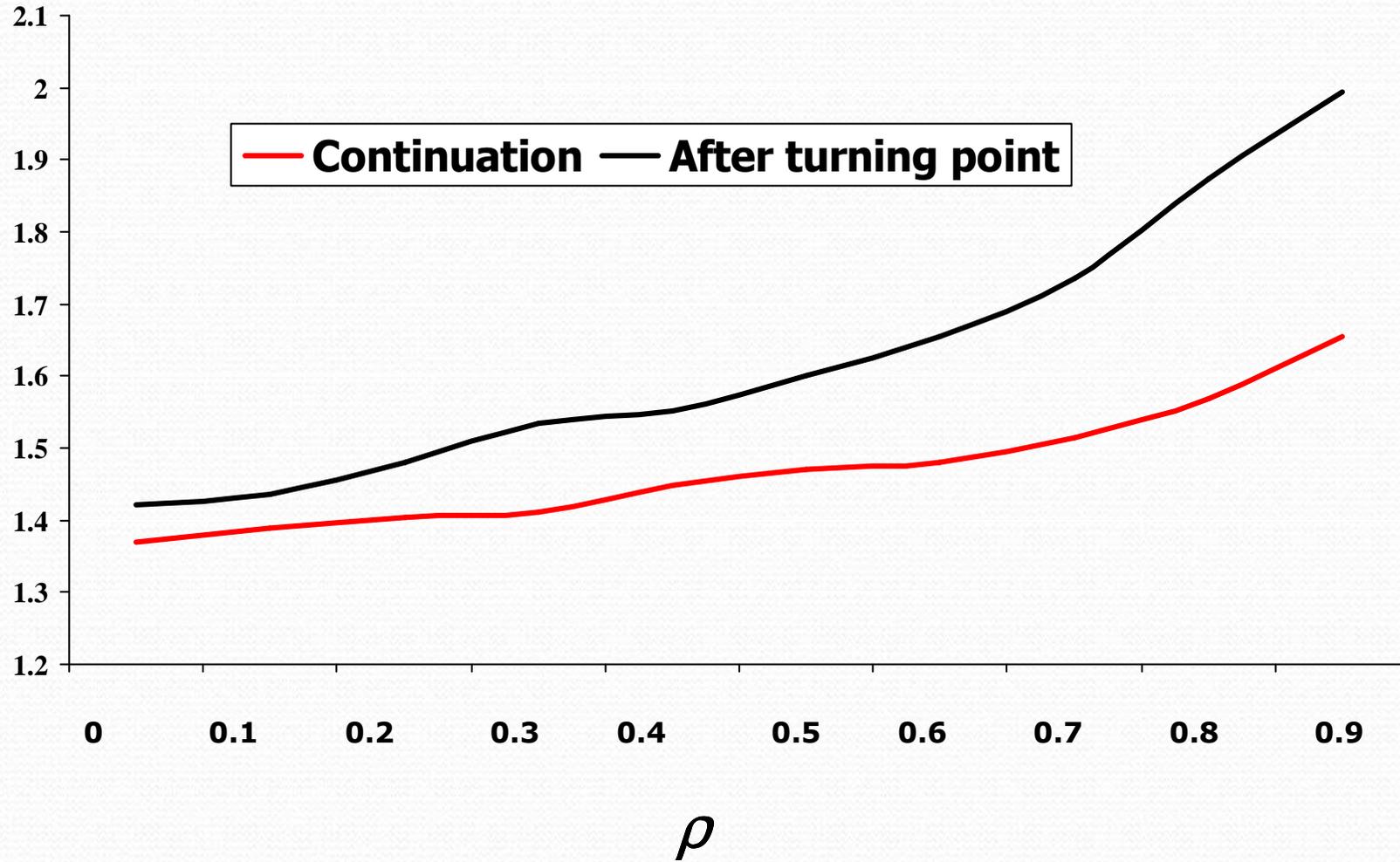**Forecasts are for 1 to 12 'quarters' ahead, 10,000 replications**

Outcomes of interest:
1. Forecast uncertainty
2. Expected run lengths without a turning point and after a turning point

Average standard deviations

Average lengths of runs

General reflection

Dependent fan charts account for both risk (uncertainty) and dynamics