A MARKUP MODEL FOR FORECASTING INFLATION FOR THE EURO AREA

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THE DATA

Euro area data seasonally adjusted for the period June 1972 to March 2002 are used. Natural logarithms are taken of all variables before estimation proceeds. The data for the period June 1972 to March 2001 are updated from Fagan *et al.* (2001), where further details may be found. The data was extended to March 2002 using Euro area data from the European Forecasting Network (EFN) data base which, in turn, makes use of data compiled by Eurostat.

The GDP data for the Euro area are aggregated by the following operation on the real and nominal components of GDP for each country, $y_{EA} = \sum_{EA} w_i \, y_i$, where y_{EA} is the Euro-area value of the component, y_i is the component series for country i and w_i is the weight for each country in terms of the share of constant price GDP at PPP of the country in Euro-area GDP in 1995. The weights are provided on page 53 of Fagan *et. al.* (2001). The implicit price deflators are then calculated from the nominal and real aggregated components of Euro-area GDP.

This method of aggregation avoids the difficulties associated with disentangling intra Euro-area trade from trade outside the area for each of the countries. The drawback is that intra Euro-area exports and imports are not allocated to consumption, investment and government expenditures, as they should be. Consequently, if the deflators for intra Euro-area trade diverge from the deflators for trade outside the Euro area then the deflators for each component will not approximate their 'true' component deflators for the Euro area. Given that the composition of intra Euro-area trade differs from trade outside the Euro area, it is unlikely these deflators will move together. We choose to estimate the model using the GDP deflator to avoid this problem.[1]

A more recent vintage of the data from the Area Wide Model is now available, but appears to us (as a consequence of the revisions that have been undertaken in extending the time span)

to contain several anomalies in its unit labour cost and inflation series that makes its use problematic.

[1] While acknowledging the difficulties in constructing the Euro area data, particularly the need to aggregate a lot of widely disparate experiences, the Fagan *et al.* (2001) data remains the most extensive and most frequently used.

Sources and Details of the Data[(a)]

Variable	*Mnemonics*	*Details*
Price Level	YFD	Gross domestic product (GDP) implicit price deflator at factor cost. The data is extended for the period March 2001 to March 2002 by forward splicing with the 'Deflator GDP' from the EFN data base.
Unit Labour Costs	ULC	Unit labour costs measured as compensation to employees (WIN) divided by constant price gross domestic product (YER). The data is extended for the period March 2001 to March 2002 using the EFN data base where unit labour costs are calculated as 'total nominal hourly labour costs for the whole economy' multiplied by 'employment' and divided by GDP measured at constant 1995 prices.
Business Cycle	YGA	Potential output gap defined as constant price GDP (YER) divided by potential output (YET). Potential output is estimated in Fagan *et al.* (2001) as a function of the level of employment consistent with the NAIRU (LNT), the capital stock (KSR), and trend total factor productivity (TFT). The business cycle is the residuals of the logarithm of the potential output gap (YGA) regressed on a constant and trend. Prior to de-trending, YGA was extended for the period March 2001 to March 2002 by: $YGA_t = YGA_{t-1} + \Delta LYER_t - average\,\Delta LYER$ where $\Delta LYER$ is the change in the logarithm of constant price GDP and the average is taken for the period of June 1972 to March 2001.

Mnemonics are from Fagan *et. al.* (2001).

Data in Excel spreadsheet

DLYFD is the change in natural log (YFD)

MUGDP is natural log (YFD) – natural log (ULC)

GAP is YGAP