Note on the Participation Rate Forecast

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Moody's Analytics has respecified its forecast equation for the labor force participation rate. FLBT is still forecasted using an error-correction process, with the convergence term being derived from the demographic composition of the U.S. population. However, we add a labor market hotness term that pushes the labor force participation rate higher when the labor market is tight and wage growth is strong. In this type of economy, plentiful employment opportunities and robust income growth draw in workers off the sidelines.

The new equation displays formidable backtesting diagnostics, shock properties, and produces a baseline forecast that is closely aligned with our firm's view. It also allows the labor force forecast to interact with the household employment forecast for the first time. Previously, labor force and household employment were forecasted with their own stochastic processes that were unrelated. And because the unemployment rate is defined as a residual in our macroeconomic model, this approach had the drawback of leading to a negative unemployment rate forecast in extreme economic conditions or stochastic simulation. The labor market hotness term helps to mitigate this potential constraint.

New equation specification

Dependent Variable: DLOG(FLBT_US)
Method: Least Squares
Date: 09/20/19 Time: 11:50
Sample (adjusted): 1985Q1 2018Q2
Included observations: 134 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(FAPWLBT2007_US)	1.811805	0.419592	4.318020	0.0000
LOG(FLBT_US(-1))-LOG(FAPWLBT2007_US(-1))	-0.100236	0.019699	-5.088417	0.0000
DLOG(FPCNBCPH_US/FCPIUL1E_US)	0.043397	0.021455	2.022709	0.0452
DLOG(@MOVAV(FGSEPSBT$Q_US,4))	-0.027065	0.008809	-3.072460	0.0026
DLOG(@MOVAV(FENRCA_US/(FPOP2024Q_US+FPOP2529Q_US),20))	-0.030280	0.041110	-0.736570	0.4627
DLOG(@MOVAV(FCUMF_US(-8),4))	0.016748	0.016432	1.019223	0.3100
LOG(FLBR_US(-1)/FNAIRU_US(-1))	-0.004724	0.001209	-3.908737	0.0002

R-squared	0.287130	Mean dependent var	-0.000195
Adjusted R-squared	0.253452	S.D. dependent var	0.002310
S.E. of regression	0.001996	Akaike info criterion	-9.544981
Sum squared resid	0.000506	Schwarz criterion	-9.393601
Log likelihood	646.5137	Hannan-Quinn criter.	-9.483465
Durbin-Watson stat	2.113841		

Mnemonics referenced in the above equation, for example FET, can be defined using the Mnemonic 411 feature on DataBuffet. Please contact Help@economy.com for assistance.

Previous equation specification

Dependent Variable: DLOG(FLBT_US)
Method: Least Squares
Date: 06/30/14 Time: 15:58
Sample: 1985Q1 2014Q1
Included observations: 117

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(FAPWLBT2007_US)	2.386199	0.470560	5.070981	0.0000
LOG(FLBT_US(-1))-LOG(FAPWLBT2007_US(-1))	-0.060893	0.019743	-3.084245	0.0026
DLOG(FPCNBCPH_US/FCPIUL1E_US)	0.053219	0.023648	2.250420	0.0264
DLOG(@MOVAV(FGSEPSBT$Q_US,4))	-0.020745	0.009183	-2.259119	0.0258
DLOG(@MOVAV(FENRCA_US/(FPOP2024Q_US+FPOP2529Q_US),20))	-0.069244	0.046941	-1.475113	0.1430
DLOG(@MOVAV(FCUMF_US(-8),4))	0.034740	0.017272	2.011300	0.0467

R-squared	0.243568	Mean dependent var	-0.000192
Adjusted R-squared	0.209495	S.D. dependent var	0.002350
S.E. of regression	0.002089	Akaike info criterion	-9.454252
Sum squared resid	0.000484	Schwarz criterion	-9.312602
Log likelihood	559.0738	Hannan-Quinn criter.	-9.396744
Durbin-Watson stat	1.894077		

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