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Joint Vienna Institute / IMF Institute for Capacity Development

Course on Macroeconomic Forecasting (JV15.05 MF)

Vienna, Austria

March 2–13, 2015

Reading List

Session	Topic
L–1	**Review of Statistical Tools and the Classical Regression Model** **Required:** IMF Institute, 2010, "Chapter 1: Basic Empirical Methods," in *Introduction to Financial Programming* (Washington: International Monetary Fund). ***Supplementary***: Diebold, F.X. , 1998, "The Past, Present and Future of Macroeconomic Forecasting,"*Journal of Economic Perspectives*, 12, 175-192. Pagan, Adrian, 2002, "What is a Good Macroeconomic Model for a Central Bank to Use?" Comments presented at the conference, *Macroeconomic Models for Monetary Policy*, sponsored by the Federal Reserve Bank of San Francisco and the Stanford Institute for Economic Policy Research (March 1-2). Available via: http://www.frbsf.org/economics/conferences/0203/comments.pdf
W–1	**Workshop: Introduction to Forecasting Using EViews** **Required:** EViews 7 User's Guide I, 2009, Chapter 2 "A Demonstration," (Irvine, CA: Quantitative Micro Software, LLC), pp. 13–32. EViews 7 Users Guide II, 2009, Chapter 22 "Forecasting from an Equation," and Chapter 34 "Models," pp. 111–138 and pp. 511–562 (Irvine, CA: Quantitative Micro Software, LLC). ***Supplementary:*** EViews 7 Users Guide I, 2009, Chapters 3–6, pp. 33–154 (Irvine, CA: Quantitative Micro Software, LLC).

L–2	**Evaluating Regression Models** **Required:** Enders, Walter, 2010, "Chapter 2: in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 103–110. EViews 7 Users Guide II, 2009, Chapter 6 "Specification and Diagnostic Tests" pp. 139–186 (Irvine, CA: Quantitative Micro Software, LLC). ***Supplementary:*** Hamilton, J. D., 1994, Chapter 8, "Time Series Analysis", *Princeton University Press*, Princeton, New Jersey.
L–3	**Properties of Time Series Data I: Stationarity, Box Jenkins ARIMA Models** **Required:** Enders, Walter, 2010, "Chapter 2: Stationary Time-Series Models," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 49–120.
L–4	**Properties of Time Series Data II: Non-stationarity and Unit Roots** **Required:** Enders, Walter, 2010, "Chapter 4: Models with Trend," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 181–271. ***Supplementary:*** Dickey, D.A., and Fuller, W. A., 1979, "Distribution of the Estimators for Autoregressive Time Series with a Unit Root*," Journal of the American Statistical Association,* Vol. 74, pp. 427–431. Available via: http://www.deu.edu.tr/userweb/onder.hanedar/dosyalar/1979.pdf Elder, J., and P.E. Kennedy, 2001, "Testing for Unit Roots: What Should Students be Taught?", *Journal of Economic Education*, Vol. 32, No. 2, pp. 137–46. Available via: http://www.ufrgs.br/decon/virtuais/eco02007u/pasta/artigos/elder%20kennedy.pdf

L–5	**Cointegration I – Single Equation Estimation, Error Correction Models, and Forecasting** **Required:** Enders, Walter, 2010, "Chapter 6: Cointegration and Error-Correction Models," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.) pp. 356–365, pp. 382–385, and pp. 425–427. ***Supplementary:*** Engle, R. F. and C. W. J. Granger, 1987, "Co-integration and error correction: Representation, estimation, and testing," *Econometrica*, Vol 55, pp. 251–276. Stock, J. and M. Watson, 1993, "A Simple Estimator of Cointegrating Vectors in Higher Order Integrated Systems," *Econometrica*, Vol. 61, No.4, pp. 783–820. Phillips, Peter and Bruce Hansen, 1990, "Statistical Inference in Instrumental Variables Regression with I(1) Processes," *Review of Economic Studies*, Vol. 57, pp. 99–125.
L–6	**Forecast Uncertainty and Forecast Evaluation** **Required:** Enders, Walter, 2010, "Chapter 5: Multiequation Time-Series Models," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 272–355. Eviews 7 Users Guide II, 2009, Chapter 5, "Forecasting from an Equation", pp.139–186, (Irvine, CA: Quantative Micro Software, LLC). ***Supplementary*:** Clark, T., and K. West, 2007, "Approximately Normal Test for Equal Predictive Accuracy in Nested Models", *Journal of Econometrics*, Vol. 138, pp 291–311. Available via: http://www.ssc.wisc.edu/~kwest/publications/2000/Approximately%20Normal%20Tests%20for%20Equal%20Predictive%20Accuracy%20in%20Nested%20Models.pdf Diebold, Francis X.,. and R. Mariano, 1995, "Comparing Predictive Accuracy:", *Journal of Business and Economic Statistics*, Vol. 13, pp. 253–63. Available via: http://www.ssc.upenn.edu/~fdiebold/papers/paper68/pa.dm.pdf

L–7	**Vector Autoregression (VAR), Structural VAR Models, Impulse Response Functions (IRFs)** **Required:** Enders, Walter, 2010, "Chapter 6: Cointegration and Error-Correction Models," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 385–405. Eviews 7 Users Guide II, 2009, Chapter 21 "Cointegration Testing", pp. 139–186 (Irvine, CA: Quantitative Micro Software, LLC). ***Supplementary*:** Hamilton, J.D., 1994, Chapter 11 "Time Series Analysis", *Princeton University Press*, Princeton, New Jersey. Kilian, Lutz, 2013, "Structural Vector Autoregressions", Chpater 22 in Handbook of Research Methodfs and Empirical Applications in Macroeconomics, Elgar, Chatenam, UK. Available via: http://www-personal.umich.edu/~lkilian/paperlinks.html
L–8	**Cointegration II: Johansen Methodology** **Required:** Enders, Walter, 2010, "Chapter 6: Cointegration and Error-Correction Models," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 385–405. Eviews 7 Users Guide II, 2009, Chapter 21 "Cointegration Testing", pp. 139–186 (Irvine, CA: Quantitative Micro Software, LLC). ***Supplementary*:** Johansen, Soren, 1995, "Likelihood-based Inference in Cointegrated Vector Autoregressive Models", *Oxford University Press*, UK. Johansen, Soren, 1988, "Statistical Analysis of Cointegration Vectors," *Journal of Economic Dynamics and Control*, Vol. 12, No. 2–3, pp. 231–254.
L–9	**Vector Error Correction Models: Formulation, Hypothesis Testing, and Forecasting** **Required:** Eviews 7 Users Guide II, 2009, Chapter 5, "Forecasting from an Equation", pp.139–186, (Irvine, CA: Quantative Micro Software, LLC). ***Supplementary:*** Hamilton, J.D., 1994, Chapter 19 "Time Series Analysis", *Princeton University Press*, Princeton, New Jersey. Johansen, Soren, 1988, "Statistical Analysis of Cointegration Vectors," *Journal of Economic Dynamics and Control*, Vol. 12, No. 2–3, pp. 231–254.

	Clark, T., and K. West, 2007, "Approximately Normal Test for Equal Predictive Accuracy in Nested Models", *Journal of Econometrics*, Vol. 138, pp 291–311.
L–10	**Combining Forecasts from Different Sources** **Required:** Stock, James H., and Mark W. Watson, 2004, "Combination Forecasts of Output Growth in a Seven-Country Data Set," *Journal of Forecasting*, Vol. 23, No. 6, pp. 405–430. Prepublication draft of paper available via: http://www.princeton.edu/~mwatson/papers/apf_4.pdf ***Supplementary*:** Clemen, Robert, 1985, "Combining Forecasts: A Review and Annotated Bibliography," *International Journal of Forecasting*, Vol. 5, No. 4, pp. 559–583. Hansen, Bruce E., 2007, "Least Squares Model Averaging," *Econometrica*, Vol. 75, No. 4, pp. 1175–1189. Aiolfi, Capistran and Timmerman, 2010, *Forecast Handbook*, Oxford.
L-11	**Modeling Strategies and Policy Analysis: Inflation in Australia** **Required:** de Brouwer, Gordon, and Neil R. Ericsson, 1998, "Modeling Inflation in Australia," *Journal of Business and Economic Statistics*, Vol. 16, No. 4, pp. 433–449. Working paper version available via: http://www.federalreserve.gov/pubs/ifdp/1995/530/ifdp530.pdf
L-12	**Modeling and Forecasting Volatility: Univariate and multivariate ARCH Models** **Required:** Enders, Walter, 2010, "Chapter 3: Modeling Volatility," and "Chapter 7: Nonlinear Time-Series Models," in *Applied Econometric Time Series* (New York: John Wiley & Sons, 3rd ed.), pp. 121–180 and pp. 428–487. ***Supplementary:*** Bollerslev, Tim, 1986, "Generalized Autoregressive Conditional Heteroskedasticity," *Journal of Econometrics*, Vol. 31, No. 3, pp. 307–327. http://econ.duke.edu/~boller/Published_Papers/joe_86.pdf
L–13	**Practical Considerations for Implementing Macro Forecasting Procedures** No reading assigned.