

Description of Programs
Credit Spreads and Business Cycle Fluctuations
October 11, 2011

This note documents the various programs used in the paper. Included are SAS and Stata programs.

SAS Programs:

- **SummaryStats-bonds.sas**: SAS program that generates the results reported in Table 1.
- **Merton-EDF.sas**: SAS program that calculates the Merton-style distance-to-default (DD) using the methodology of Bharath and Shumway [2008].
- **PredictiveReg-Hodrick.sas**: SAS macro that uses OLS to estimate the predictive regressions with overlapping data and calculates Hodrick [1992] standard errors.
- **SelectLagLength.sas**: SAS macro that uses various information criteria to determine the “optimal” number of lags in a predictive regression with overlapping data.
- **MACRO.sas**: A collection of SAS utility macros used by **PredictiveReg-Hodrick.sas** and **SelectLagLength.sas** macros.
- **Predict-xxx.sas**: SAS programs that generate results reported in Tables 2, 3, 6, and 7. (Note: In order to run these programs, you must change the paths so that the program can compile **PredictiveReg-Hodrick.sas**, **SelectLagLength.sas**, and **MACRO.sas** macros. In addition, the appropriately named libraries and data sets must be created with the appropriately-named input data.)
- **EBP-OA-DD.sas**: SAS program that computes the excess bond premium. (Results reported in Figures 3 and 4.) This program generates identical parameter estimates of the credit spread model as those generated by the Stata program **EBP-OA-DD-Merton.do**, the only difference being that the latter program calculates two-way clustered robust standard errors (see below).

STATA Programs:

- **EBP-DD-Merton.do**: Stata program that generates the results reported in the left-hand side panel of Table 4.
- **EBP-OA-DD-Merton.do**: Stata program that generates the results reported in the right-hand side panel of Table 4 and the results reported in Table 5.

- **cgmreg.ado**: The program used to compute the two-way clustered standard errors, according to Cameron, Gelbach and Miller [2011]. This program is used by **EBP-DD-Merton.do** and **EBP-OA-DD-Merton.do** programs and must be installed in the Stata ado directory. The .hlp file is also included.
- **VAR-EBP.do**: Stata program that computes orthogonalized impulse responses and forecast error variance decomposition of quarterly macroeconomic variables in response to an EBP shock. (Results reported in Figures 5 and 6.)
- **VAR-BD-EBP.do**: Stata program that computes orthogonalized impulse responses of monthly financial variables in response to an EBP shock. (Results reported in Figure 9. Note: You must create a dummy variable d2008M9 that equals 1 in September 2008 and 0 otherwise, which controls for the collapse of Lehman Bros.)

References

- Bharath, Sreedhar T., and Tyler Shumway.** 2008. “Forecasting Default with the Merton Distance to Default Model.” *Review of Financial Studies*, 21: 1339–1369.
- Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller.** 2011. “Robust Inference with Multi-Way Clustering.” *Journal of Business and Economic Statistics*, 29: 238–249.
- Hodrick, Robert J.** 1992. “Dividend Yields and Expected Stock Returns: Alternative Procedures for Inference and Measurement.” *Review of Financial Studies*, 5: 357–386.