

## NEW EVIDENCE ON THE AFTERMATH OF FINANCIAL CRISES IN ADVANCED COUNTRIES

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### GUIDE TO ONLINE MATERIALS

#### I. ONLINE APPENDIXES

There are three online appendixes:

**A. Romer&RomerCrisesAppendixADerivationOfTheNewMeasure.pdf.** This is online Appendix A. As discussed in Sections I.A and I.B of the paper, it describes how we derive our new semiannual measure of financial distress for 24 advanced economies for the period 1967 to 2012 using information from the *OECD Economic Outlook*.

**B. Romer&RomerCrisesAppendixBAdditionalNarrativeEvidence.pdf.** This is online Appendix B. As discussed in Section I.E of the paper, it provides evidence from additional real-time narrative sources on the presence and timing of financial distress in key episodes.

**C. Romer&RomerCrisesAppendixCAdditionalEmpiricalResults.pdf.** This is online Appendix C. It presents results for the various additional empirical tests discussed in the text of the paper.

#### II. DATA AND PROGRAMS

The programs were run in RATS. The program files are plain text files that can be opened with any text editor or word processor. The “.DED” files are RATS data banks containing the data in the form they are accessed by RATS.

##### A. ORIGINAL DATA AND BASIC MANIPULATIONS

###### **1. Data**

**Romer&RomerCrisesData.xlsx.** All of the data are in this file. For the macro series (GDP, industrial production, and unemployment), the file includes both the raw quarterly series from the original sources and the semiannual data ultimately used in the estimation. The file has eleven sheets:

**New Meas. of Financial Distress** has our new semiannual series on financial distress for 24 advanced countries for 1967–2012. The construction of the series is described in Section I.A and I.B of the paper and in online Appendix A.

**Semiannual Macro Data** has the semiannual data for GDP, industrial production, and unemployment used in the estimation (constructed from the raw data, described below).

**Sources for Alt. Chronologies** gives the sources of the Reinhart and Rogoff and IMF Systemic Crisis Database crisis chronologies (described in Section I.D of the paper).

**Reinhart and Rogoff (Systemic)** has the semiannual Reinhart and Rogoff series for systemic crises for 1967–2014.

**Reinhart and Rogoff (All)** has the semiannual Reinhart and Rogoff series for all crises (including nonsystemic ones) for 1967–2014.

**IMF (All)** has the semiannual IMF Systemic Crisis Database series for all crises (including borderline systemic ones and portions of crisis periods before the crisis is identified as having become systemic) for 1970–2011.

**IMF (Systemic)** has the semiannual IMF Systemic Crisis Database for systemic crises for 1970–2011.

**GDP** has the quarterly GDP data from the OECD (described in Section II.A of the paper).

**IP** has the quarterly industrial production data from the OECD (described in Section II.A of the paper).

**Unemployment (OECD)** has the quarterly data on the unemployment rate from the OECD (described in Section II.A of the paper).

**Unemployment (FRED)** has the quarterly data on the unemployment rate from the Federal Reserve Bank of St. Louis (described in Section II.A of the paper).

## 2. Manipulations of the basic data

**PANEL.RAT** converts the GDP, industrial production, and unemployment data from quarterly to semiannual, and ratio splices the unemployment series from the Federal Reserve Bank of St. Louis to the series from the OECD when needed.

### B. PROGRAMS

#### 1. Key programs

The programs that produce the results reported in the figures and tables in the paper are:

**JORDA.RAT.** Performs the basic Jordà impulse response regressions, including the baseline results (Figure 4 and Line 1 of Table 1), results excluding any contemporaneous relationship between distress and output (Figures 7b and C5), the response of distress to itself (Figure C3), and specifications leaving out the country and/or time fixed effects and *F*-tests for excluding the fixed effects (discussed briefly in Sections II.B).

**JORDA\_OTHER.RAT.** Estimates impulse response functions for GDP using the Reinhart and Rogoff and IMF chronologies (Figure 5 and C4).

**JORDA\_WLS.RAT.** Addresses the issue of differences in the variance of the residuals across countries (Figure 6 and Line 2 of Table 2).

**JORDA\_LEAD.RAT.** Performs the estimates that include the behavior of output one half-year before financial distress as part of the aftermath of distress (Figure 7c).

**JORDA\_SCATTER.RAT.** Prints the data for the partial association scatter plots (Figure 8).

**JORDA\_SAMPLES.RAT.** Performs the basic Jordà impulse response regressions for the pre-global financial crisis and global financial crisis samples (Figure 9) and dropping one country at a time (Lines 3–6 of Table 2).

**JORDA\_FORECAST.RAT.** Constructs forecasts for the key episodes (Figures 10, 11, and C6).

**REGRESSNLSYSTEM\_GDP.RAT.** Performs the nonlinear estimation (Figure 12).

## 2. Other programs

Programs that produce results that are only mentioned in passing or only reported in Appendix C are:

**PANELVAR.RAT.** Estimates the aftermath of crises using a vector autoregression rather than the Jordà local projection approach (mentioned briefly in Section II.B and reported in Figure C2).

**JORDA\_SES.RAT.** Computes alternative standard errors (mentioned briefly in Section II.D and reported in Table C1).

**JORDA\_INTERACTIONS.RAT.** Performs the Jordà impulse response regressions interacting the financial distress variables with a dummy variable for the 2007-and-after period (mentioned briefly in Section III.A).

## 3. RATS data banks

The “.DED” files are RATS data banks containing the data in the form they are accessed by RATS.