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The effects of systemic banking crises in the inter-war period

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ABSTRACT

This paper examines the time-profile of the impact of systemic banking crises on GDP and industrial production using a panel of 24 countries over the inter-war period and compares this to the post-war experience of these countries. We show that banking crises have effects that induce medium-term adjustments on economies. Focussing on an eight-year horizon, it is clear that the negative effects of systemic banking crises last over the entirety of this time-horizon. The effect has been identified for GDP and industrial production. The adverse effect on the industrial sector stands out as being substantially larger in magnitude relative to the macroeconomic effect. Comparing the results across long-run historical periods for the same selection of countries and variables identifies some differences that stand out: the short term macroeconomic impact effects are much larger in the post-war period, suggesting that the propagation channels of shocks operate at a faster pace in the more recent period. Moreover, the time-profile of effects differs, suggesting that modern policies may be modulating the temporal shape of the response to banking crises shocks. However, the broad magnitude of the adverse effect of banking crises remains comparable across these time periods.

1. Introduction

This paper examines the time-profile of the impact of systemic banking crises on GDP and industrial production using a panel of 24 countries over the inter-war period and compares this to the post-war

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experience of these countries. The main aim of the paper is to clarify our understanding of the impact of banking crises during the inter-war period. The choice of countries is partly determined by historical data availability but we are able to study a diverse set of economies with differences in production structures, per capita income, and financial depth. Although there is significant general interest on the inter-war period in the literature on financial crises, partly because banking crises were widespread during this period, there exist only a few econometric studies of the period. Often, the inter-war data forms part of the sample in a longer period study of financial crises. For example, Bordo et al. (2001), Dwyer et al. (2013) and Jordà et al. (2013) include data from the inter-war era in their estimations but do not provide separate econometric analysis for this specific period. Occasionally the 1930s are excluded as a robustness check on observed results (Schularick and Taylor, 2012; Jordà et al., 2013) as a way of testing the assumption of the exceptionalism of the Great Depression. The assumption that inter-war banking crises were more severe in their effects lingers in the literature; for example, in a study of the OECD economies during the period 1967–2007, Romer and Romer (2015) assert that banking crises before World War II distort our understanding of the impact of banking crises in more recent years by leading us to believe that the effect is large and persistent – they find that banking crises had mild short-term effects. This paper contributes to the literature by explicitly comparing results for the inter-war and post-war periods for the same set of 24 countries.

Bernanke and James (1991) provide one of the few econometric studies focussing on the inter-war period; they analyse a monthly panel data set of industrial production for the period from 1930 to 1936 and find an important role for banking crises in explaining the link between falling prices and falling output. They find that banking crisis has a significant and large negative impact effect on industrial production growth rates, implying that severe banking panics reduce output growth independently of gold-standard effects. A number of other studies use descriptive analysis to document the effect of major financial crises. Reinhart and Rogoff (2009b) argue that major financial crises raise unemployment and reduce growth in the decade following a major banking crisis. Reinhart and Reinhart (2010) plot the probability density functions of several key macroeconomic indicators for the ten years before and after major financial crises, and use the non-parametric Kolmogorov–Smirnov test to examine whether these indicators are drawn from the same distribution. They find that real GDP per capita growth rates are significantly lower in the decade following severe financial crises, such as the 1930s. Reinhart and Rogoff (2014) examine the effect of 100 systemic banking crises since the mid-19th Century (approximately one third of their events take place within the inter-war period) and find that such events have long lasting effects; it takes a mean of eight years to reach pre-crises levels of per capita income. Grossman (1994, 2010) describes the cyclical time-profiles of GDP during the Great Depression of the 1930s in countries experiencing banking crises and non-crisis countries and finds evidence of high amplitude depressions and persistent differences in the recovery profiles of banking crises countries, compared to non-crisis countries.

This paper contributes to our understanding of the impact of banking crises in the inter-war period from three separate angles. First, we have refined the existing data sets on banking crises to construct a new banking crises data set for 24 countries that allows us to document an important distinction between systemic and non-systemic banking crises and refines the dating of the starting year of banking crisis events. As part of this exercise, we reviewed existing data sets and identified inconsistencies across classifications. We then used country-specific studies to determine the severity of specific events. All classifications of inter-war banking crises, including our own, involve an element of qualitative judgement and we outline the details of each event in Appendix I to account for our classifications. Given the qualitative nature of classifications, and the existence of some unavoidable classification uncertainty, a further innovation in our approach is to retain information about less severe events in a broader selection (B) which we include in our estimations for sensitivity analysis. In doing so, we have attempted to emphasise the difference between banking crises that are clearly systemic and events that may only share some elements of systemic features. Thus, although ideally banking crises would likely be best described by a spectrum of severity (data permitting), we attempt to use available information to document two points on this spectrum. For completeness, we also consider the even broader classification of Reinhart and Rogoff (2009a), which contains a number of what they consider to be "Type II banking crises" i.e. events that entail limited financial distress.