

Banking Shocks and Top income Shares

Preliminary draft, comments are welcome. Please do not circulate

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Introduction

The 2007-2008 financial collapse and its subsequent economic recession brought the distributional impact of macroeconomic shocks back on the research agenda.

This paper attempts to investigate the impact of systemic banking shocks on within-country income distribution since the beginning of the twentieth century and for 27 countries accounting for more than a third of world GDP. In order to do so, we will turn to the investigation of top income shares data, the only available source of information to analyse inequality over a long time span as well as across a number of countries.

However, disentangling the overall distributional consequence of macroeconomic shocks is a challenging and complex task. On one hand banking crises are not isolated macroeconomic events, as they are commonly clustered with other macro shocks. On the other hand, banking crises are often followed by policy interventions which have potential distributional implication as well. Moreover, to complicate the empirical specification of the model even further, a growing body of research is pointing to the role of inequality as a main contributor to financial instability, casting doubts about the exogeneity of the regressors.

In this paper we will attempt to address the most pressing concerns expressed above. Firstly, the use of a set of different covariates, including indexes for a wide range of macroeconomic shocks, will help to disentangle the direct impact of specific banking crisis episodes, net of other relevant macroeconomic episodes. Secondly, with the use of data based on gross income definition we can exclude any direct impact of

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fiscal policy on our measure of inequality (top income shares). Thirdly, the use of a short time horizon (4 years), we argue, should be sufficient not to worry much about the potential role of new institutional and regulatory framework likely stemming from the crisis. Finally, we test the robustness of our results to the assumption that both systemic banking crises and economic shocks have exclusively lagged effects on the growth of the top shares. This will address the concern of potential endogeneity of crisis indicators to changes in ‘inequality’.

Overall, our study builds on existing literature about the distributional implication of crises, including studies by Roine, Vlachos and Waldenstrom (2009), Morelli (2011) and Bordo and Meissner (2011), from now on referred to as RVW, MO, and BM. Specifically, our approach expands the methodology adopted in MO to a panel of countries and builds on previous empirical contributions by RVW and BM. Our work will study the richest fractiles more closely (especially top001) and our specifications make use of the growth rates of the top shares rather than their first-difference. We further depart from RVW and BM’s methodological assumptions in different ways. Firstly, we construct a more homogeneous dataset of banking crises across different sources discarding non-systemic episodes. Secondly, we adopt a novel methodology consistent with an ‘agnostic’ view of the ending date of a banking crisis. Thirdly, we acknowledge the fact that macroeconomic shocks are not isolated events but occur in cluster. This leads us to include other type of shocks as well within our empirical specification, hoping to obtain more accurate estimates of the ‘residual’ impact of a banking shock. Fourthly, we exploit year-to-year variations and do not average out the data. Similarly, we work with the original series of the WTID and do not interpolate top income shares. Lastly, we estimate our empirical specifications based on the standard homogenous panel models as well as on models based on the recent literature on panel time-series with common-factors (heterogenous panel models which control for more general cross-section dependence). This will test how the results may be driven by the nature of the estimation methodologies. We also provide our results divided by period and country-group sub-samples, marking the importance of a long time *and* cross-country perspective.

In practise, the empirical evidence for this paper is produced by estimating impulse response functions (IRFs) of the rate of growth of top income shares to the systemic banking crises. This methodology is more commonly applied in macroeconomic studies and, to our knowledge, constitutes a novelty within the literature of income distribution. We first generalize this approach to a cross-section of countries and we discuss the estimation of the model based on two main approaches. On one hand we make use of the more standard ‘pooled’ estimators (i.e. POLS, FGLS). On the other hand we take advantage of the more recent advancements within the heterogenous models and common factors approach to panel estimation (i.e. the family of the Mean Groups estimators). Although still in its infancy and not commonly applied within the empirical

literature, these models are particularly suitable for macro-panels with ‘long N’ and ‘long T’ structure and strong features of cross-section dependence.

Our results show that systemic banking crises have, on average, no significant additional impact on the dynamic of top shares when using the whole sample of countries and years. Analysing results over time, however, reveals a more complex relationship between inequality and crisis. In particular, our findings show that the pre-1950 crises appear to exert a relatively mild negative impact on the ‘inequality’ of income (at best, almost a half of what the work by Atkinson and Morelli(2011) considers to be a “salient” change in inequality), whereas the crises occurred within the post-1950 sub-sample do not seem to have any significant effect on the average dynamics of the top shares. However, once we drop from the analysis the observations for the the so called ‘developing’ and ‘southern European’ countries (with low coverage of data in the pre-1950 period), recent crises appear, in the short-run and on average, up to three times as disruptive for the richest fractile share compared to the crises occurred in the interwar period. Finally, we also document that the distributional impact of shocks differ across different country groups. Following the classification used in Atkinson, Piketty and Saez’s 2011 paper, we broadly found two main macro-groups of countries, according to their different distributional response to banking crises. On the one hand, there are the so called Nordic European, Western English Speaking and Continental European (including Japan) countries, in which the richest fractile share seems to suffer a negative shock following a banking crisis. On the other hand, there are the so called Southern European and the Developing countries which show the opposite response, namely an increase in their top shares. Less clear is the impact of crises on the bottom of the top decile across different country-groups. Indeed, there is more heterogeneity across country groups and its response to shocks is measured with more uncertainty.

The paper is organized in eight sections. The first describes the complexity lying behind the question under investigation whereas the second illustrates the existing literature on the topic. The third and fourth sections analyse in detail the assembled dataset, the methodology and estimation strategies. We further discuss the results and their tentative interpretation in the following two sections. Finally, we conclude and we propose the tables and the charts as well as additional insights about the empirical methodology, in specific appendices.