

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

North American Journal of Economics and Finance

journal homepage: www.elsevier.com/locate/najef

Determinants of the real impact of banking crises: A review and new evidence

Philip Wilms^{a,b}, Job Swank^{a,b}, Jakob de Haan^{b,c,d,*}^a *Erasmus University Rotterdam, The Netherlands*^b *De Nederlandsche Bank, The Netherlands*^c *University of Groningen, The Netherlands*^d *CESifo, Munich, Germany*

ARTICLE INFO

JEL codes:

F3
G01
G18

Keywords:

Banking crises
Real impact of crises
Output loss due to crises

ABSTRACT

We examine which variables are robust in explaining cross-country differences in the real costs of banking crises. We identify 21 variables frequently used as determinants of the severity of banking crises. After a discussion of five measures based on cumulative output (or output growth) lost after a banking crisis, we examine the drivers of the real impact of banking crises for two preferred measures. Our results suggest that fixed investment and financial openness affect losses in output levels, while fixed investment, the current account balance, liquidity support, monetary policy and financial freedom affect losses in output growth after banking crises.

1. Introduction

The recent global financial crisis has revived research in banking crises. Most studies in this line of literature examine the drivers of such crises or try to identify early warning indicators of banking crises (see, for instance, [Klomp, 2010](#) and references cited therein). A small but rapidly growing subset of the literature analyzes the determinants of the impact of banking crises on the real economy, henceforth referred to as the real impact. This issue is of great importance, as the recent global financial crisis has illustrated. Whereas some countries did not face a decline in output during this crisis, other countries suffered from double-digit output losses ([Aiginger, 2011](#)). Likewise, some countries recovered much faster than other countries ([Shehzad & de Haan, 2013](#)).

It is widely believed that banking crises are followed by recessions. Bank failures reduce credit supply, which may in turn limit both fixed investment and consumption and thereby lead to a recession ([Serwa, 2010](#)). However, in the theoretical model of [Ranci re, Tornell, and Westerman \(2008\)](#), long-run growth and banking crises can be positively related. This result builds on the literature showing a positive relationship between financial development and economic growth. In the model of Ranci re et al., credit growth finances economic growth but is subject to downside risk. Banking crises are the realization of that downside risk. If the impact of financial development on long-run growth exceeds the short-run negative impact of banking crises, there will be a positive relationship between growth and banking crises. Another warning that banking crises may not always cause recessions comes from [Dwyer, Devereux, and Baier \(2013\)](#). Using long-term data for 21 economies from around the world, these authors report substantial diversity in the effect of banking crises on real GDP per capita. Most strikingly, twenty-five percent of the banking crises are not associated with a decrease in real GDP per capita in the year of the crisis or in the following two years. Still, also these authors report that—on average—banking crises are associated with a decline in real GDP per capita in the year of the crisis and the year thereafter and that these decreases are large: real GDP per capita falls by 0.34 percent per year in the year of a crisis and 1.04 percent per year in

* Corresponding author at: De Nederlandsche Bank, P.O. Box 98, 1000 AB Amsterdam, The Netherlands.
E-mail address: j.de.haan@dnb.nl (J. de Haan).

<http://dx.doi.org/10.1016/j.najef.2017.10.005>

Received 16 April 2017; Received in revised form 28 September 2017; Accepted 3 October 2017

1062-9408/ © 2017 Elsevier Inc. All rights reserved.

the following year. Likewise, [Claessens, Kose, and Terrones \(2012\)](#) find that recessions associated with financial disruptions are often longer and deeper than other recessions.

The economic costs of a banking crisis can be defined as the loss of present and future discounted consumption in a particular country. To measure this directly is difficult and most studies addressing the determinants of the real impact of banking crises therefore use a proxy, such as the cumulative output losses following a banking crisis.¹ There is no agreement in the literature about the variables that affect the real impact of banking crises. This lack of consensus may be the consequence of the use of different proxies for the real impact of banking crises. But it also reflects that most studies do not carefully identify potential drivers of the relationship between lost output (growth) and banking crises. The purpose of our research is therefore 1) to critically assess several proxies for the output loss due to banking crises as used in the literature and 2) to unravel which macroeconomic variables are robust in explaining cross-country differences in the real impact of systemic banking crises, using two preferred proxies for the real impact of crises.

We rely on the banking crisis database constructed by [Laeven and Valencia \(2013\)](#).² These authors define a systemic banking crisis as an event in which there are: “(1) Significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system and/or bank liquidations). (2) Significant banking policy intervention measures in response to significant losses in the banking system” ([Laeven & Valencia, 2013, p. 228](#)).

Our main contributions to the literature are as follows. First, whereas previous studies mostly focus on one particular measure of crisis severity, we critically assess five widely used indicators of the output loss of banking crises. We conclude that each of these measures has serious conceptual shortcomings, but that two measures are to be preferred. These measures are used in our subsequent analysis of the drivers of the real impact of banking crises. Second, in contrast to most previous studies, we consider a long list of variables identified in previous studies as potential drivers of the real impact of banking crises. Third, whereas in previous studies the selection of variables included in the model explaining crisis severity seems rather ad hoc, we follow a more systematic approach to deal with the problem of model uncertainty. To identify which variables are robust, we proceed in two steps. In the first stage, we use Bayesian model averaging (BMA) to select a base model. Only variables with the largest posterior inclusion probabilities are included into the base model. In the second stage, we select from the remaining set of possible regressors the ones with the highest significance level. Using our preferred measures of crisis severity, our results suggest that fixed investment and financial openness affect losses in output levels, while fixed investment, the current account balance, liquidity support, monetary policy and financial freedom affect losses in output growth due to banking crises.

The remainder of the paper is structured as follows. Section 2 critically discusses different crisis severity measures and focuses on some studies using these measures. Section 3 reviews relevant determinants of banking crisis severity as identified in previous studies. Section 4 presents our empirical analysis. The final section provides an overview of the main results and discusses possible limitations.

2. Capturing the real impact of crises

Several measures have been used in the literature as a proxy for the real impact of a banking (or financial) crisis. Section 2.1 discusses five different measures of output loss due to a banking crisis. We illustrate these measures using the representative case of the banking crisis in 1998 in Ecuador.³ Section 2.2 critically assesses these measures.

2.1. Measuring output loss

We use the banking crisis database constructed by [Laeven and Valencia \(2013\)](#) to determine the start of a banking crisis. This database is widely used and identifies the start of 147 banking crises over the period 1970–2011. [Table 1](#) describes the output loss measures discussed.⁴

We start our discussion of the measures shown in [Table 1](#) with Crisis Severity 3 (CS3), as (a variant of) this measure has been widely used in the literature (see [Appendix 1](#) for an overview of relevant studies). It is shown in [Fig. 1](#). Crisis severity is measured by taking the integral of the area between trend and actual GDP from point A up to the point where actual GDP is back on trend (point

¹ A notable exception is [Cecchetti, Kohler, and Uppur \(2009\)](#), who (also) use a proxy for the length of the crisis, i.e. the number of quarters it takes for output to recover to its pre-crisis level. They find that the length of the contraction following systemic banking crises is strongly related to: the growth of GDP in the year before the crisis (higher growth implies a shorter contraction); the presence of a currency crisis (*longer* by more than five quarters, on average); the presence of a sovereign debt crisis (*shorter* by more than seven quarters, on average); and whether an asset management company has been set up (*longer* by more than five quarters). [Reinhart and Rogoff \(2014\)](#) also consider the length of the crisis, defined as the number of years it takes to reach the prior peak in real per capita income.

² [Chaudron and de Haan \(2014\)](#) compare several banking crises datasets using the frequency of bank failures and the costs of banking crisis. These authors conclude that the Laeven and Valencia dataset is the most reliable source.

³ According to [Laeven and Valencia \(2013\)](#), the output loss of this crisis was 23.3%, while the average output loss of all banking crises in the Laeven-Valencia database is 23.2%.

⁴ In our sample, the growth rate is already back at its pre-crisis level after 8 quarters. This is similar to the finding of [Abiad, Balakrishnan, Brooks, Leigh, and Tytell \(2009\)](#), who conclude that annual growth tends to fall substantially below the pre-crisis trend during the first two years of the crisis, but it is statistically indistinguishable from the pre-crisis trend thereafter. At the same time, there is a lot of cross-country variability. For example, while the change in output relative to trend following banking crises has a mean of –11 percent after 4 quarters, its standard deviation is 10 percent. Similarly, while growth tends to return to the pre-crisis trend rate after 8 quarters on average, the standard deviation is 2.84.

Download English Version:

<https://daneshyari.com/en/article/7373840>

Download Persian Version:

<https://daneshyari.com/article/7373840>

[Daneshyari.com](https://daneshyari.com)