Szkoła Główna Handlowa w Warszawie

Kolegium Analiz Ekonomicznych

An analysis of the causes of frequent banking crises. Empirical research versus theory.

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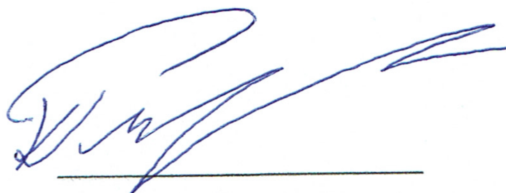

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Warsaw 2021

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Dissertation Overview:

There were two main rationales for writing a dissertation on banking crises. First, the topic of banking crises is interesting because of the potential multidimensional consequences, including possible high economic costs. Second, little attention in the literature has been paid to the frequency of banking crises including an analysis of whether (and if so, why) there are countries where banking crises have occurred frequently. Hence the main research objective in the dissertation is:

To analyze if there are countries with frequent occurrence of banking crises, and if so, analyze the causes why banking crises occur frequently in these countries.

In Chapter 1, based on a review of over 100 pieces of literature, I identified only two publications that analyzed whether there were countries where banking crises occurred frequently and (if so) why: **i) Calomiris and Haber (2014) and ii) Singer and Copelovitch (2020).** In the chapter, I discussed both studies, including an overview of: i) the definitions of banking crisis used in these studies, ii) the research methodologies used, and iii) the countries identified (in both studies) where banking crises occurred frequently and countries where banking crises were rare.

In Chapter 2, I conducted an empirical analysis of the frequency of banking crises for a long period (+100 years) and a large number of countries (+100). The empirical study was divided into four main parts. **The aim of the first part was to clearly define a banking crisis.** Based on the systematization of 20 definitions of banking crises, I assumed in the dissertation that a banking crisis is an event when:

1. there was a banking panic, or
2. there was a banking panic and the state intervened to stabilize the banking sector, or
3. there was no banking panic, but its absence was due to early (preventive) state intervention.

In the second part of Chapter 2, I built a database of banking crises, which I constructed by combining the seven most often cited databases. The database thus constructed covered 140 countries between 1800 and 2016, resulting in a final list of banking crises of 384 cases. **In the third part of Chapter 2, I described the methodological strategy used to identify countries with frequent, and countries with rare banking crises.** By frequency, I meant the average number of years that banking crises occurred in a given country, and for the final analysis, I took only countries with at least a 100-years long history. As countries with a frequent occurrence of banking crises, I assumed those in which a banking crisis occurred on average once every 20 years, and as countries with a rare occurrence of banking crises, I assumed those in which a banking crisis occurred on average once every 40 years. **In the fourth part, I presented the results of the study.** The countries where banking crises occurred frequently included: Argentina, Brazil, China, Italy, Japan, Mexico, Spain, the United Kingdom, and the United States. I identified only two countries with rare occurrences of banking crises and where credit was abundant before the 1980s: Australia and Canada. Three countries had rare occurrences of banking crises and reached an abundant level of bank credit after the 1980s: Greece, New Zealand, and Panama. Five countries had rare occurrences of banking crises and did not reach an abundant level of bank credit even until 2016: Bolivia, Colombia, Peru, Uruguay, and Venezuela.

After an empirical study that identified countries where banking crises occurred frequently, I discussed theories of the causes of banking crises, dividing them into those according to which banking crises are consequences of activities of private banks (Chapter 3) or consequences of specific government interventions (Chapter 4).

The analysis of the theories explaining the occurrence of banking crises as consequences of activities of private banks was the subject of Chapter 3. I divided these theories into three subgroups.

The first were theories that would explain banking crises by the occurrence of random bank panics (Diamond and Dybving, 1983). The discussed empirical studies, the review of a theoretical model of the conversion of runs into banking panics according to Kaufman (1988), and the observation that in the long run the distribution of banking crises was not random but concentrated in a small group of countries (chapter 2.) challenged this theory as a possible explanation why there are countries where banking crises occurred frequently.

The second subgroup were the theories that, using different models and different "natural instabilities" of the banking sector, explained banking crises by the occurrence of negative shocks (e.g. Fisher, 1933; Bernanke, 1983; Mishkin, 1991; Kiyotaki and Moore, 1997; Gorton, 2012). However, the cited empirical studies have questioned whether negative shocks can be the main (root) causes of the general occurrence of banking crises.

The third subgroup consisted of theories that explained banking crises by credit booms that would be triggered by private banks. The very triggering of booms by private banks would occur in three different ways. First, private banks would be expected to generate booms as a result of operating in the fractional reserve system (Rothbard, 1974). However, in such a situation, banking crises should not be more frequent in a small group of countries, since fractional reserve banking was the dominant form of banking in all countries between 1800 and 2016. Thus, this theory does not explain the variation in the frequencies of banking crises. Second, private banks would be expected to generate credit booms after episodes of "good times", meaning where there was optimism in the market, under the so-called financial instability hypothesis (Minsky, 1972). Many theoretical studies have examined this issue, but the financial instability hypothesis has been the subject of a limited number of empirical studies. However, the two empirical studies I found - and discussed further in Chapter 3 - challenge this theory. Third, private banks would be expected to generate credit booms in response to the occurrence of a positive shock to the economy (Kindleberger, 1978). However, the cited empirical studies have questioned whether positive shocks alone can lead to credit booms that finance investment manias resulting in bubbles.

The analysis of theories explaining the occurrence of banking crises with state interventions was the subject of Chapter 4. I divided these theories into two subgroups. First consisted of theories that were based on institutional economics. Second, consisted of theories, that were based on political economics.

I discussed the theories explaining the occurrence of banking crises on the basis of institutional economics in the first part of Chapter 4. These theories distinguish a number of interventions through which the state destabilizes the banking sector; in particular, on the basis of these theories, banking crises are a result of:

1. **state central banks** (through monetary policy),
2. **state guarantees** that destabilize the banking sector through moral hazard (including state lender of last resort, state guarantees of deposits, and state guarantees of selected bank credit).
3. **state** intervention in the form of various **regulations.**

The empirical studies cited present evidence that these interventions can destabilize the banking sector. In the chapter I discussed the case study of Scotland between 1695 and 1845 when banking was essentially free of state intervention (including no state central bank), and yet there was no banking crisis during this period, and the level of bank credit was significantly higher than in England.

In the second part of Chapter 4, I discussed theories that explain banking crises based on political economy. I discussed three such theories in detail.

The first was the theory suggested by Rajan (2010). According to it, an increase in inequality motivates politicians, regardless of their views, to create a credit boom. However, the cited empirical studies analyzing the occurrence of banking crises and inequality presented mixed results.

The second was the theory of Singer and Copelovitch (2020). According to them, political coalitions lead to such state interventions that allow either a stock market or a banking development. In countries where the stock market dominates the financial sector, banking is more unstable as it competes with the stock market for the same customers. However, the empirical studies discussed suggested that it was not the political coalitions that determined whether it was the banking sector or the stock market that dominated the financial sector in a country, but whether the legal system was derived from continental or common law. The empirical studies discussed above also questioned whether a structure (larger banking sector or larger stock market) actually affected the likelihood of a banking crisis in a country.

The third theory was the so-called "game of bank bargains" of Calomiris and Haber (2014). The goal of this game is to manage regulatory-banking conflicts in such a way that an informal coalition of (i) politicians, (ii) banks, and (iii) debtors are formed that would generate economic rents for its participants. What determines the shape of the coalition - and therefore the influence of the state in the banking sector - is the regime and the level of centralization of power. The "game of bank bargains" is a universal theory that offers an explanation not only for the variation in the frequency of banking crises but also for the variation in levels of bank credit across countries. Because of the non-transparent nature of the "game of bank bargains," its empirical verification is difficult. However, I did cite in the dissertation: i) a narrative analysis by Royo (2020) for more than 300 years of Spain, which confirmed the validity of Calomiris' and Haber (2014) theory, ii) empirical studies that confirmed selected elements of the "game of bank bargains" (especially relevant among them is the study by Herra et al., 2014, who showed that a political boom increases the probability of a banking crisis).

In Chapter 5, I made a comparative analysis of selected cases of countries with frequent and rare banking crises. The most illustrative was the comparison of the US and Canada. The two countries have many characteristics in common, but in the U.S. banking crises have occurred frequently, while in Canada banking crises have not occurred once since independence. A review of studies suggests that in the U.S., various government interventions led to the destabilization of the banking sector. Meanwhile, until 1935, the banking sector in Canada was free from state intervention (e.g., there was no central bank until that year), and since 1935, the influence of the state on the banking sector has not destabilized it. I also presented why, according to Calomiris and Haber (2014), the state in the US intervened in such a way that it resulted in frequent banking crises, while in Canada it did not. In both cases it was, according to Calomiris and Haber (2014), a derivative of detailed political coalitions between i) banks, ii)

politicians and iii) debtors in a "game of bank bargains", wherein the U.S. in this way the populists held power over the banking sector, while in Canada the liberals held power over the banking sector.

The key three conclusions of the dissertation include:

1. The empirical analysis identified a small group of countries where banking crises occurred frequently over a long period.
2. Theories that suggest that banking crises are caused by the activities of private banks are not supported by empirical research or (and) these theories do not explain the frequent occurrence of banking crises in the identified small group of countries.
3. The theories that suggest that various government interventions led to banking crises are supported by empirical evidence. Moreover, these theories offer an explanation why banking crises have been frequent in a small group of countries over a long period of time.

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