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FINANCIAL CRISES IN SPAIN. LESSONS FROM THE LAST 150 YEARS

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Abstract: The financial disturbances that erupted in the US in the second half of 2007, with the failure of Bear Stearns and then in 2008 with the catastrophic bankruptcy of Lehman Brothers, are the latest in a series of such episodes experienced by economies in various regions of the world. Financial crises, however, are not unique to current financial systems. History is replete with banking and exchange rate crises. Are crises alike or are they very different from each other? Do they share similar features or, on the contrary they are strikingly distinct? Have they become more frequent, more durable or more severe as we have moved from the XIX to the XX century? Have crises become more systemic? Is the crisis problem growing more severe? All these are relevant questions that merit to be answered, and some of them have already been closely studied by a handful number of scholars. In this paper we have chosen to address, for Spain, some of them. We like to know if financial crises have become more frequent and more damaging to the economy. We inquire whether the Spanish crisis experience is similar to the international norm. To conduct our exercise we have gathered a comprehensive long-run data set including financial and stock market variables. The coverage spans one century and a half, from 1850 to the present time.

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FINANCIAL CRISES IN SPAIN. LESSONS FROM THE LAST 150 YEARS [1]

"You study history. Can you tell us, then, whether the crisis problem is growing more severe?
Lawrence Summer. Former US Deputy Treasury Secretary (quoted in Eichengreen and Bordo, 2003, p. 72)

1. Introduction

The crisis problem is one of the dominant macroeconomic features of our ages. The financial disturbances that erupted in the US in the second half of 2007, with the failure of Bear Stearns and then in 2008 with the catastrophic bankruptcy of Lehman Brothers, are the latest in a series of such episodes experienced by economies in various regions of the world in recent years. Only in the 1990s currency and financial crises have occurred in Europe (the breakdown of the European Monetary System´s exchange rate mechanism, and the Russian suspension of its foreign debt); in Latin America (the tequila crisis in Mexico and the Brazilian currency collapse), and in east Asia (Indonesia, Korea, Malaysia, the Philippines, and Thailand). All these crises have been costly in varying degrees, both in lost of output and in the fiscal and quasi-fiscal outlays to shore up fragile financial sectors.

Financial crises, however, are not unique to current financial systems, of course; history is replete with banking and exchange rate crises. For those who have studied the history of money over the very long run financial crises are not at all a surprising phenomena. Since Schumpeter ´s "Business Cycles (1939) we know that financial turmoil are inextricably associated to modern capitalist development. Financial instability and crises are facts of economic life, as Minsky (1977) reminded a few years ago. Chancellor (1999) in his book on financial speculation has documented how financial crises have stretched back at least as far as Ancient Rome during the second century BC. Kindleberger (2000) has provided a check-list of financial crises going back to the tulip mania of 1636 in Holland and up to the Asian crisis of 1997 and the subsequent Russian and Brazilian crises of 1998. Goodhart and Delargy (1998) have elaborated a useful table with the international stock exchange panics between 1873 and 1932 for major core countries, characterizing each panic according to its magnitude and its international impact. Bordo (1986) has also provided a catalog of crises, distinguishing between banking crises that interrupt the internal payments system and

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currency crises that disrupt the external payments relations. And more recently, Reinhart and Rogoff (2008) have constructed an impressive data set with banking and financial crises around the entire world dating back to 1800. Hence, from a historical viewpoint crises are depressingly familiar. And perhaps, only the distinguishing feature of the financial crises of the twentieth century, however, is that they continue to occur despite vigorous attempts to strengthen the international financial architecture and when our understanding about nominal variables, financial markets and banking structures has made enormous stride.

Are crises alike or are they very different from each other? Do they share similar features or, on the contrary they are strikingly distinct? Have they become more frequent, more durable or more severe as we have moved from the XIX to the XX century? Are we living now in a more vulnerable financial world? Have crises become more systemic? Is the crisis problem growing more severe? What does history tells us when comparing past and present crises?

All these are of course relevant questions that merit to be answered, and some of them have already been closely studied by a handful number of scholars. In this paper we have chosen to address, for Spain, some of them. We like to know if financial crises have become more frequent and more damaging to the economy, and to deal with the topic we have followed the example of a well known and often quoted paper by Bordo, Eichengreen, Klingebiel and Martinez-Peria (BEKM, 2001) [2]. Distinguishing between banking crises, currency crises and twin crises, they have provided data for a 21-country sample for the 1880-1997 period and 56 countries starting in 1973, allowing comparison to be made across time of the frequency, depth and duration of crises. They have found that crisis frequency since 1973 has been double that of the Bretton Woods and the classical gold standard periods and is rivalled only by the crisis-ridden 1920s and 1930s. However, they also have found that crises, although more frequent, have not grown longer or that output losses have become larger. In short, crises may have become more frequent but not more severe.

Spain is a country that have moved from underdevelopment in the XIX century to emerging and then into a developed nation in the XX century, which, obviously, have not avoided the repetition of the various types of crises. Many of the bankruptcy and currency panic episodes in the world have had repercussions in the Spanish economy. In

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ECO2009-08791.

[2] See also Eichengreen and Bordo (2003)

many instances dates of crises have coincided. In this paper we want to know if the crisis problem in Spain has become more recurrent and more severe. We inquire whether the Spanish crisis experience is similar to the international norm. For instance, do the results obtained in BEKM hold water for Spain? Is the Spanish case different from the norm? Although our examination is restricted to a single country, we think that perhaps it is fruitful to examine in depth a country-specific historical experience.

To conduct our exercise we have gathered a comprehensive long-run data set including financial and stock market variables. The coverage spans one century and a half, from 1850 to the present time. The construction of the data set has build on our own research, as well as on the work of earlier scholars.

As BEKM we have divided the period in four sub-periods, so that we can compare the most recent years (1973-2000) with more than a century of financial and stock market crises, distinguishing the Bretton Woods period (1945-72), the interwar years (1919-35), and the long second half of the XIX-century (1850-1913) ([3]). As we compare four periods in which Spain has gone form a backward to an emerging and then to an industrial nation, we like to elucidate whether financial instability has become more systemic, distressing and costly, as the country´s income per capita has risen. Also as BEKM we focus the comparison in three issues: the frequency, the duration and the depth of crises, and we ask whether crises have been influenced by changes in the type of monetary regime or by changes in the regulatory financial framework.

We detail our crisis identification methodology and discuss the main features of the data in the next section. After that, we study whether crises have become more frequent in Spain under different macroeconomic frameworks and we compare the Spanish experience with the international experience (section 3). In section 4 we examine if the crisis problem has grown more severe as Spain has risen from an emerging to an industrial nation. Section 5 offers some general conclusions and proposes the agenda for future research.

2. Currency crisis, banking crisis, and stock market crashes

What has been the incidence of currency, banking and stock market crises in Spain in the past 150 years? Has there been any tendency for one type of crisis to

[3] Our interwar period ends in 1935 because of the beginning of the Civil War in July 1936.

become more or less prevalent? And what have been the costs of financial and stock market crises? To answer these questions, operational criteria to identify these three types of crises are needed. Rather than to provide our own definition to identify crises we have preferred to follow the procedures adopted in the standard economic literature to isolate episodes of financial and stock market collapse [4].

A currency crisis may be said to occur when a speculative attack on the exchange value of the currency results in a devaluation (or sharp depreciation) of the currency, or forces the authorities to defend the currency by spending large volumes of international reserves or by sharply raising interest rates. BEKM date a currency crisis by computing an index of exchange market pressure which is a weighted average of the percentage change in the exchange rate, the short term interest rate and the reserves [5]. The construction of this index is relatively complex because of the weights that have to be assigned to each of the three variables. In our exercise we have, provisionally, opted for a simple index: the nominal exchange rate of the peseta ([6]). For the 1850-1914 period we have used the rate against the pound sterling; for the interwar years we use an unweighted combination of the exchange rate of the peseta against the pound sterling, the franc and the dollar; finally the exchange rate of the dollar has been used thereafter. As in other studies we have made use of qualitative information to spot possible crises in particular for periods in which the foreign exchange market has been under strict control or has not operated altogether. We define a currency crisis when we observe a depreciation of the exchange rate above a 25 per cent.

Banking crises are more difficult to identify empirically, partly because of the nature of the problem and partly because of the lack of relevant data (IMF, 1998). Although data on bank deposits are readily available for most countries, and thus could be used to identify crises associated with runs on banks, most banking problems in recent years have not originated on the liability side of banks´ balance sheets. Banking crises generally stems from the assets side of bank´s balance sheets -from a protracted deterioration in assets quality. This suggests that variables such as the share of non-perfoming loans in banks´ portfolios, large fluctuations in real estate and stock prices, and indicator of business failure could be used to identify crisis episodes. The difficulty

[4] See, for example, IMF (1998)

[5] The methodology comes from Eichengreen et al (1996), pp. 463-84

[6] We know that this criteria excludes instances where a currency comes under severe pressure but the authorities successfully defend it by intervening in the foreign exchange market, or by raising interest

is that data for such variables are not readily available for many countries or are incomplete. Given these limitations, banking crises have usually been dated by researchers on the basis of a combination of events, such as the forced closure, mergers, or government takeover of financial institutions, runs on banks, or the extension of government assistance to one or more financial institutions. Since Martin-Aceña, Pons and Beltrán (2009) have identified the banking crises for the whole period of this paper, using both quantitative and qualitative information, we simply adopt their dates.

For stock market panics there are no clear definitions in the literature, so that in this case we have opted to follow the most simple procedure. We define a stock market crash as an event when the stock price index declines more than 25 % from its nearer highest historical quotation ([7]). For the pre-1914 period we have used a combination of stock prices in Madrid and Barcelona, at the time the two major markets. However, after 1914 as Madrid concentrated the equity trading of the major companies we restrict the index to this market. We define a stock market crash when the index fell more than a 25 %.

In addition to these three single types of crises, we have computed another four that combine elements of the single ones. This exercise can be justified because a crisis is a complex phenomenon and in many instances it is the result of a combination of events. The twin currency and banking crises (twin 1 in our terminology) are the most widely studied and significant of all them and refers to the simultaneous occurrence of banking and balance-of-payments problems. The other two (twin 2, a combinations of banking and stock market crises; and twin 3, a combination of currency and stock market crises) have received less attention. However, we have found that, in our case, they add pieces of information that are useful to understand the length and severity of certain historical episodes. To close the circle we have thought of interest to offer what we denominate "triple crisis", an unfortunate event that occurs when a country suffers a currency, banking and stock market panic at the same time.

3. The frequency of crises

rates, or by other means. The exchange rate data has been taken from Estadísticas Históricas de España and Carreras and Tafunell (2003).

[7] This method is similar to that used by Patel and Sarkar (1998). They define a stock market crash as an event when the stock price index declines, relative to the historical maximum, more than 20 % for development markets and more than 35 % for emerging markets

According to the standard definition the frequency of a crisis is the number of crises divided by the number of year observations, by period. The exercise has been conducted for the four periods, and the results are summarized in figures 1 and 2. The 1850-1913 years were characterized by a floating exchange rate regime, since Spain never adopted the gold standard, by absence of capital control and by the lack of regulation of the financial system. The main features of the interwar, 1919-1939, were a (dirty) floating rate regime, capital controls and a lightly regulated banking system. As elsewhere, from 1945-1971 the prevailing elements of the Spanish regime were a fixed exchange rate with capital controls and a strictly regulated financial system was. The last period, on the contrary, exhibits the opposite features: flexible exchange rates, no capital controls and a deregulated financial system.

The bars at the far left of figure 1 indicates that after 1913 crises episodes, that is the combination of banking, currency and stock market disruptions became more frequent. For the second part of the XIX century and up to the First World War we have found a frequency rate of 8 %, half of that estimated for the other three periods, which exhibit an average rate of 16 %. This XIX-XX century comparison suggests that as Spain´s economy moved from its initial backward status to an emerging one and later to that of an industrial nation crises became more recurrent. Although not entirely comparable, since we have included evidence for stock market crashes, our results replicate those found by BEKM for their large sample of 21 countries.

The interwar period is when the frequency of (all) crises was higher, a conclusion similar to that obtained by BEKM in their comprehensive study. On the contrary, an interesting result of our exercise, somehow at odd with the world sample, is that the crisis problem has not grown since 1972. Moreover, when comparing the crisis frequency for the last two periods, 1945-72 and 1973-2000, we see no distinction, despite the fact that the monetary and regulatory frameworks were radically different. A third relevant observation is that for the three periods after 1919 the rate of incidence of crises has been relatively high. In Spain, in any given year between 1919 and 2000 the chance of suffering a currency, banking, stock market, or any combination of them has been above the world average (12 %).

A combination of simultaneous types of crises rather than the occurrence of a single one it is what explains better the frequency rate in each period, as figure 2 demonstrates. Twin 2 (banking and stock market) and the triple (currency, banking and stock market) seems to have been the most common turmoil in the pre-1913 and also in the post-1919 periods. This result is consistent with the qualitative evidence and it should not surprise scholars familiar with the Spanish financial history literature. Before 1936 banks´ failures and stock market crashes have been journey companions and in most instances the correlation has run from the latter to the former. In the interwar years banking crises were a repetitive phenomenon, although it was in combination with the other two types of crises what caused the overall rate of incidence to increased from 8 % to 19 %.

As elsewhere banking crises were almost non-existence in the so-called Bretton Woods years, while on the contrary currency crises emerged as a major source of economic disturbances. This result is, obviously, similar to that documented for the international economy at large. Moreover, since the repetition of stock market crashes was also common, then the twin 3 type of crisis is what explains why the rate of incidence in the years 1945-72 remained as high as 15.4 %, again well above the world average (8 %).

Figures 2 also makes clear that it is the frequency of currency crises combined with banking and stock market crashes (twin 2 and triple) what explains why the rate of incidence has been so large since 1973. This is consistent as well with our historical knowledge of recent times. The peseta exchange rate peseta suffered a series of sharp devaluations in the 1970s and 1980s, and did not escape either the disturbing event that characterized the European exchange rate turbulence of 1992-93. In addition, the country´s economic fabric suffered one of the most intense banking and stock market collapses of modern times.

Our statistical exercise suggests that the "crisis problem" in Spain has been a complex phenomenon since a mixture, twin and triple, of crises seems to have been more prevalent when compared with the world sample. If this argument is right, then this complexity is the consequence or perhaps the cause of a highly vulnerable economy. Although not easy to explain, one is tempted to point to the instability of the political environment, particularly in the XX century, as a significant factor of the vulnerability of the Spanish economic fabric.

Frequency and regime changes

Does the frequency of crises depend on the nature of the monetary and of the financial regimes? Has been the rate of incidence of crises higher without capital control? Has Spain experienced more crises (any variety) with a fixed or with a floating exchange rate? These questions merit attention and we believe they have significant policy implications, as BEKM have suggested.

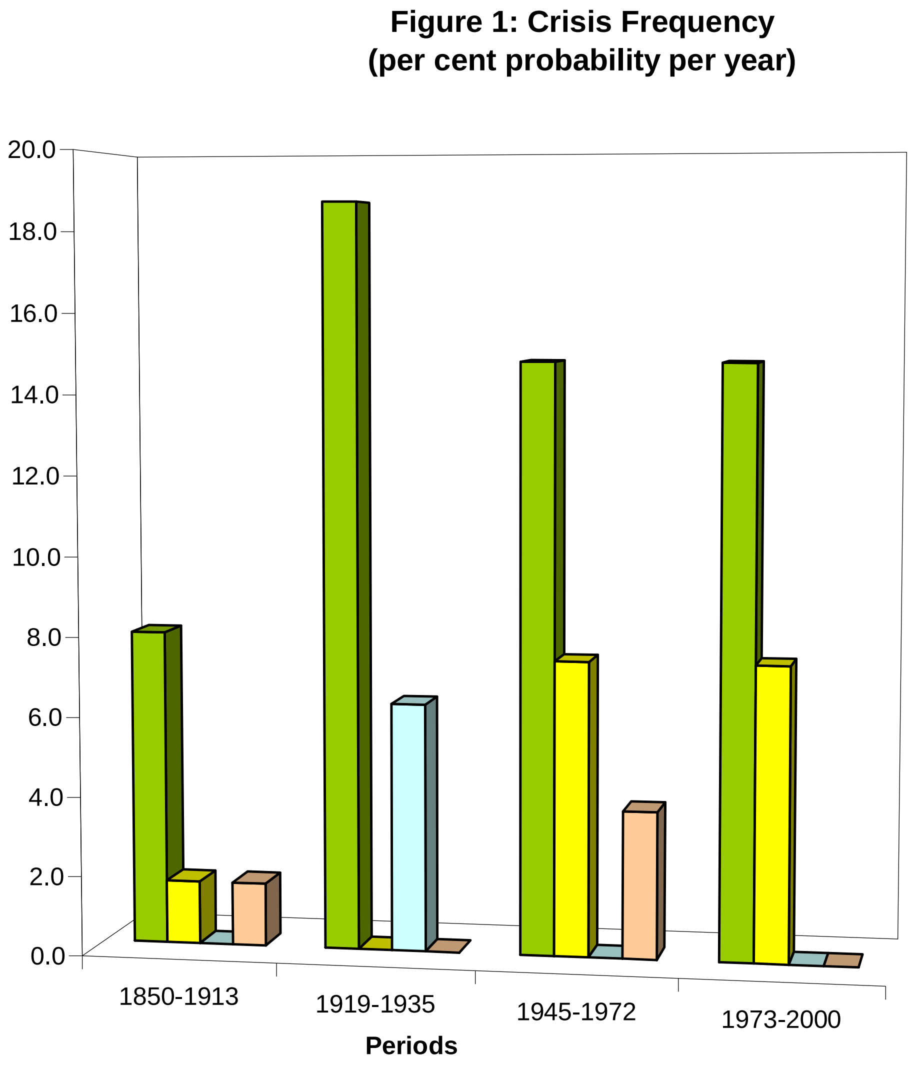
Considering the evidence presented so far and taking into account the characterization made above of the four historical periods the data do not lend support to the generalized belief that currency, banking and stock market disturbances are associated with years of capital mobility. In fact, a comparison of 1945-72 with the following period (figure 1) is quite definite. As Spain has moved from a tight system of capital control to a near situation of unrestricted capital mobility banking crises (alone) or currency crises (alone) have not become more frequent. It may be worth noting that our results appear in striking contrast with those obtained by BEKM, an issue that certainly deserves further scrutiny.

The exchange rate regime has not influenced much either the frequency of crises, at least when we compare the last two periods. However, a different story can be told if the comparison is between the two first periods. For instance, the sixty-five years of nearly clean floating, from 1850 to 1914, and unrestricted capital mobility coincided with a lesser frequency of (all) crises. But when we moved from the clean to the dirty floating that characterized the interwar years, crises, single or mix, increased its frequency.

Our final point touches on another BEKM preoccupation: are emerging economies more crisis-prone? Does the frequency rate decreases when a country graduate as industrial? The BEKM results, when a large sample of 56 countries developed and less developed are examined, suggest that crises have concentrated predominantly in emerging market; in other words, that crises are more frequent in emerging than in industrial nations.

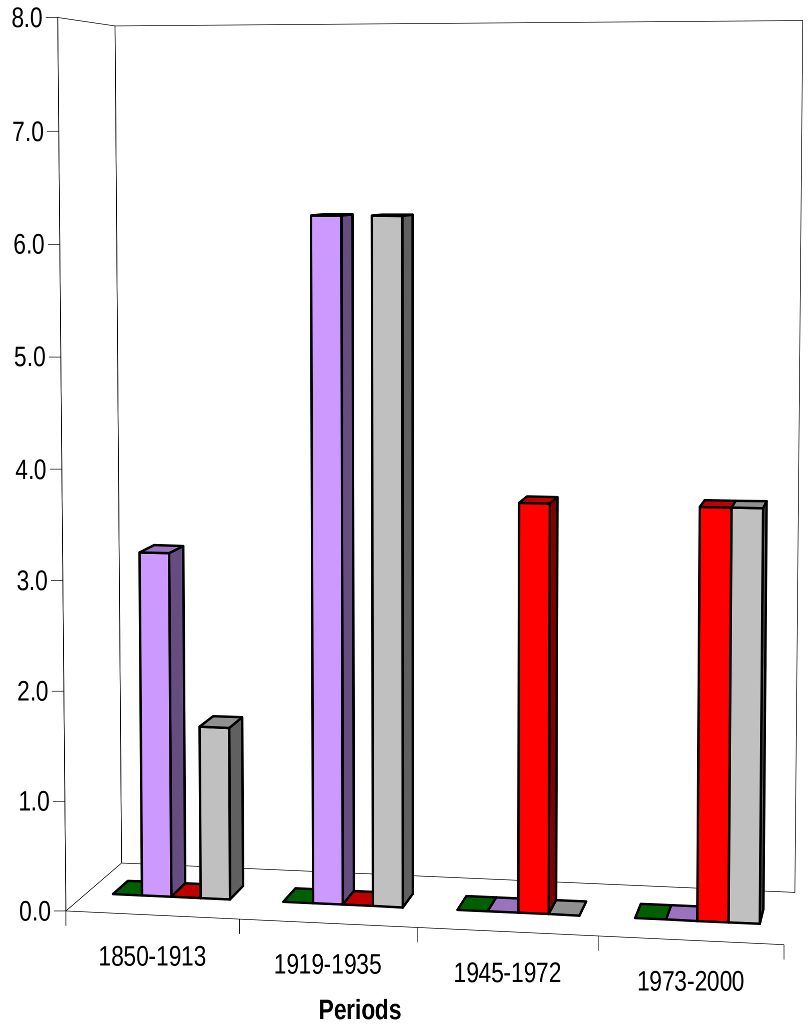
In this 150 span years Spain has moved from underdevelopment, before 1914, to emerging, between 1919 to 1973, and to industrial thereafter. Has the rate of incidence of crises increased? Has the crisis problem become more prevalent? It is difficult to find a straight answer to the question. The most that can be said is that when raising from its emerging status to its present industrial position hardly any change can be detected. No reduction in the rate of incidence of crises can be observed between the 1945-1972 period and the 1973-2000 years. The frequency rate has been the same and only when we look at particular crises or at any combination of them certain differences seems to appear. In other words, while the frequency of (all) crises has been quite similar, before and after 1973, the frequency of any specific crisis, whether banking, currency or stock market, has not been notably different.

1. All crises
2. Currency crises
3. Banking crises
4. Stock market crises



1. Twin 1 (currenccy + banking)
2. Twin 2 (banking + stock market)
3. Twin 3 (currency + stock market)
4. Triple (currency + banking + stock market)

Figure 2: Crisis Frequency (per cent probability per year)



4. Duration and depth of crises

Recovery time is defined as the number of years until GDP growth returns to its pre-crisis trend. By definition minimum recovery time is one year. The depth or severity of a crisis is the cumulative loss of output estimated by summing the differences between the trend growth and the output growth after the crisis until the time when the annual output growth returned to its trend.

To quantify the length and depth of a crisis is nothing simple, since it requires to calculate the trend growth of the economy and to define the pre-crisis period of comparison (three, five or more years of normal growth) with the actual growth during the crisis. The IMF uses the trend rate GDP growth for the three years preceding the event, while BEKM computes the trend rate of GDP growth for the five years preceding the event. In our paper we have adopted a different approach. Our trend growth derived directly from the different phases of growth defined by Prados (2003). In his El progreso económico de España he estimated average growth rates for periods delimited by two peaks years. We have chosen this alternative because for Spain the three or five years average pattern is not enough representative of the long term rate of growth. In our case the potential growth is better captured by the growth rate of a full cycle, as defined by Prados (2003).

BEKM sustain that recovery time from crises appears to be similar in the four periods under examination. However, the depths of crises seems to have been more intense between 1880 and 1913 than after 1973. Moreover the output loss from currency crises in recent times is only two-thirds what it was before 1913 and for banking crises it is between 75 % to 80 %. Also according to BEKM, twin crises have grown more severe post-1973, although the output losses are not on the scale of the interwar years, particularly for the emerging markets. In all periods, the output losses were greater in emerging markets than industrial countries. The average drop in output following a crisis in a sample of ten emerging markets is greater in the post-Bretton Woods era than the average drop in output following a crisis in any other period of the twentieth century.

Our results for the particular case of Spain are shown in table 1. For the entry "all crises" it appears obvious that the latest period exhibits the worst performance. Its pre-crisis trend growth has taken longer (double) time to restore (recovery has been delayed) than any of the other three periods: as much as 4.2 years against an average of

2 years for the other three periods. Moreover, the post-1973 crises not only have been more durable but also more severe, with a cumulative GDP loss as high as a 14.4 per cent, twice that of 1850-13, and three times the output losses of the interwar and the Bretton Woods years. This is sharp contrast with the well-known conclusions reached by BEKM, for whom crisis had grown more frequent but no more severe after 1973. The different can be explained because of the extraordinary severity of the triple crisis that occurred in the late 1970s. The intensity was in part due to the impact of the deep industrial recession that took place during the transition period from the dictatorship to democracy, and also due to the slow adaptation of the Spanish economy to the more open and integrated economy of the then European Community.

Another salient feature of table 1 is the relative mild severity of the interwar crises in absolute terms and when compared with the international experience. Duration was short and output losses (all crises) lower than in any other of the three periods. Industrial backwardness, financial isolation and the sharp depreciation of the exchange rate of the peseta against all major international currencies may explain this marked difference. Finally we like to call the attention to the fact that the twin 2 type of crisis of the period 1850-1913 was the more durable, 2.5 years on average, and the more severe, a average loss of output about 14.0 per cent. For the interwar period the triple seems to have been the lengthier.

More detailed information is presented in table 2 that list the duration and depth of crises by year and by types. The longest and deeper was the triple currency, banking and stock market crash that burst in 1976-77. Complete recovery required a full decade and the cumulative output loss rose to a 49.6 % high. The other two major disturbances are dated in the nineteenth century, the twin crisis of 1866 and 1882: both caused a cumulative GDP loss of about 14 %. Moreover, recovery from the latter took as much as six full years.

Table 1: Duration and Depth of Crisis in Spain

Spain	1850-1913	1919-1935	1945-1972	1973-2000
	Average Duration of the crisis in years			
All crisis	2.6	1.5	2	4.2
Currency	2		1.5	1.5
Banking		1		
Stock market	1	1	2	
Twin 1 (curr+bank)				
Twin 2 (bank+stock)	4.5	1		
Twin 3 (curr+stock)			3	3
Triple (curr+bank+stock)	1	3		11
	Average Crisis Depth (cumulative GDP loss %)			
All crisis	6	4.1	5.1	14.4
Currency	0.2		1.4	1.2
Banking		0		
Stock market	0	3.5	8	
Twin 1 (curr+bank)				
Twin 2 (bank+stock)	14	0		
Twin 3 (curr+stock)			9.6	2.3
Triple (curr+bank+stock)	1.8	13		49.6

Note: Twin 1 is a combination of currency and banking crises, Twin 2 is a combination of banking and stock market crisis, Twin 3 is a combination of currency, banking and stock market crisis.

Table 2: Duration and Depth of Crisis in Spain, by year and type of crisis

Crisis years	Type of Crisis	Average Duration in years	Average Depth (cumulative GDP loss %)
1866	Twin 2 (bank+stock)	3	14.5
1882	Twin 2 (bank+stock)	6	13.5
1890	Triple (curr+bank+stock)	1	1.8
1898	Currency	2	0.2
1906	Stock market	1	0
1850-1913		2.6	6
1914	Stock market	1	3.5
1920	Twin 2 (bank+stock)	1	0
1924	Banking	1	0
1931	Triple (curr+bank+stock)	3	13
1919-1935		1.5	4.1
1948	Stock market	2	8
1958	Twin 3 (curr+stockmarket)	3	9.6
1967	Currency	2	1.5
1971	Currency	1	1.3
1945-1972		2	5.1
1977	Triple (curr+bank+stock)	11	49.6
1982	Currency	1	0
1992	Twin 3 (curr+stockmarket)	3	5.5
1995	Currency	2	2.3
1973-2000		4.2	14.4

Note: Twin 1 is a currency and stock market crisis, Twin 2 is a banking and stock market crisis, Twin 3 is a currency, banking and stock market crisis.

5. Conclusions

This paper has a twofold goal. Firstly to identify all the major financial and stock market crises that have occurred in Spain in the last 150 years; to estimate its frequency by periods, and to measure its length and depth. Secondly to compare our findings for a single country with the well-known results reached by BEKM for a sample of 21 and 56 countries.

Although we think it is the first time this exercise is conducted for Spain or for any other individual country, we claim no any methodological innovation in our approach. But progress in the study of history occurs by little steps and by adding details to great theories or interpretations. In this paper we replicate BEKM research and quibble over some aspects of their characterization of one century of financial crises. As BEKM do, we present a quantitative analyses for a large number of banking and currency crises, and trace comparison of the pre-1914 crises, the interwar and the post-World War II periods. Although our study is limited to Spain, the case may serve to check the results for one country against those obtained by BEKM for a much larger sample in which many details are obviously underscored.

What can be learned from our exercise? What conclusiones have we reached? Do they confirm o reject our previous knowledge? Does our story differ from the story told by BEKM? In what follows we briefly summarize our findings

We have identified 17 crises of various classes over the last 150 years. They have occurred under different monetary and regulatory regimes. Crises (all) seems to have been more frequent in Spain, although this conclusion has to take into consideration that our span of period is longer than BEKM and we have included also the stock market panics. Crises have been followed by recession lasting on average 2-4 years, a duration not far from the 2-3 years recorded by BEKM. On average severity of all crises at world level (BEKM) has been a 9.2 cumulative loss of output, while the same figure for Spain has been 7.4, that is, somehow lower. The table below reveals from where this different difference emerges, namely, from the interwar period depression, which was considerably milder in Spain. On the contrary the recorded losses in the last period were larger in Spain than at the international level.

According to BEKM crises have become more frequent but no more severe, a phrase that can be said to epitomize the main argument of their study. Have we enough robust evidence to sustain the same for Spain?

What our evidence tells is that the rate of frequency of Spanish crises has been high after 1919 and has remained high since. Banking crises, alone or in combination with currency and stock market crises were more prevalent in the interwar period than in any other period. Currency crises, on the contrary, took place more often in the period 1945-72, when Spain was in the process of graduation as industrial nation. The rapid transformation of the economy during the 1950s and 1960s with high import requirements of raw material and intermediate goods provoked recurrent balance of payments disequilibrium exerting strong pressures on the exchange rate. On the other hand, we observe that the severity of crisis has grown in the last period when compared with all previous years, although this result is due to the intensity of the banking crisis of 1977-82.

Our paper is preliminary and we are aware that we have ahead a large agenda of research. We need to improve the data set and our statistical exercise has to be refined. We also have to estimate most sophisticated indexes to spot and define crises. We have to conduct a similar analysis to that of BEKM to discriminate between economic recession (losses of output) with and without financial crises. We have to do comparison with the experience of other individual countries. Finally, we have to investigate the causes of crises.

Crisis frequency

SPAIN		BEKM	
1850-1913	7.9	1880-1913	4.9
1919-1935	18.8	1919-1939	13.2
1945-1972	14.8	1945-1971	7.0
1973-2000	14.8	1973-1997 (*)	12.2

* Figure for the 56 country sample

Output loss

SPAIN		BEKM	
1850-1913	6.0	1880-1913	9.8
1919-1935	4.1	1919-1939	13.4
1945-1972	5.1	1945-1971	5.2
1973-2000	14.4	1973-1997 (*)	8.3

* Figure for the 56 country sample

REFERENCES

Bordo, M. (1986), "Financial crises, banking crises, stock market crashes and the monet supply: some international evidence, 1870-1933", F. Capie and G.E. Wood (eds), Financial crises and the world banking system. London, Macmillan.

Bordo, M., Eichengreen, B., Klingebiel, D. and Martinez-Peria, M.S. (2001): “Financial crisis. Lessons from the last 120 years. Is the crisis problem growing more severe?”, Economic Policy, April, pp. 53-82.

Carreras, A. and X. Tafunnell (2003), Historia económica de la España contemporánea. Barcelona, Crítica

Chancellor, E. (1999), Devil takes the hindmost: a history of financial speculation. Londond, Macmillan

Eichengreen, B., A. Rose and C. Wypplosz (1996), "Contagious currency crises: first tests", Scandinavian Journal of Economics, 98, 4.

Eichengreen, B. and M. Bordo (2003), "Crises now and then: what lesson from the last era of financial globalization", Paul Mitzen (ed), Monetary history, exchange rates and financial markets. Essays in honour of Charles Goodhart. Edward Elgar.

Estadísticas Históricas de España. Madrid, Fundación BBVA

Goodhart, Ch. And Delargy (1998), "Financial crises: plus ça change, plus c´est la même chose", International Finance, 1, 2, pp. 261-287

International Monetary Fund (1998): "Financial crises: charcteristics and indicators of vulnerability", World Economic Outlook (May), IMF, Washington, DC.

Kindleberger, Ch. P. (2000, 4th edn), Manias, panics and crashes - a history of financial crises. Chichester, John Wiley

Martín Aceña, P., Pons, Maria A. and Betrán, C. (2009): “Financial Crisis and Financial reforms in Spain. What Have We Learned?”. Banca d´Italia (forthcoming)

Minsky, H.P. (1977), "A theory of systemic fragility", in E.I. Altman and A.W. Sametz (eds), Financial crises: institutions and markets in a fragile economic environment. Wiley.

Patel, S. and Sarkar, A. (1998): “Stock market crisis in developing and emerging countries”, Research Paper, Federal Reserve Bank of New York, num. 9809.

Prados de la Escosura, L. (2003): El progreso económico de España, Madrid, Fundación BBVA.

Reinhart, C. and Rogoff, K.S. (2008): “This time is different? A panoramic view of eight centuries of financial crisis”, National Bureau of Economic Research, March 2008, WP, 13882.