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THIS TIME IS DIFFERENT CHARTBOOK:  
COUNTRY HISTORIES ON DEBT, DEFAULT, AND FINANCIAL CRISES

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This Time is Different Chartbook: Country Histories on Debt, Default, and Financial Crises  
Carmen M. Reinhart  
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**ABSTRACT**

This Chartbook provides a pictorial history, on a country-by-country basis, of public debt and economic crises of various forms. It is a timeline of a country's creditworthiness and financial turmoil. The analysis, narrative, and illustrations in Reinhart and Rogoff (2009), *This Time is Different: Eight Centuries of Financial Folly*, were primarily organized around themes (serial default, inflation, etc.), although detailed tables in the book chronicled country-specific information on the dating, frequency, incidence, etc. of specific crises episodes by country. The Chartbook compliments the thematic analysis with individual country histories, and provides the grounds for a systematic analysis of the temporal patterns of debt cycles, banking and sovereign debt crises, hyperinflation, and, for the post World War II period, the reliance on IMF programs.

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## I. Preamble

This Chartbook provides a pictorial history, on a country-by-country basis, of debt and economic crises of various forms. The analysis, narrative, and illustrations in *This Time is Different*, were primarily organized around *themes* (serial default, inflation, etc.), although detailed tables in the book chronicled country-specific information on the dating, frequency, incidence, etc. of specific crises episodes by country.<sup>1</sup> The Chartbook compliments the thematic analysis—indeed, it fills in as documentation to its underpinnings. What follows systematically illustrates for 70 countries the individual timeline of public and private debts, banking, sovereign domestic and external debt crises, and hyperinflation, starting from a country’s independence (and even prior to that in numerous cases) to the present. The dating of the largest output declines and a country’s history with International Monetary Fund (IMF) programs since World War II to deal with an assortment of economic ills contribute to the chronologies.

The individual country histories are often fascinating in their own right, highlighting that virtually no country has escaped unscathed from economic crises of one form or another. In effect, in a number of countries, financial crises are more “a way of life” affecting all, if not most generations. Black swans are not that rare.

The prologue to this Chartbook is minimalist by design and is organized as follows. The next section offers an essential guide to the country charts and the accompanying tables, clarifies methodological issues, and delineates the approach followed to document the vast number of sources referenced in this analysis.

Section III summarizes some of the main (common or recurrent) themes and patterns that (collectively) the country histories reveal. Some of these are documented in the literature while others merit considerable further study. These “big picture” themes include: The repeated-game nature of sovereign debt crises and the fact serial default is commonplace among today’s

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<sup>1</sup> Reinhart and Rogoff, (2009)

emerging markets just as it was among advanced economies in an earlier era needs little commentary, as even a casual perusal of the charts display this historical pattern. The serial nature of banking crises (particularly among the more developed economies prior to World War II) is equally compelling. Nearly all of the 21 advanced economies in the sample record an impressive crisis tally, especially from the 1880s to the 1930s. The episodes where there are surges in private debt before the crisis and public debts after the crisis are not only numerous but span across advanced and emerging economies in nearly all regions. And so on...

The last section discusses where there are gaps in the data and overall analysis of the debt-crisis cycle. As such, it is a roadmap for future research,

## II. Key to Charts and Methodology Notes

For working definitions of banking, currency, debt, and inflation crises, see the extensive discussion in Reinhart and Rogoff (2009a and 2010). As to the crises highlighted in the country profiles, our focus is on primarily external sovereign default (also its less common counterpart--domestic sovereign default) and banking crises. Many countries have a rich history of recurring (and often chronic) exchange rate crashes and inflation crises, particularly (but not exclusively) in post World War II Latin America. We only provide limited information on these recurring follies in monetary history.<sup>2</sup> We do include, highlight and date all hyperinflation episodes, as these have been associated with the complete or near complete liquidation (through de facto default) of domestic currency debts.

### *Key to charts*

Besides the events discussed above, in a few charts we highlight “near- default” episodes, which involve some form of international assistance to avoid a default or a restructuring. Their dates are also listed in the first column of the accompanying table. Some examples of sub-




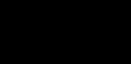

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<sup>2</sup> In the tables that accompany each country profile, we do provide, as summary statistic on inflation crises, the share of years with annual inflation above 20 per cent per annum. This inflation performance also gives a reasonable indication of the incidence of currency crashes,



sovereign defaults (by states or provinces) are also flagged. In a few charts, historic currency crashes (such as the collapse of an 80-year old peg) are highlighted as well. More mundane episodes of inflation and currency crises are not shown. However, the full sample incidence (share of years) in an inflation crisis, is reported in the table below the chart, so as to provide information on chronic inflation problems.<sup>3</sup> The major output collapses shown in the tables that accompany the charts and the numerous IMF programs since 1952 (listed as a memorandum item at the bottom of the table) are not depicted in the figures, to avoid compromising clarity.

Table 1. Coloring and Shading to Highlight Events in Country Charts

Years in default or restructuring External debt		Pale shading
Years in default or restructuring Domestic debt		Dark shading
Near default, as defined in text		Bright shading
First year of banking crises		Black line/bar
Hyperinflation (annual inflation > 500%)		Medium shading

***Insets of smaller tables and charts into the figures***

Insets are used throughout to provide complementary information to that shown in the main figure. For example, for many advanced economies, an inset plots for household credit to GDP from the mid-1990s to the present to highlight trends in private debts ahead of the 2007-2008 crisis. In other cases, these insets provide information on the maturity composition of the debt (public or private, as the case may be) on the eve of a banking crisis be it default or hyperinflation. The distribution of public and private debt before and after a crisis also provide documentation of the numerous crisis cases where the government assumed important quantities of private debts.

<sup>3</sup> For evidence on the correlation and overlap between currency crashes and inflation crises, see Reinhart and Rogoff (2010).

### ***Descriptive statistics in the tables to each country***

Descriptive statistics are mostly self-explanatory, but two particulars merit explanation. The first year of banking crises are listed and those shown in *italics* indicate that the episode in question was not deemed to be a systemic crisis. Near default episodes are also shown in *italics* and not counted in the tally of default. The last column provides information on the largest annual output declines, usually the top five, but more or less when relevant. Both the year and the percent decline (in parentheses) are given. For full output collapse episodes, the interested reader is referred to Barro and Ursua (2009).

The bottom portion of the table gives memorandum items on IMF programs with the country over the period from 1952 to 2009. The first year of the program is listed as well as the total number of programs. The relevant sources are discussed below.

### ***Debt ratios***

Debt is usually shown as a percent of GDP and in a few cases as a percent of exports. In a handful of cases we have debt data for the earlier part of the 19<sup>th</sup> century but no GDP or trade measure to scale the debt data by. In those few cases, we show changes in debt (often over three years) to provide an indication of the debt cycle. The nominal GDP data comes from numerous scholars as well as official statistical sources. For a number of developing countries we have more data on exports than for GDP (in all cases we have post World War II nominal GDP data). In these cases the charts show the actual debt/GDP ratio for the period during which GDP data is available (say post 1920s) and use the debt/exports ratio times the average export to GDP ratio (for the period during which both series overlap) to back-cast the series.

### ***References and sources***

Most charts list the main source as Reinhart and Rogoff (2009), which has an extensive data appendices listing sources series-by-series and country-by-country over different subperiods. Additional sources listed below each graph usually indicate that we came across these sources subsequent to the publication. Prominent examples of the recent discoveries include: detailed

recent historical studies of Italian, Greek, Dutch and Swedish public debts (Maura Francese and Angelo Page for Italy, Sophia Lazaretou on Greek 19<sup>th</sup> century domestic debts, Frit Bos for the Netherlands, and Klas Fregert and Roger Gustafsson for Sweden.) As the sample was extended to include Bulgaria, Ghana, Iceland, Ireland, and Switzerland, pertinent sources for these are also listed in the relevant country page. Finally, the sources for the IMF programs are Bird, Hussain and Joyce (2004), Mody and Saravia (2009), and the IMF's Annual Reports for several years to update these studies through 2009.

### III. Debt and Crises: Main Themes

This section highlights some of the issues where the collective evidence from the country histories are particularly illuminating. Throughout, I use country examples or specific crises episodes to illustrate particular points.

*(i) Serial default is a widespread phenomenon across emerging markets and several advanced economies.* Figures 8a and 26 for Brazil and Greece, respectively (among many more that are similar) call attention to this point by simply shading the years in default throughout the sample; the summary table also lists the timing and duration of each default spell while the tally entry (bottom of column 1) reports the default tally for 1800-2009. Countries such as France and Spain have a higher count if pre-1800 default episodes are counted.

*(ii) Prior to World War II, serial banking crises in the advanced economies was the norm; as the larger emerging markets developed a financial sector in the late 1800s—these economies joined the “serial banking” crisis club.* Country histories for Belgium (Figure 6), Canada (Figure 10a) among others, illustrate this pattern. The world financial centers (the UK, Figure 65a and the US Figure 66a) take the lead in serial banking crises. One can speculate that the less-developed economies substitute foreign bankers for nonexistent domestic ones. As such, when acute sovereign fiscal difficulties arise, these become manifest in serial external default rather than serial domestic banking crises.

(iii) In light of serial debt and banking crises (not to mention chronic currency and price instability), it is not surprising to see a similar *serial pattern in the incidence of IMF programs*. Peru and the Philippines set the record with 24 and 23 programs, respectively. However, IMF programs were not always in the exclusive domain of emerging markets. During the 1950s-1970s, the IMF was more like the discount window of a central bank and did not carry the stigma of the default or near default cases. Among the advanced economies, the U.K. holds the record with 11 programs.<sup>4</sup>

(iv) *Private debts typically surge prior to a banking crises*. This pattern is evident in total external debt (a stock), capital inflow bonanzas (a flow), domestic banking sector credit (a stock), or any combination of these.<sup>5</sup> *Public debts may or may not surge ahead of banking crises*. Indeed, especially in financial repression cases the governments efforts to stuff its debts in “captive “ bank balance sheets Procyclical fiscal policies, where the government amplifies the boom-bust cycle in total debt (as documented in Kaminsky, Reinhart and Vegh, 2003), all too often re-enforce the boom in private indebtedness ahead of the banking crisis.

For external debts, see Figures 30b and 62a for Iceland and Thailand, respectively. Surges in capital inflows do not last forever. When they end, countries often display the Calvo-type sudden stop syndrome, even in crises of an earlier century in advanced economies.<sup>6</sup> The U.S. experience during 1865-1913, shown in Figure 68b, exemplifies this behavior. Domestic credit climbs sharply prior to the banking crisis and unwinds afterward—the examples from banking in Colombia (Figure 12b) and Norway (Figure 47b) demonstrate this time profile. By contrast, the famous (or infamous) lost decade and bank debt overhang in post 1992 crisis Japan is evident from Figure 34b. The coverage on domestic credit boom in this Chartbook is not intended to be as comprehensive as public and external debt—the primary focus. However, the

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<sup>4</sup> Bird et.al. (2004) aptly title their paper on IMF programs “Many Happy Returns?..”

<sup>5</sup> The term “capital flow bonanza” is introduced in Reinhart and Reinhart(2008) and refers to a surge in capital inflows (over and beyond their historic norm).

<sup>6</sup> Calvo, Izquierdo, and Loo\_Kung (2006), for example.

pattern alluded to here is strongly supported by the evidence from studies that have focused primarily on the domestic credit cycle. The most comprehensive in terms of country coverage is Mendoza and Terrones (2008), who find most booms are followed by currency crises, banking crises or both. The smaller country set for the 1880-2008 period studied in Schularick and Taylor (2010) presents similar findings.<sup>7</sup>

*(v) Banking crises most often either precede or coincide with sovereign debt crises.* To be clear, we are referring to “domestic” banking crises, the issue of whether banking crises in the financial centers precede domestic banking crises and or sovereign defaults or restructurings is examined in some detail in Reinhart and Rogoff (2010). The reasons for this temporal sequence may be the contingent liability story emphasized by Diaz Alejandro (1985) and formalized in Velasco (1986), in which the government takes on massive debts from the private banks, thus undermining its solvency.<sup>8</sup> Even absent large scale bailouts (and without counting the post-crisis new government guarantees), Reinhart and Rogoff (2009) establish that, largely owing to collapsing revenues, government debts typically rise by about 86 percent in the three years following a systemic financial crisis, this sets the stage for rating downgrades and, in the worst scenario, default.

The list of country examples of this sequencing is too long to enumerate, we would highlight as illustrative, the Barings 1891 crisis in Argentina (Figure 3b), Austria’s banking crisis in 1931 and subsequent default in 1932 (Figure 5a) and Indonesia’s 1997-1998 banking crisis and 1999-2000 default (Figure 32a).

*(vi) Public debts follow a repeated boom-bust cycle; many (if not most) of the bust phase involved a debt crisis in emerging markets. Public sector borrowing surges as the crisis nears.* Debts continue to *rise after* default, as arrears accumulate and GDP contracts markedly.<sup>9</sup>

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<sup>7</sup> Kaminsky and Reinhart (1999) and Gourinchas et.al. (2001) also document for different samples this boom-crisis-bust pattern.

<sup>8</sup> See Arellano and Kocherlakota (2008) for a framework that is consistent with these dynamics.

<sup>9</sup> See Reinhart and Rogoff (2008) on evidence on output behavior before during and after debt crises.

If there is an exchange rate crash associated with default, as shown in Reinhart (2002), the valuation effect on external debts also contributes to further increase in debt/GDP ratios.

The boom-bust episodes are very numerous cutting across regions and time. The crisis episode in Figure 69 for Zambia illustrates the pre-crisis surge in public debt—as well as its continued climb in the early stage of default.

(vii) As suggested in the Diamond and Dybvig’s famous framework of banking crises, *short-term debts (public and private) escalate on the eve of banking crisis and sovereign defaults.*<sup>10</sup>

This pattern is also consistent with He and Xiong’s (2010) setting, where creditors’ incentives to shorten debt maturity to protect themselves against runs by other creditors. Most famously, Mexico ramped up its short-term debt issuance just in advance of its “Tesobonos” crisis in 1994 as in Figure 40b. In the march toward hyperinflation, long-term debts disappear altogether; the German hyperinflation of 1923-1924 (Figure 22a) demonstrates these dynamics.

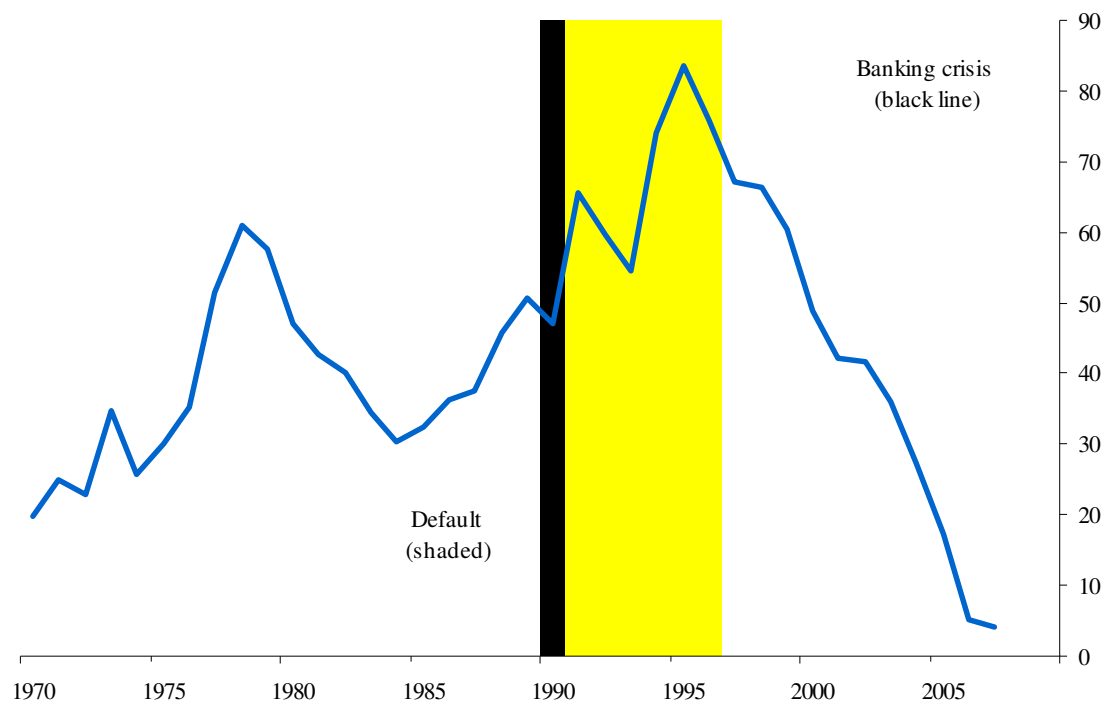
(viii) *Private debts become public debts-after the crisis.* Several examples from the debt crisis that engulfed Latin America in the early 1980s and lasted a decade are documented in various insets that document the rising share of *private “hidden debts”* carrying implicit government guarantees (Figure 62a for Thailand, among others) (Figure 19a for Ecuador, for example).<sup>11</sup>

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<sup>10</sup> See Chang and Velasco (2000) for an open-economy treatment of Diamond and Dybvig (1983).

<sup>11</sup> For a discussion of hidden public debt see Reinhart and Rogoff (2008).

Figure 1. Algeria: External (public plus private) Debt, Default and Banking Crises, 1970-2009  
(debt as a percent of GDP)

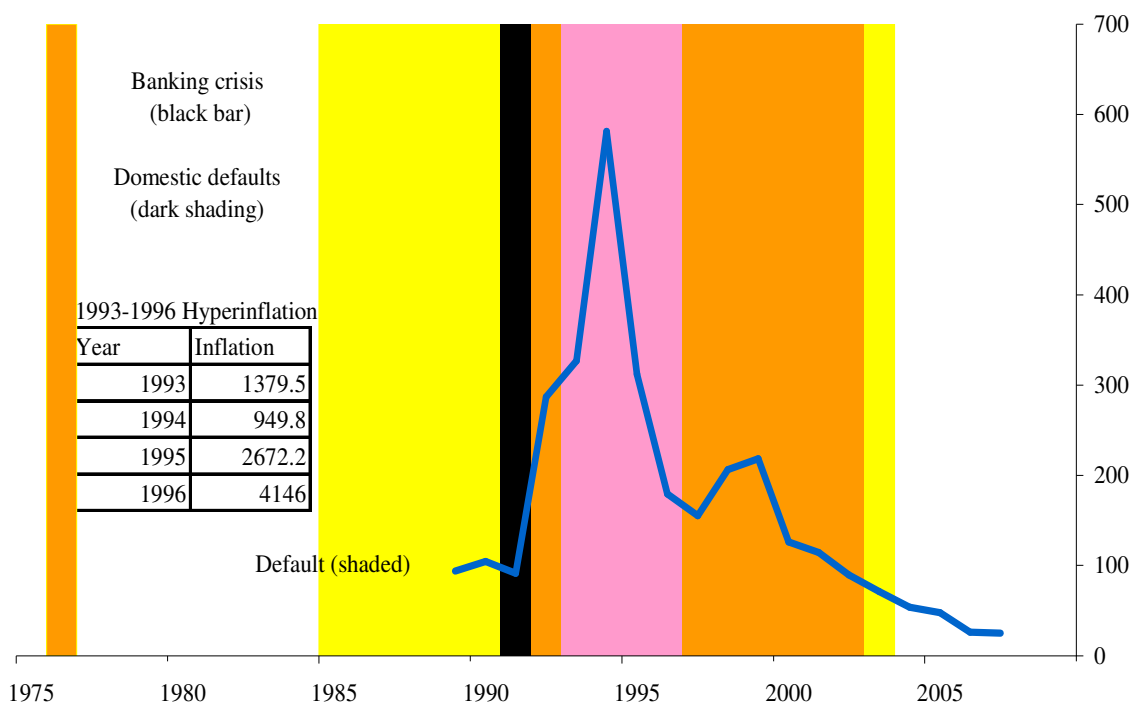


Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Algeria, 1962-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1991-1996	6	n.a.	1990	n.a.	10.4	12.5	1961(12.1) 1962(21.1) 1966(4.8) 1971(8.5) 1980(5.4)
Number of episodes:							
1		0	1	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs 1989, 1991, 1994, 1995							Total number 4

Figure 2. Angola: External (public plus private) Debt, Default, Hyperinflation and Banking Crises, 1975-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein.

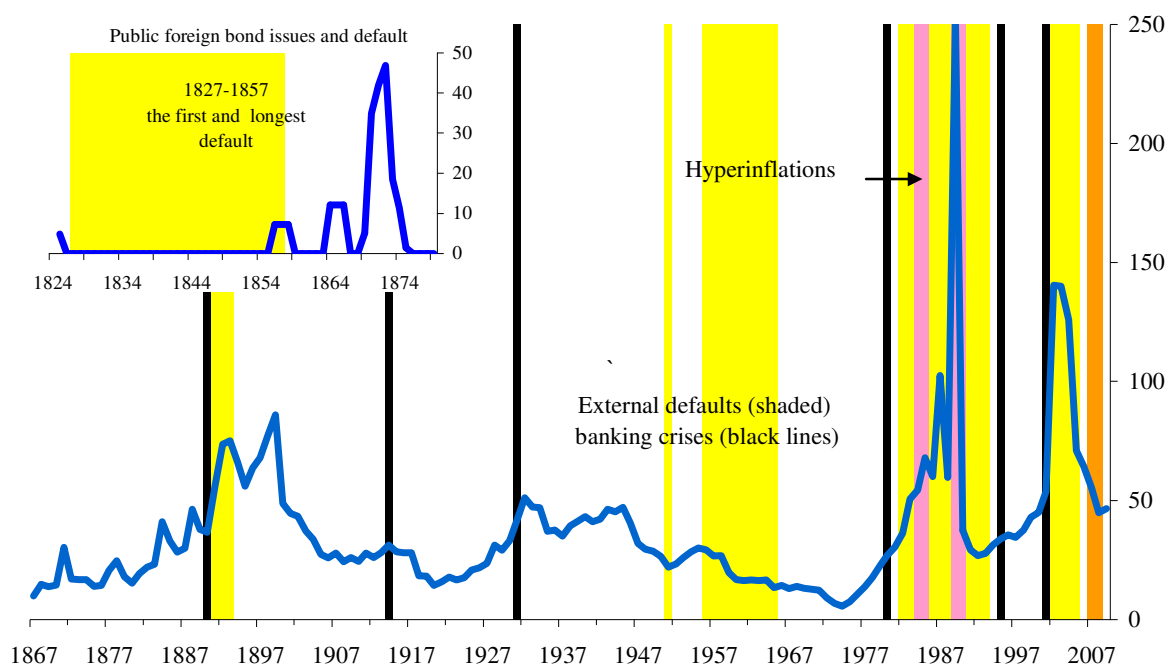
Notes: No data is available prior to 1985 right after independence from Portugal (1975) and during the early year of the 27-year civil war (1975-2002).

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Angola, 1975-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1985-2003	19	1976 1992-2002	1991	1993-1996	54.3	60.0	1974 (5.0) 1975 (38.4) 1976 (10.2) 1992(5.8) 1993(24.0)
Number of episodes:							
1		2	1	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
None							0



Figure 3a. Argentina: Central Government (domestic plus external) Debt, Default, Hyperinflation and Banking Crises, 1824-2009 (debt as a percent of GDP)



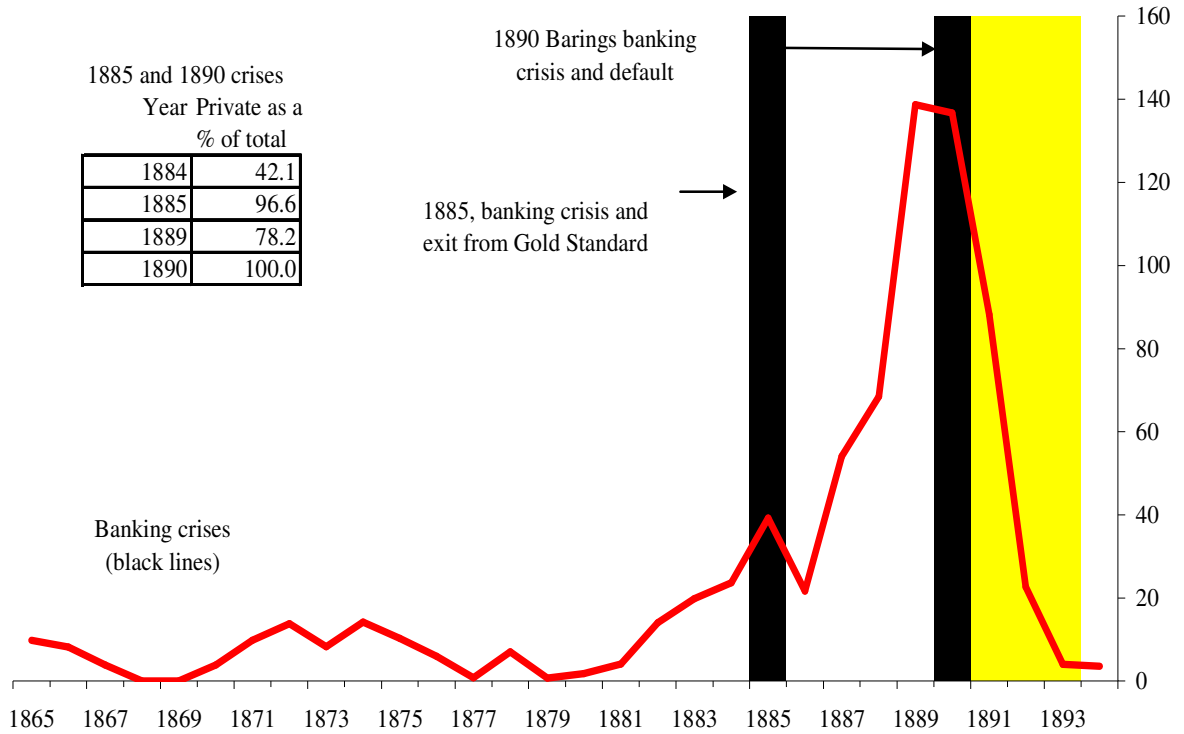
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: Only systemic banking crises are shown above. Domestic default episodes are that overlap with external default are not shaded (see table below for dates)

Default, Banking Crises, Growth Collapses Hyperinflation, and IMF Programs:  
Argentina, 1816-2009

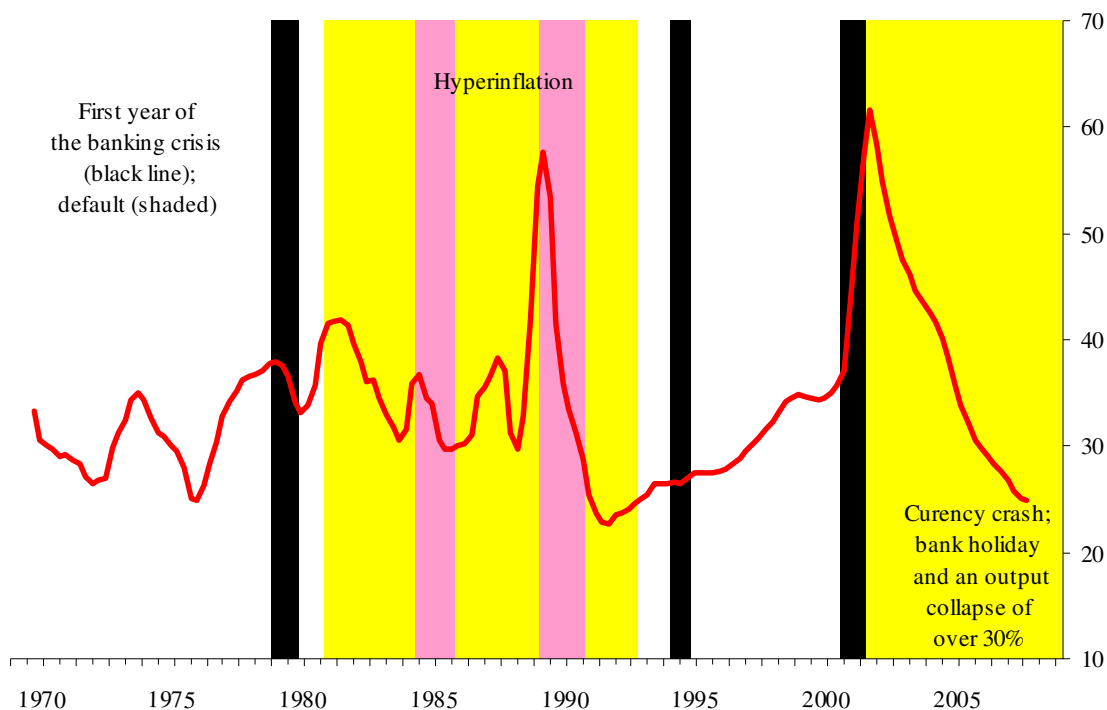
External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	7 worst output collapses year(decline)
1827-1857	31	1890-1893	1885	1984-1985	32.5	24.7	1914(10.4)
1890-1893	4	1982	1890	1989-1990			1917(8.1)
1951	1	1989-1990	1914				1931(6.9)
1956-1965	10	2001-2005	1931				1959(6.5)
1982-1993	12	2007-2009	1934				1985(7.0)
1989	--		1980				1989(7.0)
2001-2005	9		1985				2002(10.9)
			1989				
			1995				
			2001				
Number of episodes:							
7		5	10	2			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1958-1962, 1967-1968, 1976-1977, 1983-1984, 1987, 1989, 1991-1992, 1996, 1998, 2000, 2003(2)							20

Figure 3b. Argentina: Private Capital Inflows from the United Kingdom, Default, Devaluation and Banking Crises, 1865-1895  
 (capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

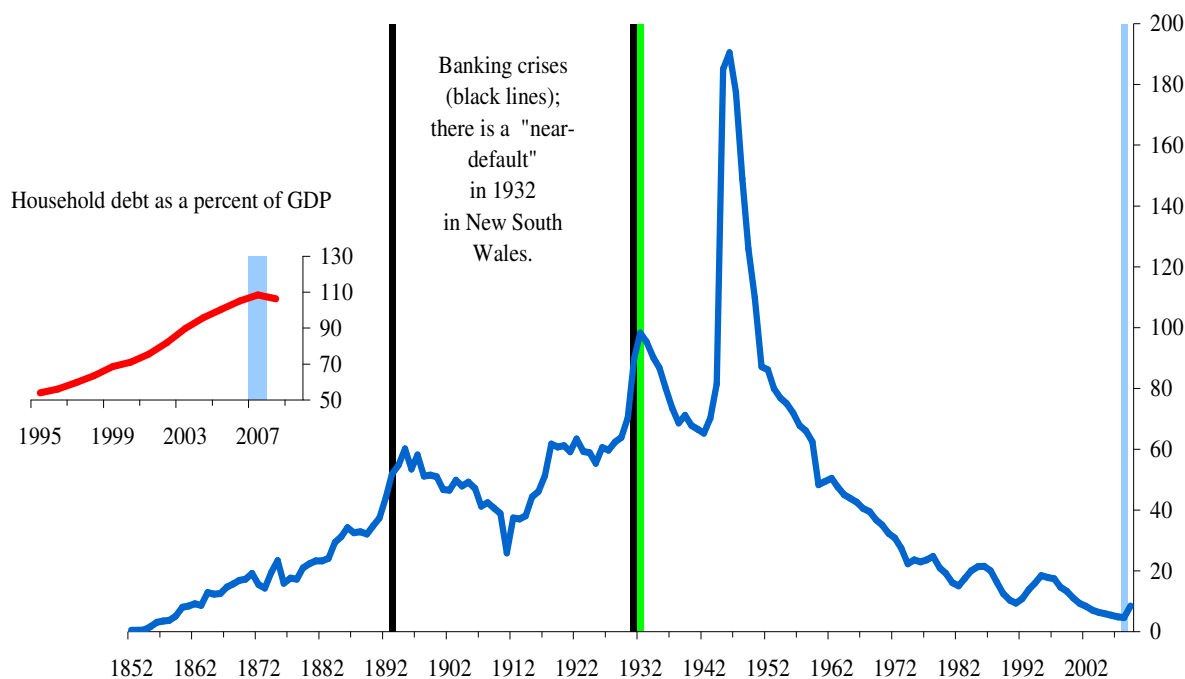
Figure 3c. Argentina Banking Survey: Domestic Credit, Default, Hyperinflation  
and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used. Only systemic banking crises are shown.

Figure4a. Australia: Central Government (domestic plus external) Debt, Near-default, and Banking Crises, 1852-2009 (debt as a percent of GDP)



Sources: S.J. Butlin (1968), OECD, Reinhart and Rogoff (2009) and sources cited therein.

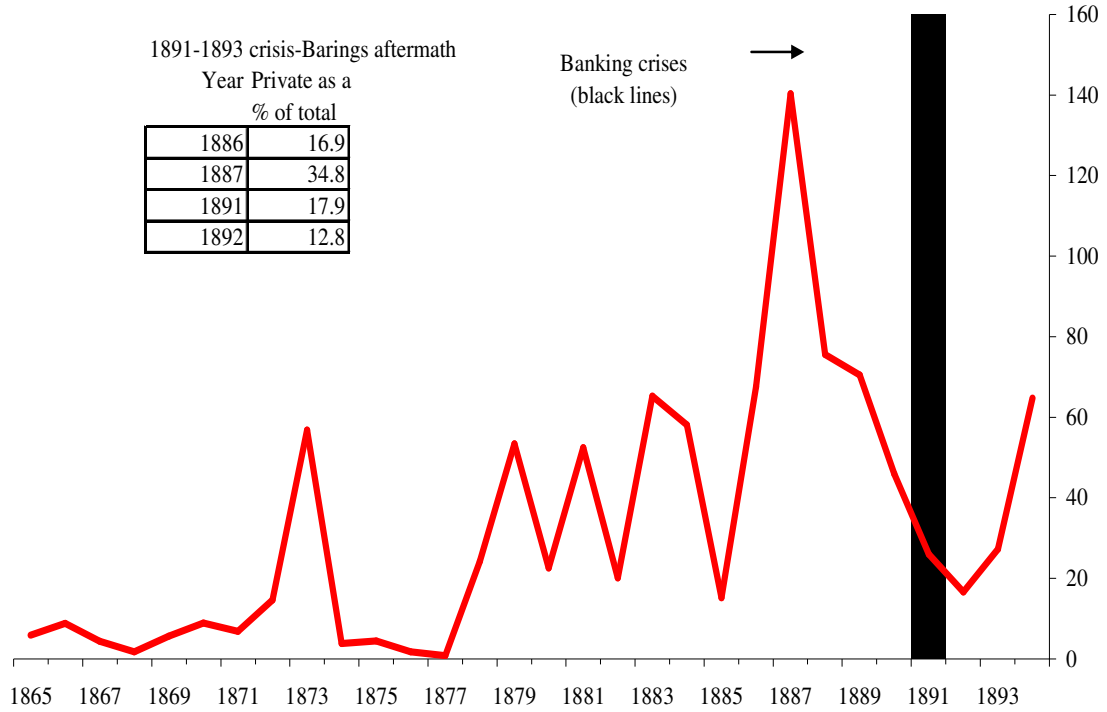
Notes: An interesting anecdote on sub-sovereign debt from correspondence with Huw McKay (who also referred us to Butlin's work, which dates the earliest banking crises). During the great depression, the left wing government of the largest state in Australia, New South Wales, voted to default on its foreign debt, only to be over-ruled by the Federal Government. Only systemic banking crises are shown.

Default, Banking Crises, Growth Collapses and IMF Programs: Australia, 1800-2009  
(calculations since independence—1901)

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
<i>1932</i>	n.a.	n.a.	1828 1843 1893 1931 <i>1989</i>	n.a.	n.a.	2.8	1882(5.6) 1892(12.3) 1893(5.5) 1930(9.5) 1931(6.7)
Number of episodes:							
0		0	5	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs							1
1961							1

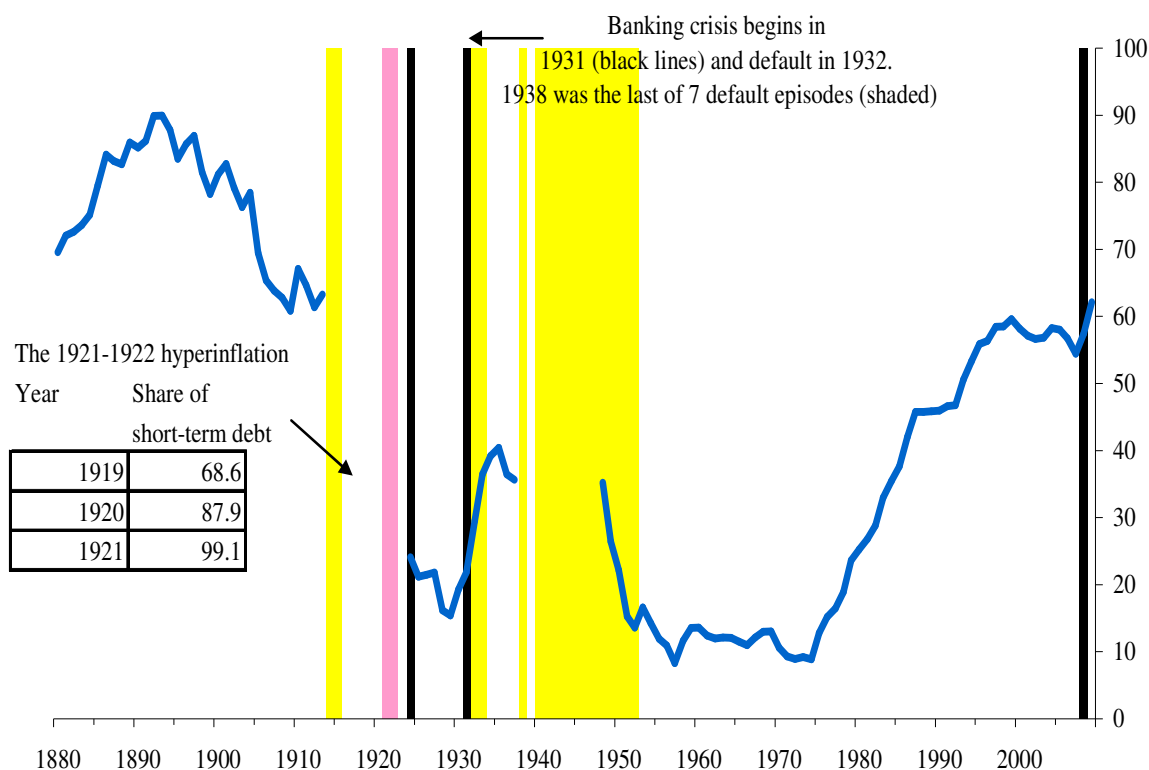
Notes: Near default (*italics*) not counted in total.

Figure 4b. Australia: Private Capital Inflows from the United Kingdom and  
 Banking Crises, 1865-1895  
 (capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

Figure 5a. Austria: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1880-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Austria, 1800-2009  
(Austria-Hungary pre-1918)

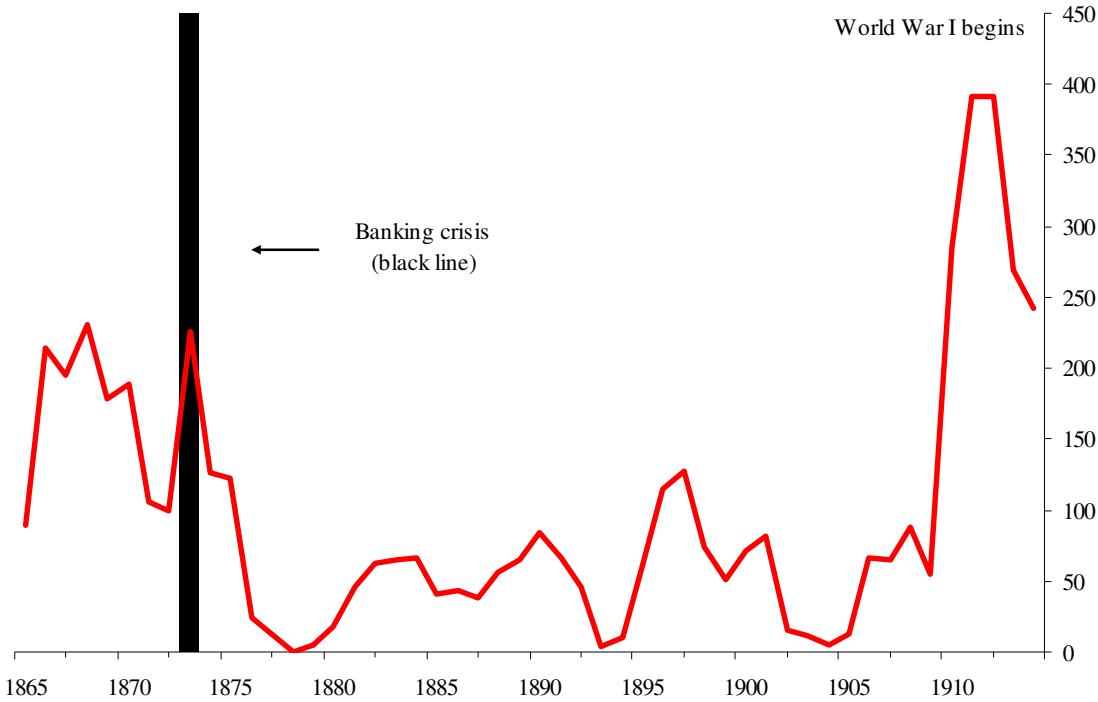
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline) <sup>1</sup>
1802-1815	14	1945	1873	1921-1922	17.1	13.3	1919(15.6)
1816	1		1924				1931(8.0)
1868-1870	3		1929				1932(10.3)
1914-1915	2		1931				2009(3.8)
1932-1933	2		2008				
1938	1						
1940-1952	13						
Number of episodes:							
7		1	5	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
None							0

Notes: There is an issue whether to treat (more or less) consecutive defaults in 1802, 1805, and 1811 as separate episodes or as a single longer episode, as above.

<sup>1</sup>Excludes World Wars I and II.

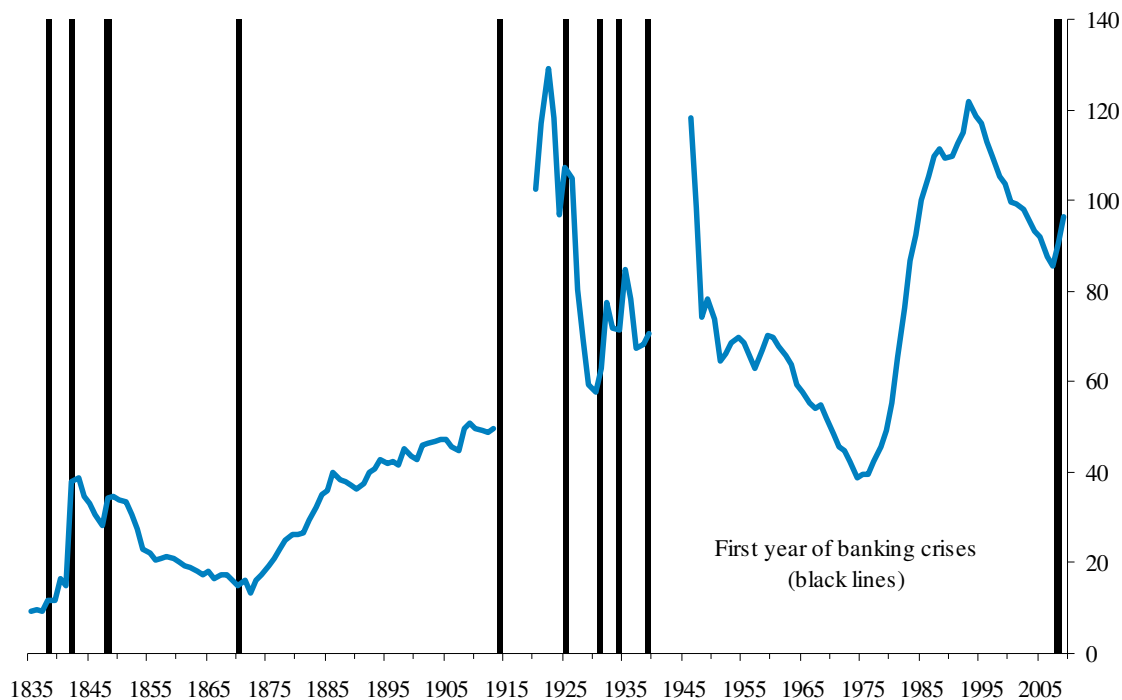
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 5b. Austria: Private Capital Inflows from the United Kingdom and  
Banking Crises, 1865-1914  
(capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

Figure 6. Belgium: Central Government (domestic plus external) Debt and Banking Crises, 1835-2009 (debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Belgium, 1800-2009

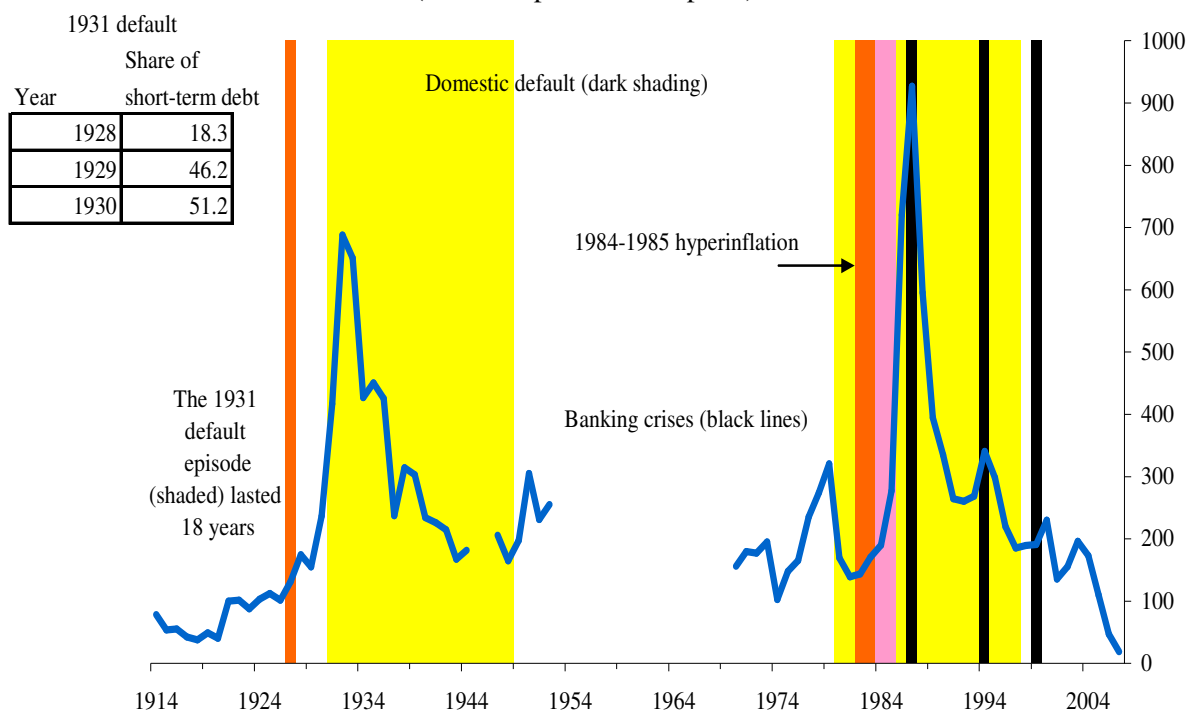
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	n.a.	1838	n.a.	n.a.	5.2	1932(4.5)
			1842				1938(2.3)
			1848				2009(3.2)
			1870				
			1914				
			1925				
			1931				
			1934				
			1939				
			2008				
Number of episodes:							
0	0	10	0				
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1952							1

<sup>1</sup>Excludes World Wars I and II.

Notes: Summary of private forecasts for 2009 in *italics*.



Figure 7. Bolivia: Central Government (domestic plus external) Debt  
Default, Banking Crises, and Hyperinflation, 1914-2009  
(debt as a percent of exports)

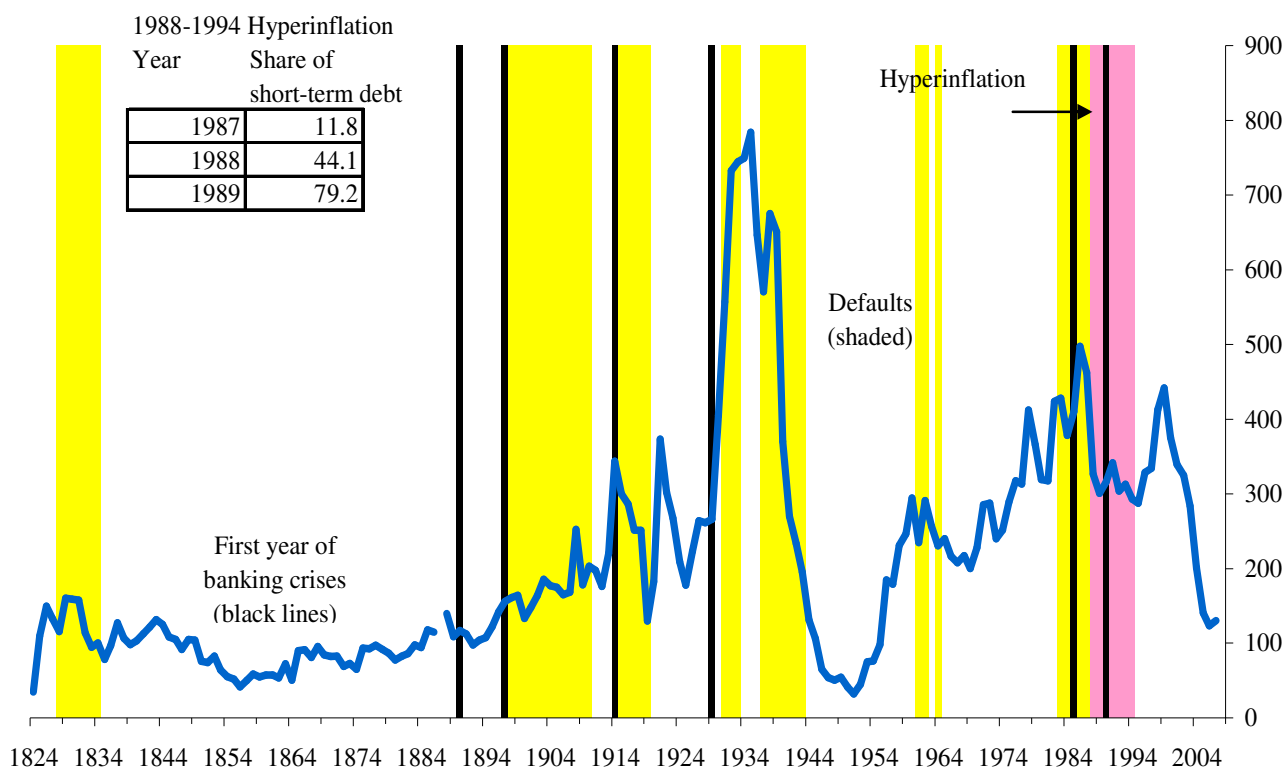


Sources: Reinhart and Rogoff (2009), and sources cited therein, and UNCTAD Handbook of Statistics.  
Notes: No GDP data is available prior to 1950, hence, we scale debt by exports.

Default, Banking Crises, Growth Collapses, Hyperinflation, and IMF Programs:  
Bolivia, 1825-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1875-1879	5	1927	1987	1984-1985	21.6	14.6	1954(9.5)
1931-1948	18	1982-1985	1994				1956(5.9)
1980-1984	5		1999				1982(4.4)
1986-1993	8						1983(4.5)
1989-1997	9						
Number of episodes:							
5		2		3		1	
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1956-1957, 1959, 1961-1967, 1969, 1973, 1980, 1986 (2), 1988(2), 1994, 1998, 2001							20

Figure 8a. Brazil: External Debt, Default, Hyperinflation and Banking Crises, 1824-2009  
(debt as a percent of exports)



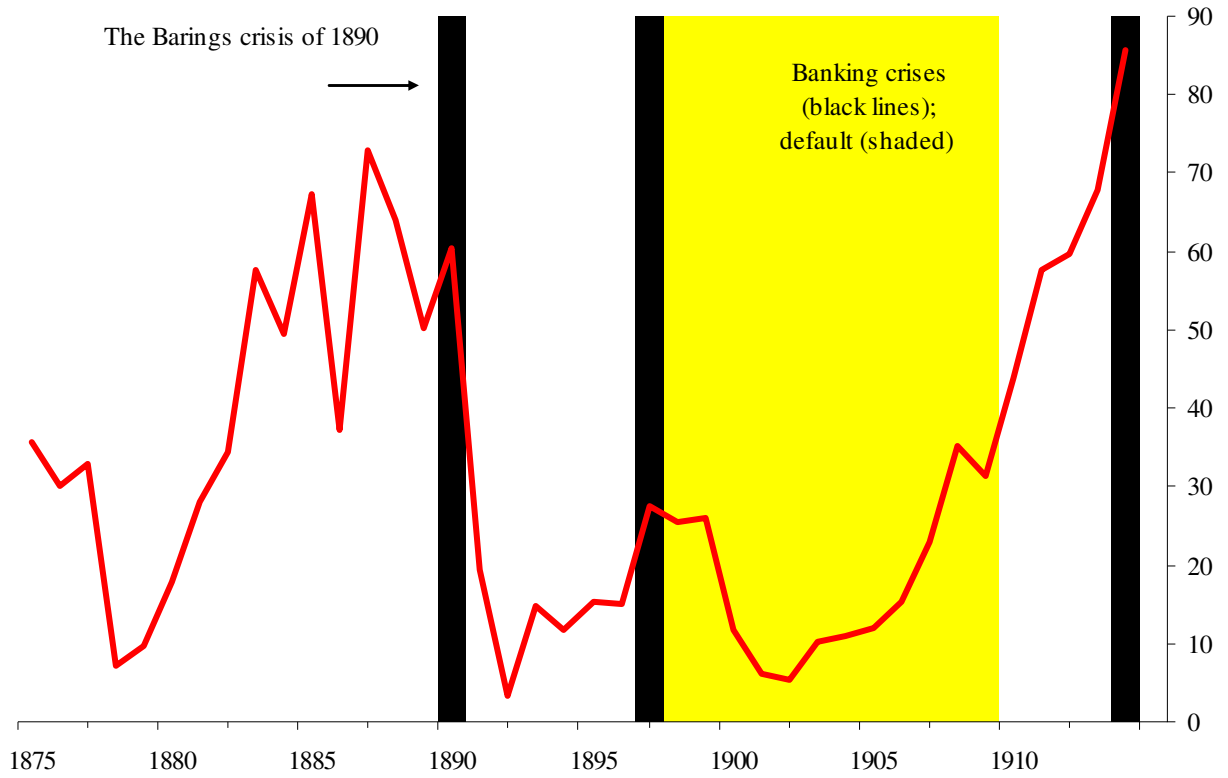
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: For 1824-1945, public external debt; for 1946-2009 external debt is the aggregate of public and private debts. Only the major banking crises are shown. There are a total of 9 default episodes but only 8 shaded regions, as two episodes occur in consecutive years (see table below). Only systemic banking crises are shown.

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Brazil, 1822-2009

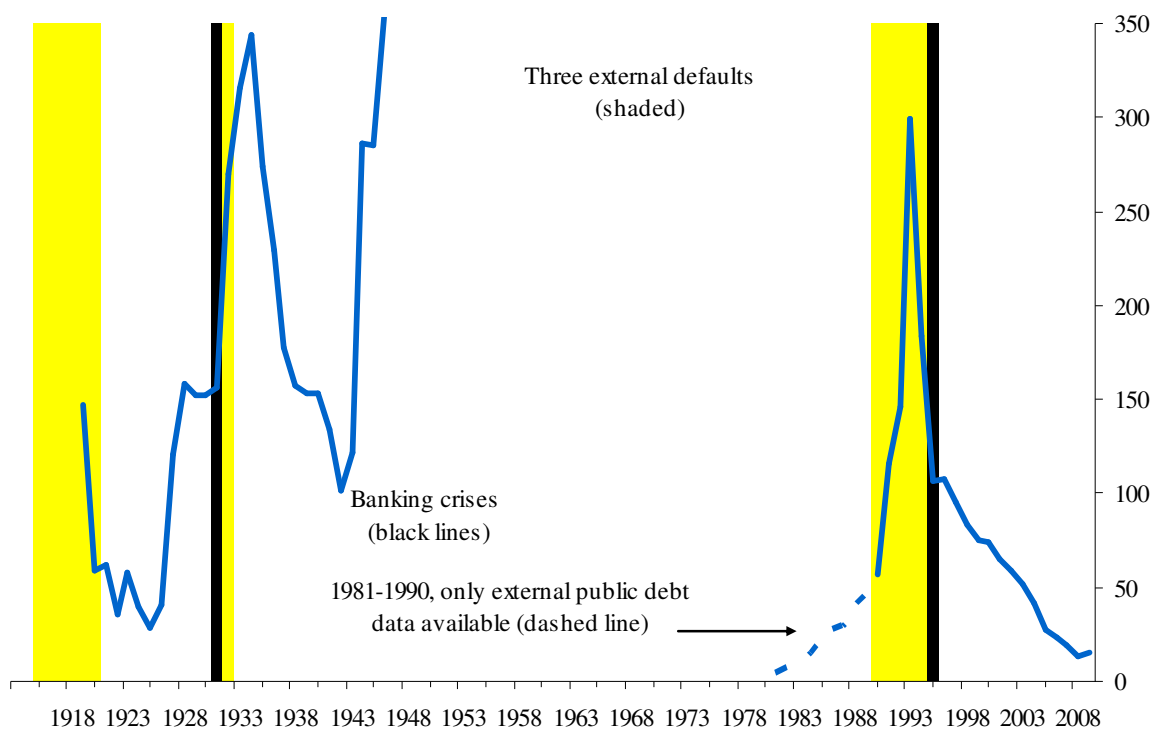
External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1828-1834	7	1886-1987	1890	1988-1990	26.6	26.1	1893(12.8)
1898-1901	4	1990	1897	1992-1994			1896(7.2)
1902-1910	9		1900	or			1930(6.0)
1914-1919	6		1914	single			1981(4.4)
1931-1933	3		1923	episode			1990(4.2)
1937-1943	7		1926	1988-1994			
1961	1		1929				
1964	1		1963				
1983-1990	8		1985				
			1990				
			1994				
Number of episodes:							
9		2	11	2(1)			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1958, 1961, 1965-1972, 1983, 1988, 1992, 1998, 2001-2002							16

Figure 8b. Brazil: Private Capital Inflows from the United Kingdom and  
Default and Banking Crises, 1875-1914  
(capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

Figure 9. Bulgaria: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1919-2009 (debt as a percent of GDP)



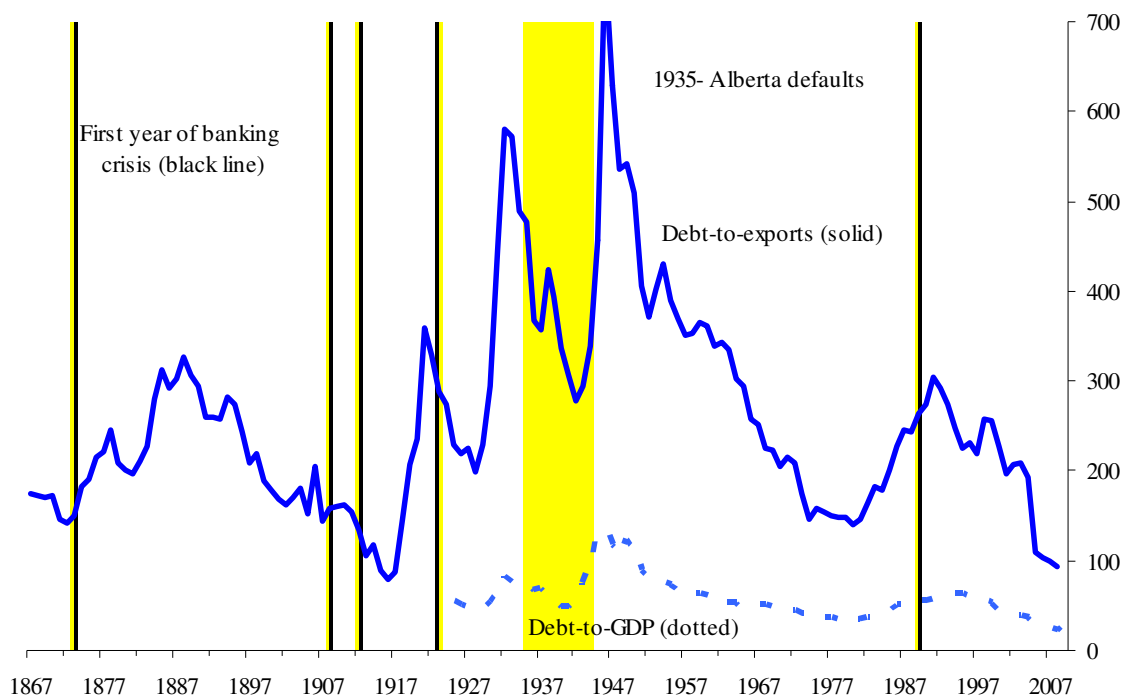
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Bulgaria

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	6 worst output collapses year(decline)
1916-1920	5	n.a.	1931	n.a.	n.a.		1934(8.5)
1932	1		1994				1990(9.1)
1990-1994	5						1991(10.8)
							1993(11.6)
							1996(8.0)
							2009(6.5)
Number of episodes:							
3		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total number
1991-1992, 1994, 1996-1998, 2002, 2004							8

Notes: Summary of private forecasts for 2009 in *italics*.

Figure 10a. Canada: Central Government (domestic plus external), 1867-2009  
(debt as a percent of exports and GDP)

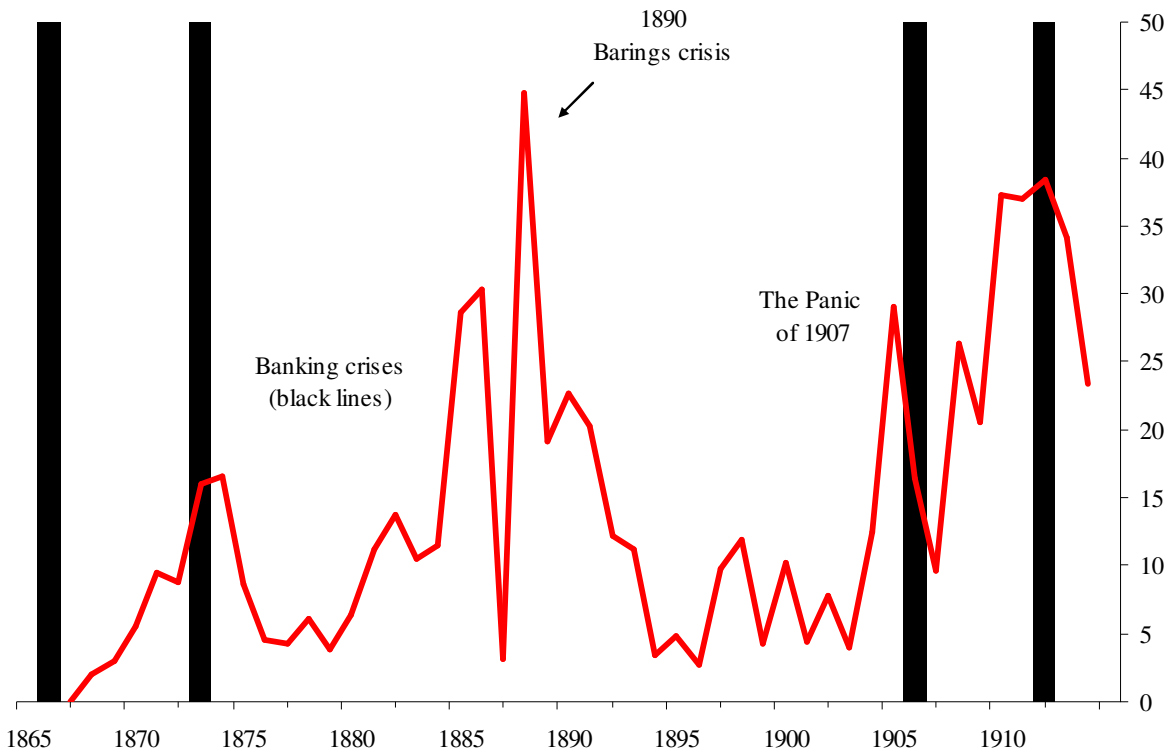


Sources: Reinhart and Rogoff (2009) and sources cited therein. The 1983 banking crisis (also shown) does not meet the systemic criteria.

Default, Banking Crises, Growth Collapses and IMF Programs: Canada, 1867-2009

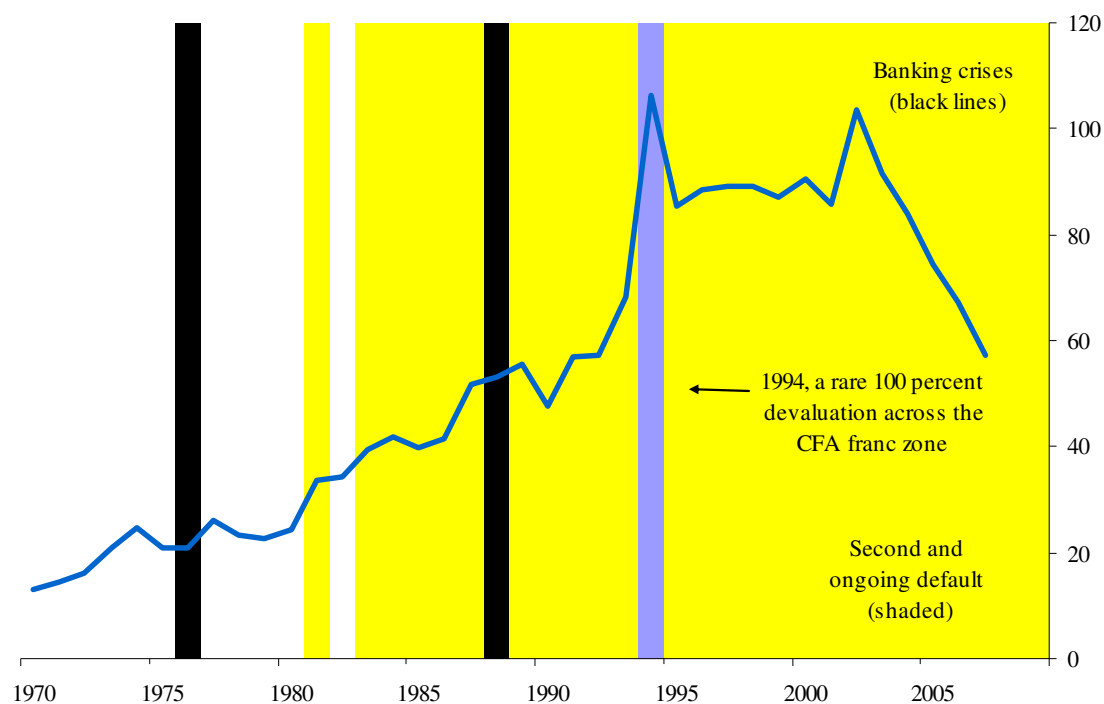
External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	6 worst output collapses year(decline)
1935 "near"	10	n.a.	1837 1866 1873 1906 1908  1912 1923 1983	n.a.	n.a.	0.7	1876(6.7) 1919(7.6) 1921(10.8) 1931(15.4) 1932and 1933(7.1)
Number of episodes:							
0	0	8	0				
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
None							0

Figure 10b. Canada: Private Capital Inflows from the United Kingdom  
and Banking Crises, 1865-1914  
(capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

Figure 11. Central African Republic: External (public plus private) Debt, Default, Devaluation and Banking Crises, 1970-2009 (debt as a percent of GDP)

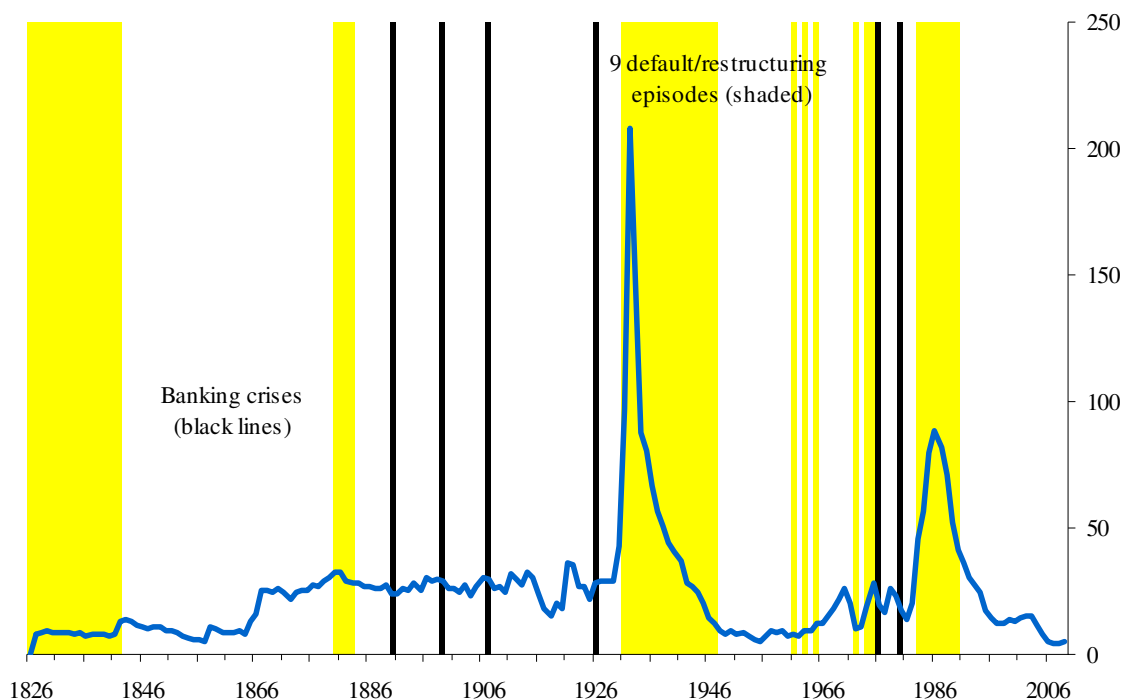


Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs:  
Central African Republic, 1960-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1981	1	n.a.	1976	n.a.	56.0	4.0	1979(5.6)
1983-2009	27		1988				1983(6.0)
Number of episodes:							1996(8.1)
2		0	2	0			2003(7.1)
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total	
1980-1981, 1983-1985, 1987(2), 1989, 1994, 1998						10	

Figure 12a. Chile: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1826-2009  
(debt as a percent of GDP)



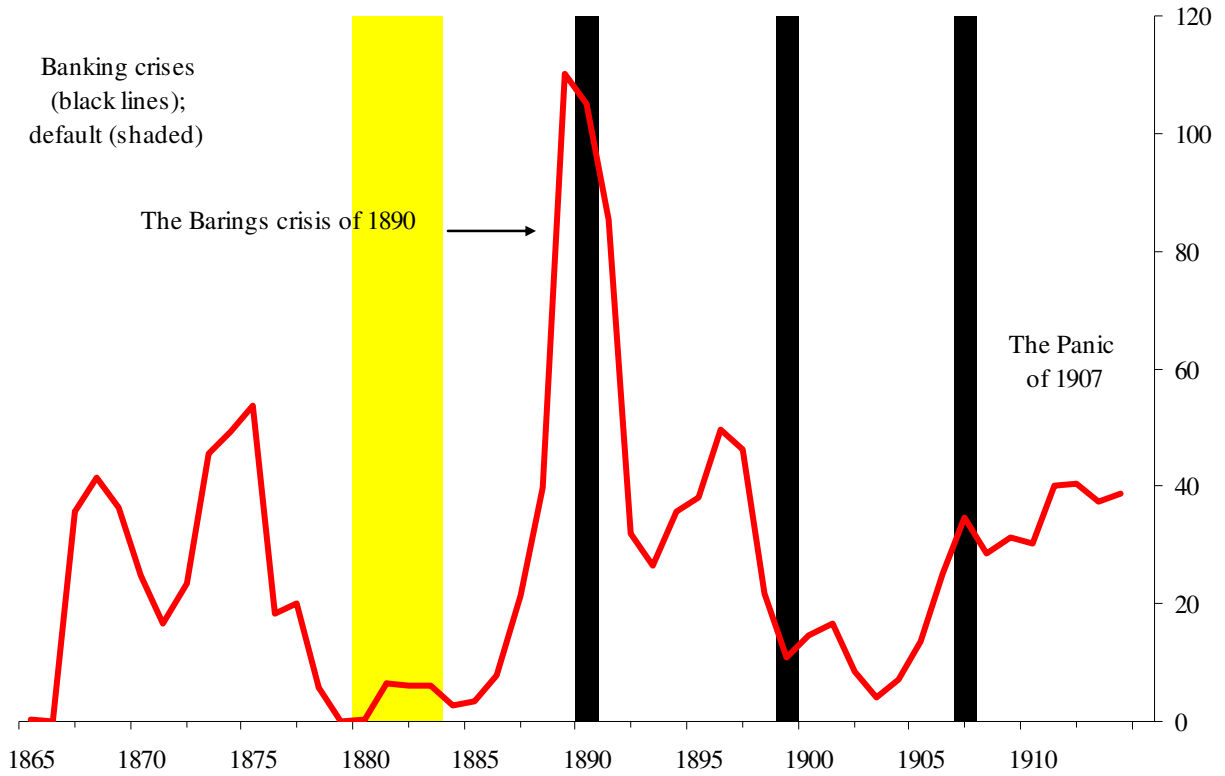
Sources: Diaz et. al (2001), Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Chile, 1818-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	7 worst output collapses year(decline)
1826-1842	16	n.a.	1890	n.a.	27.1	20.3	1919(14.2)
1880-1883	4		1899				1921(13.3)
1931-1947	18		1907				1930(16.0)
1961	1		1915				1931(21.2)
1963	1		1926				1932(15.5)
1965	1		1976				1947(10.8)
1972	1		1981				1975(12.9)
1974-1975	2						1982(13.6)
1983-1990	8						
Number of episodes:							
9		0	7	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1956, 1958-1959, 1961, 1963-1966, 1968-1969, 1974-1975, 1983, 1985, 1989 (2)							16

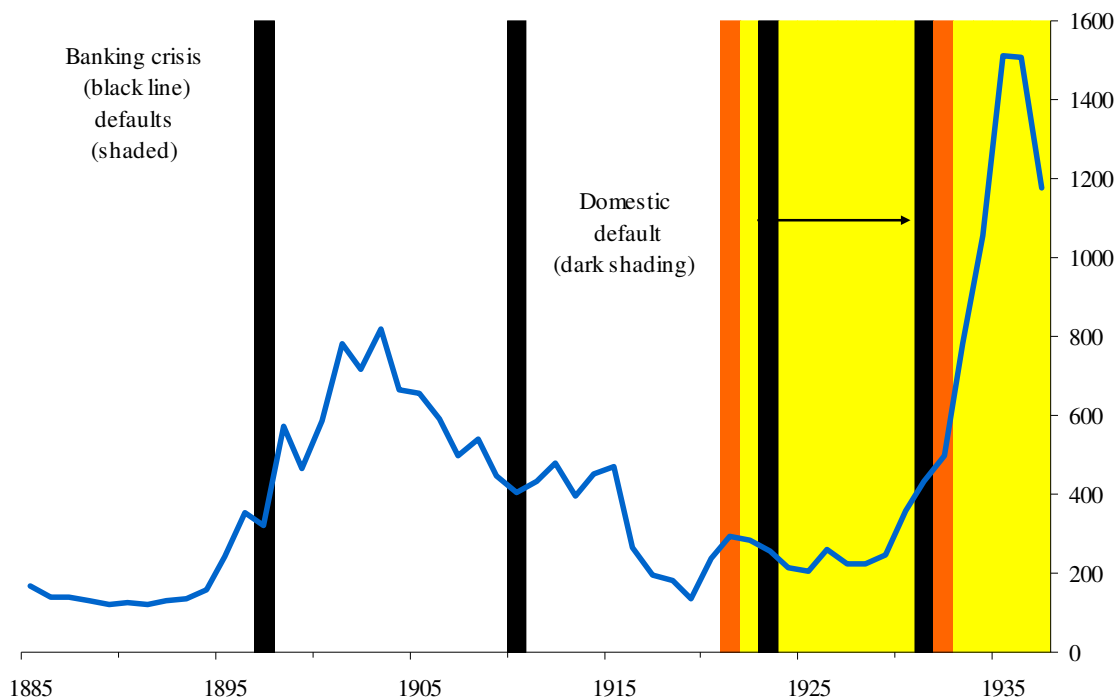


Figure 12b. Chile: Total (public and private) Capital Inflows from the United Kingdom,  
Default and Banking Crises, 1865-1914  
(capital flows as a percent of exports, three-year sum)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

Figure 13a. China: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1885-1937  
(debt as a percent of exports)



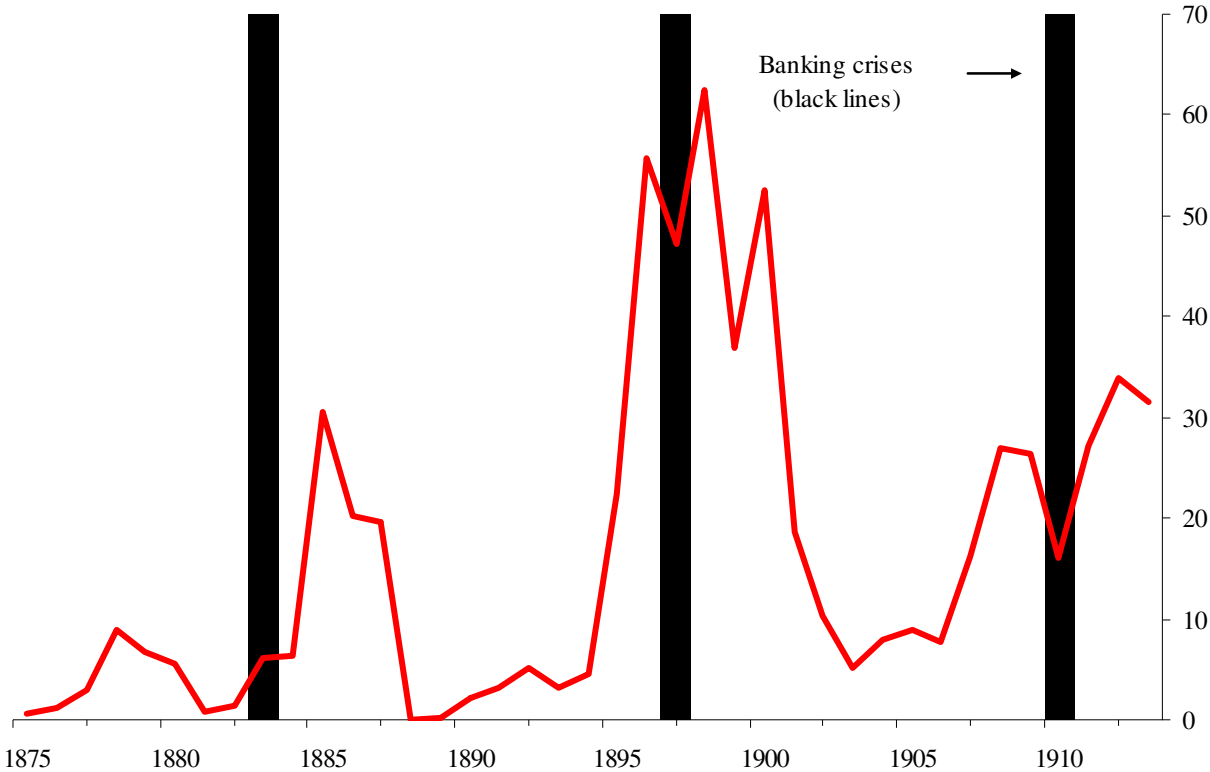
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
China, 1850-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
1921-1936	16	1921	1863	1946-1948	12.9	10.0	1934(8.7)
1939-1949	11	1932	1866				1960(3.4)
			1873				1961(17.3)
			1883				
			1898				
			1910				
			1923				
			1931				
			1934				
			1998				
Number of episodes:			10	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs 1981, 1986							Total
							2

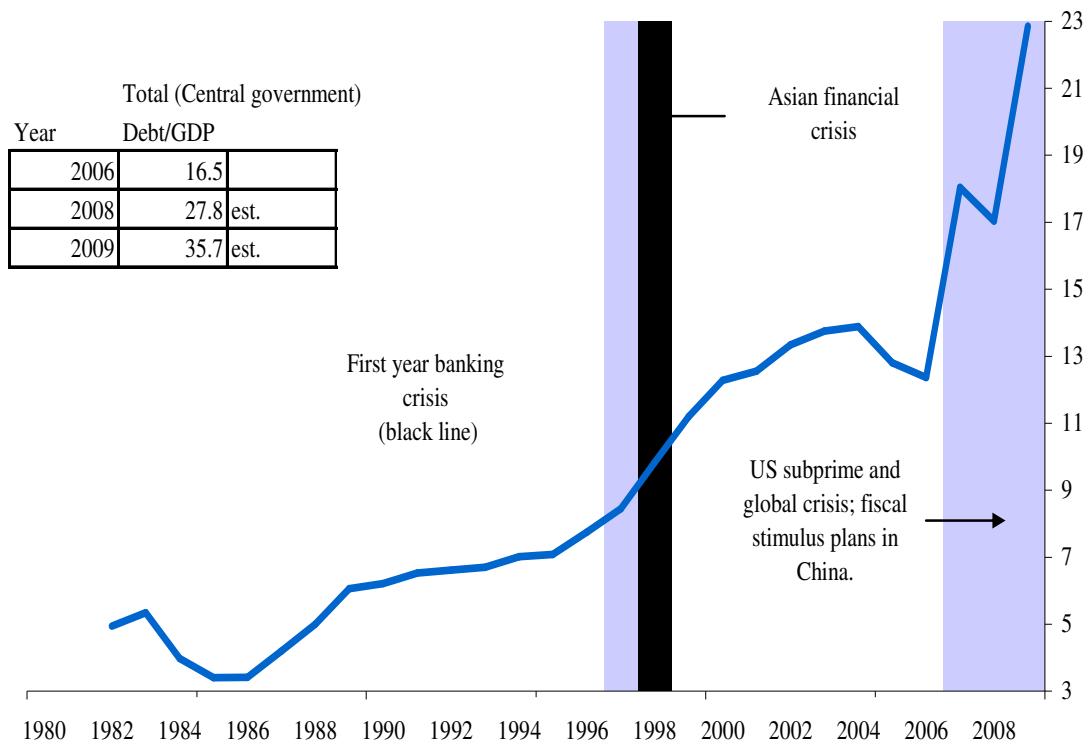
<sup>1</sup>No output data from 1939 to 1951.

Figure 13b. China: Public and Private Capital Inflows from the United Kingdom  
and Banking Crises, 1875-1914  
(capital flows as a percent of exports, three-year sum)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

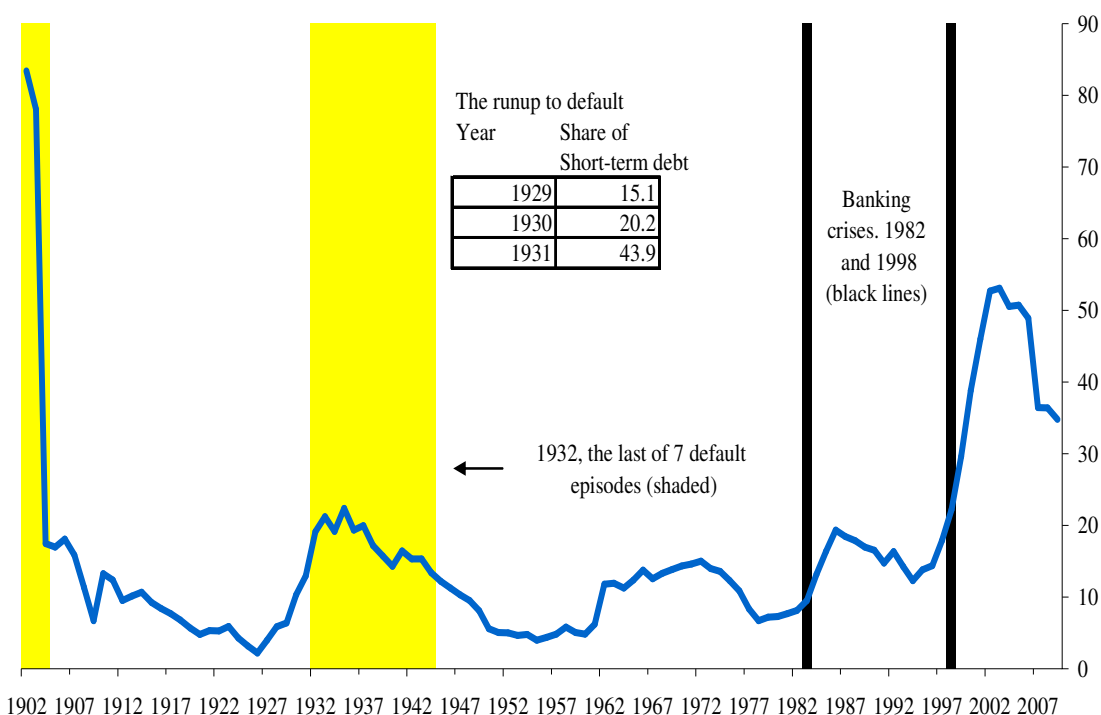
Figure 13c. China: Central Government Debt Issuance (domestic plus external)  
and Banking Crises, 1981-2009  
(three-year sum in issuance as a percent of GDP)



Sources: China Statistical Yearbook, several issues, National Debt Association of China, Reinhart and Rogoff (2009) and sources cited therein, and authors' calculations.

Notes: Data on central government debt outstanding (domestic plus external) is no longer published. Estimates for 2008 and 2009 are based on issuance data for those years.

Figure 14a. Colombia: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1902-2009 (debt as a percent of GDP)

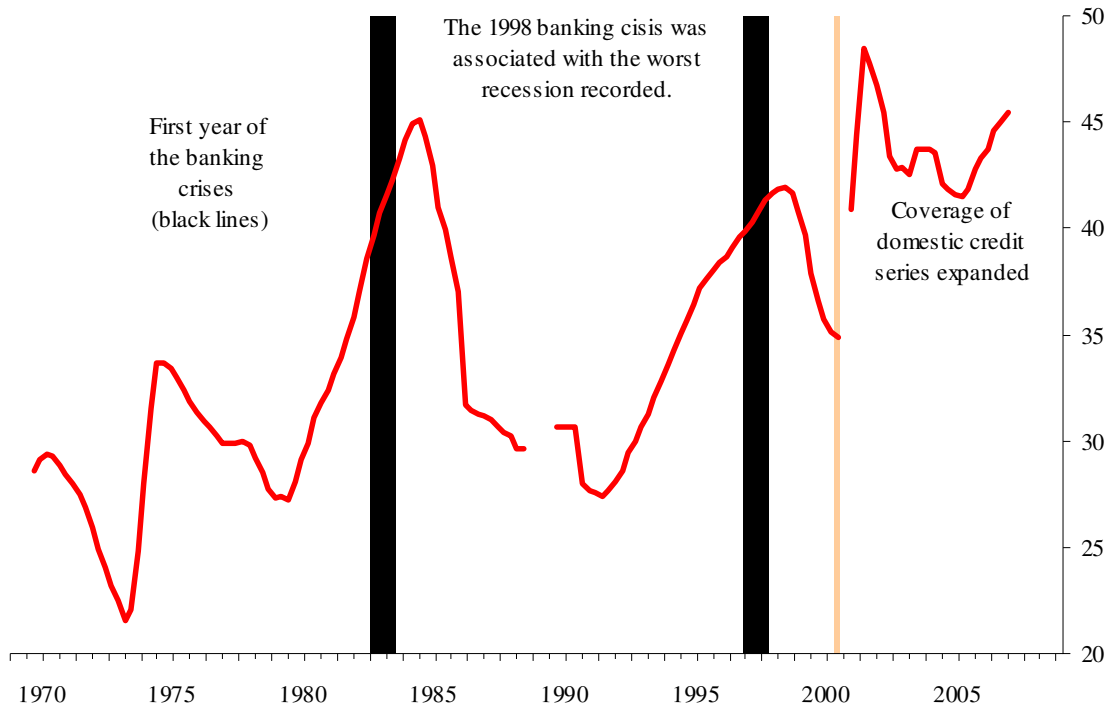


Sources: Junguito and Rincón (2004), Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Colombia, 1819-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1826-1845	20	n.a.	1882	n.a.	35.6	17.8	1914(3.4)
1850-1861	12		1998				1934(2.1)
1873	1						1999(4.2)
1880-1896	17						
1900-1904	5						
1932-1934	3						
1935-1944	10						
Number of episodes:							
7		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1957-1960, 1962-1964, 1966-1973, 1999, 2003, 2005							18

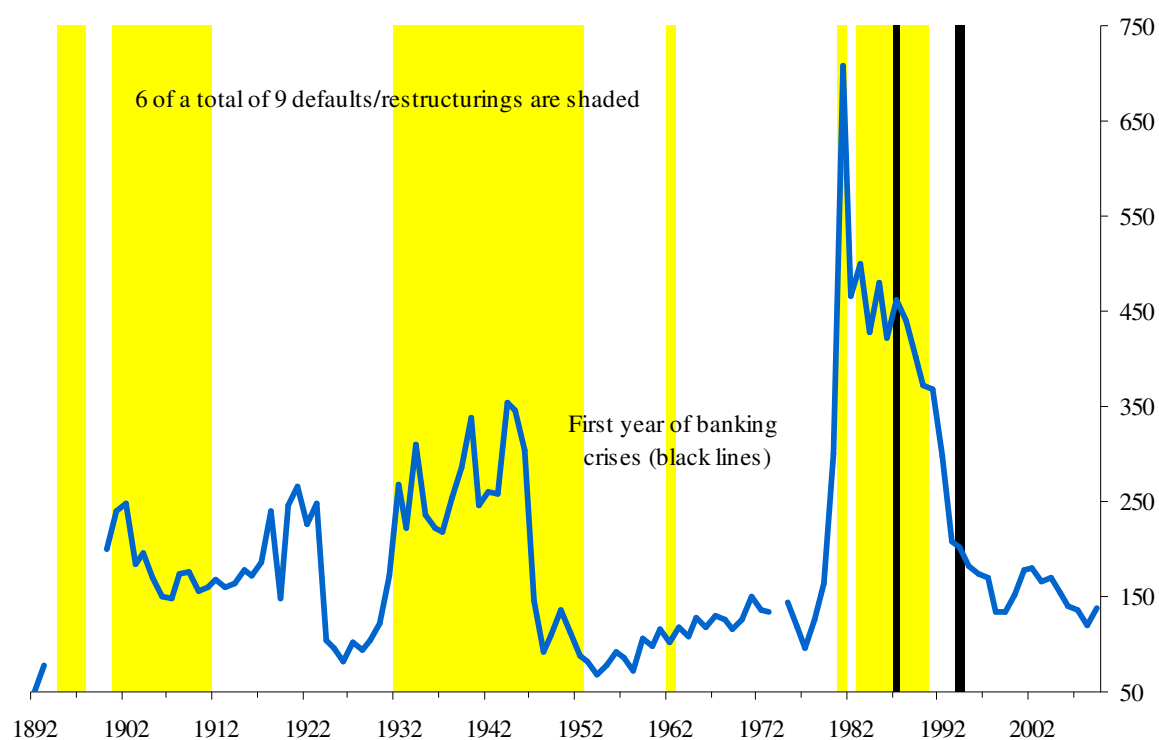
Figure 14b. Colombia Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 15. Costa Rica: Central Government (domestic plus external) Debt  
Default and Banking Crises, 1892-2009  
(debt as a percent of exports)



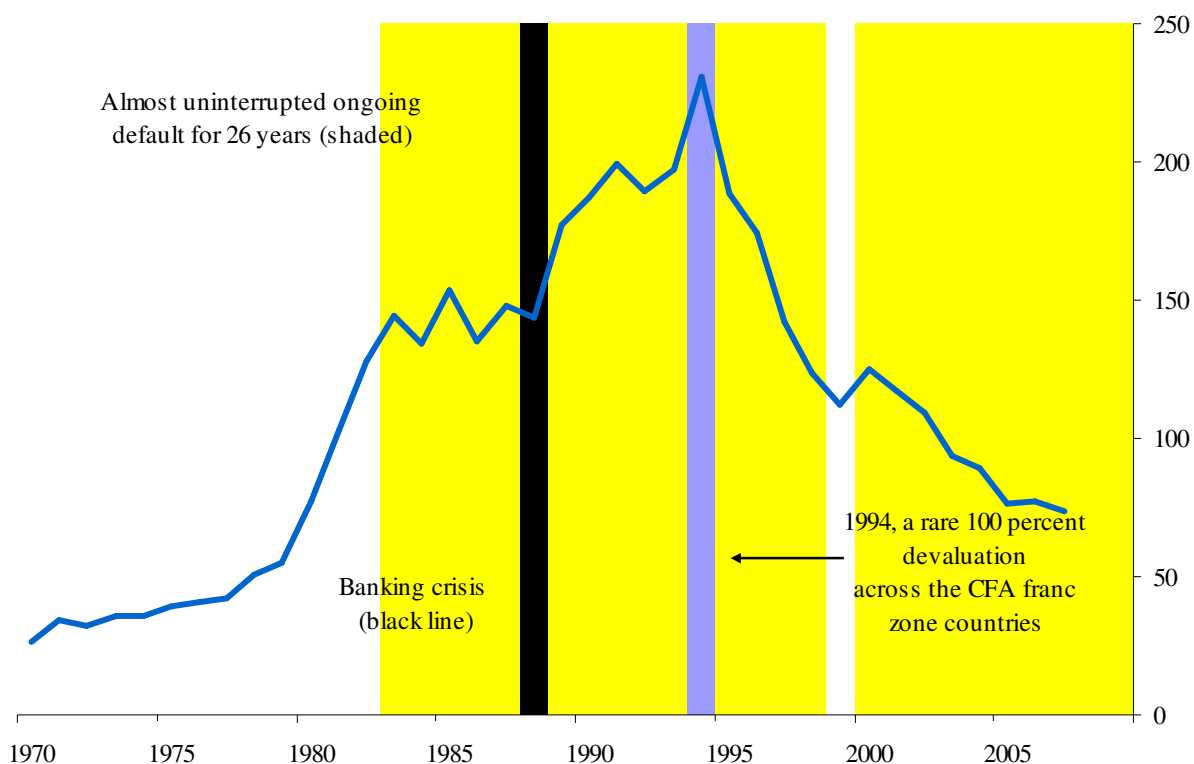
Sources: Soley Güell (1926), UNCTAD Handbook of Statistics, Reinhart and Rogoff (2009) and sources cited therein.

Notes: No GDP data is available prior to 1950, hence, we scale debt by exports.

Default, Banking Crises, Growth Collapses and IMF Programs: Costa Rica, 1838-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1828-1840	13	n.a.	1987	n.a.	34.5	5.3	1923(7.6)
1874-1885	12		1994				1927(9.2)
1895-1897	3						1932(8.0)
1901-1911	11						1934(11.8)
1932-1952	21						1942(10.4)
1962	1						1944(9.4)
1981	1						1982(7.3)
1983-1990	8						
1984-1985							
Number of episodes:							
9		0	2	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs							16
1961-1962, 1965-1967, 1976, 1980-1982, 1985, 1987, 1989, 1991, 1993, 1995, 2009							

Figure 16. Cote D'Ivoire: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)



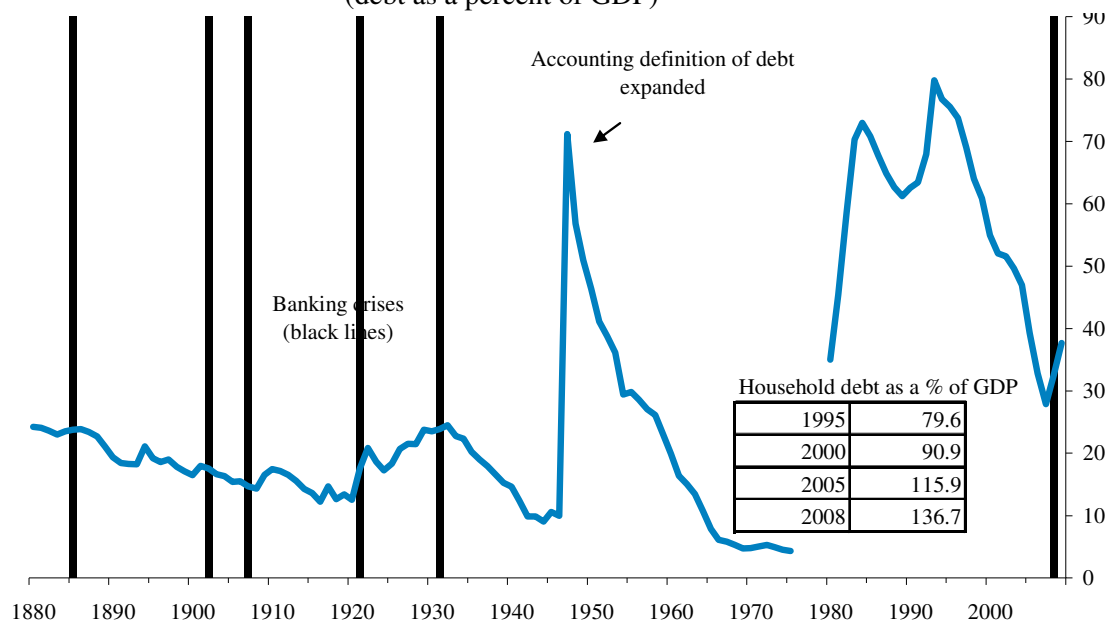
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Cote D'Ivoire, 1960-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1983-1998	16	n.a.	1988	n.a.	52.0	6.0	1965(2.2)
2000-2009	10						1983(3.9)
Number of episodes:							1990(6.9)
2		0	1	0			2000(4.6)
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total	
1981, 1984-1986, 1988-1989, 1991, 1994, 1998, 2002, 2009						11	



Figure 17. Denmark: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1880-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: Only systemic banking crises are shown.

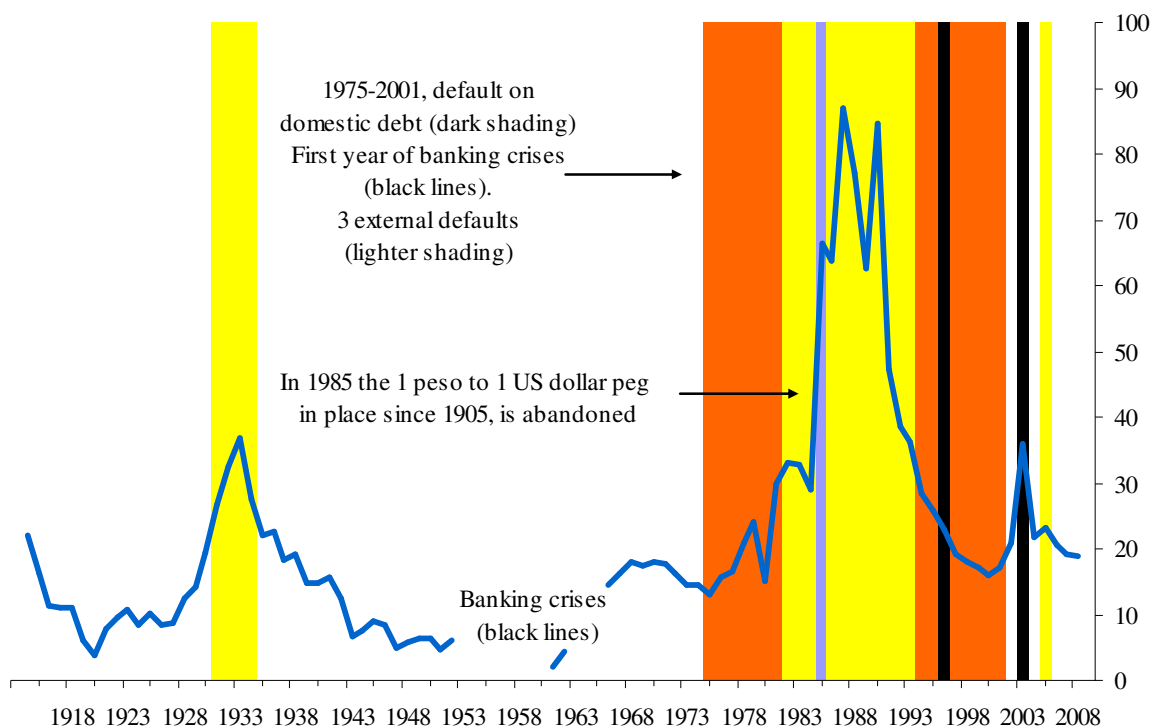
Default, Banking Crises, Growth Collapses and IMF Programs: Denmark, 1800-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	1813	1813 1857 1877 1885 1902 1907 1921 1931 1987 2008	n.a.	0.0	1.9	1856(5.6) 1877(2.7) 1921(2.9) 1932(2.6) 2009(5.0)
Number of episodes:							
0		1	10	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
None						0	

<sup>1</sup>Excludes World Wars I and II.

Notes: Summary of private forecasts for 2009 in *italics*.

Figure 18. Dominican Republic: Central Government (domestic plus external)  
Debt, Default, Devaluation and Banking Crises, 1914-2009  
(debt as a percent of GDP)

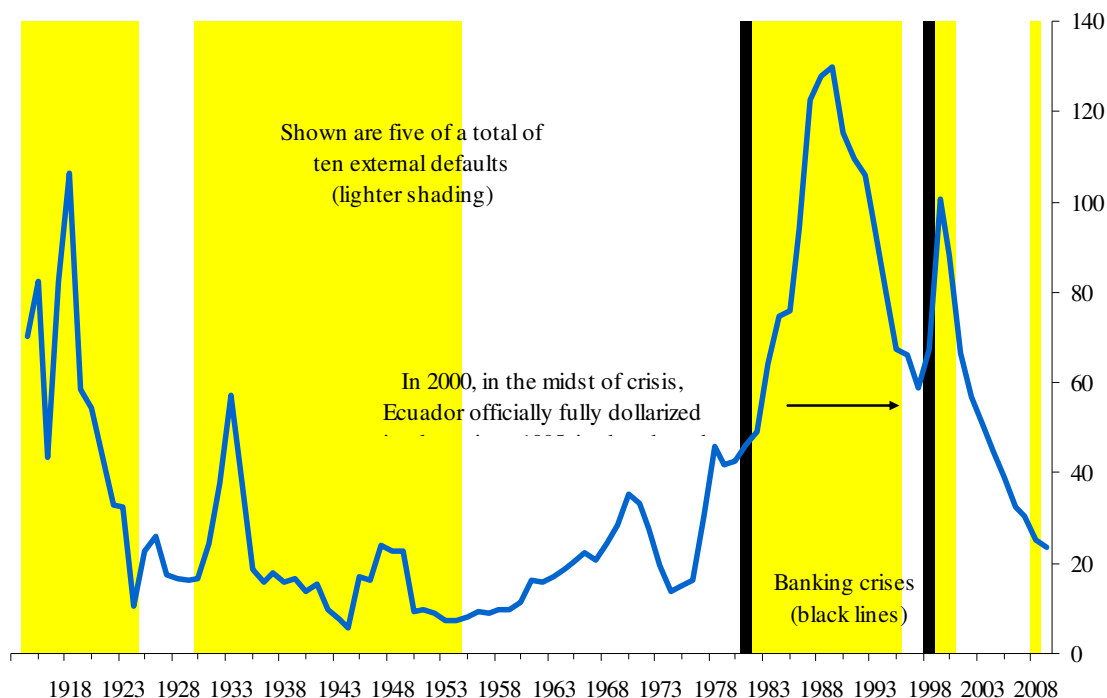


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Dominican Republic, 1844-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1872-1888	17	1975-2001	1996	n.a.	28.3	6.6	1965(12.4)
1892-1893	2		2003				1985(2.5)
1897	1						1990(5.5)
1899-1907	9						
1931-1934	4						
1982-1994	13						
2005	1						
Number of episodes:							
7		1	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1959, 1964, 1983, 1985, 1991, 1993, 2001, 2003, 2005							9

Figure 19a Ecuador: Central Government (domestic plus external)  
Debt, Default and Banking Crises, 1914-2009  
(debt as a percent of GDP)



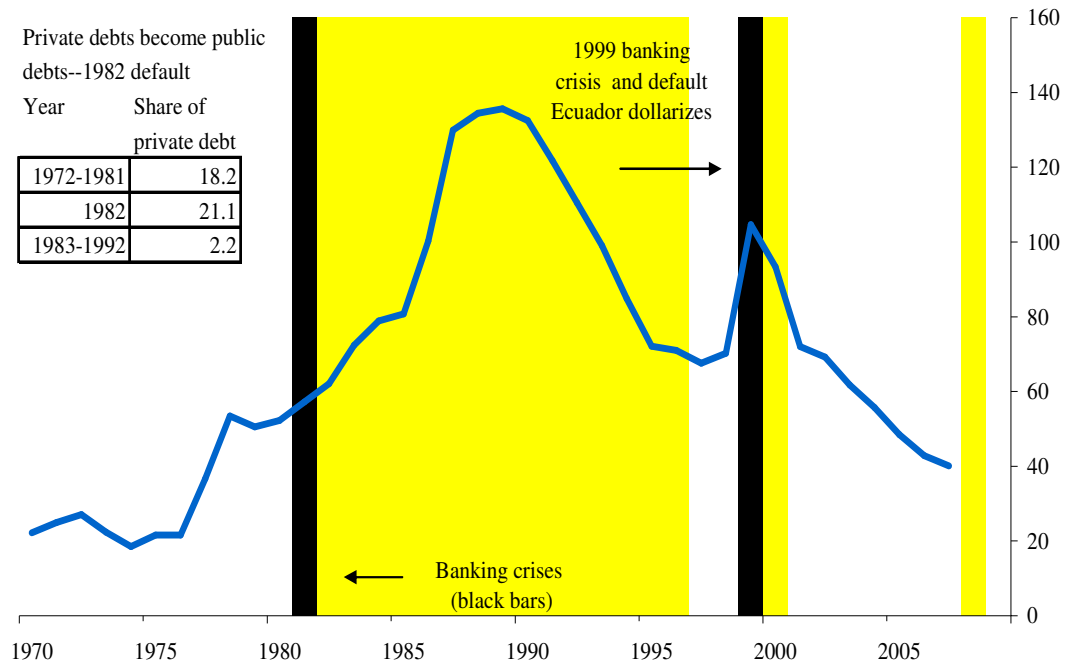
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: For the period 1973-1989 the data is for external public debt for general government, this underestimates public indebtedness, as it does not include domestic (or internal) debts—at the same time general government is more inclusive than our central government measure. These two effects are working in opposite directions.

Default, Banking Crises, Growth Collapses and IMF Programs: Ecuador, 1830-2009

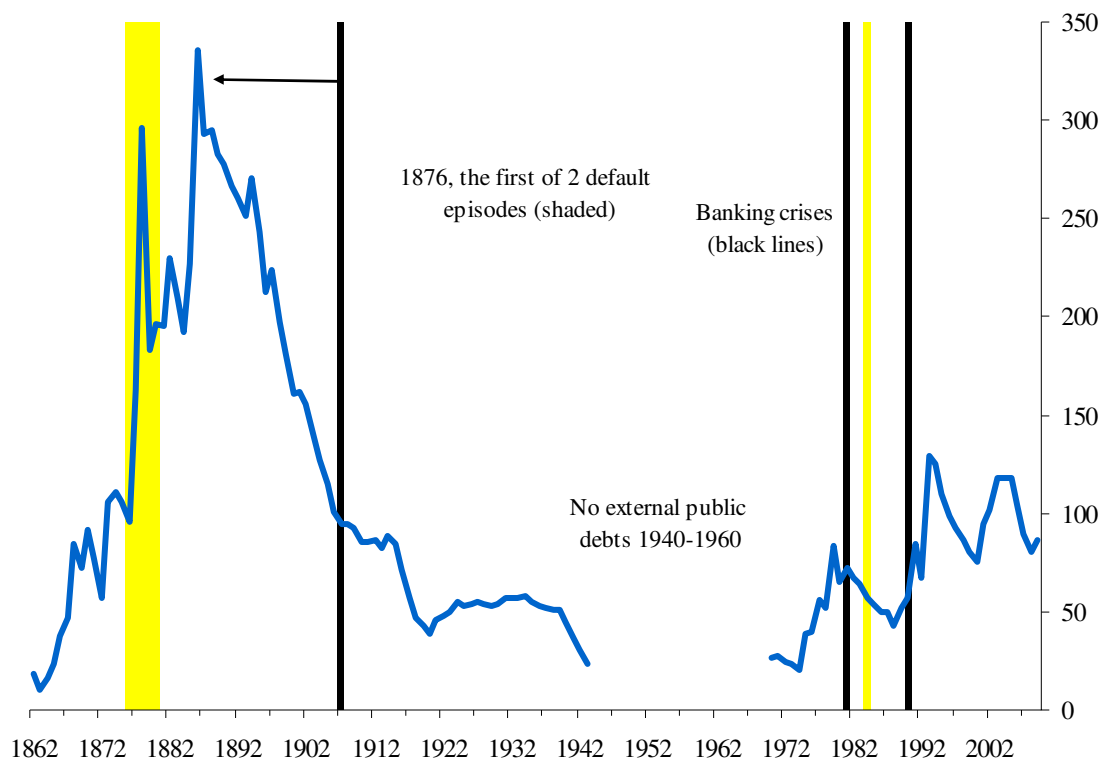
External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1826-1845	20	1999	1981	n.a.	57.8	13.9	1983(2.1)
1868-1890	4		1998				1987(6.0)
1894-1898	1						1999(6.3)
1900-1904	5						
1906-1911	3						
1914-1924	9						
1929-1954							
1982-1995							
1999-2000							
2008							
Number of episodes:							
	10	1	2	0			
Memorandum item on IMF programs, 1952-2007							Total
Dates of programs							18
1961-1966, 1969-1970, 1983, 1985-1986, 1988-1989, 1991, 1994, 2000, 2003							

Figure 19b. Ecuador: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
 (debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Figure 20. Egypt: Public Debt, Default, and Banking Crises, 1862-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

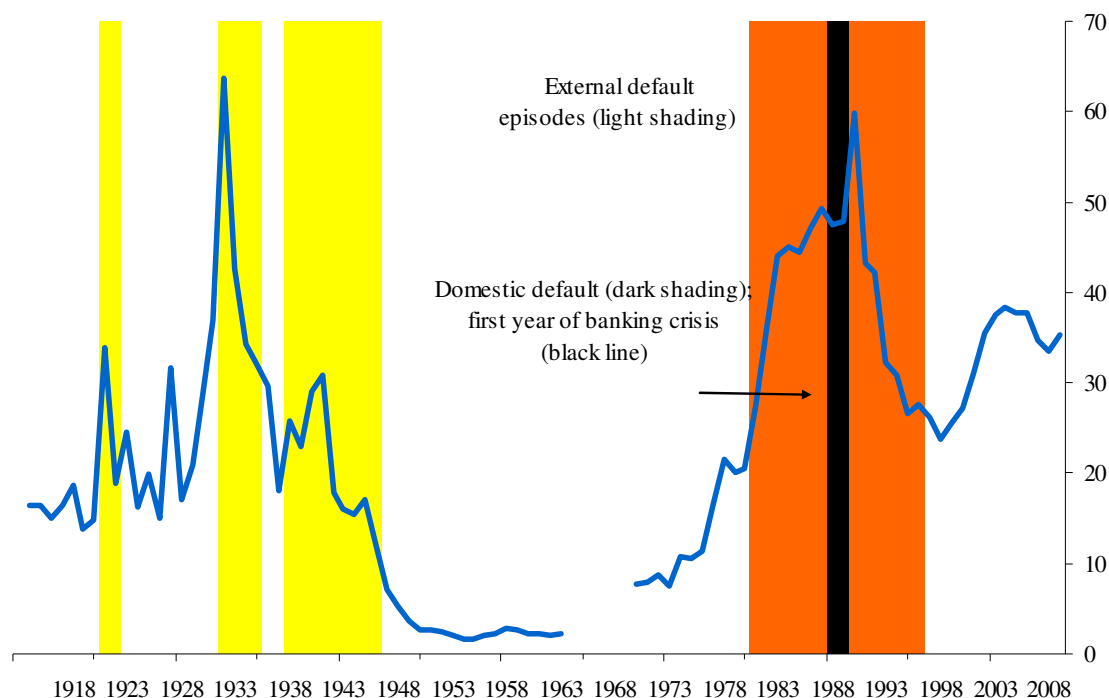
Notes: By 1945, the outstanding balance on Ottoman debts were either fully paid off or forgiven; no external debts are recorded through 1960.

Default, Banking Crises, Growth Collapses and IMF Programs: Egypt 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1876-1880	5	n.a.	1907	n.a.	2.9	5.2	1887(2.2)
1984	1		1981				1914(3.0)
			1990				1920(6.6)
Number of episodes:			3	0			1942(3.6)
		0					1991(3.2)
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1962, 1964, 1977-1978, 1987, 1991, 1993, 1996							8

Sources: Pre-World War II GDP from Yousef (2002).

Figure 21a El Salvador: Central Government (domestic plus external)  
Debt, Default and Banking Crises, 1914-2009  
(debt as a percent of GDP)

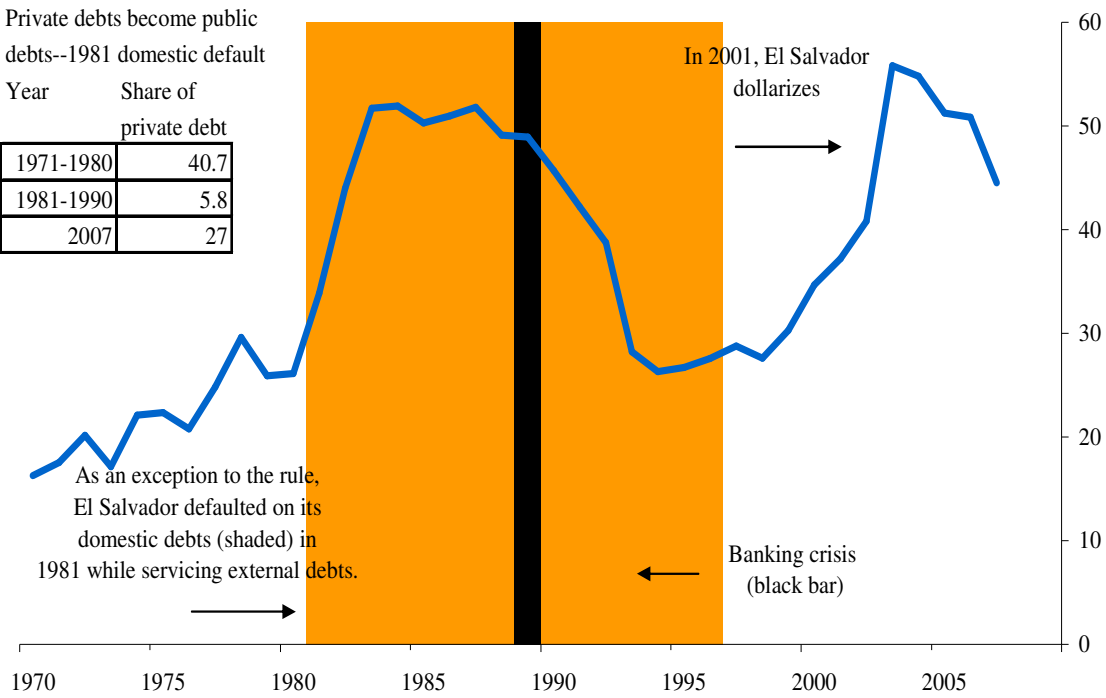


Sources: Reinhart and Rogoff (2009), and sources cited therein, and UNCTAD Handbook of Statistics.  
Notes: No GDP data is available prior to 1950, hence, we scale debt by exports.

Default, Banking Crises, Growth Collapses and IMF Programs: El Salvador, 1838-2009

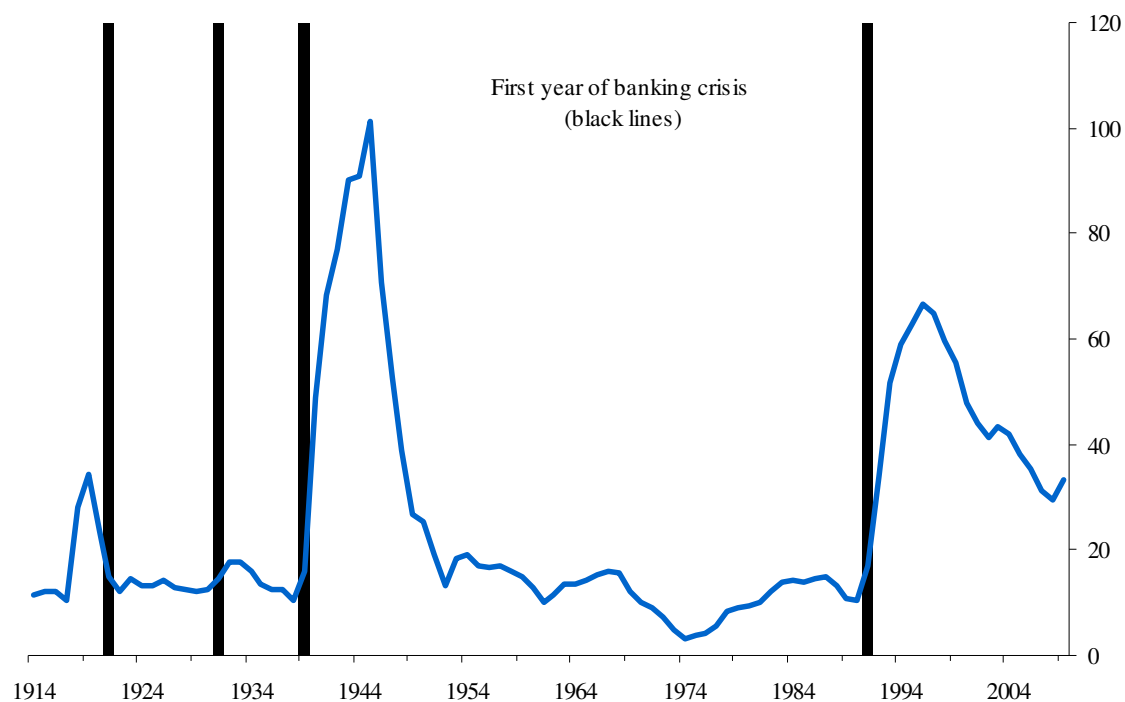
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	7 worst output collapses year(decline)
1828-1860	33	1981-1996	1989	n.a.	22.7	3.5	1927(12.1)
1898	1						1931(10.1)
1921-1922	3						1932(10.2)
1932-1935	11						1938(7.1)
1938-1946	21						1949(9.2)
Number of episodes:							1980(8.6)
5		1	1	0			1982(6.3)
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1958-1963, 1965, 1967, 1969-1970, 1972, 1980, 1982, 1990, 1992-1993, 1995, 1997-1998, 2009							20

Figure 21b. El Salvador: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
 (debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Figure 22a. Finland: Central Government (domestic plus external) Debt and Banking Crises, 1914-2009 (debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

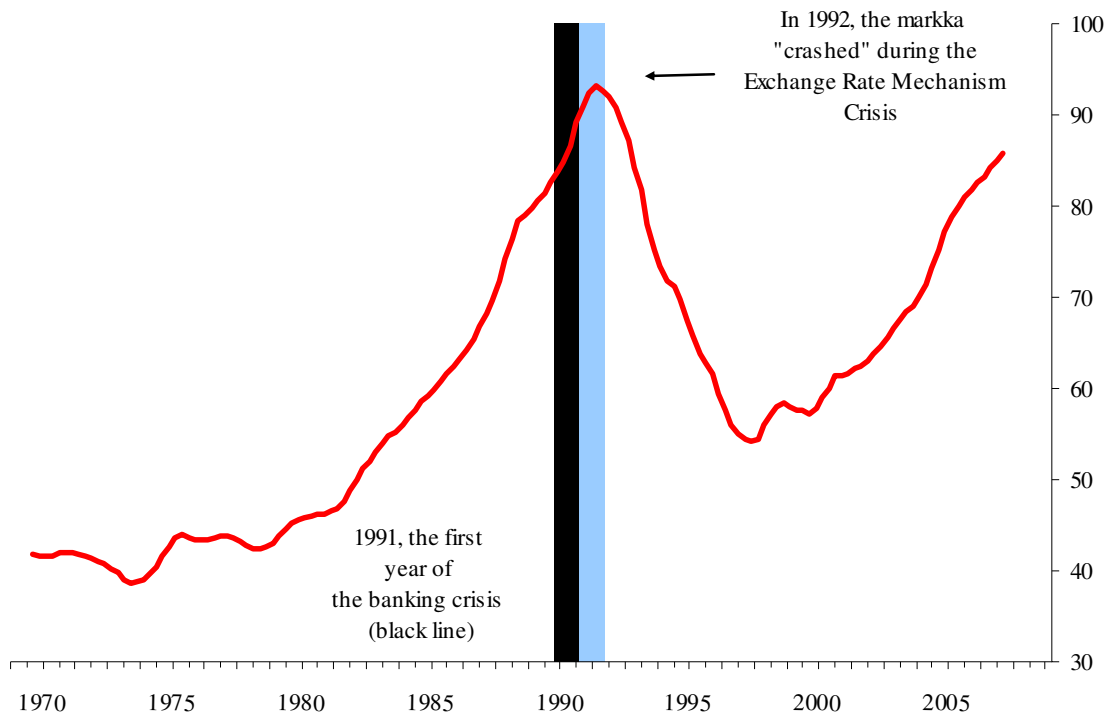
Default, Banking Crises, Growth Collapses and IMF Programs: Finland, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	n.a.	1900 1921 1931 1939 1991	n.a.	n.a.	7.5	1862(5.4) 1867(8.0) 1931(2.4) 1991(6.2) 2009(6.4)
Number of episodes:							
0		0	5	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs 1952, 1967, 1975							3

<sup>1</sup>Excludes World Wars I and II.



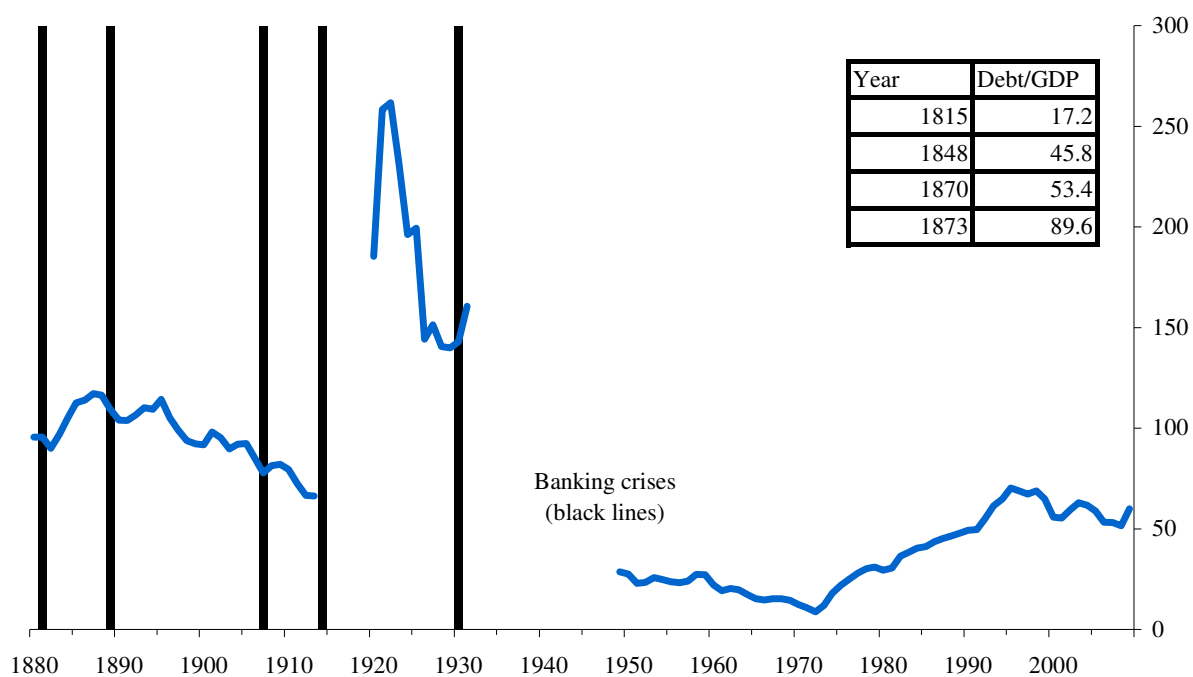
Figure 22b. Finland Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 23. France: Central Government (domestic plus external) Debt and Banking Crises, 1880-2009 (debt as a percent of GDP)



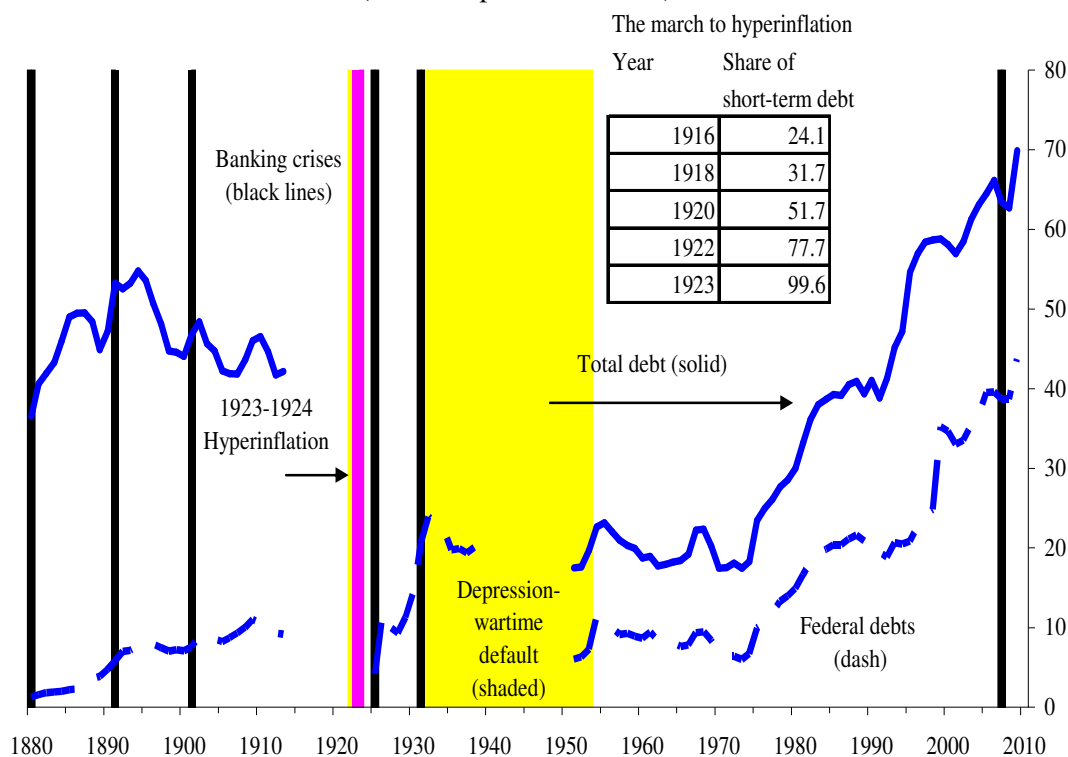
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: France, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	6 worst output collapses year(decline) <sup>1</sup>
1812.	n.a.	n.a.	1802 1805 1848 1881 1889 1907 1914 1930 1994	n.a.	0.5	5.7	1848(6.1) 1859(6.5) 1870(7.6) 1876(8.2) 1931(6.0) 1932(6.5)
Number of episodes:					0	10	0
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total	
1956, 1958, 1969						3	

<sup>1</sup>Excludes World Wars I and II. There are a couple of additional output declines comparable in magnitude to those shown in the latter 19<sup>th</sup> century.

Figure 24a. Germany: Federal and Total Government (domestic plus external) Debt, Default, Hyperinflation, and Banking Crises, 1880-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein.  
Notes: Only systemic banking crises are shown.

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Germany, 1800-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
1807	1	1948	1857	1923-1924	12.9	9.5	1919(19.5)
1812	1		1880				1923(16.9)
1850	1		1891				1931(7.6)
1932-1953	22		1901				1932(7.5)
			1925				1946(52.6)
			1931				2009(4.9)
			1977				
			2007				
Number of episodes:							
4		1	8	1			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs							0
None							0

<sup>1</sup>Excludes World Wars I and II.

Notes: Summary of private forecasts for 2009 in *italics*.

Figure 24b. Germany: Public and Private Capital Inflows from the United Kingdom  
and Banking Crises, 1870-1912  
(capital flows as a percent of exports, three-year sum)

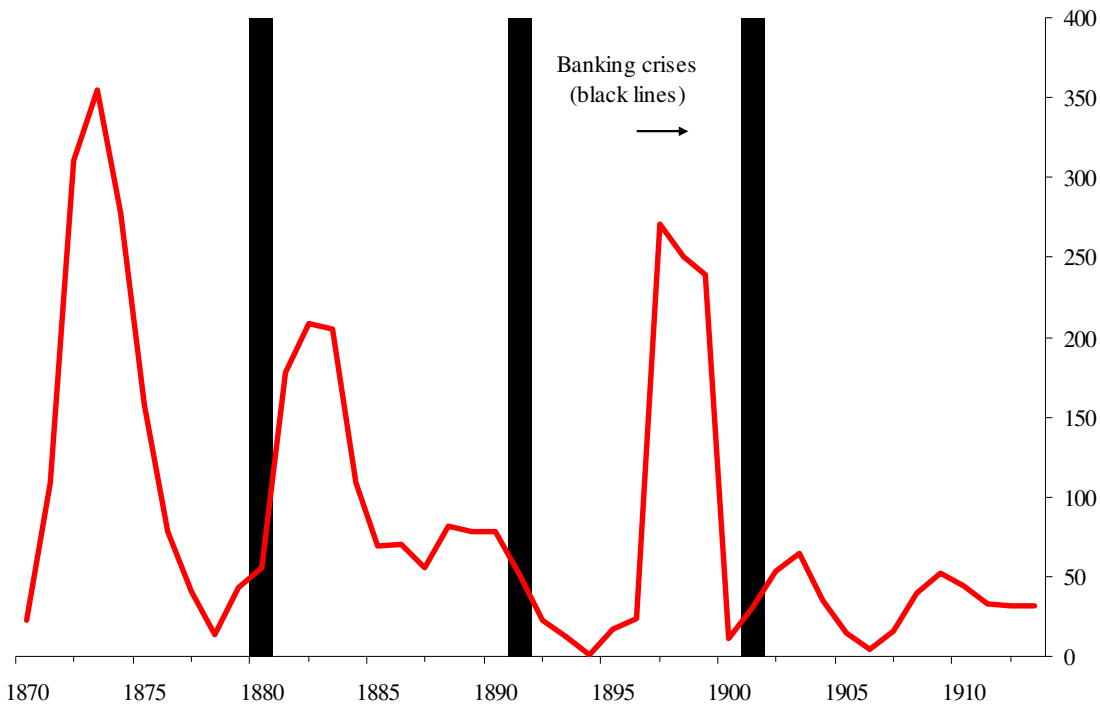
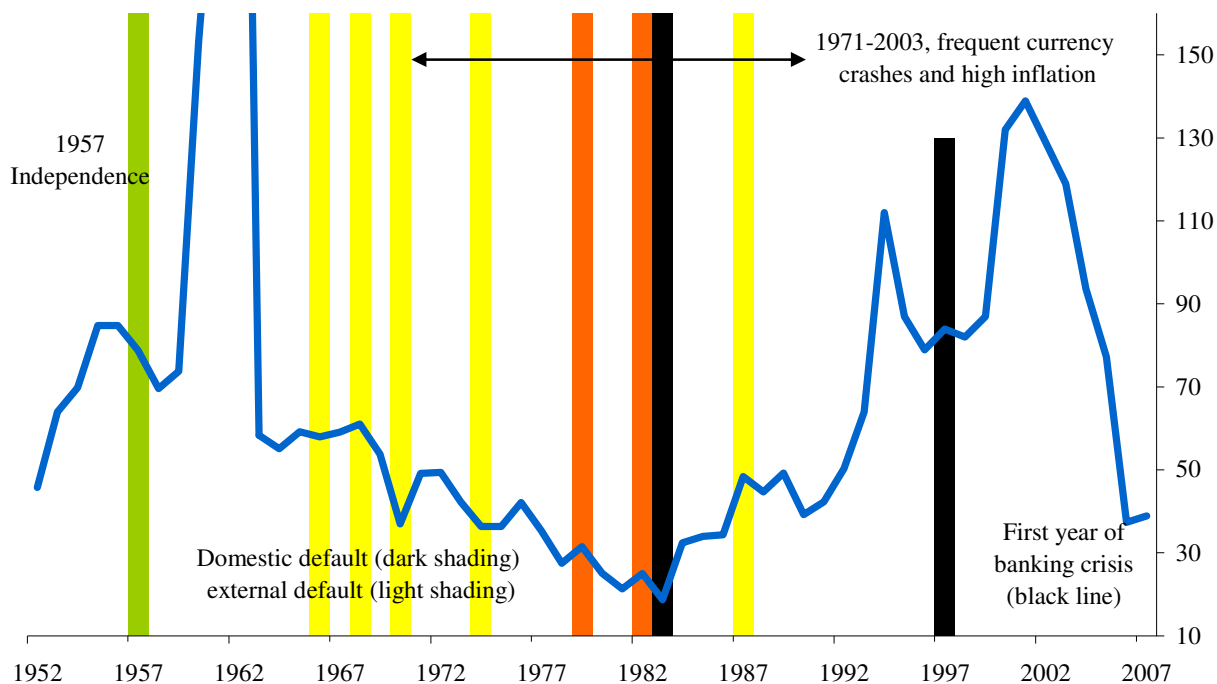


Figure 25. Ghana: Total Public (domestic and external) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

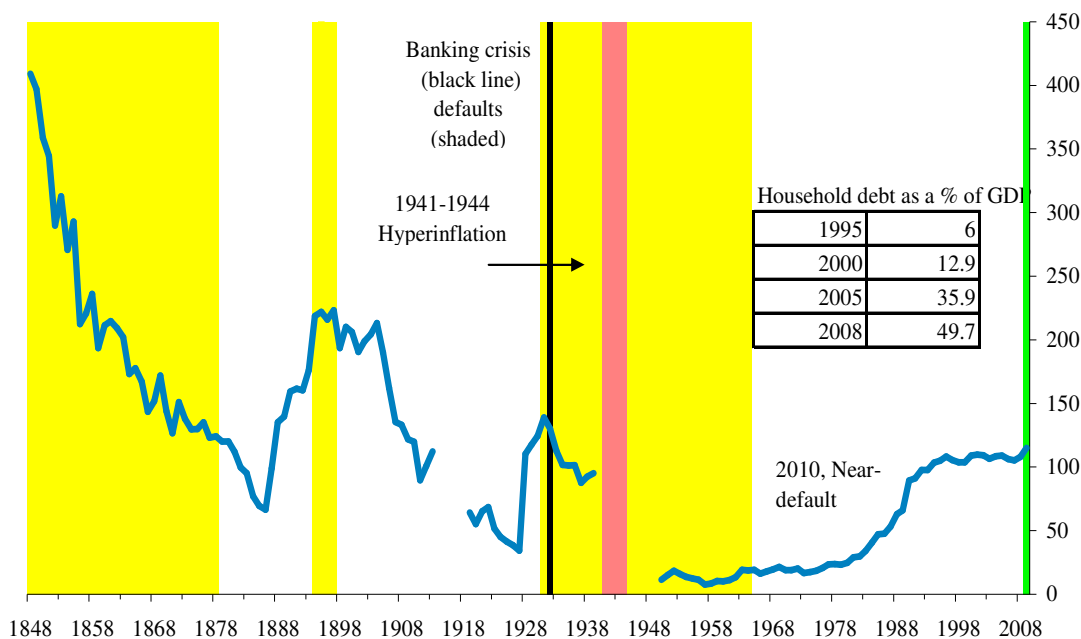


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Ghana, 1957-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1966	1	1979	1982	n.a.	9.4	45.3	1955(6.4)
1968	1	1982	1997				1975(12.5)
1970	1						1982(6.9)
1974	1						1983(4.6)
1987	1						
Number of episodes:							
5		2	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1966-1969, 1979, 1983, 1984, 1986, 1987(2), 1988, 1995, 1999, 2003							14

Figure 26a. Greece: Central Government (domestic plus external) Debt, Default, Hyperinflation, and Banking Crises, 1848-2009 (debt as a percent of GDP)



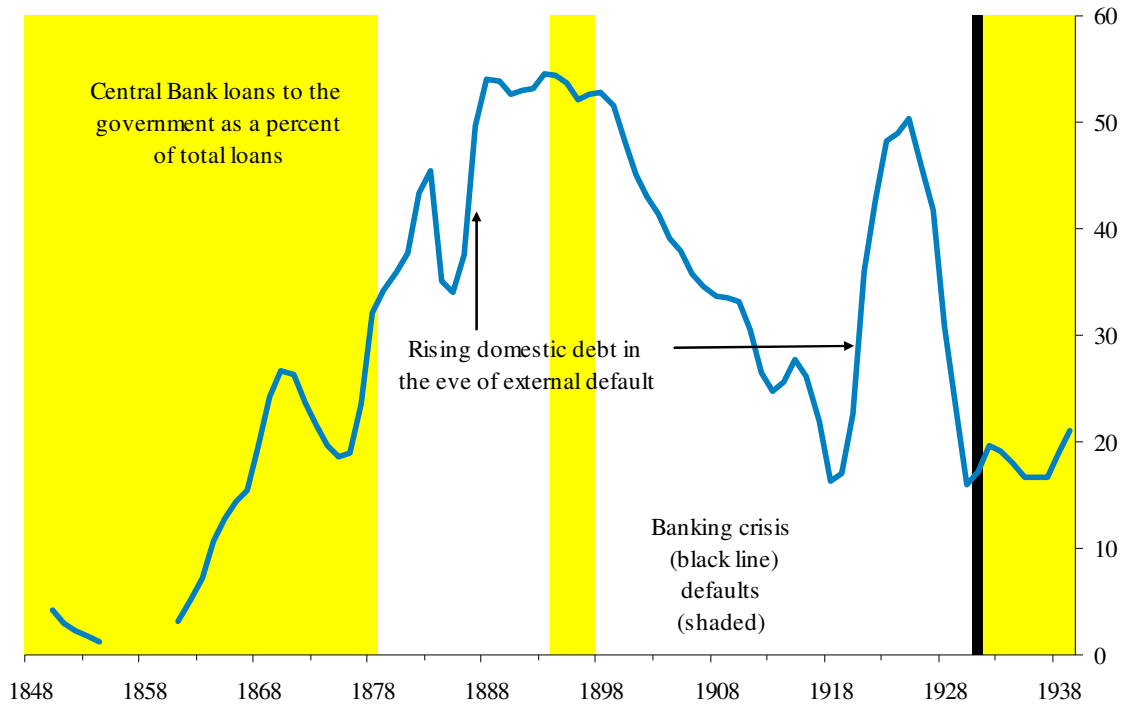
Sources: Lazaretou (2005), Levandis (1944), Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, Hyperinflation, and IMF Programs:  
Greece, 1829-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyperinflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
1826-1842	17	1932-1951	1931	1941-1944	48.1	12.7	1847(14.0)
1843-1859	17		1991				1852(14.7)
1860-1878	19						1856(11.7)
1894-1897	4						1891(11.5)
1932-1964	33						1919(17.7)
Number of episodes:							
5		1	2	1			
Memorandum item on IMF programs, 1952-2007							
Dates of programs							Total
None							0

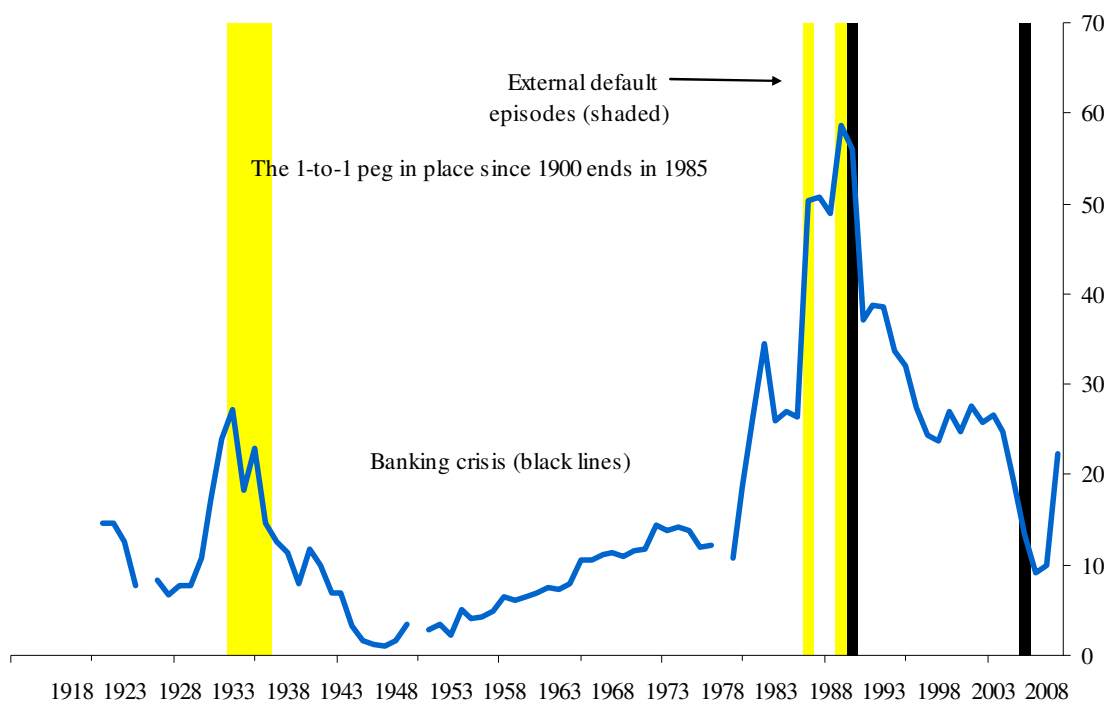
<sup>1</sup>Excludes World Wars I and II. Source: Kostelenos et. al. (2007)

Figure 26b. Greece: Government Domestic Debt, Default, and Banking Crises, 1884-1939  
(loans to the government as a percent of Central Bank loans)



Sources: Lazaretou (2005), Levandis (1944), Reinhart and Rogoff (2009) and sources cited therein.

Figure 27. Guatemala: Central Government (domestic plus external) Debt, Default, and Devaluation, 1920-2009 (debt as a percent of GDP)



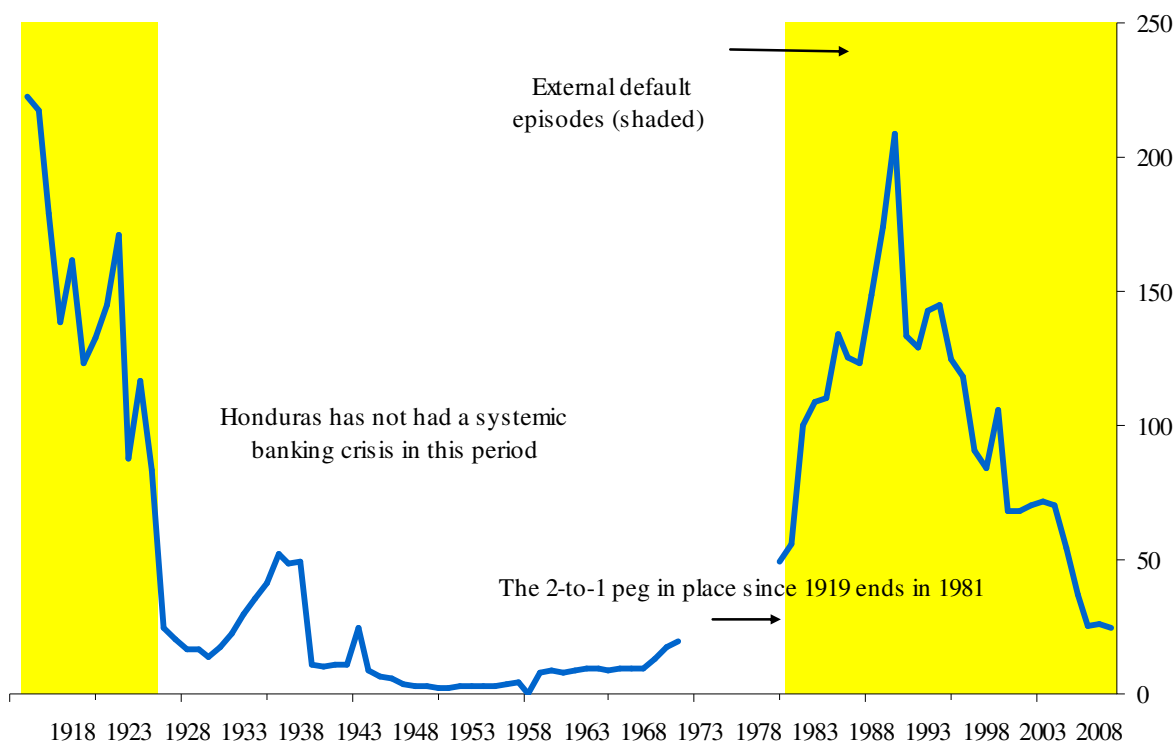
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Guatemala, 1838-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1828-1856	29	n.a.	1991	n.a.	31.4	3.5	1922(5.6)
1876-1888	13		2001				1931(6.7)
1894	1		2006				1932(12.5)
1899-1913	14						1943(33.3)
1933-1936	4						1982(3.5)
1986	1						
1989	1						
Number of episodes:							
7		0	3	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1960-1961, 1966-1970, 1972, 1981, 1983, 1988, 1992, 2002-2003, 2009							15



Figure 28. Honduras: Central Government (domestic plus external) Debt, Default, and Devaluation, 1914-2009 (debt as a percent of GDP)

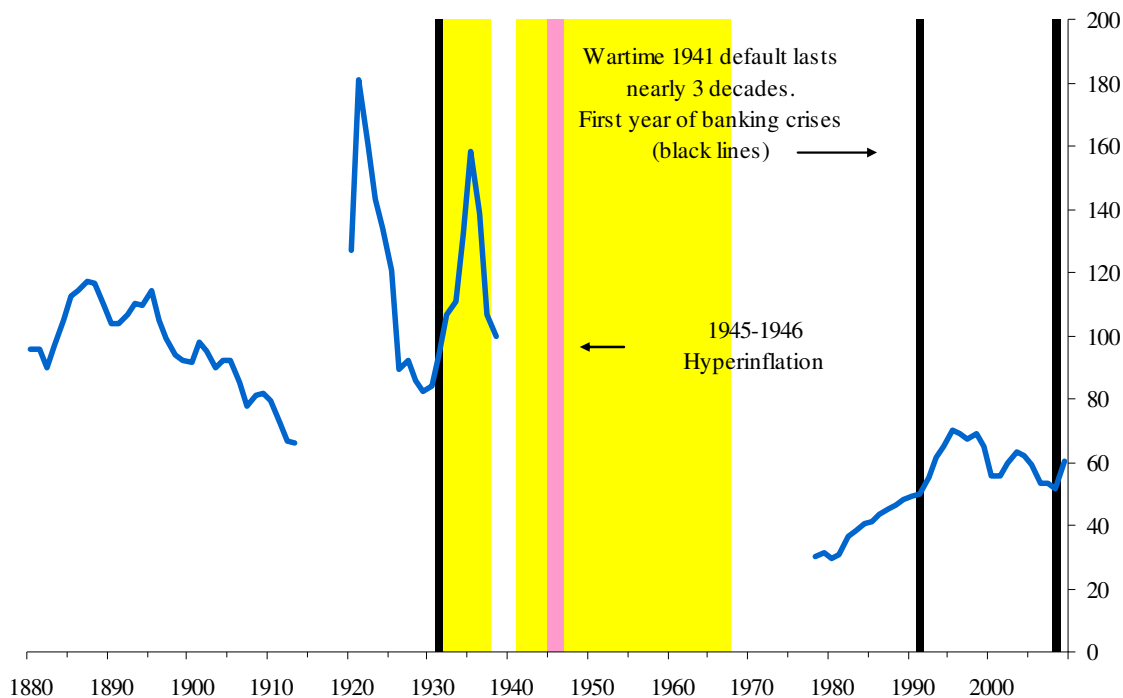


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Honduras, 1838-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1828-1867	40	n.a.	1999	n.a.	65.1	3.5	1924(6.6)
1873-1925	53		2001				1932(10.4)
1981-2009	29						1933(6.2)
Number of episodes:							1942(8.6)
3		0	2	0			1954(5.7)
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1957, 1959-1964, 1966, 1968-1969, 1971-1972, 1979, 1982, 1990, 1992, 1999, 2004, 2008							19

Figure 29. Hungary: Central Government (domestic plus external) Debt, Default, Hyperinflation, and Banking Crises, 1880-2009 (debt as a percent of GDP)



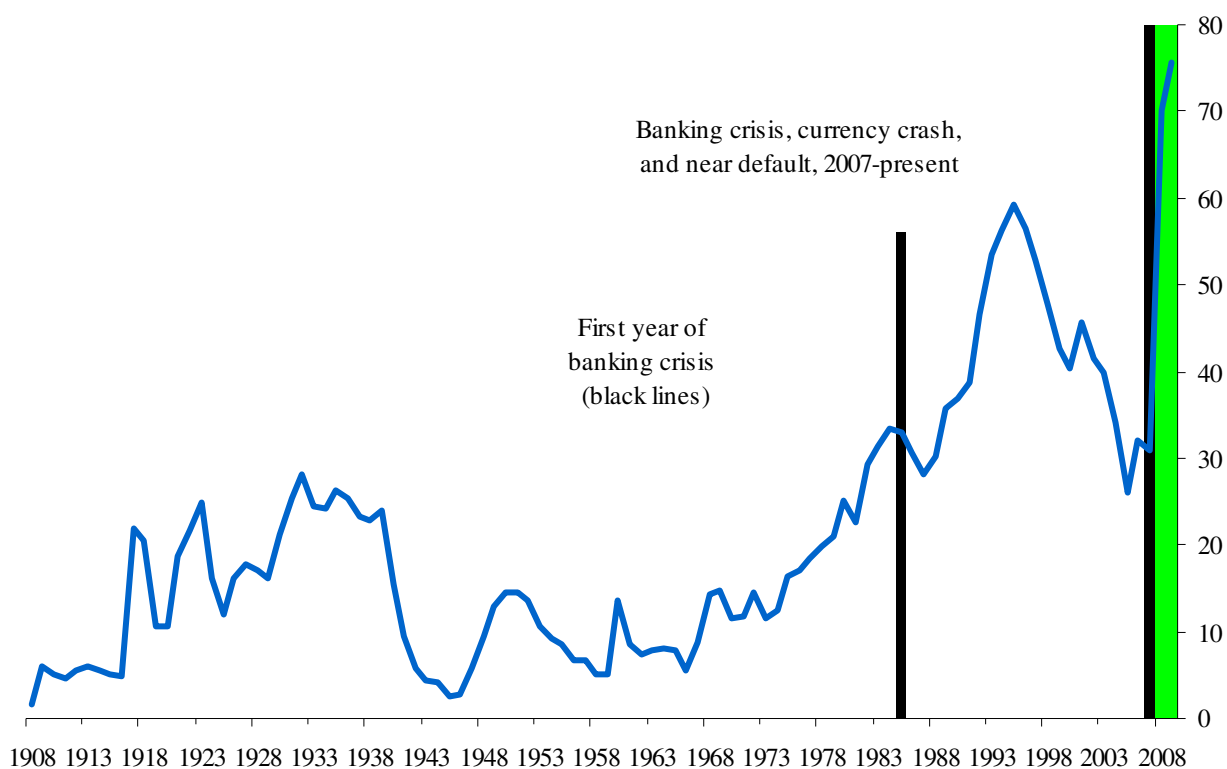
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Hungary, 1918-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyperinflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1932-1937	7	n.a.	1931	1945-1946	37.0	14.1	1931(4.8)
1941-1967	27		1991				1990(6.7)
			2008				1991(11.9)
							2009(6.7)
Number of episodes:							
2		0	3	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1982, 1984, 1988, 1990-1991, 1993, 1996, 2008							8

Notes: Summary of private forecasts for 2009 in *italics*.

Figure 30a. Iceland: Central Government (domestic plus external) Debt and Banking Crises, 1908-2009  
(debt as a percent of GDP)



Sources: Historical Statistics of Iceland (2010), Reinhart and Rogoff (2009) and sources cited therein

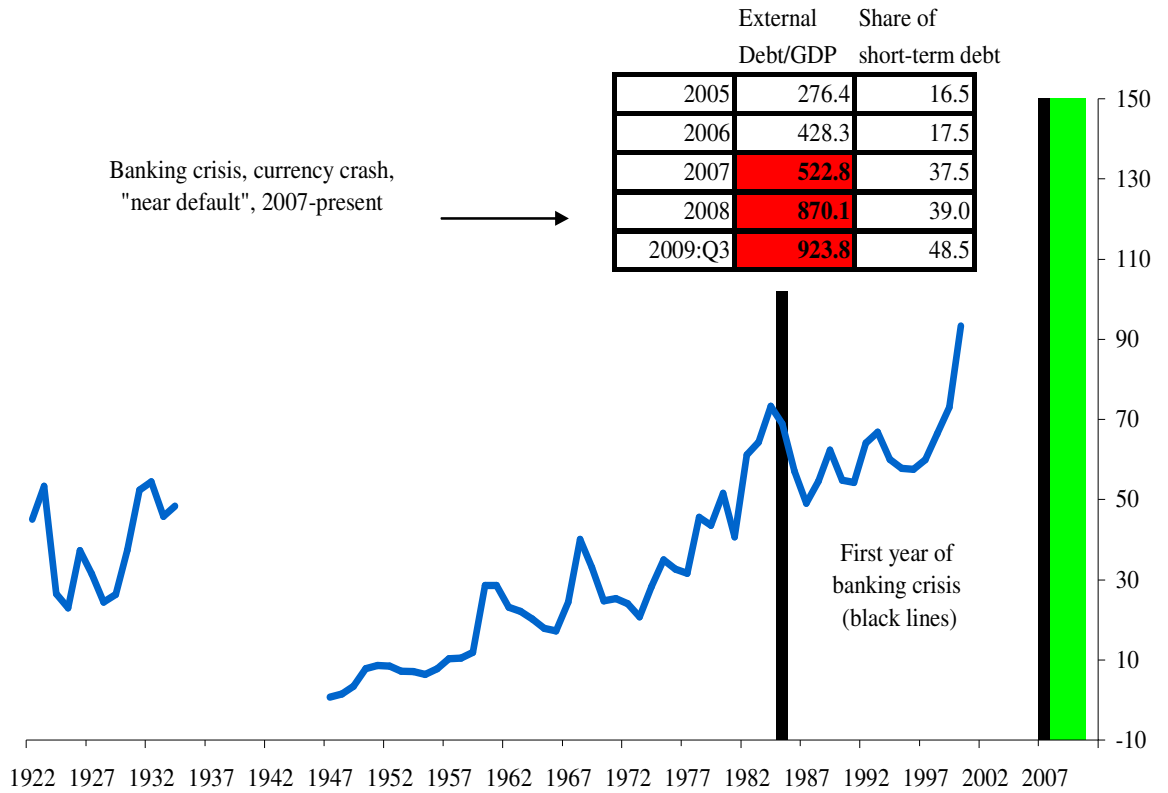
Default, Banking Crises, Growth Collapses and IMF Programs: Iceland, 1918-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	n.a.	1985	n.a.	n.a.	25.0	1916(11.7)
2007-2010	"near" 3		2007				1918(6.2)
							1920(15.2)
							1968(5.6)
							2009(8.5)
Number of episodes:							
0		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total	
1960, 2008						2	

<sup>1</sup> The reported declines for 1916, 1918, and 1920 are on a per capita basis (Historical Statistics of Iceland, 2010).

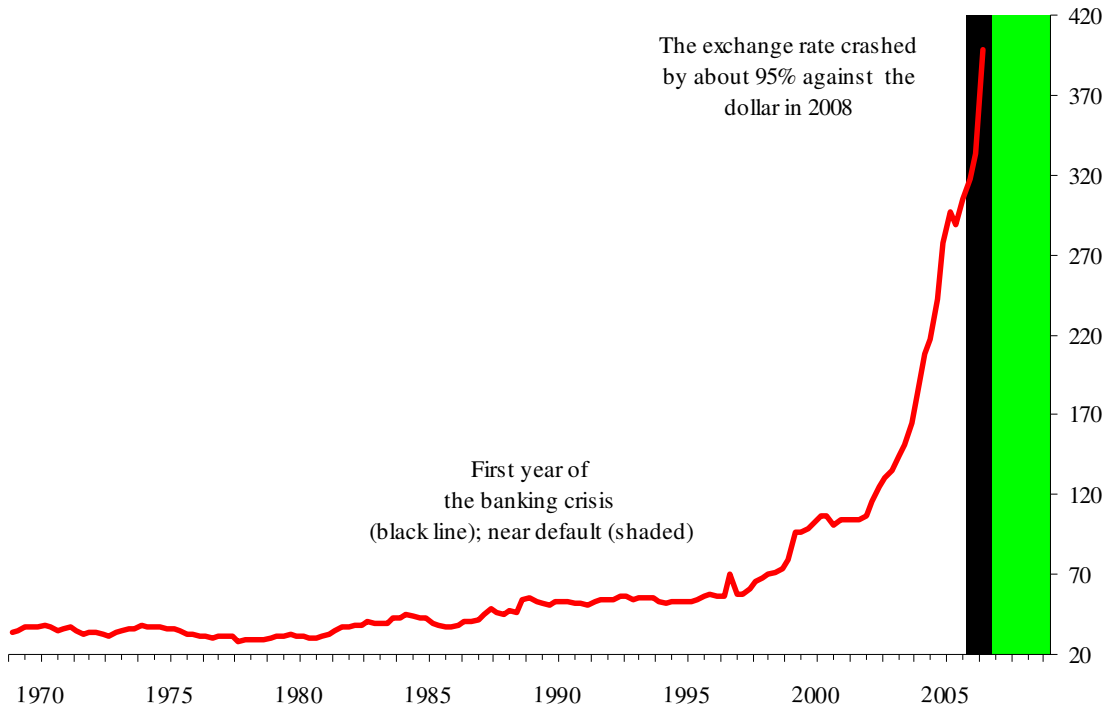
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 30b. Iceland: External (public plus private) Debt and Banking Crises, 1922-2009  
 (debt as a percent of GDP)



Sources: Historical Statistics of Iceland (2010), Reinhart and Rogoff (2009) and sources cited therein.

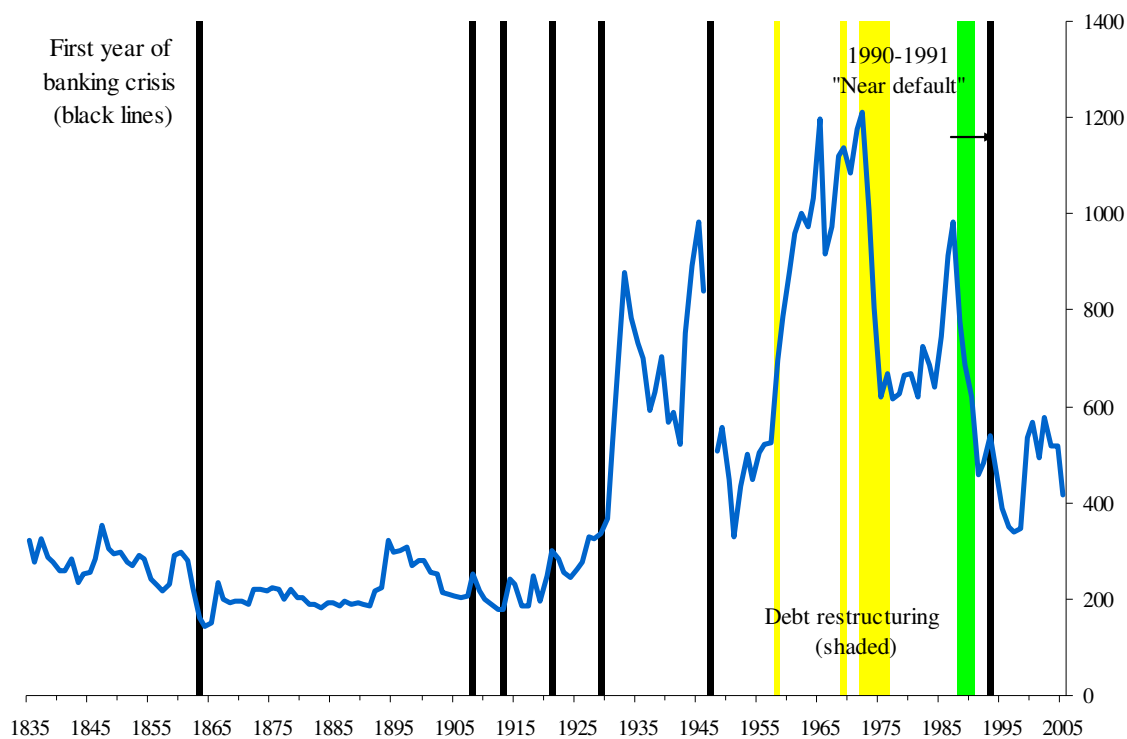
Figure 30c. Iceland Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 31. India: Public (domestic plus external) Debt Reschedulings, Near-default, and Banking Crises, 1835-2009  
(debt as a percent of exports)



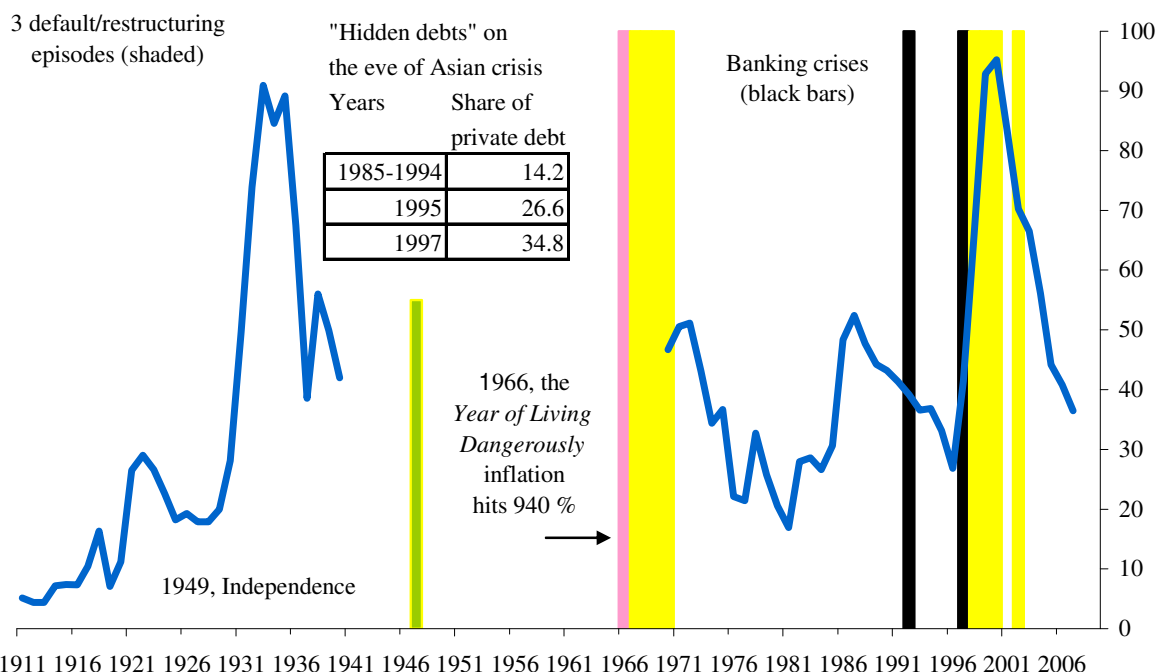
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: India, 1835-2009  
(calculations since independence—1947--reported)

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1958	1	n.a.	1863	n.a.	11.1	3.2	1891(9.2)
1969	1		1908				1899(7.8)
1972-1976	5		1914				1918(12.8)
<i>1989-1990</i>			1921				1920(7.9)
Number of episodes:			1929				1947(17.2)
			1947				
			1993				
3		0	7	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1957, 1962-1963, 1965, 1981, 1991 (2)							7

Notes: Near default (*italics*) not counted in total.

Figure 32a. Indonesia: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1911-2009  
(debt as a percent of GDP)



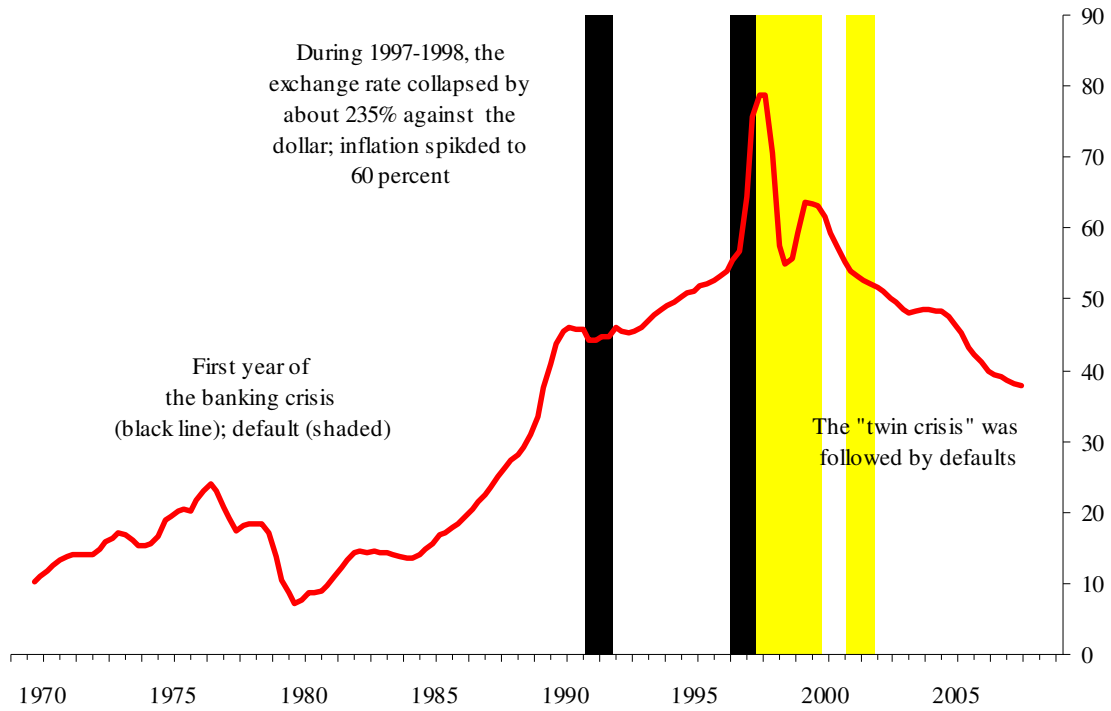
Sources: Creutzberg, P. (1976), Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Indonesia, 1800-2009

(calculations since independence—1949--reported)

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1966-1970	5	n.a.	1992	1966	14.8	31.1	1931(7.1)
1998-2000	3		1997				1958(4.7)
2002	1						1963(4.2)
							1967(4.4)
							1998(13.1)
Number of episodes:							
3		0	3	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1961, 1963, 1968-1973, 1997-1998, 2000							11

Figure 32b. Indonesia Banking Survey: Domestic Credit, Default and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)

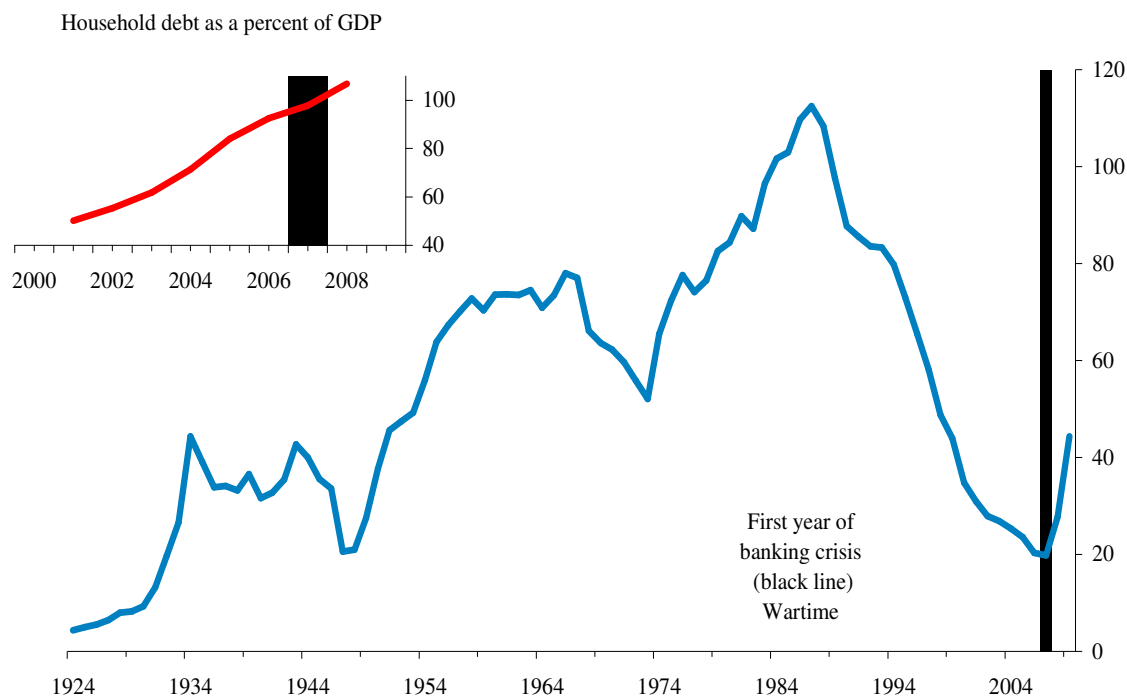


Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.



Figure 33a. Ireland: Central Government (domestic plus external) Debt and Banking Crises, 1929-2009  
(debt as a percent of GDP)



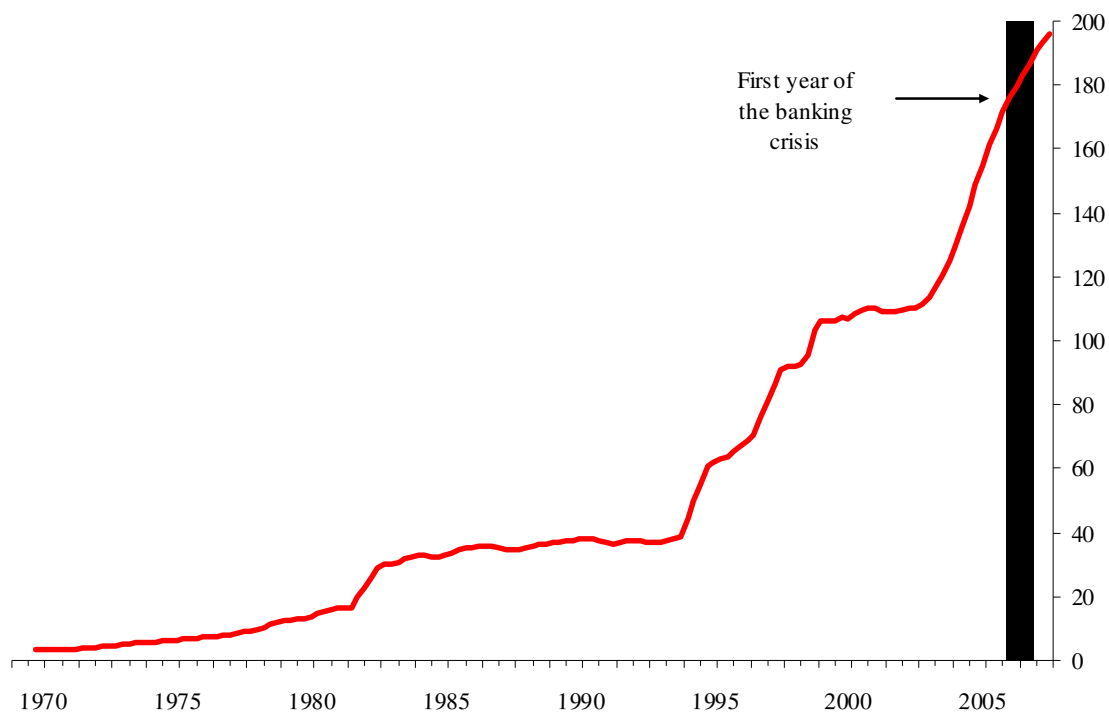
Sources: National Treasury Management Agency, Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Ireland, 1919-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
n.a.	n.a.		1836 1856	n.a.	n.a.		1933(2.5) 1937(3.8) 1958(2.1) 2008(3.0) 2009(7.5)
Number of episodes:							
0		0	4	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs							0
None							0

Notes: Summary of private forecasts for 2009 in *italics*.

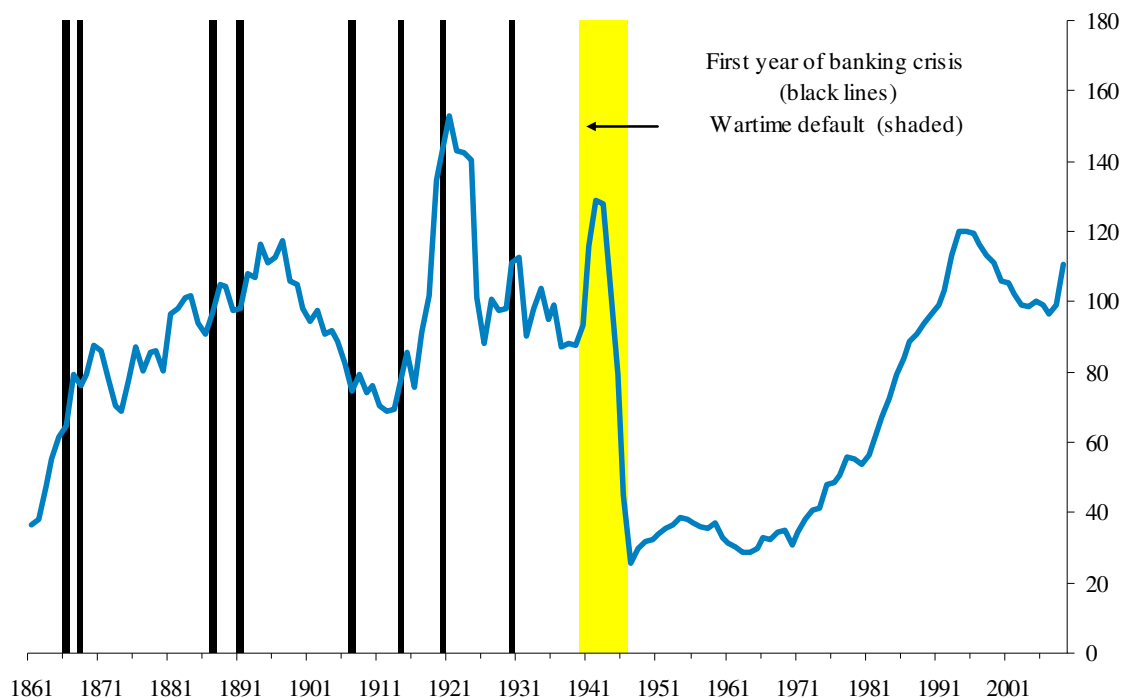
Figure 33b. Ireland Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 34. Italy: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1861-2009  
(debt as a percent of GDP)



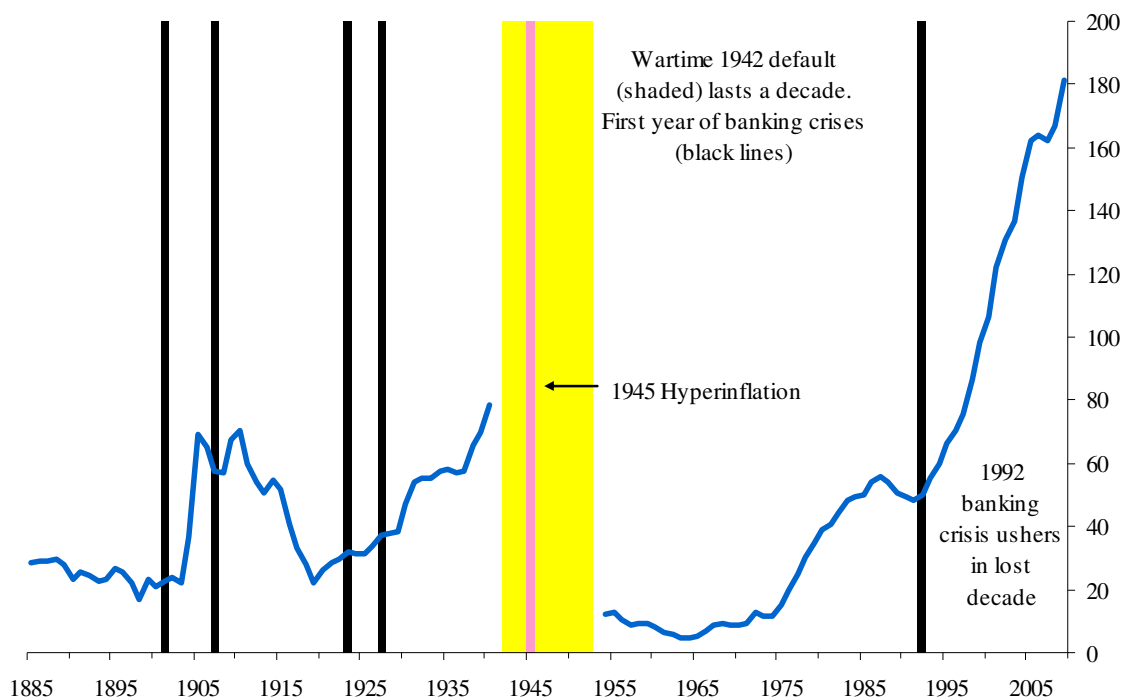
Sources: Francese and Pace (2008), Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Italy, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	7 worst output collapses year(decline) <sup>1</sup>
1940-1946	7	n.a.	1866 1887 1891 1893 1907 1914 1921 1930 1935 1990 2008	1944	3.3	10.5	1867(8.3) 1881(6.7) 1892(5.6) 1919(16.7) 1920(8.7) 1930(4.9) 2009(4.8)
Number of episodes:							
1		0	11	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs 1974, 1977							2

Notes: Summary of private forecasts for 2009 in *italics*.

Figure 35a. Japan: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1885-2009  
(debt as a percent of GDP)



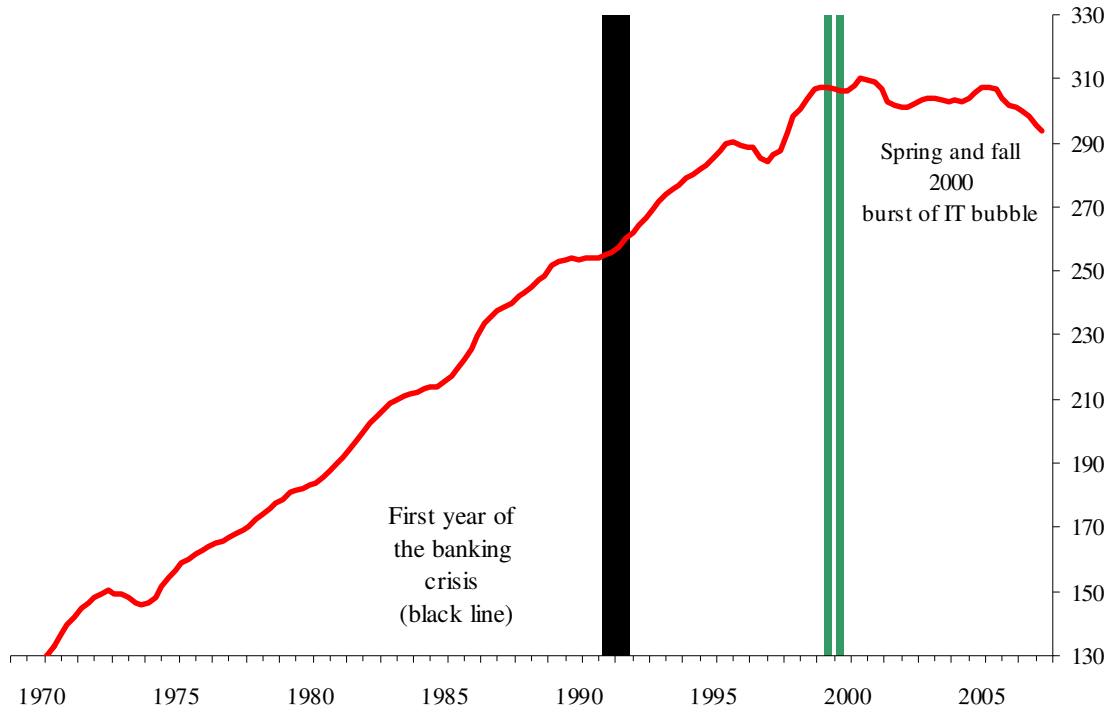
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Japan, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1942-1952	11	1946-1948	1872 1882 1901 1907 1917 1923 1927 1992	1945	5.2	11.0	1896(5.5) 1899(7.4) 1920(6.2) 1930(7.3) 2009(5.0)
Number of episodes:							
1		1	8	1			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs 1962,1964							2

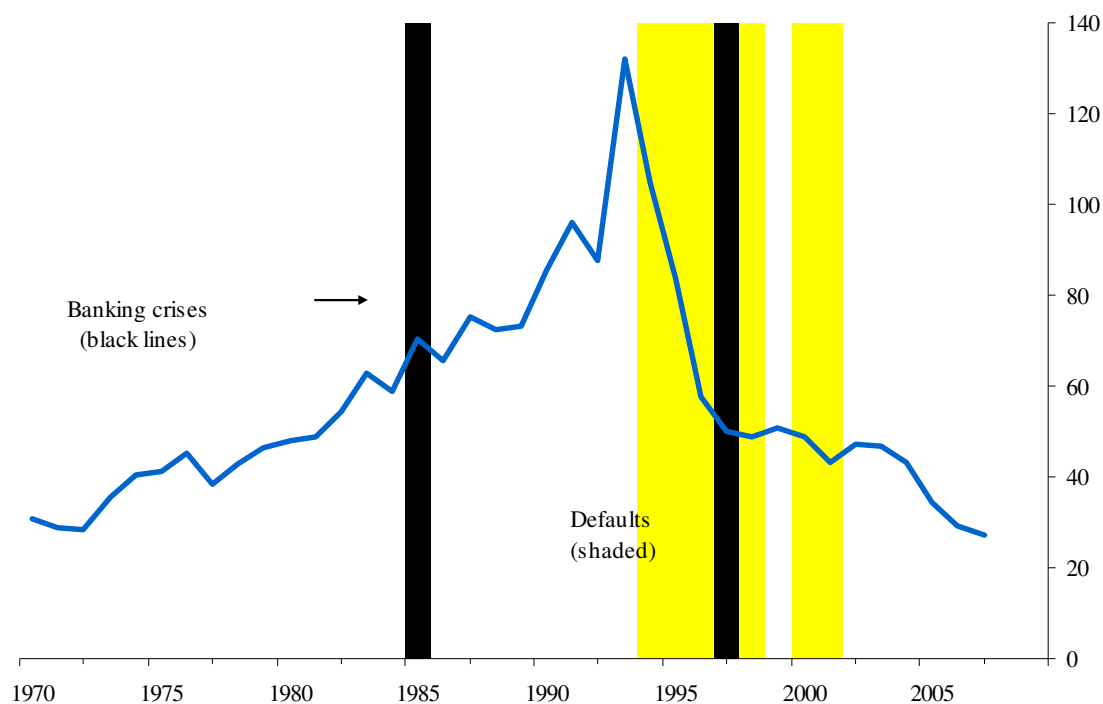
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 35b. Japan Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Figure 36. Kenya: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

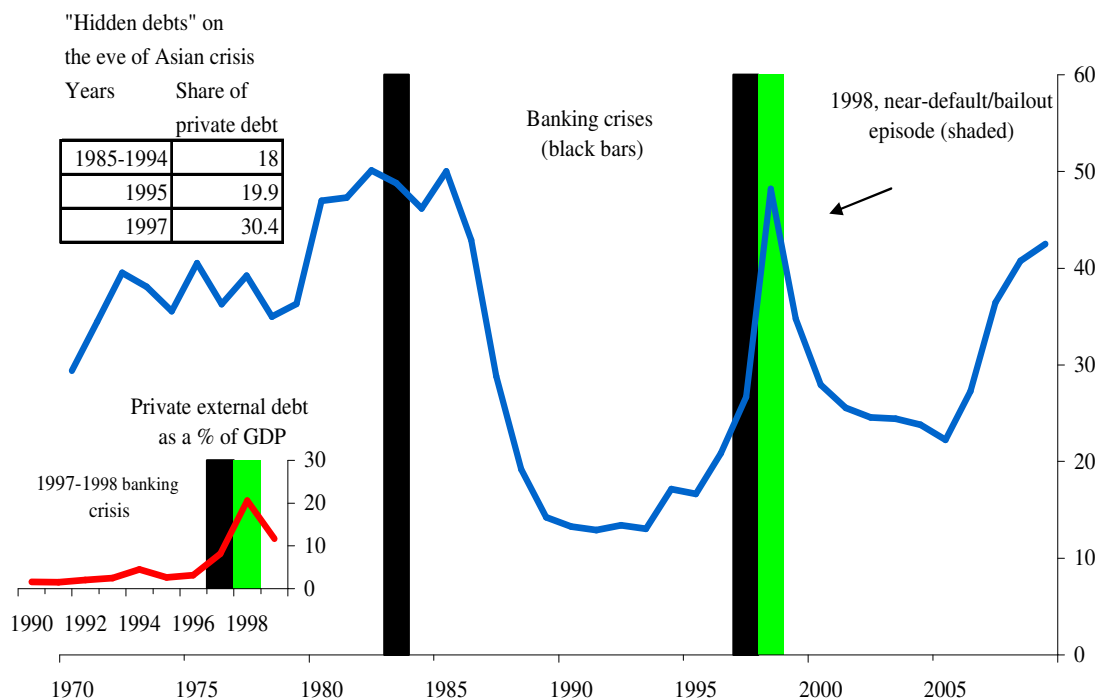


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Kenya, 1963-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline) <sup>1</sup>
1994-1998	5	n.a.	1985	n.a.	14.9	8.5	1952(11.1)
2000-2001	2		1996				1953(2.5) 1961(2.4)
Number of episodes:							
2		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1975, 1977-1980, 1982-1983, 1985, 1988(2), 1989, 1993, 1996, 2000, 2003							15

Figure 37. Korea: External (public plus private) Debt, Near-default, and Banking Crises, 1970-2009 (debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

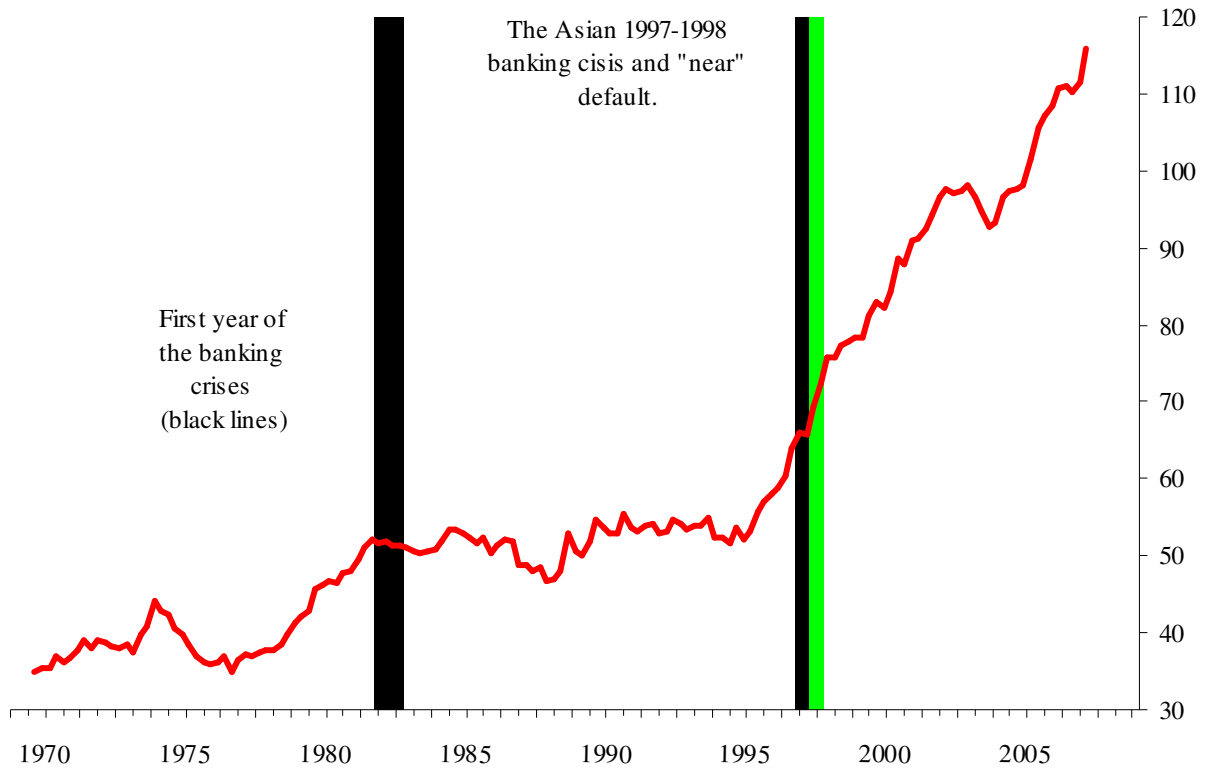
Default, Banking Crises, Growth Collapses and IMF Programs: Korea, 1945-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
<i>1997-1998</i>	2		1983 1985 1997	n.a.	0.0	15.4	1920(12.3) 1922(7.1) 1939(10.4) 1951(7.7) 1998(6.9)
Number of episodes:							
0	0	0	3	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1965-1975, 1977, 1980-1981, 1983, 1985, 1997							17

Notes: Near default (*italics*) not counted in total.

Sources: Pre-WWII real GDP, Bassino and van del Eng, (2006).

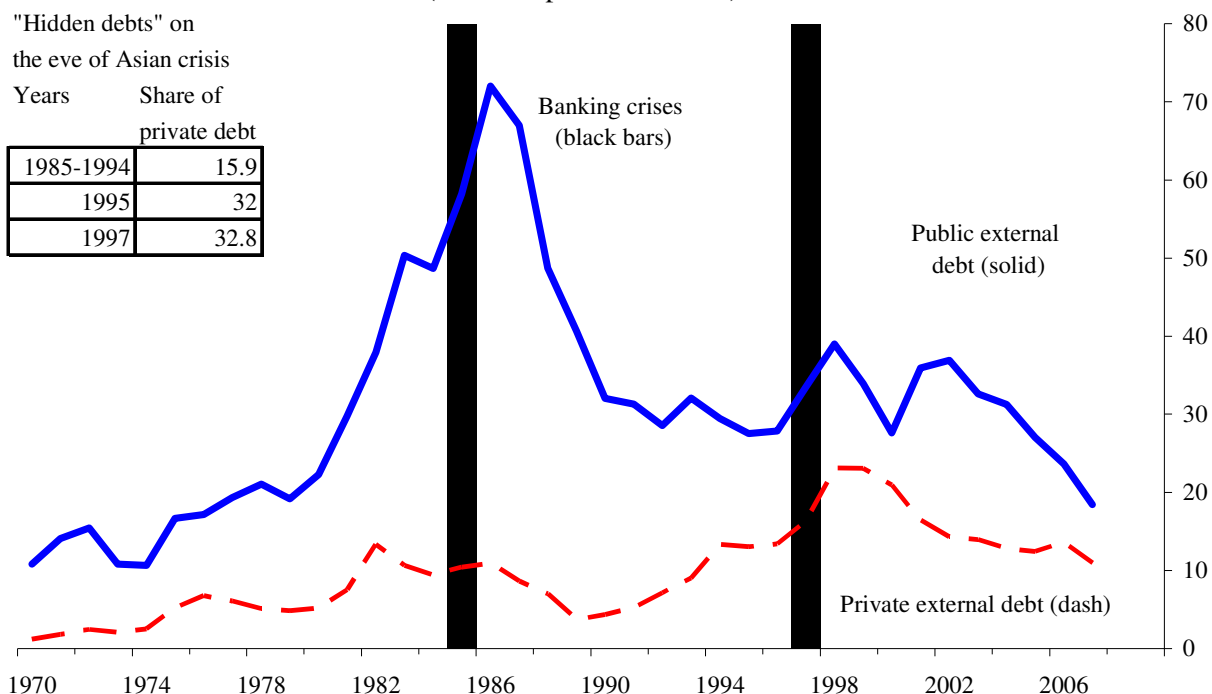
Figure 37b. Korea Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.



Figure 38a. Malaysia: External (public plus private) Debt, Near-default, and Banking Crises, 1970-2009 (debt as a percent of GDP)

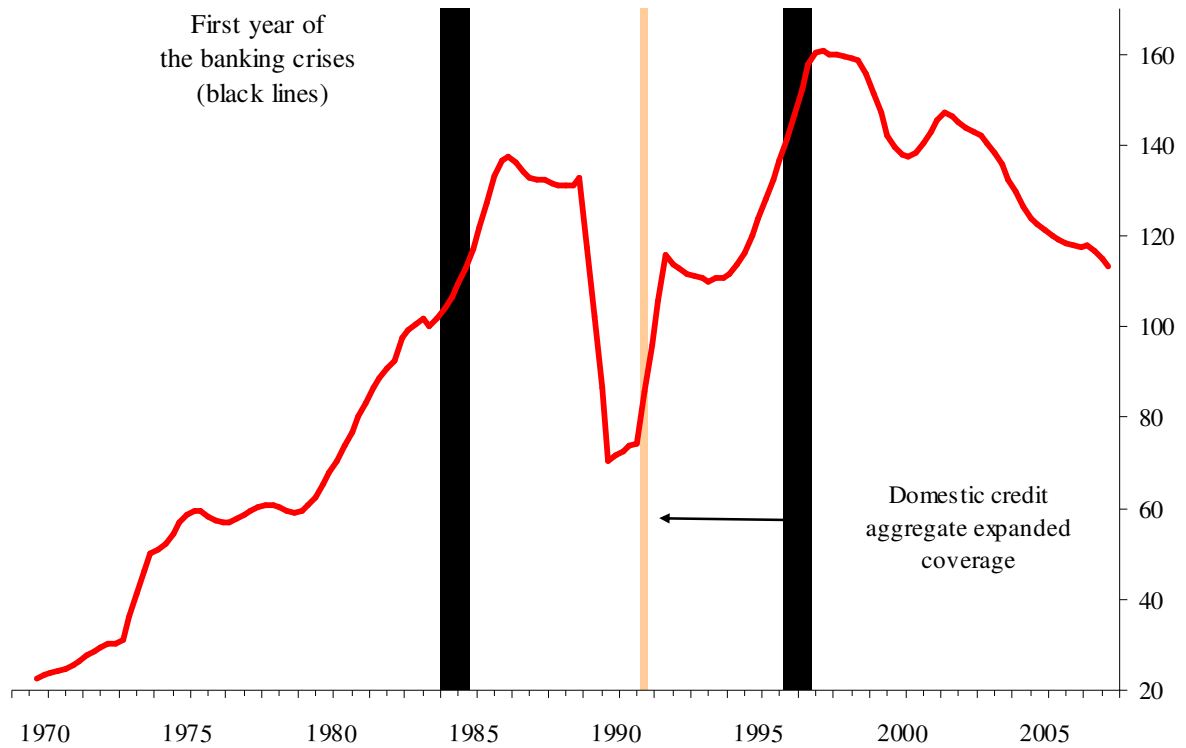


Default, Banking Crises, Growth Collapses and IMF Programs: Malaysia, 1963-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
n.a.	n.a.	n.a.	1985 1997	n.a.	0.0	0.0	1912(7.2) 1925(12.4) 1938(4.9) 1951(5.5) 1998(7.4)
Number of episodes:							
0		0	2	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs							0
None							0

Sources: Pre-WWII real GDP, Bassino and van del Eng, (2006).

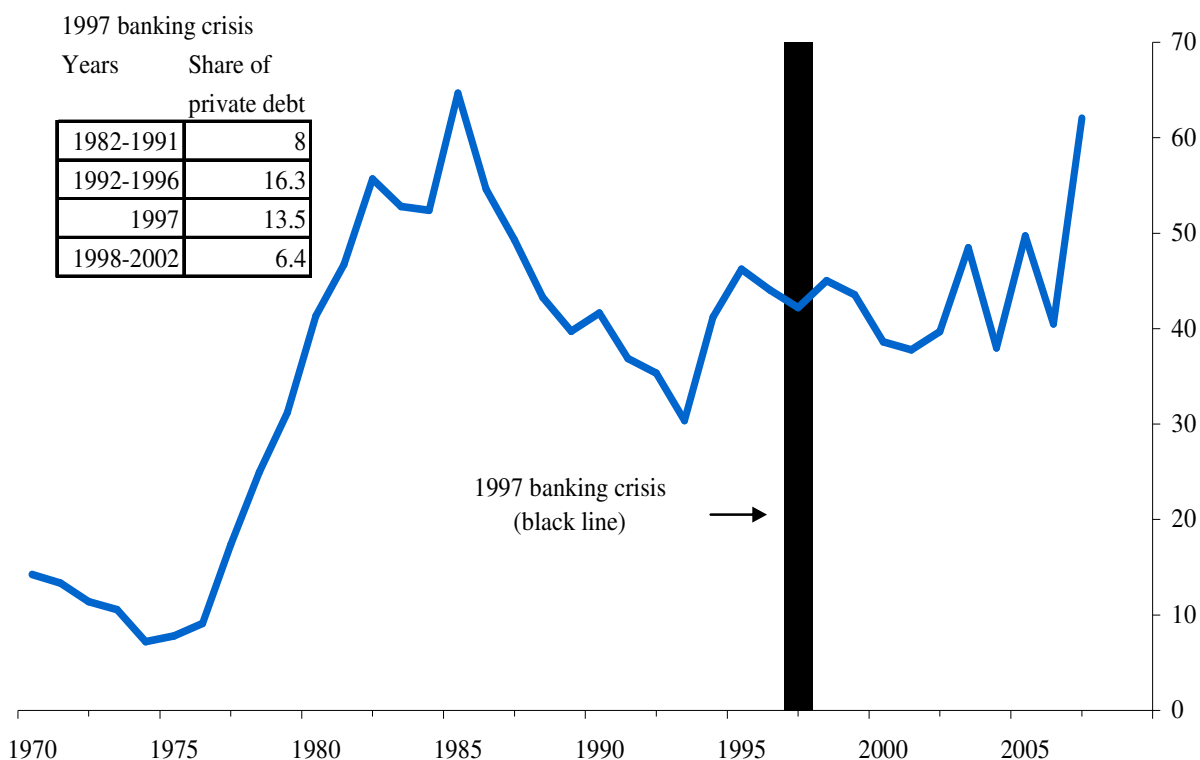
Figure 38b. Malaysia Banking Survey: Domestic Credit, Default and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 39. Mauritius: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

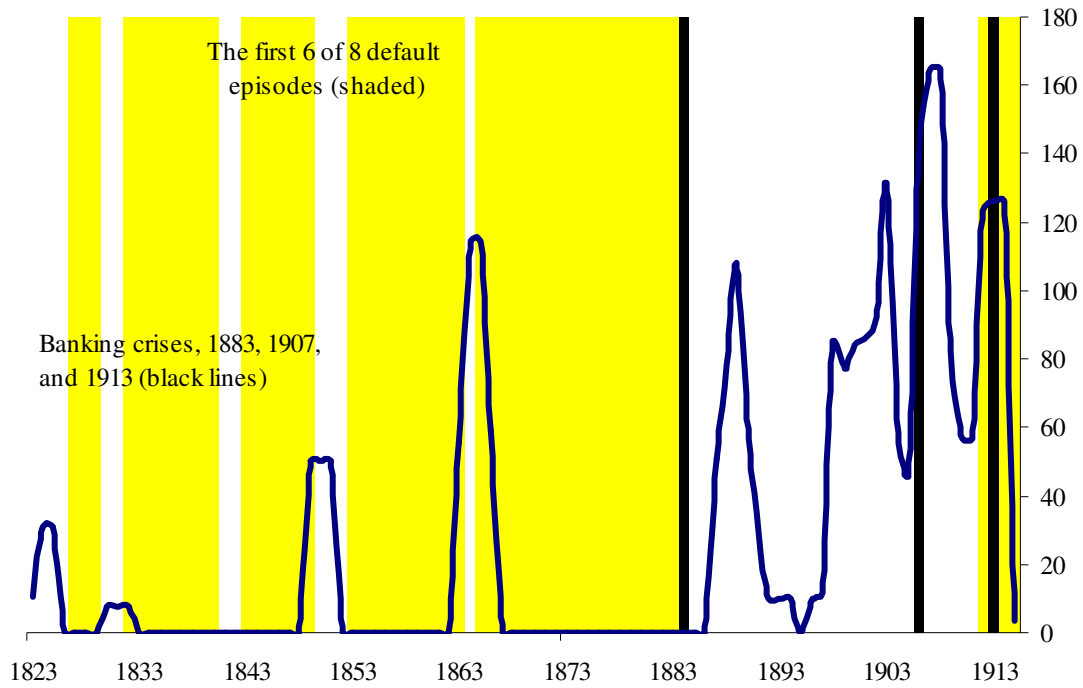


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Mauritius, 1968-2009

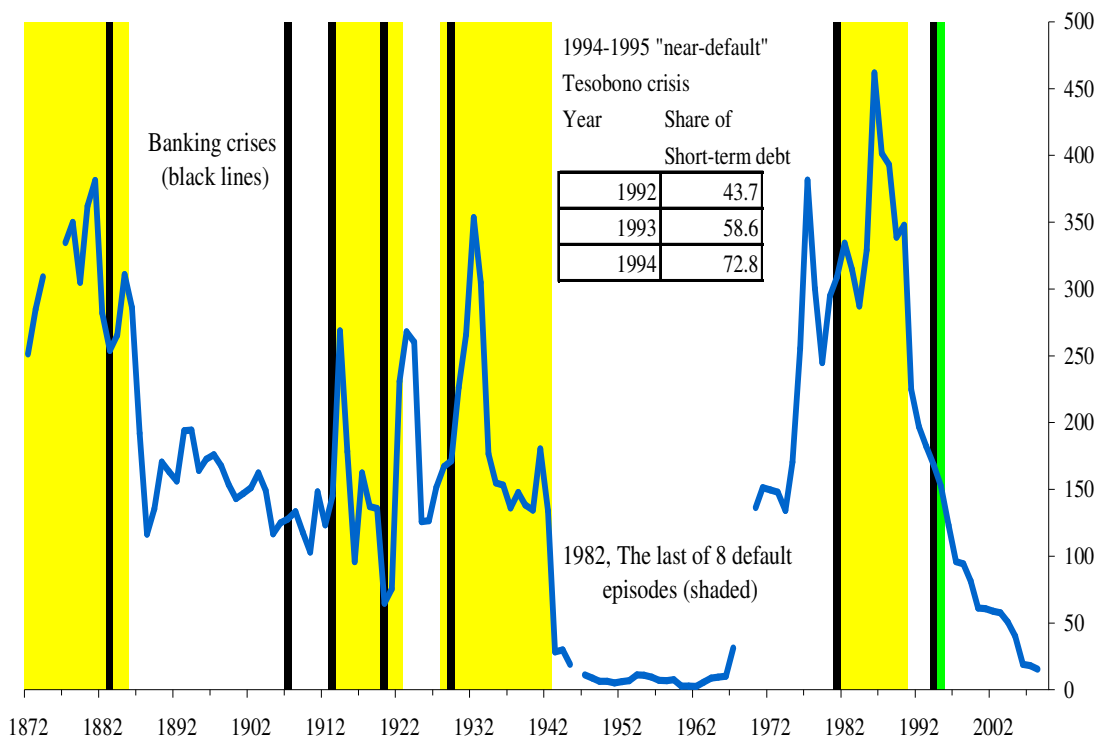
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
n.a.	n.a.	n.a.	1997	n.a.	0.0	11.9	1964(6.9) 1968(6.9) 1980(10.1)
Number of episodes:							
0		0	1	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs 1978-1981, 1983, 1985							6

Figure 40a. Mexico: Public Foreign Bond Issues, Default, and Banking Crises, 1824-1910  
(Billions of US dollars, three-year sum)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Figure 40b. Mexico: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1872-2009  
(debt as a percent of GDP)



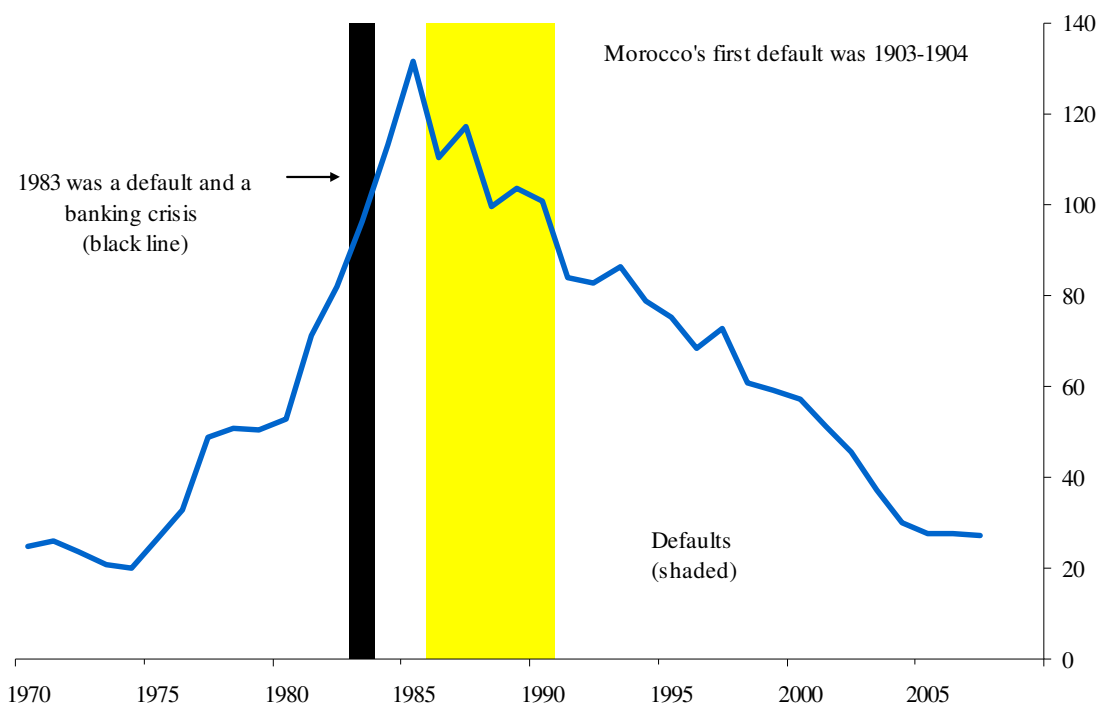
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Mexico, 1821-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	6 worst output collapses year(decline)
1828-1830	3	1850	1883	n.a.	43.9	11.1	1902(7.1)
1833-1841	1	1928-1932	1907				1930(6.3)
1844-1850	7	1982	1913				1932(15.0)
1854-1864	11		1920				1983(4.3)
1866-1885	20		1929				1995(6.2)
1914-1922	9		1981				2009(6.7)
1928-1942	15		1994				
1982-1990	9						
Number of episodes:							
8		3	7	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1954, 1959, 1961, 1977, 1983, 1986, 1989, 1995, 1999							9

Notes: Summary of private forecasts for 2009 in *italics*.

Figure 41. Morocco: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

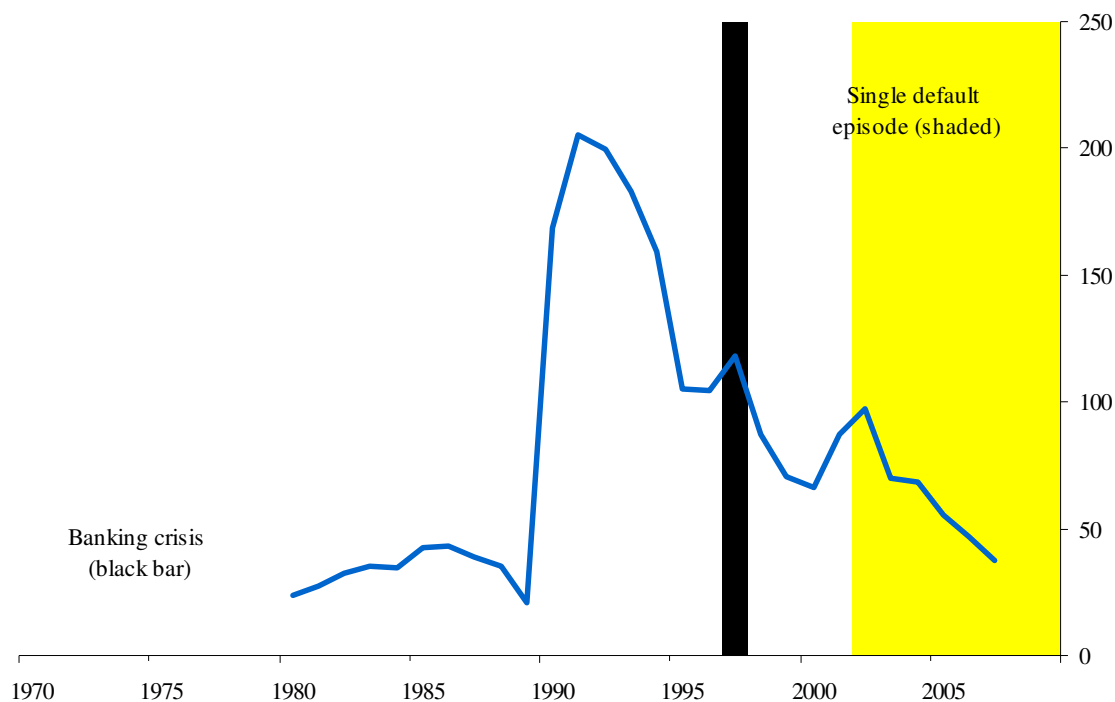


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Morocco, 1956-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1903-1904	2	n.a.	1983	n.a.	11.1	0.0	1981(2.8)
1983	1						1992(4.0)
1986-1990	5						1995(6.6)
Number of episodes:							
3		0	1	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total	
1959, 1965-1969, 1971, 1980-1983, 1985-1986, 1988, 1990, 1992						16	

Figure 42. Myanmar: External (public plus private)  
Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

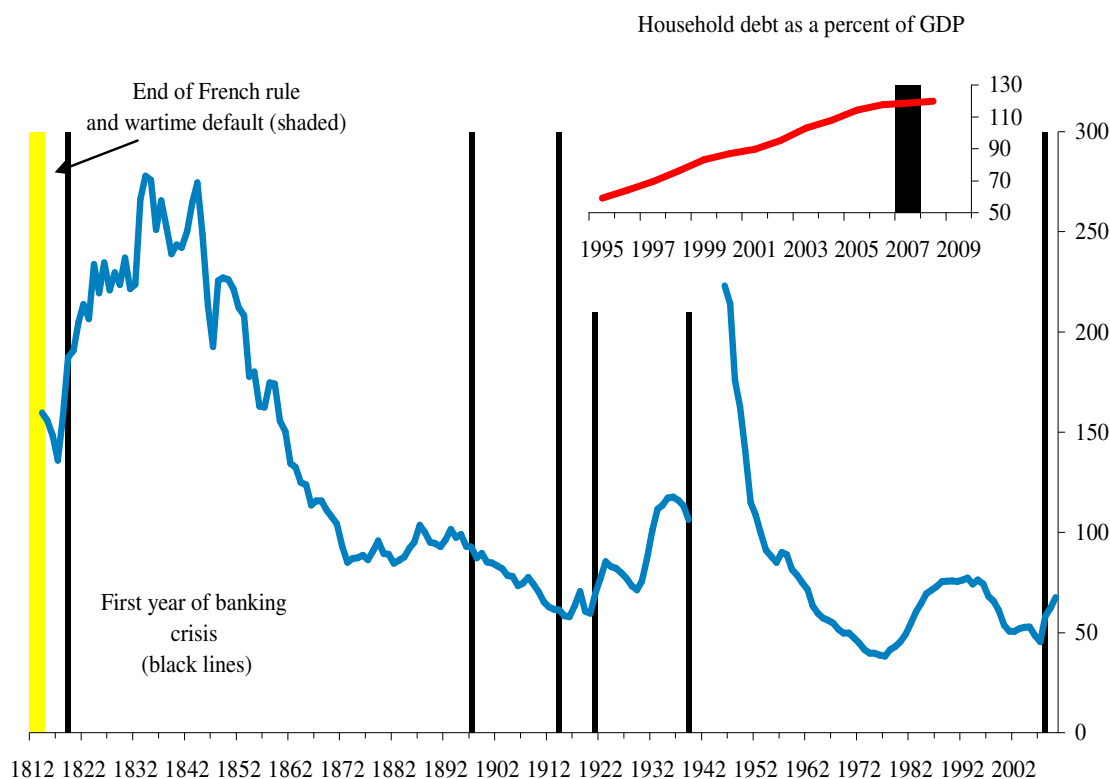


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs : Myanmar, 1948-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1997-2009	13	1984 1987	1996	n.a.	21.0	37.1	1954(6.2) 1966(4.2) 1987(4.0) 1988(11.4)
Number of episodes:							
1	2	4	0				
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1969, 1973-1974, 1977-1978, 1981							6

Figure 43. Netherlands: General Government (domestic plus external)  
and Banking Crises, 1812-2009  
(debt as a percent of GDP)



Sources: Bos (2007), CPB Netherlands Bureau of Economic Analysis (2010), Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Netherlands, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline) <sup>1</sup>
1802-1814	13	1802-1814	1819 1897 1914 1921 1939 2008	n.a.	6.2	0	1830(3.5) 1896(3.8) 1931(6.1) 2009(4.0)
Number of episodes:							
1		1	6	0			
Memorandum item on IMF programs, 1952-2009							Total
Dates of programs							1
1957							1

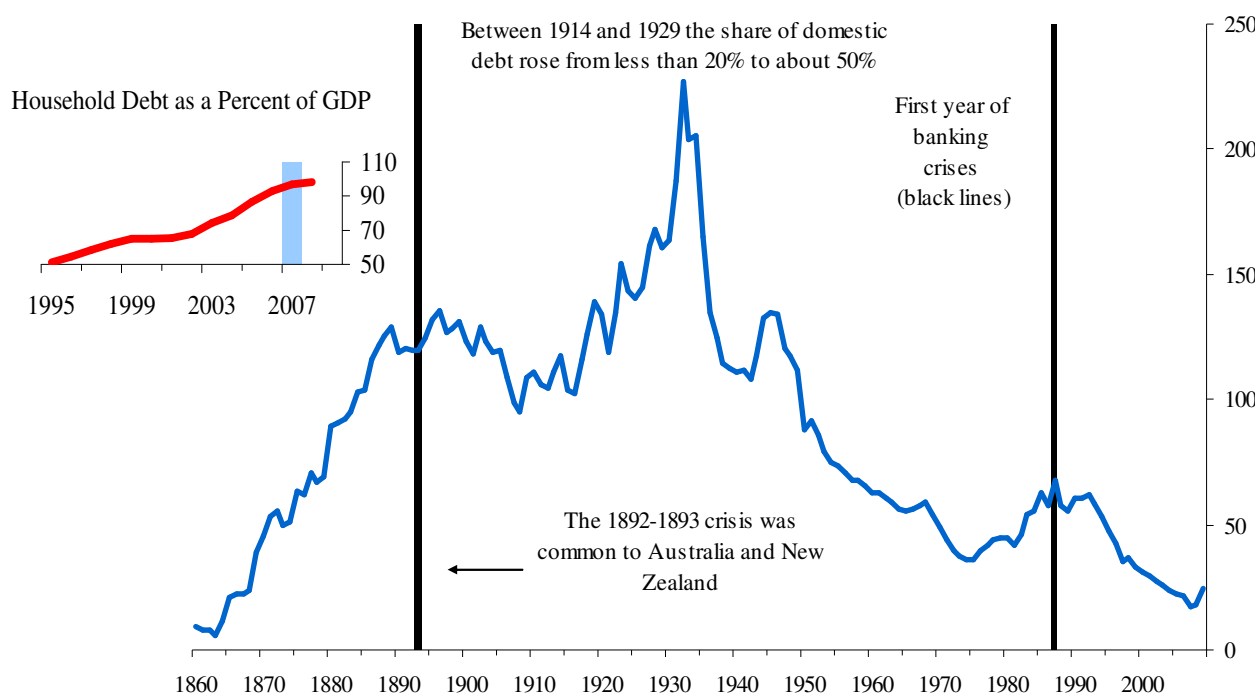
<sup>1</sup>Excludes World Wars I and II.

Notes: Summary of private forecasts for 2009 in *italics*.



Figure 44a. New Zealand Central Government (domestic plus external) Debt and Banking Crises, 1860-2009

(debt as a percent of GDP)



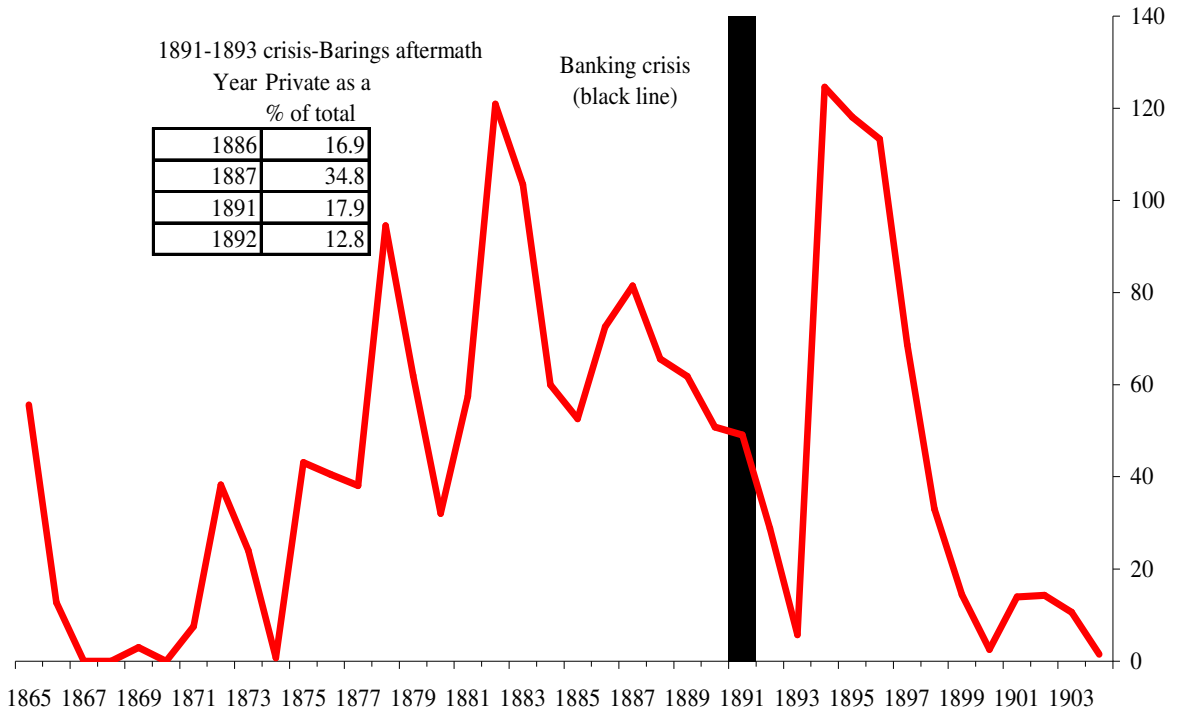
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: New Zealand, 1907-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	n.a.	1893 1987		0.0	0.0	1876(11.6) 1908(6.9) 1931(8.5) 1948(9.9) 1951(7.6)
Number of episodes:							
0		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1967							1

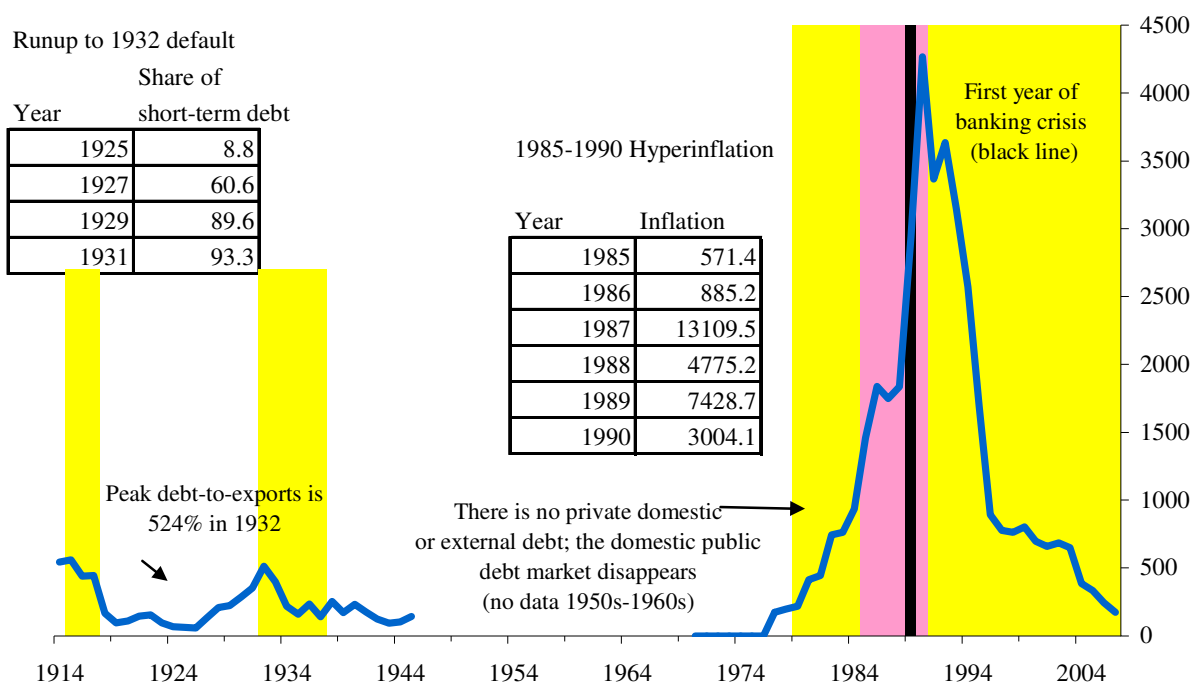
<sup>1</sup>Excludes World Wars I and II.

Figure 44b. New Zealand: Private Capital Inflows from the United Kingdom and  
 Banking Crises, 1865-1905  
 (capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein.

Figure 45. Nicaragua: Central Government (domestic plus external) Debt and Default, Hyperinflation, and Banking Crises, 1914-2009  
(debt as a percent of exports)



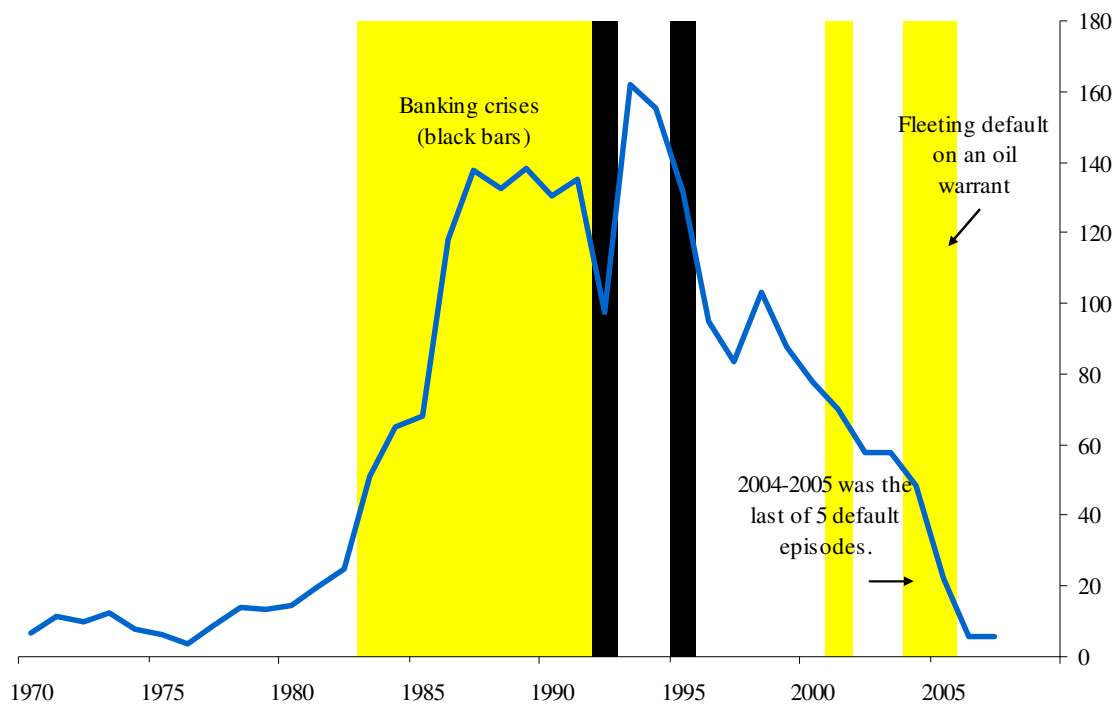
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: No GDP data is available prior to 1950, hence, we scale debt by exports.

Default, Banking Crises, Growth Collapses and IMF Programs: Nicaragua, 1838-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1828-1874	47	1985-1990	1987	1985-1990	47.1	12.2	1930(19.2)
1894-1895	2		2000				1936 (20.4)
							1978(7.9)
1911-1912	2						1979(26.6)
1915-1917	3						1988(12.4)
1932-1937	6						
1979-2009	31						
Number of episodes:							
6		1	2	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1956-1958, 1960, 1963-1964, 1968-1970, 1972, 1979, 1991, 1994, 1998, 2002							15

Figure 46. Nigeria: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

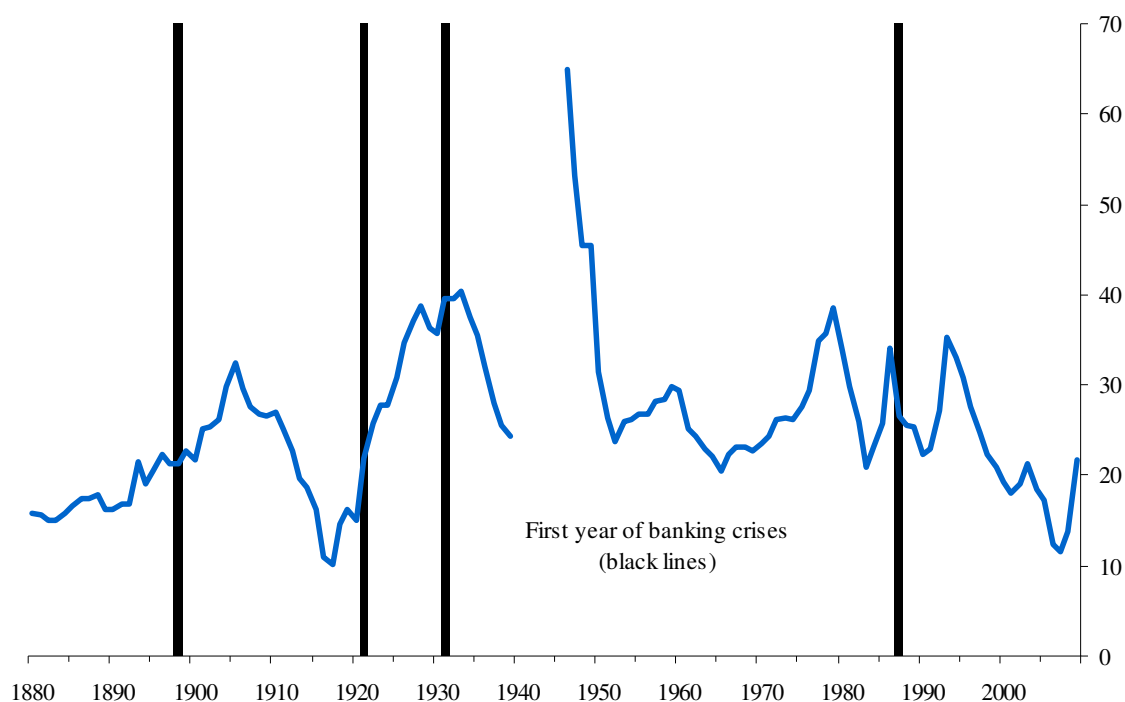


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Nigeria, 1960-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1982-1992	11	n.a.	1992	n.a.	28.0	24.0	1967(15.5)
1986-1988	3		1995				1978(5.9)
1992	1						1983(5.1)
2001	1						1986(8.8)
2004-2005	2						1987(10.8)
Number of episodes:							
5		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total	
1987, 1989, 1991, 2000						4	

Figure 47a. Norway: Central Government (domestic plus external) Debt and Banking Crises, 1880-2009  
(debt as a percent of GDP)

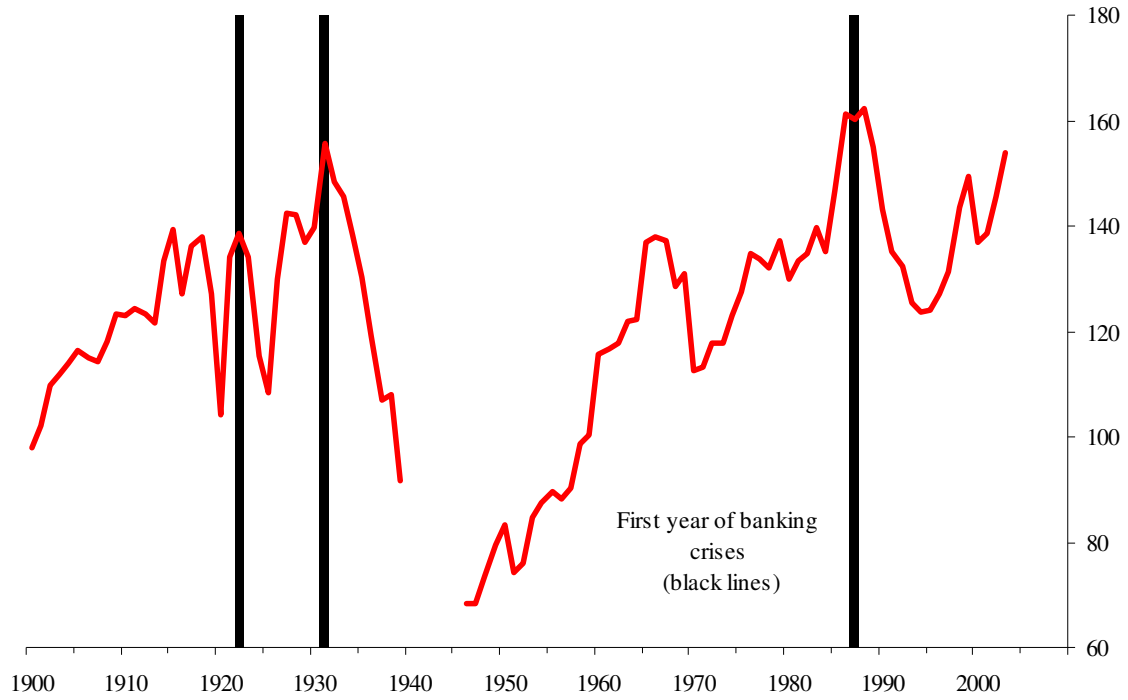


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Norway, 1800-2009

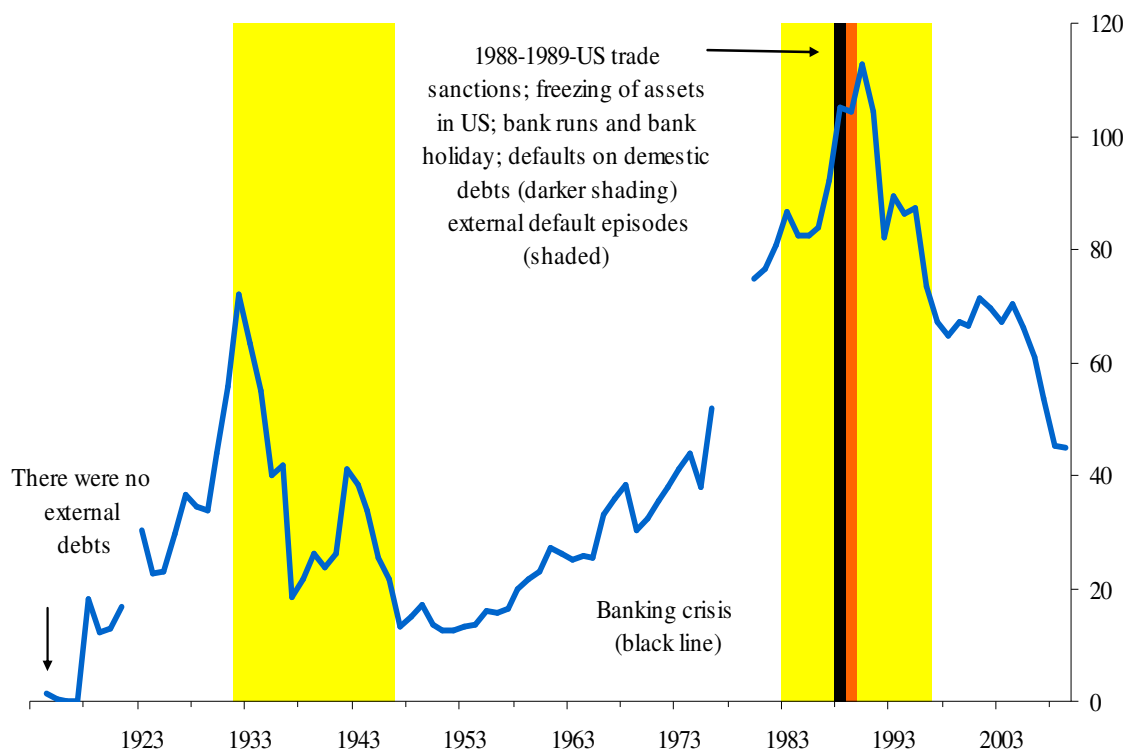
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
n.a.	n.a.	n.a.	1898 1921 1931 1936 1987	n.a.	n.a.	5.2	1831(7.0) 1848(4.7) 1921(9.7) 1931(7.8)
Number of episodes:							
0		0	5	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
None							0

Figure 47b. Norway: Domestic Private Credit, 1900-2004  
(Amount outstanding at year-end as a percent of GDP)



Sources: Eitrheim, Ø., K. Gerdrup and J.T. Klovland (2004), Reinhart and Rogoff (2009) and sources cited therein.

Figure 48. Panama: Central Government (domestic plus external) Debt and Banking Crises, 1914-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

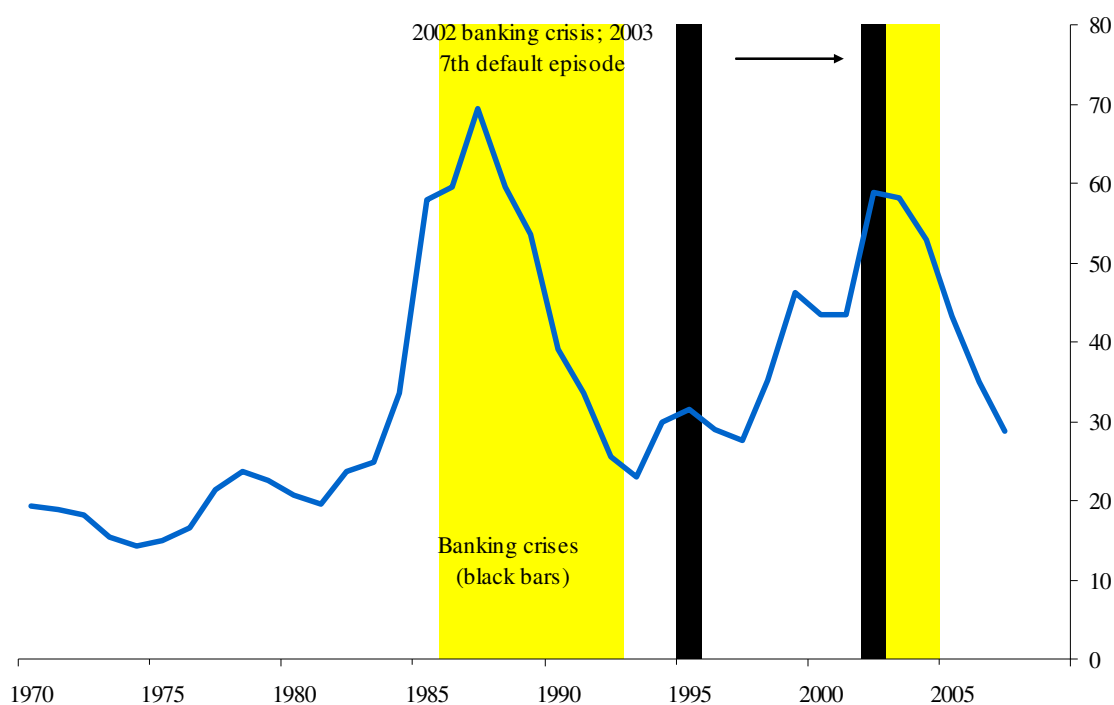
Notes: No GDP data is available prior to 1945, hence, we scale debt by exports and adjust it by the ratio of exports to GDP to splice the pre-World War II series.

Default, Banking Crises, Growth Collapses and IMF Programs: Panama, 1903-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1932-1946	15	1988-1989	1988	n.a.	27.1	0	1948(5.9)
1983-1996	14						1983(4.5)
1987-1994							1988(13.5)
Number of episodes:							
3		1	1	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1965, 1968-1975, 1977-1980, 1982-1983, 1985, 1992, 1995, 1997, 2000							20

Notes: The 1987-1994 default is on bonds, while the 1983-1996 episode is on bank loans.

Figure 49. Paraguay: External (public plus private) Debt, Near-default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Paraguay, 1811-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1874-1885	12	n.a.	1890	n.a.	22.6	11.1	1940(5.3)
1892-1895	4		1997				1947(13.1)
1920-1924	5		2002				1983(3.0)
1932-1944	13						2009(4.5)
1968-1969	2						
1986-1992	7						
2003-2004	2						
Number of episodes:							
7	0	3	0				

Memorandum item on IMF programs, 1952-2009

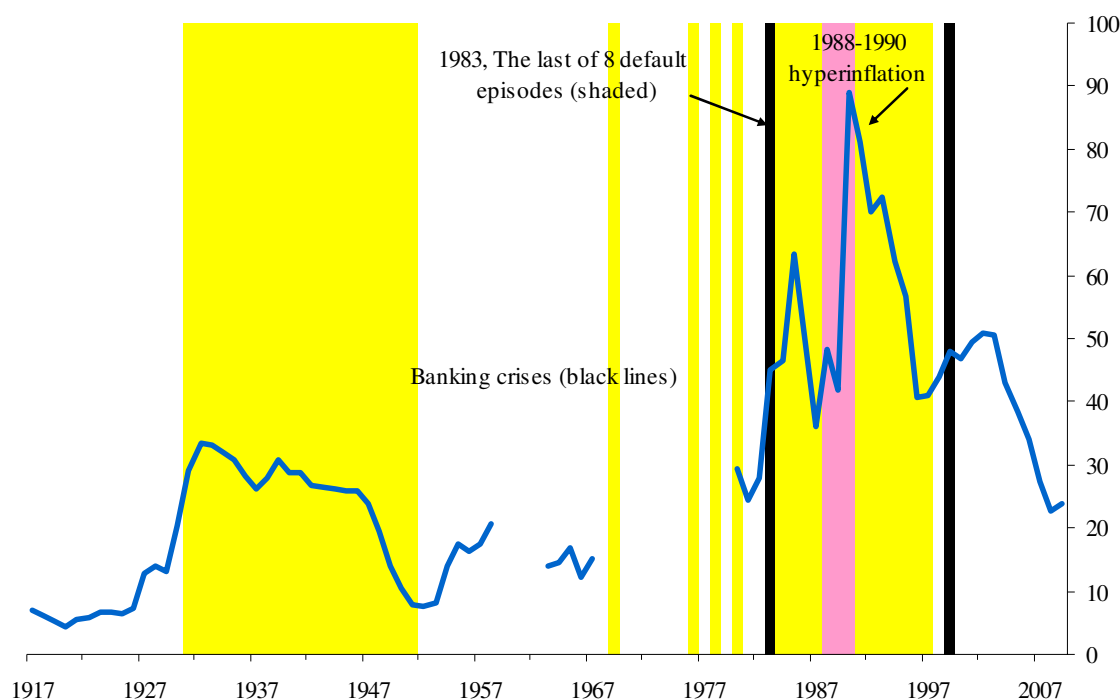
Dates of programs  
1957-1961, 1964, 1966, 1968-1969, 2003

Total  
10

Notes: Summary of private forecasts for 2009 in *italics*.



Figure 50a. Peru: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1917-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Peru 1821-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1826-1848	23	1931-1938	1872	1988-1990	40.2	13.2	1930(11.5)
1876-1889	14	1985-1987	1983				1931(8.1)
1931-1951	21		1999				1983(9.3)
1969-1969	2						1988(9.4)
1976	1						1989(13.4)
1978	1						
1980	1						
1984-1997	14						
Number of episodes:							
8	2	3	1				

Memorandum item on IMF programs, 1952-2009

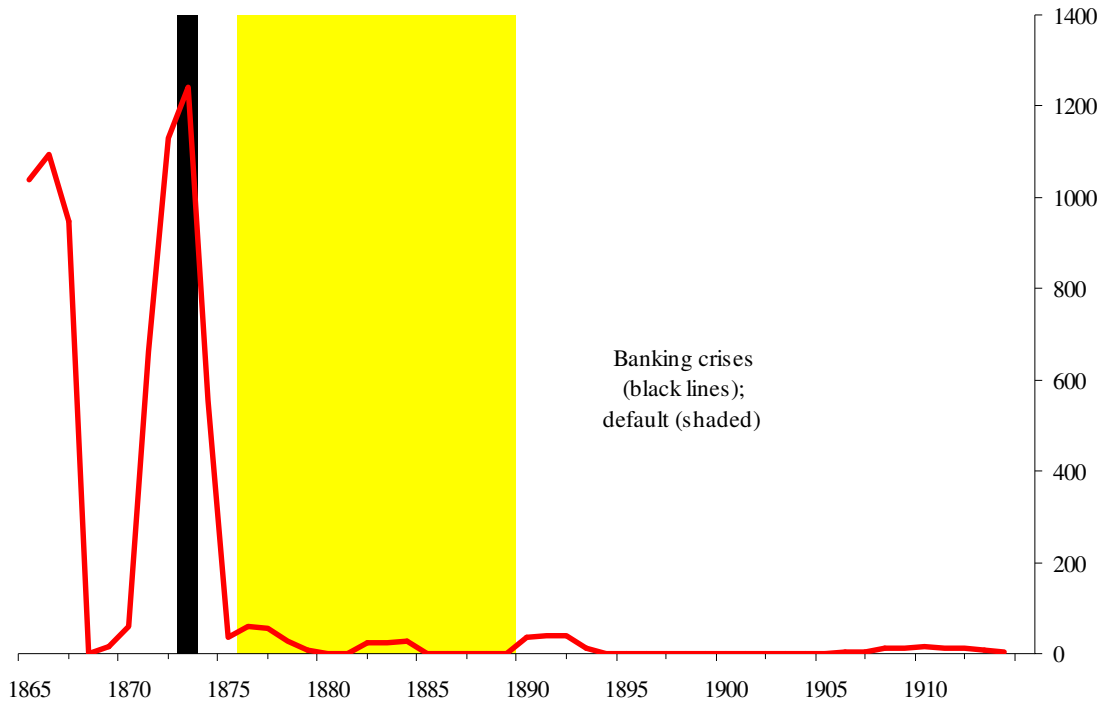
Dates of programs

1954, 1958-1968, 1970, 1977-1979, 1982, 1984, 1993, 1996, 1999, 2001-2002, 2004

Total number of years

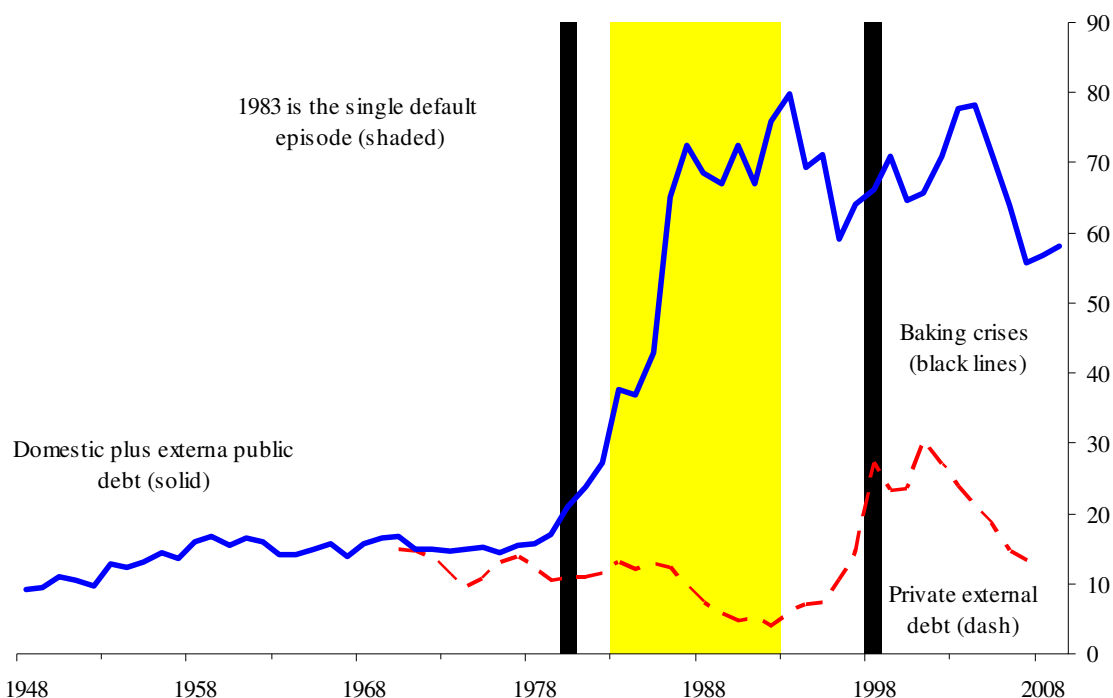
24

Figure 50b. Peru: Total (public and private) Capital Inflows from the United Kingdom and Banking Crises, 1865-1905  
(capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein.

Figure 51a. Philippines: External Private and Public (domestic plus external) Debt, Near-default, and Banking Crises, 1948-2009  
(debt as a percent of GDP)



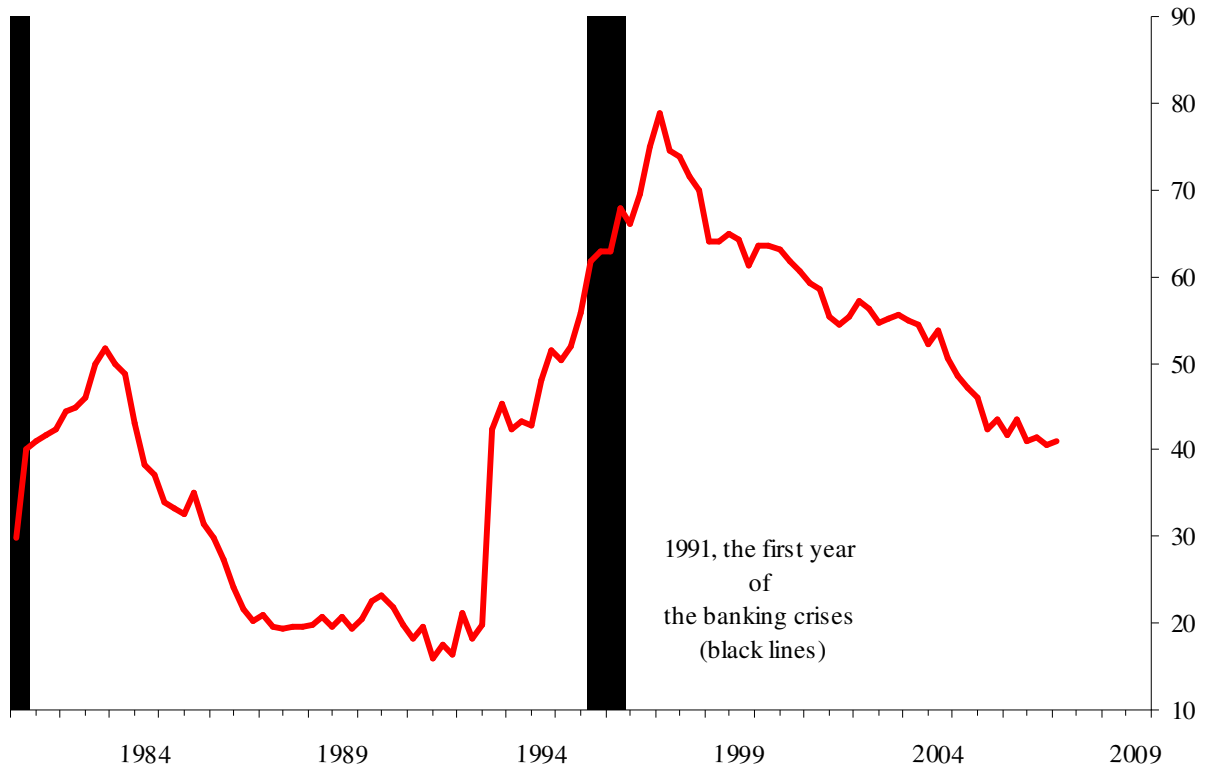
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses and IMF Programs: Philippines, 1946-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1983-1992	10	n.a.	1981 1997	n.a.	18.8	6.3	1904(13.9) 1923(6.1) 1935(6.8) 1984(7.5) 1985(7.5)
Number of episodes:							
1		0	2	0			
Memorandum item on IMF programs, 1952-2007							
Dates of programs 1962-1968, 1970-1976, 1979-1980, 1983-1984, 1986, 1989, 1991, 1994, 1998							Total 23

Sources: Pre-WWII real GDP, Bassino and van del Eng, (2006).

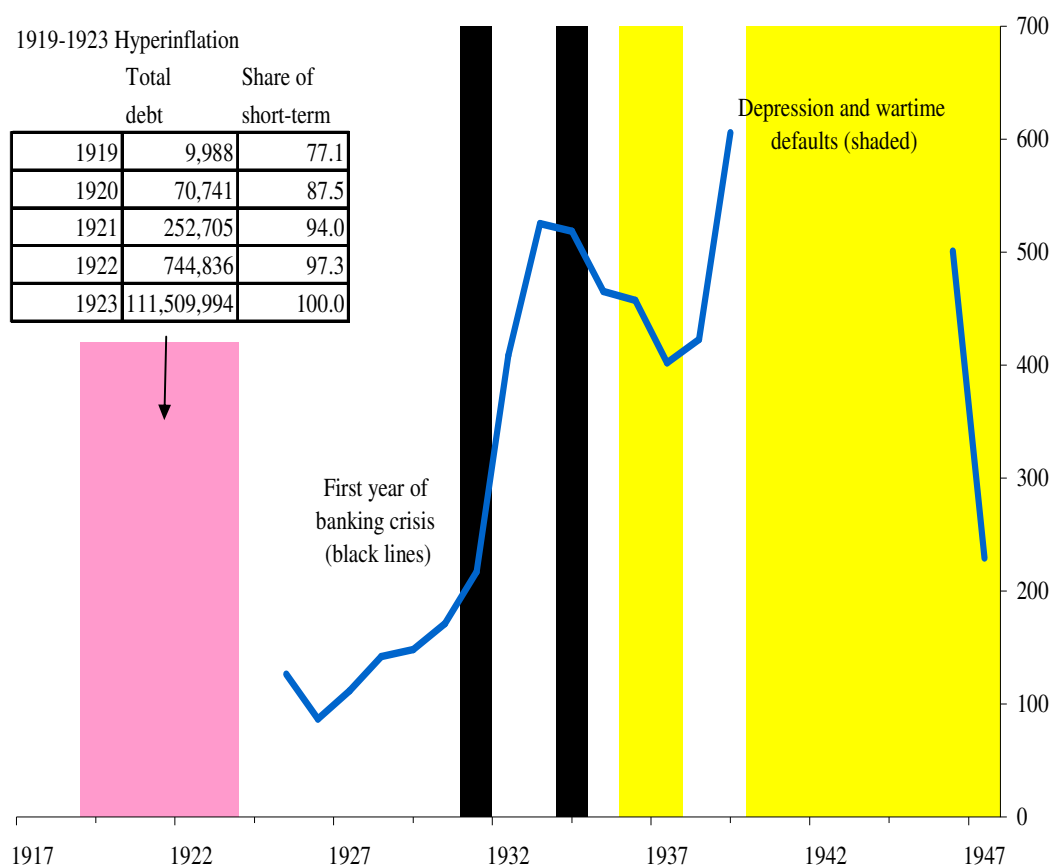
Figure 51b. Philippines Banking Survey: Domestic Credit, Default  
and Banking Crises, 1980-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 52a. Poland: Central Government (domestic plus external) Debt, Default, Hyperinflation and Banking Crises, 1917-1947  
(debt as a percent of GDP)

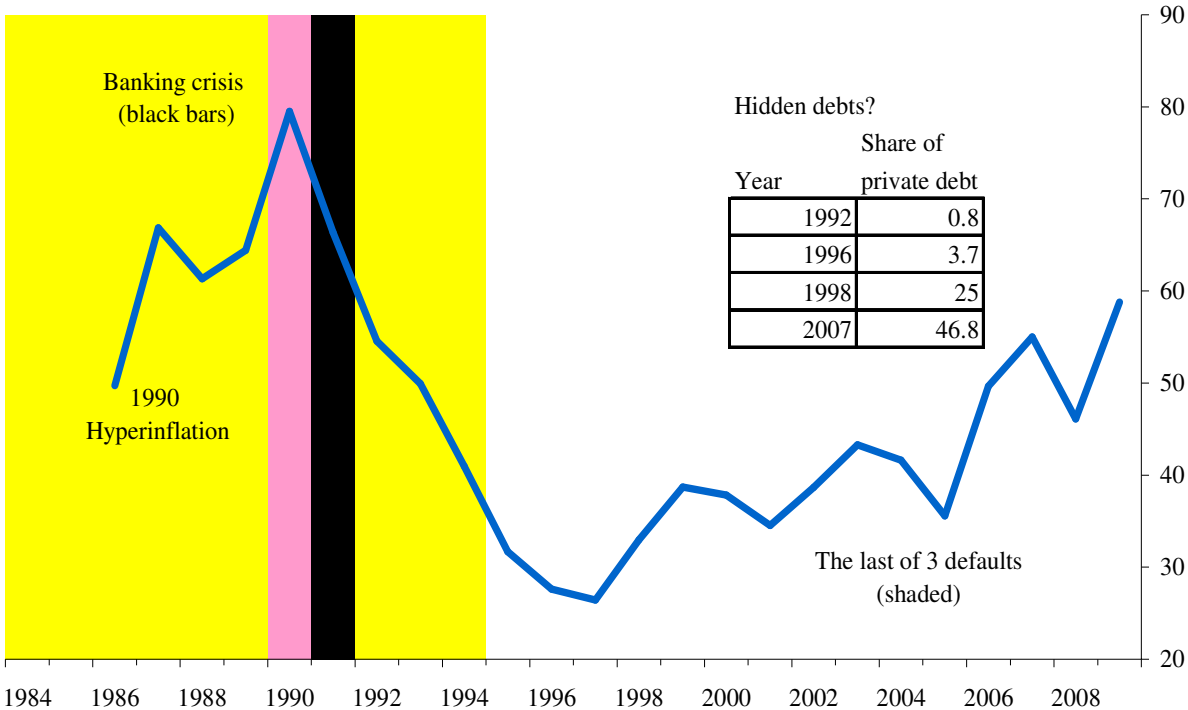


Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses, Hyperinflation and IMF Programs:  
Poland, 1918-2009

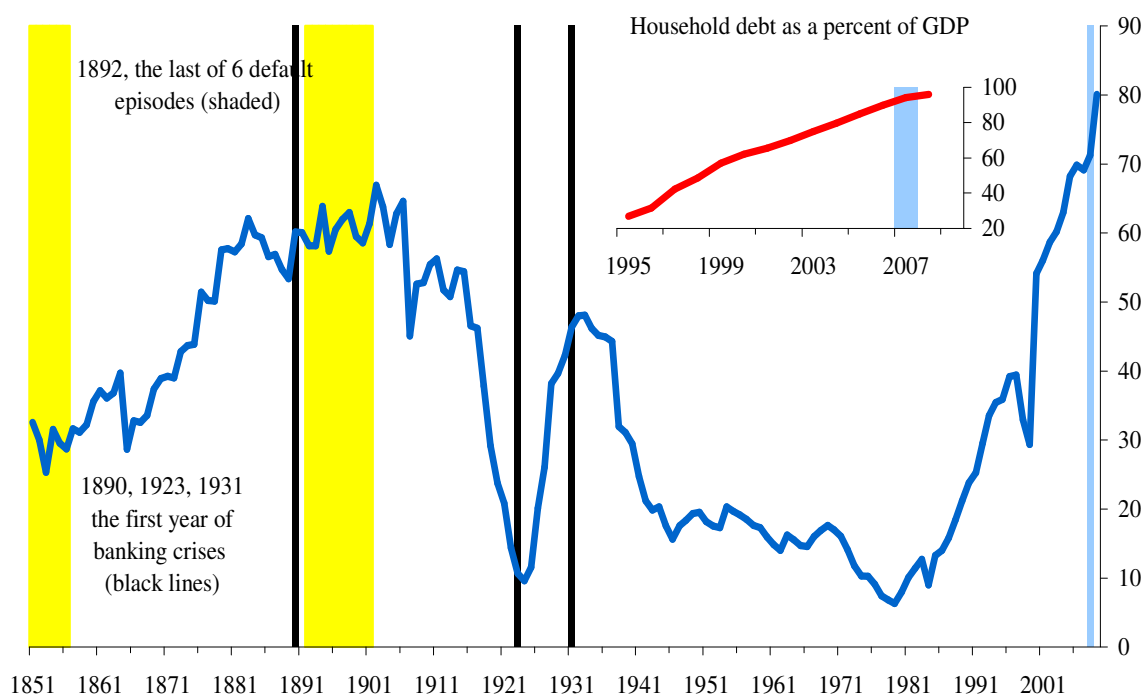
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1936-1937	2	n.a.	1931	1919-1923	31.5	18.5	1980(-6.0)
1940-1952	13		1934	1990			1981(10.0)
1981-1994	14		1991				1990(7.2)
							1991(7.0)
Number of episodes:							
3		0	3	1			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
1990-1991, 1993-1994						4	

Figure 52b. Poland: Central Government (domestic plus external) Debt, Default, Hyperinflation and Banking Crises, 1984-2009  
 (debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Figure 53. Portugal: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1851-2009  
(debt as a percent of GDP)

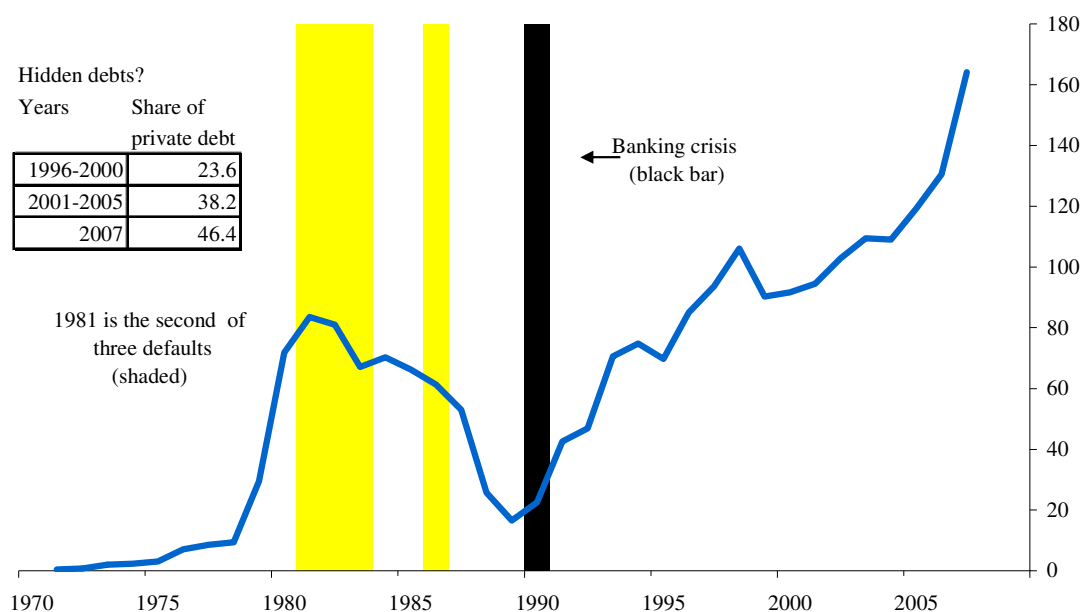


Sources: OECD, Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Portugal, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1828	1	n.a.	1828	n.a.	11.0	9.5	1918(5.1)
1837-1841	5		1846				1928(9.7)
1850-1856	7		1890				1935(5.3)
1892-1901	10		1920				1936(7.6)
			1923				1940(6.5)
			1931				
Number of episodes:							
4		0	6	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
1977, 1978, 1983						3	

Figure 54. Romania: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of exports)



Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses and IMF Programs: Romania, 1878-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1933-1958	26	1933-1958	1931	n.a.	22.6	9.8	1989(5.8)
1981-1983	4		1990				1990(5.6)
1986	1						1991(12.9)
							1997(6.1)
							2009(7.2)
Number of episodes:							
3		1	2	0			

Memorandum item on IMF programs, 1952-2009

Dates of programs

1975, 1977, 1981, 1991-1992, 1994, 1997, 1999, 2001, 2004, 2009

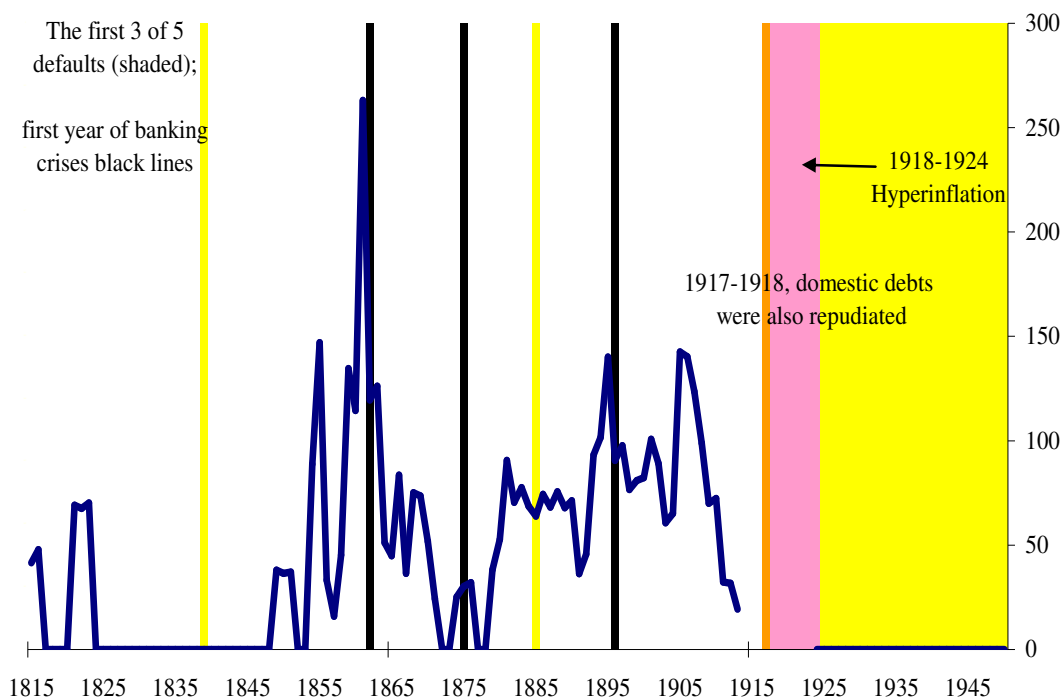
Total number of years

10

Notes: Summary of private forecasts for 2009 in *italics*.



Figure 55a. Russia: Public Foreign Bond Issues and Default, 1815-1945  
(as a percent of exports)



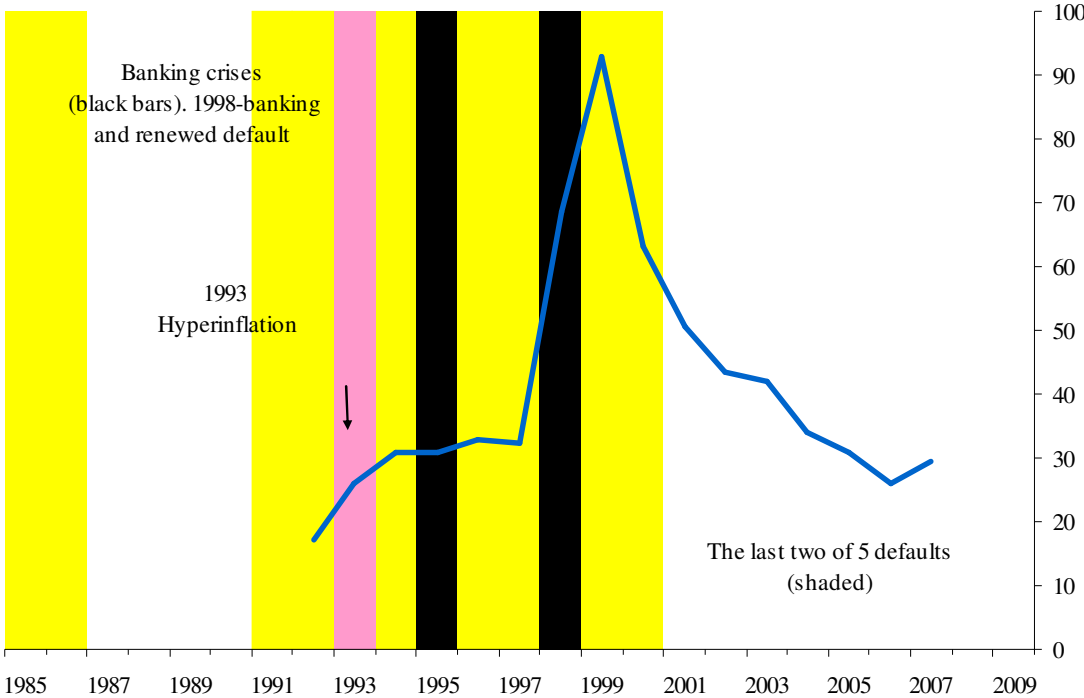
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses, Hyperinflation, and IMF Programs:  
Russia 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1839	1	1917-1918	1862	1918-1924	38.8	13.8	1992(14.5)
1885	1	1947	1875	1993			1993(8.7)
1918-1986	69	1957	1896				1994(12.7)
1991-1997	7	1998-1999	1995				1998(5.3)
1998-2000	3		1998				2009(7.9)
			2008				
Number of episodes:							
5		4	6	2			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
1992, 1995-1996, 1999						4	

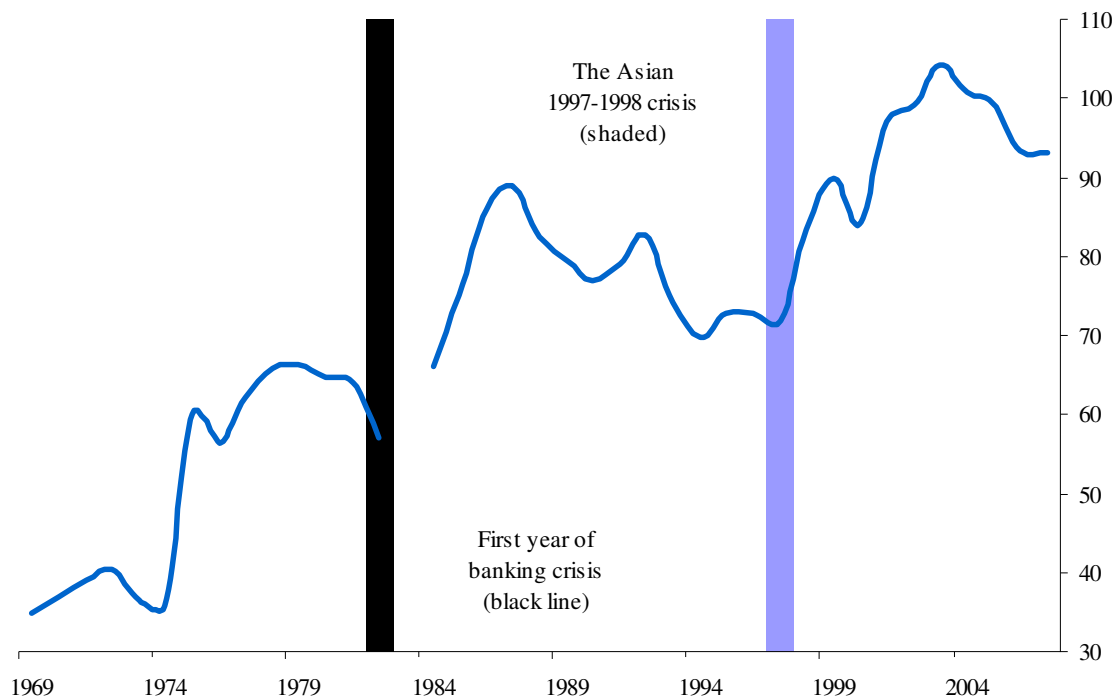
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 55b. Russia: External (public plus private) Debt, Default, Hyperinflation, and Banking Crises, 1985-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Figure 56. Singapore: Central Government (domestic and external) Debt, Default, and Banking Crises, 1969-2009  
(debt as a percent of GDP)



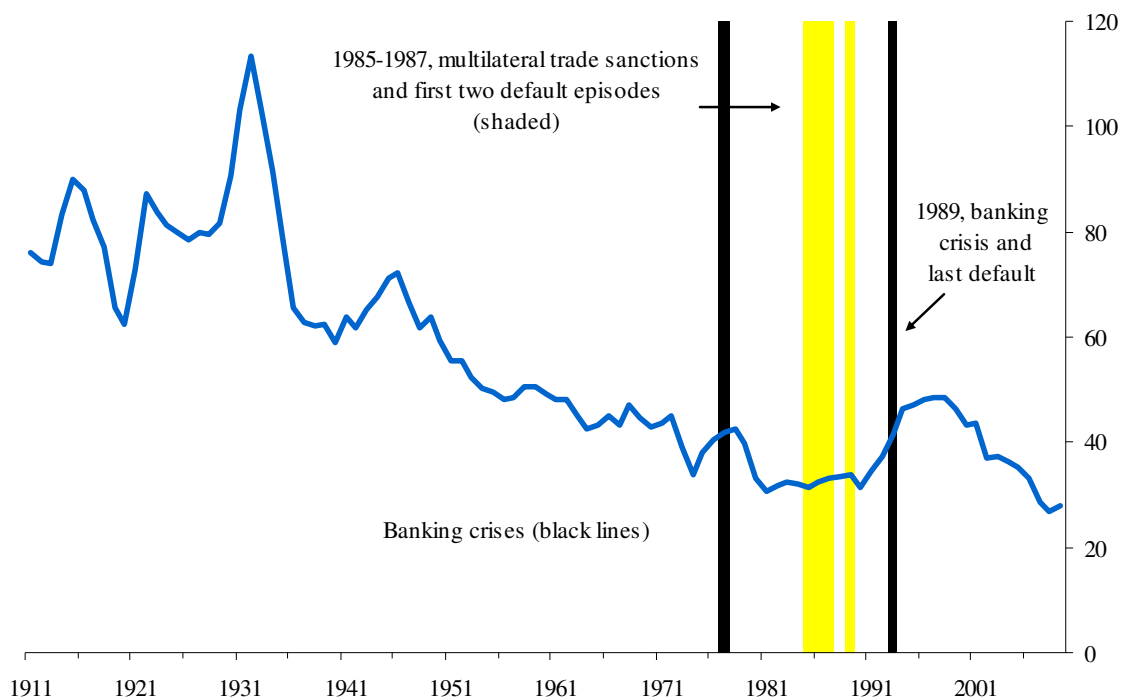
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: Since the mid-1990s all public debts of the central government are domestic.

Default, Banking Crises, Growth Collapses, and IMF Programs: Singapore, 1965-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
n.a.	n.a.	n.a.	1982	n.a.	0.0	2.2	1964(3.5) 2001(2.4) 2009(2.0)
Number of episodes:		0	1	0			
Memorandum item on IMF programs, 1952-2009							Total number of years
Dates of programs							0
None							

Figure 57a. South Africa: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1911-2009  
(debt as a percent of GDP)



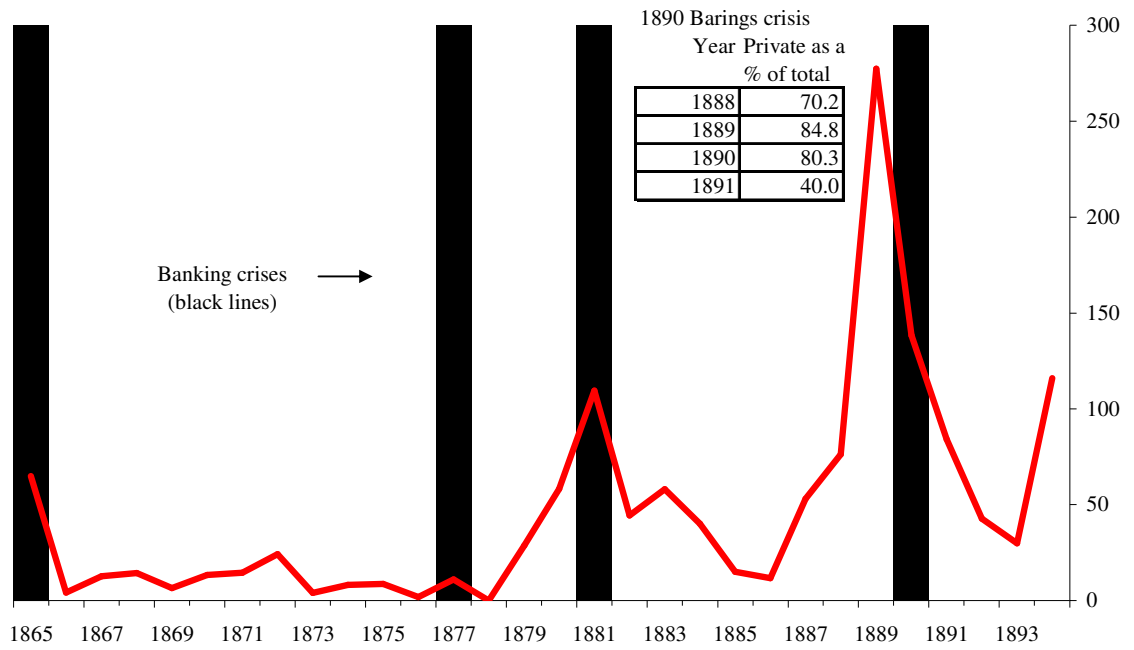
Sources: Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses, and IMF Programs: South Africa, 1800-2009  
(calculations since independence—1910--reported)

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1985-1987	3	n.a.	1865	n.a.	5.0	1.0	1983(1.8)
1989	1		1877				1992(2.1)
1993	1		1890				2009(1.8)
			1977				
			1989				
Number of episodes:							
3		0	4	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
1958, 1961, 1976(2), 1982-1983						6	

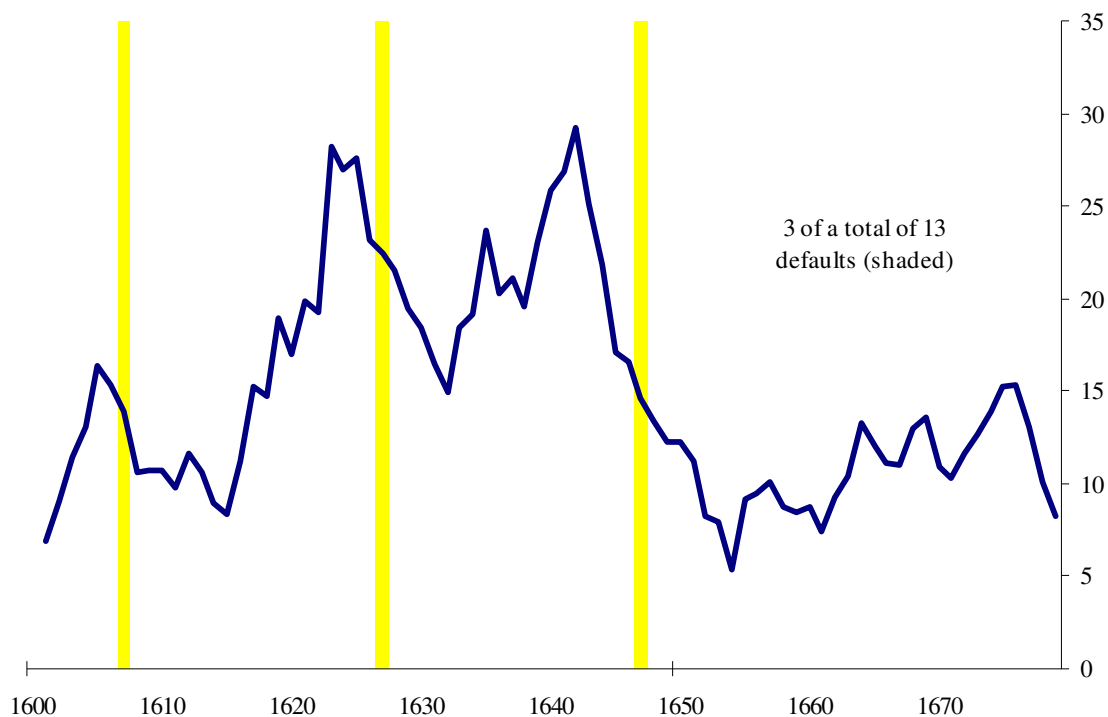
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 57b. South Africa: Private Capital Inflows from the United Kingdom and Banking Crises, 1865-1895  
 (capital flows as a percent of exports)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein

Figure 58a. Spain: Short-term Loans to the Crown and Defaults, 1601-1679  
(Billions of ducats, three-year sum)

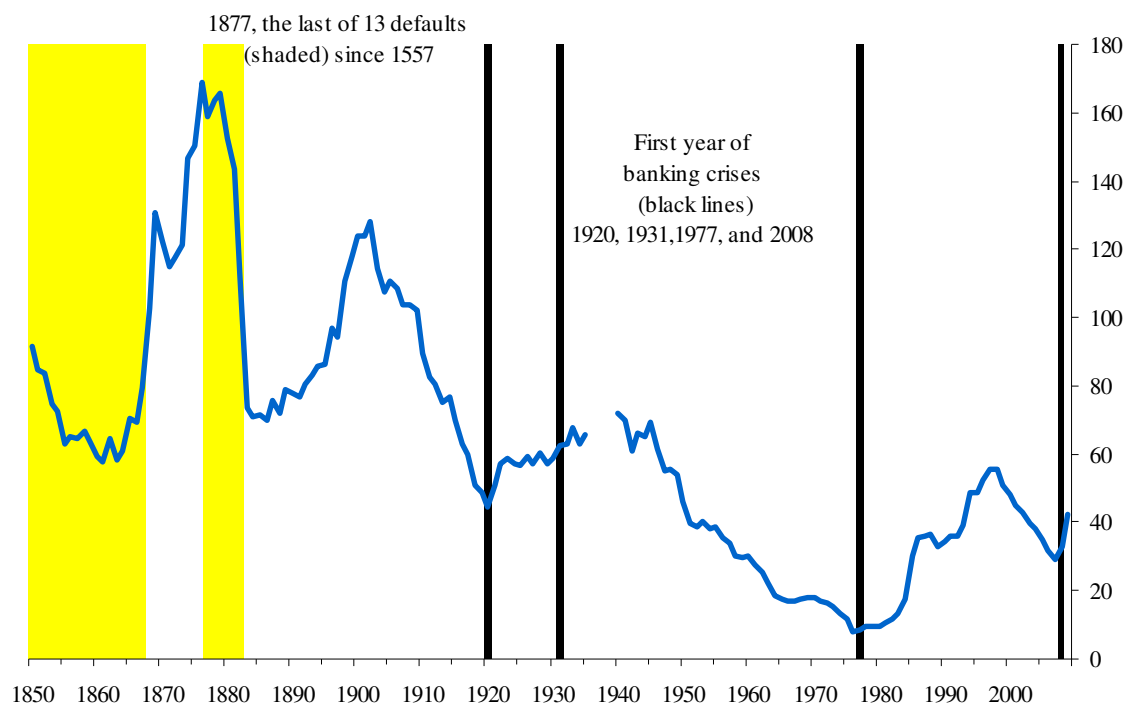


Sources: Reinhart and Rogoff (2009) and sources cited therein

Domestic and External Default, Banking Crises, and Hyperinflation: Spain, 1550-1799

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyperinflation dates	Share of years in external default	Share of years in inflation crisis
1557-1560	4	1557-1560	n.a.	n.a.	n.a.	
1575-1577	3	1575-1577				
1596-1597	2	1596-1597				
1607	1					
1627	1					
1647	1					
Number of episodes:						
6		3	0	0		

Figure 58b. Spain: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1850-2009  
(debt as a percent of GDP)

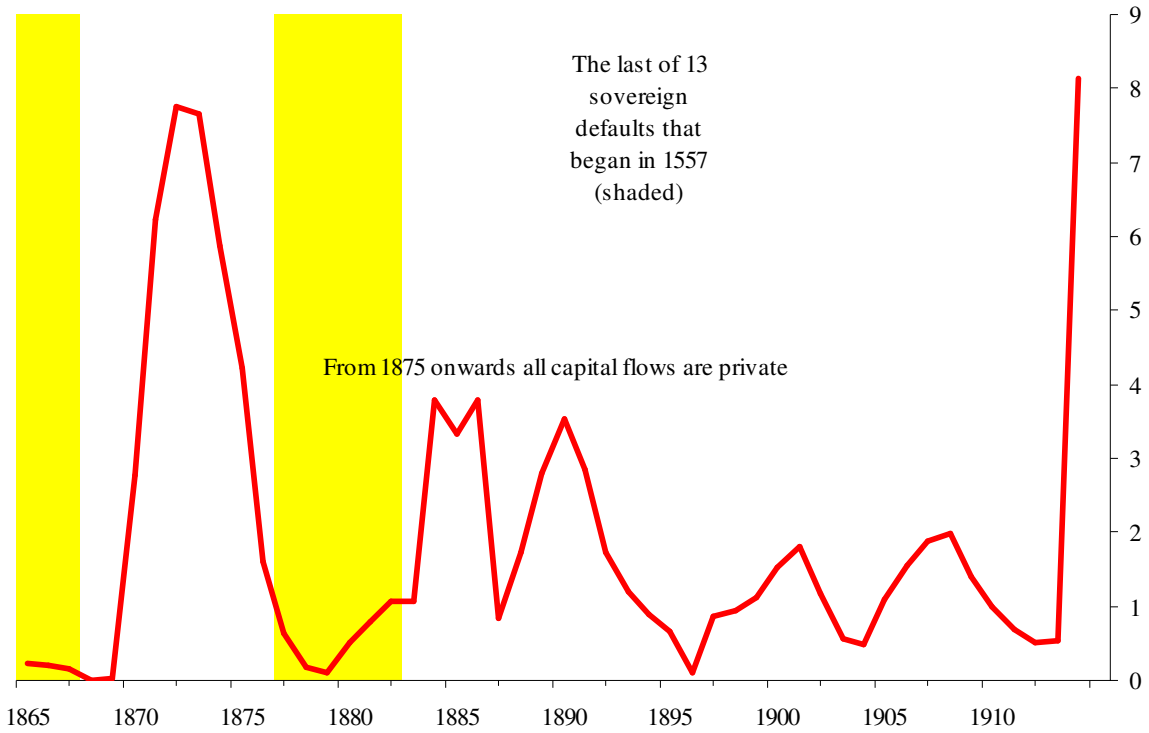


Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, and IMF Programs: Spain, 1800-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)	
1809	1	1936-1939	1814	n.a.	23.8	3.8	1868(10.1)	
1820	1		1829				1874(8.4)	
1831-1834	4		1846				1896(8.0)	
1837-1867	31		1920				1936(22.3)	
1851	-		1931				1937(8.3)	
1877-1882	7		1977					
Number of episodes:			2008					
6		0	6	0				
Memorandum item on IMF programs, 1952-2009								
Dates of programs						Total number of years		
1959, 1960, 1978						3		

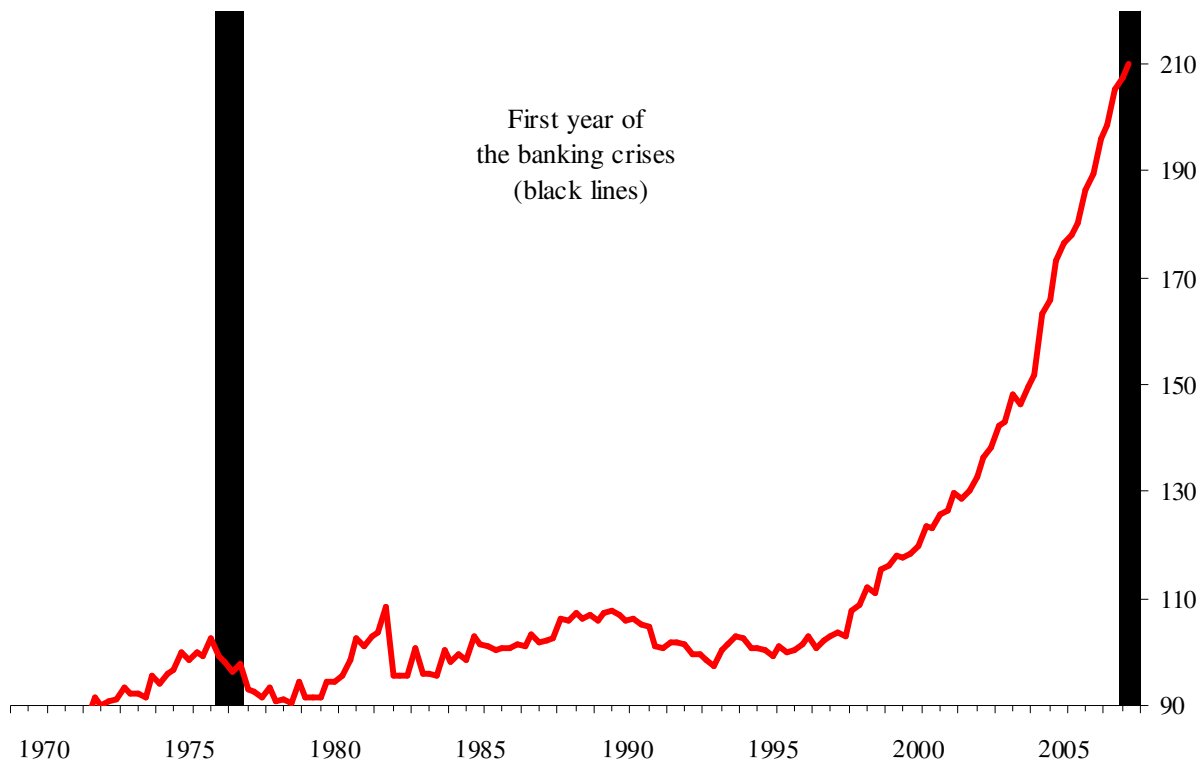
Figure 58c. Spain: Total (public and private) Capital Inflows from the United Kingdom and Banking Crises, 1865-1914  
(capital flows as a percent of exports, three-year sum)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein



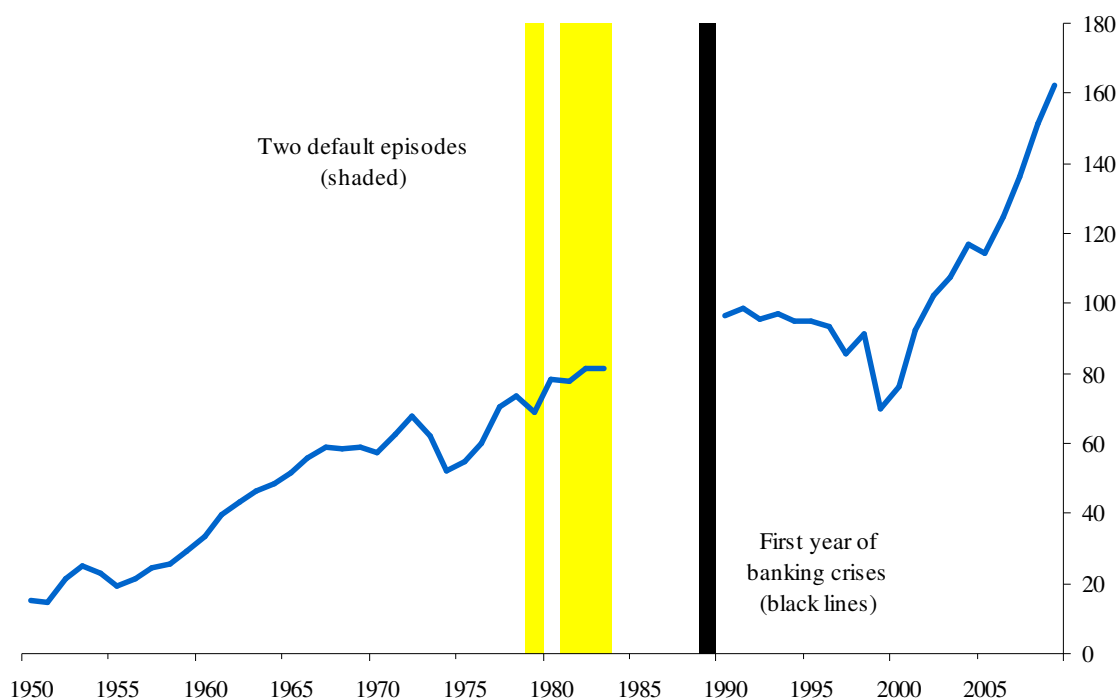
Figure 58d. Spain Banking Survey: Domestic Credit, Default  
and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP, 4-quarter moving average)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Notes: For periods where no quarterly nominal GDP is available, a moving-average interpolation method is used.

Figure 59. Sri Lanka: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1950-2009  
(debt as a percent of GDP)



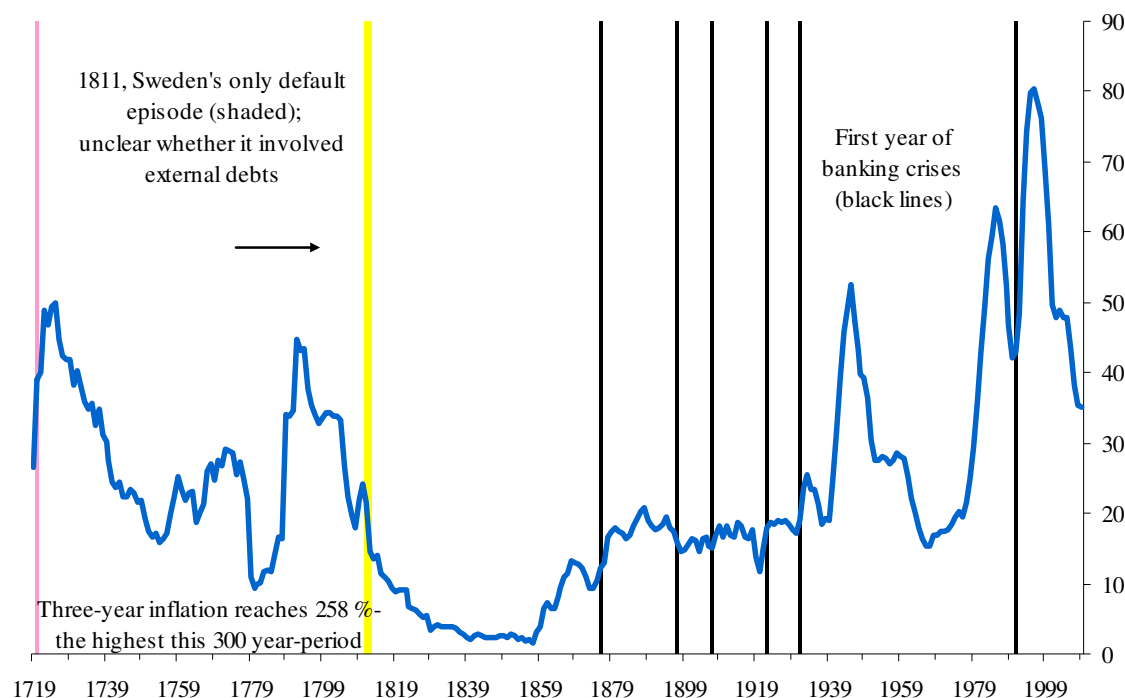
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, and IMF Programs: Sri Lanka, 1948-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	4 worst output collapses year(decline)
1979	1	1996	1989	n.a.	6.5	3.2	1918(-6.5)
1981-1983	3						1930(4.0)
							1935(5.2)
							1944(5.5)
Number of episodes:							
2		1	1	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
1965-1966, 1968-1969, 1971, 1974, 1977, 1979, 1983, 1988, 1991, 2001, 2003(2)						14	

Sources: Pre-WWII real GDP, Bassino and van del Eng, (2006).

Figure 60a. Sweden: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1719-2009 (debt as a percent of GDP)



Sources: Fregert, K och R. Gustafsson, (2008), "Fiscal Statistics for Sweden 1719-2003", Research in Economic History, volume 25, 137-191, Reinhart and Rogoff (2009) and sources cited therein.

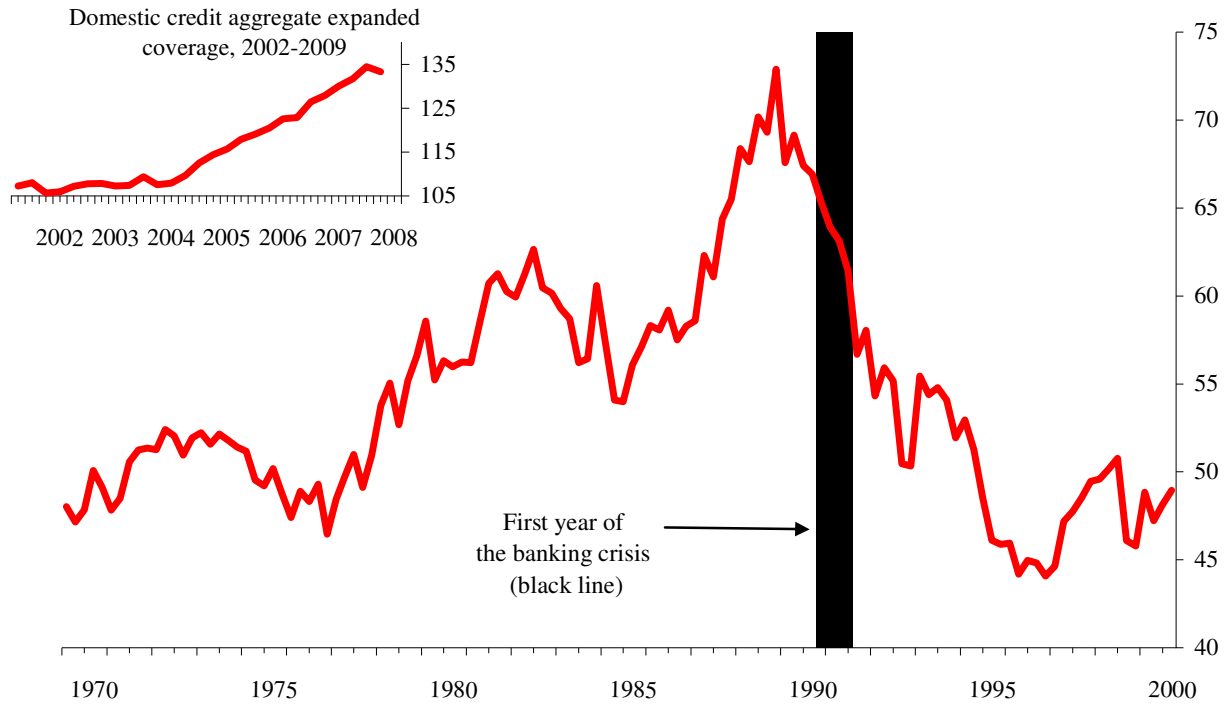
Notes: Prices are far more volatile during pre-World War II. For this reason, and owing to the fact that deflation is about as likely as inflation prior to the rise of fiat money, we also examine the evolution of (smoother) three year changes in the price level.

Default, Banking Crises, Growth Collapses, and IMF Programs: Sweden, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
1811	1	n.a.	1811 1876 1897 1907 1922 1931 1991	n.a.	0.5	1.9	1826(8.9) 1838(5.7) 1861(5.7) 1921(3.7) 2009(4.2)
Number of episodes:							
1		0	6	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
None							0

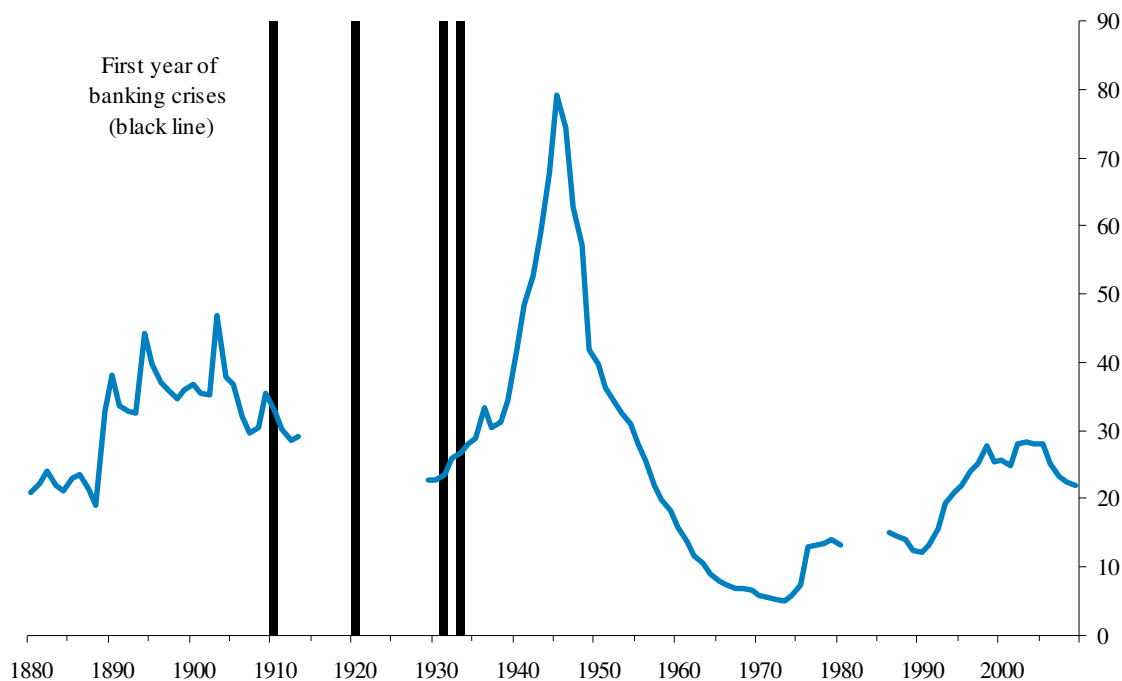
<sup>1</sup>Excludes World Wars I and II.

Figure 60b. Sweden Banking Survey: Domestic Credit, Default  
and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Figure 61. Switzerland: Central Government (domestic plus external) Debt and Banking Crises, 1880-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein.

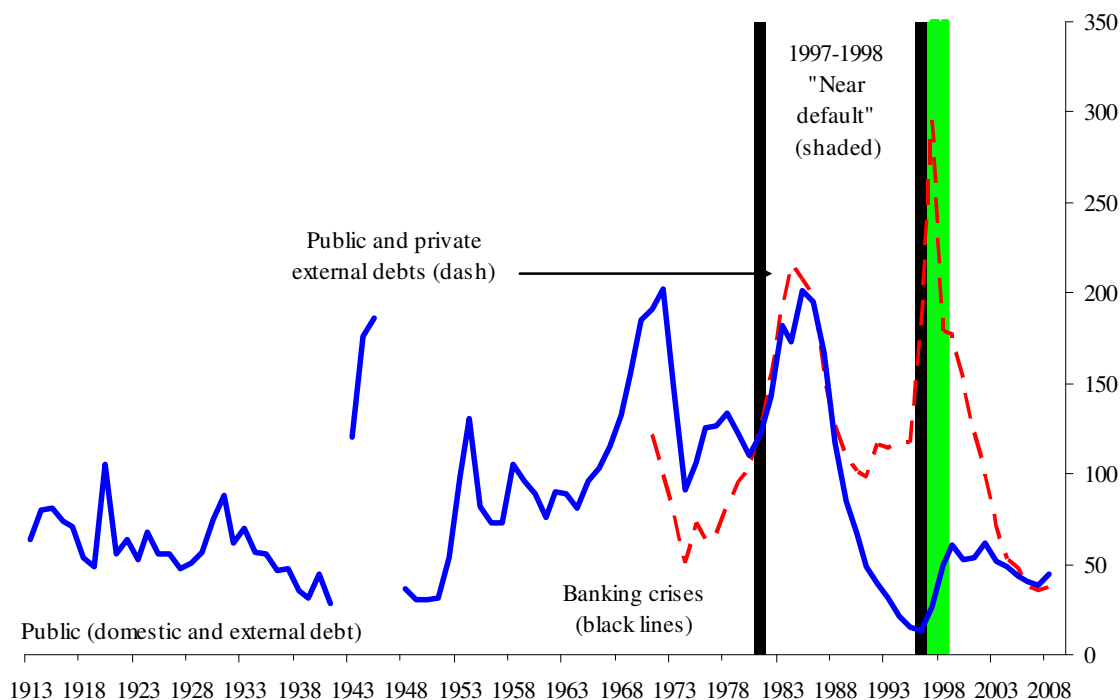
Default, Banking Crises, Growth Collapses, and IMF Programs: Switzerland, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	n.a.	1870	n.a.	n.a.		1854(11.1)
			1910				1860(13.0)
			1921				1867(12.1)
			1931				1877(9.7)
			1933				1975(7.3)
Number of episodes:			0	5	0		
Memorandum item on IMF programs, 1952-2009							
Dates of programs						Total number of years	
None						0	

<sup>1</sup>Excludes World Wars I and II.

Sources: Pre-WWII real GDP, Bassino and van del Eng, (2006).

Figure 62a. Thailand: Public (domestic and external) and External (public and private) Debts, “Near-default”, and Banking Crises, 1913-2009 (debt as a percent of exports)



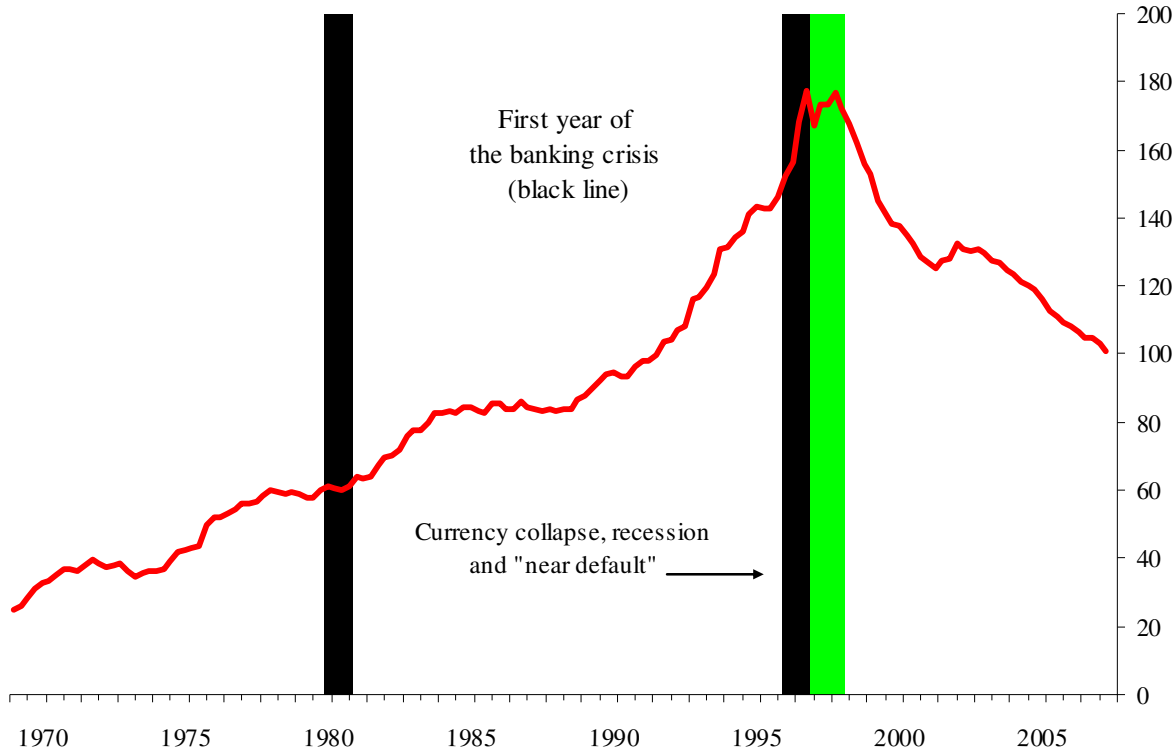
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, and IMF Programs: Thailand, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1997-1998	“near” 2	n.a.	1983 1996	n.a.	0.0	9.0	1919(4.2) 1942(9.0) 1945(6.8) 1998(10.5) 2009(2.3)
Number of episodes:							
0		0	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs 1978, 1981-1982, 1985, 1997							Total number 5

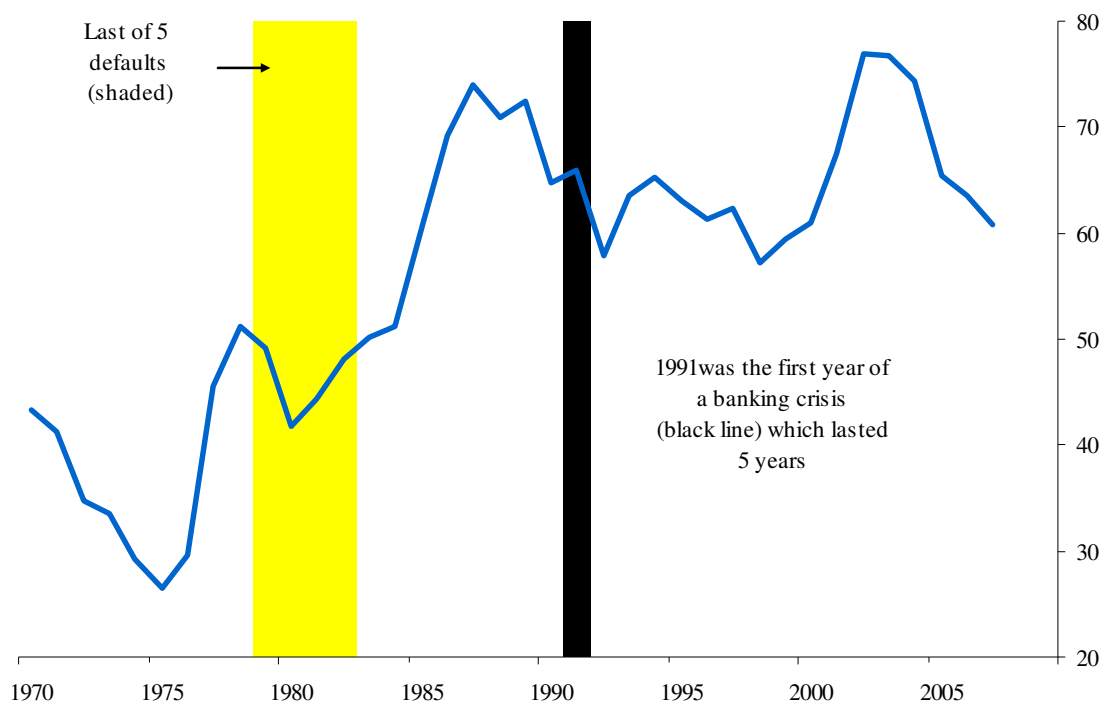
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 62b. Thailand Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Figure 63. Tunisia: External (public plus private) Debt, Default and Banking Crises, 1970-2009  
(debt as a percent of GDP)



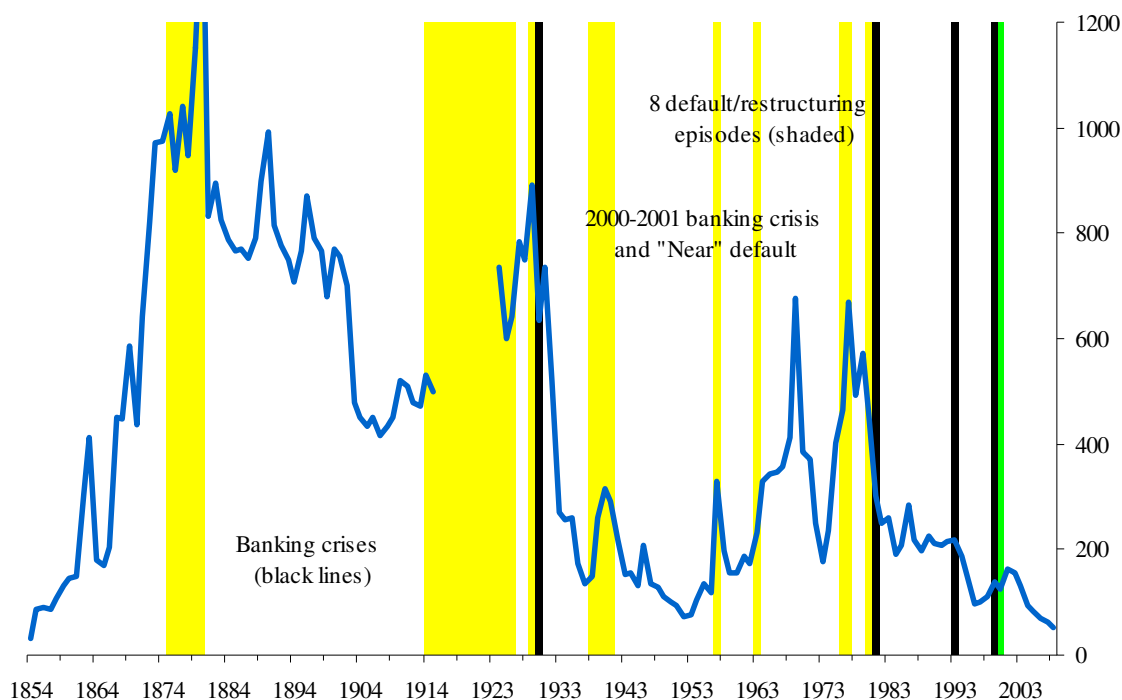
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, and IMF Programs: Tunisia, 1956-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1867-1870	4	n.a.	1991	n.a.	13.0	0.0	1955(5.1)
1956	1						1957(4.1)
1958	1						1959(4.2)
1963	1						
1979-1982	4						
Number of episodes:							
5		0	1	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total number
1964-1967, 1969-1970, 1986, 1988							8



Figure 64a. Turkey: External Public Debt, Default, and Banking Crises 1854-2009  
(debt as a percent of exports)



Sources: Pamuk (1995), Reinhart and Rogoff (2009) and sources cited therein

Default, Banking Crises, Growth Collapses, and IMF Programs: Turkey, 1800-2009  
(calculations since independence—1923--reported)

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
1876-1881	6	n.a.	1931	n.a.	19.5	35.6	1927(9.1)
1915-1928	14		1982				1932(6.0)
1931-1932	2		1991				1994(5.5)
1940-1943	4		2000				2001(5.7)
1959	1						2009(5.6)
1965	1						
1978-1979	2						
1982	1						
2000-2001 "near"	2						
Number of episodes:							
	8	0	4	0			

Memorandum item on IMF programs, 1952-2009

Dates of programs

1961-1970, 1978-1980, 1983-1984, 1994, 1999, 2002

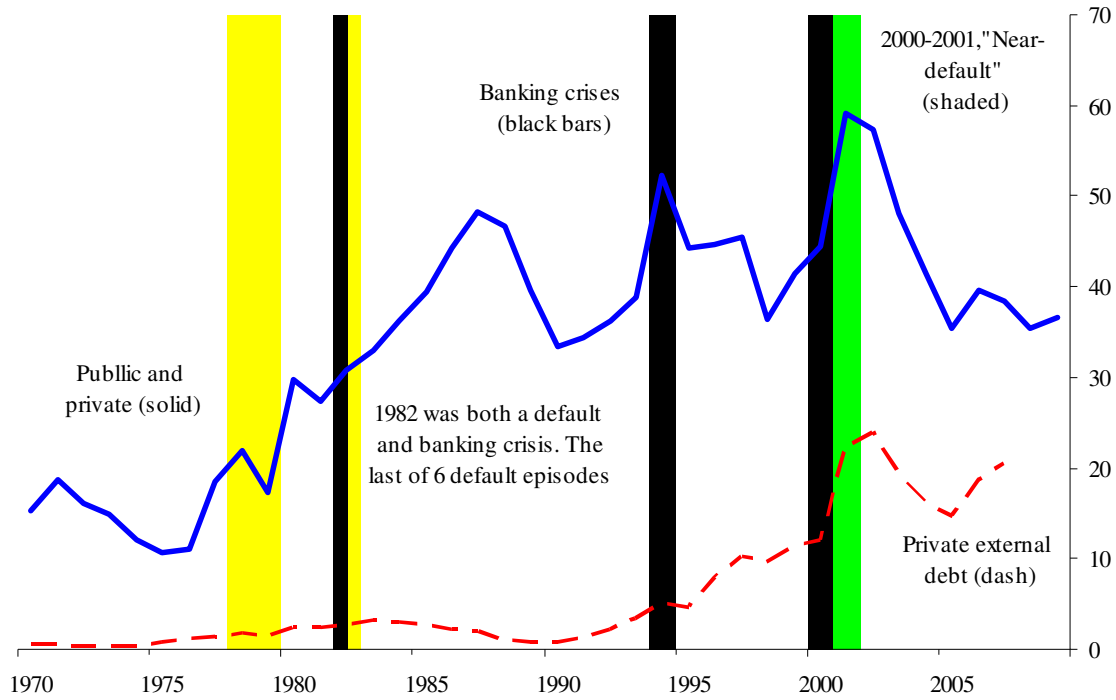
Total number

18

<sup>1</sup>Excludes World Wars I and II.

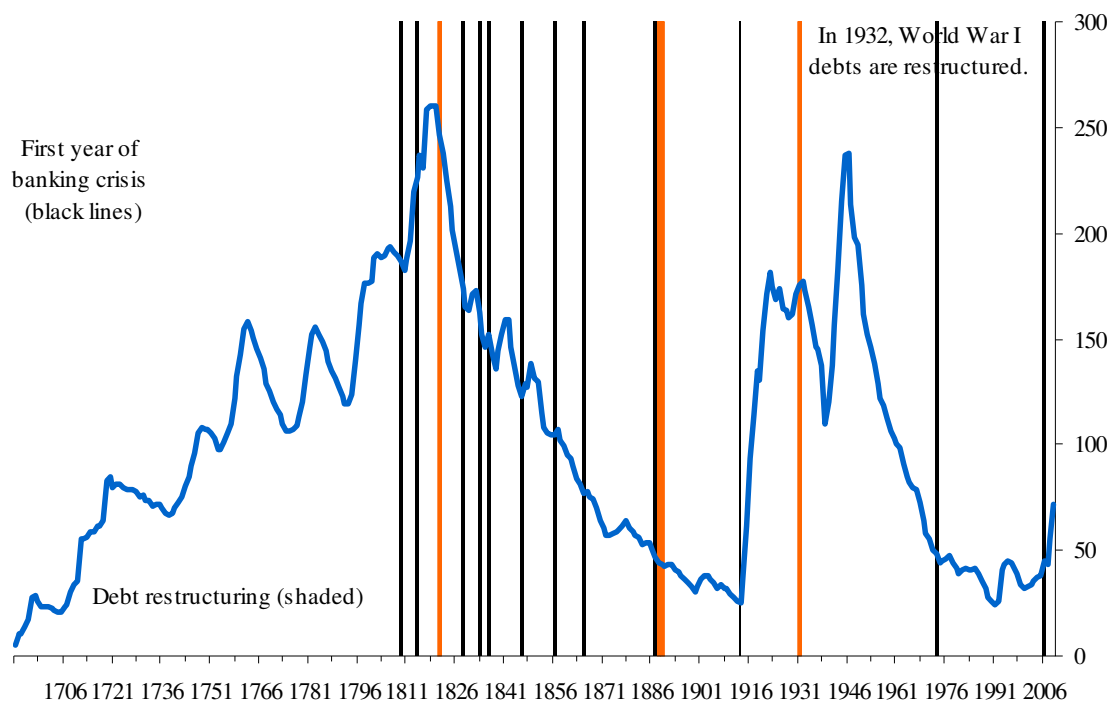
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 64b. Turkey: External Public and Private Debts, Default, Near-default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

Figure 65a. United Kingdom: Central Government Debt, Restructurings,  
and Banking Crises, 1692-2009  
(debt as a percent of GDP)



Sources: UKpublicspending, (2010), Reinhart and Rogoff (2009) and sources cited therein.

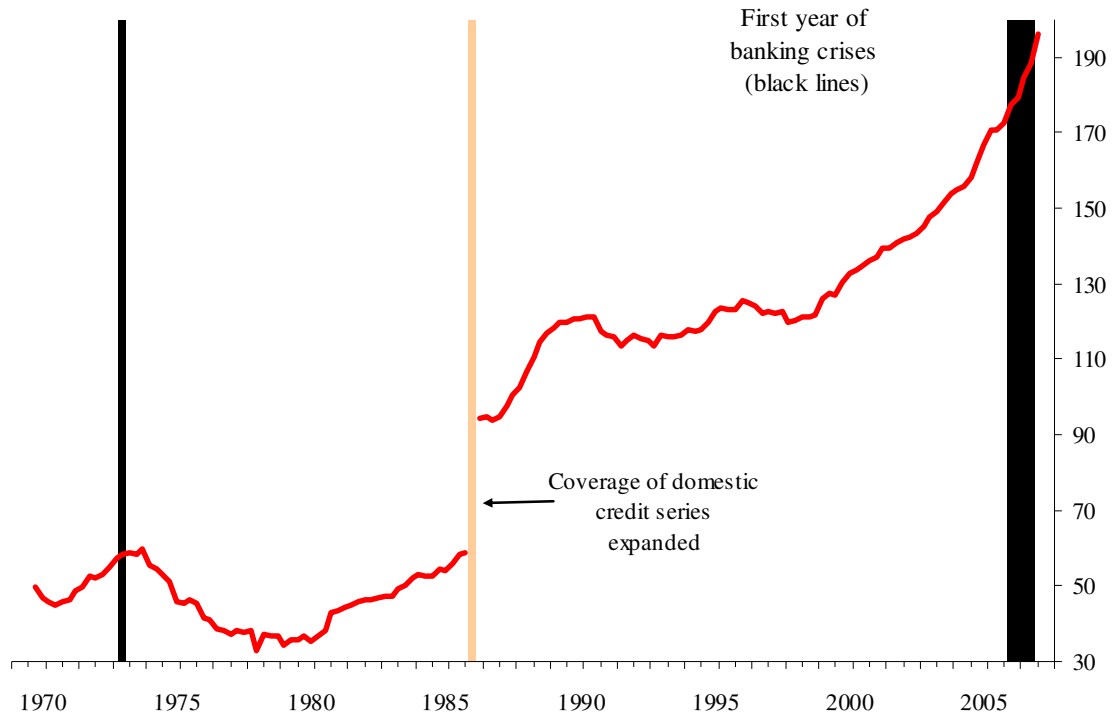
Default, Banking Crises, Growth Collapses, and IMF Programs:  
United Kingdom, 1800-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
n.a.	n.a.	1822	1810	n.a.	n.a.	2.4	1919(10.9)
		1834	1815				1920(6.0)
		1888-1889	1825				1921(8.1)
		1932	1837				1931(5.1)
			1847				2009(4.9)
			1857				
			1866				
			1878				
			1890				
			1974				
			1984				
			2007				
Number of episodes:							
0		4	12	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1956-1958, 1961-1964, 1967, 1969, 1975, 1977							11

<sup>1</sup>Excludes World Wars I and II.

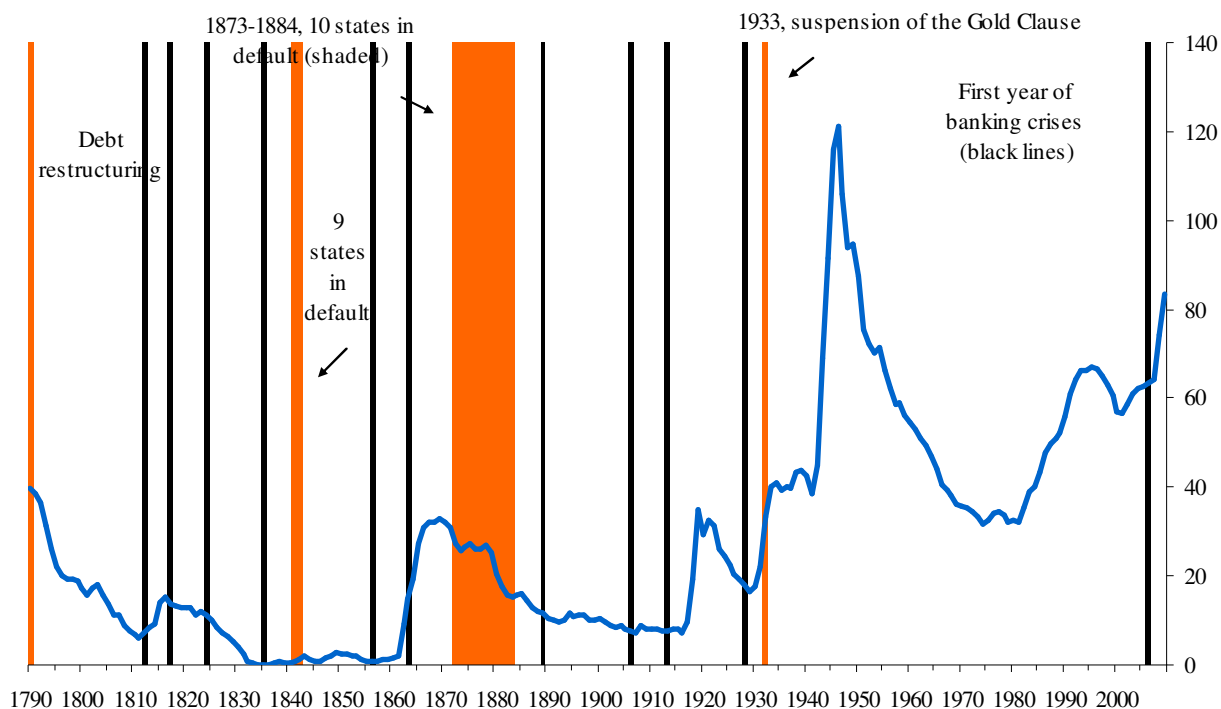
Notes: Summary of private forecasts for 2009 in *italics*.

Figure 65b. United Kingdom Banking Survey: Domestic Credit and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.

Figure 66a. United States: Central Government Debt, Default, and Banking Crises, 1790-2009  
(debt as a percent of GDP)



Sources: Reinhart and Rogoff (2009) and sources cited therein

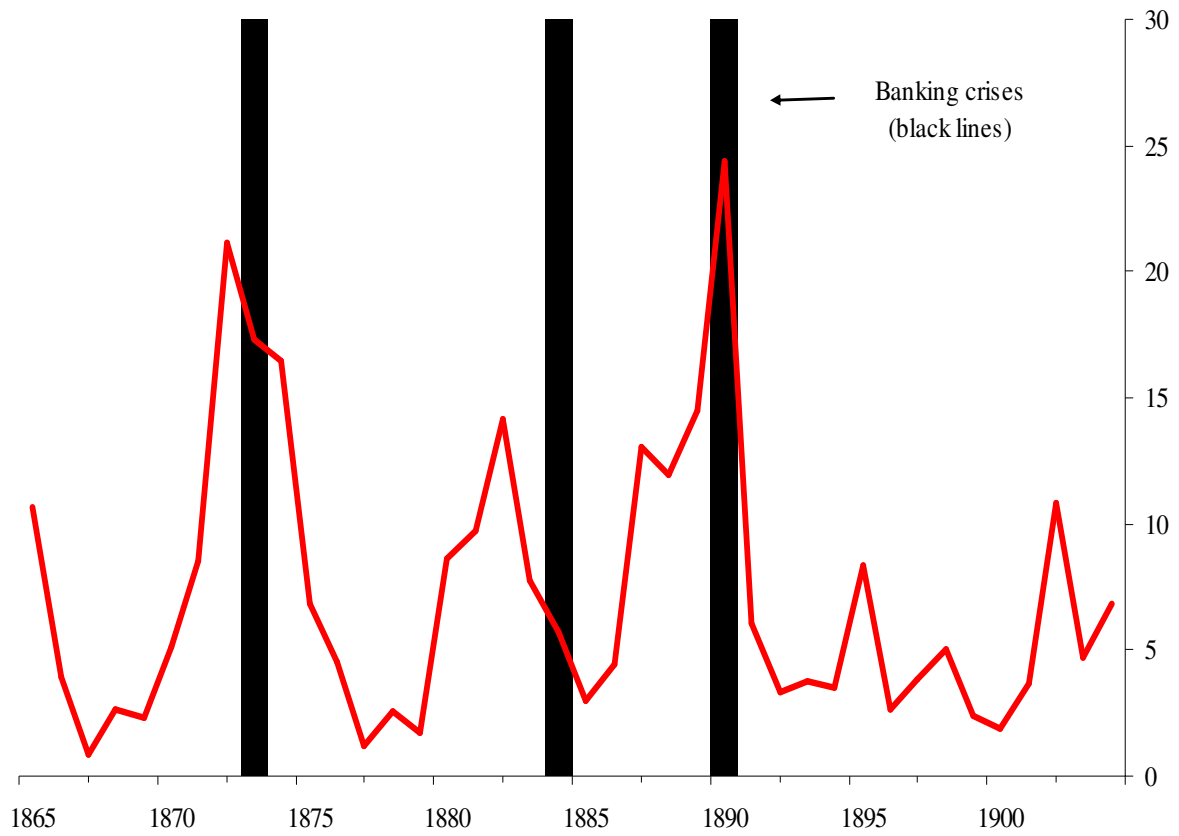
Default, Banking Crises, Growth Collapses, and IMF Programs:  
United States 1790-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline) <sup>1</sup>
1790	1	1790	1814	n.a.	n.a.	1.4	1908(10.8)
		1841-1842	1818				1914(7.7)
		1873-1884	1836				1930(8.6)
		1933	1841				1932(13.1)
			1857				1946(10.1)
			1861				
			1864				
			1873				
			1884				
			1890				
			1907				
			1914				
			1929				
			1984				
			2007				
Number of episodes:							
1		2	15	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1963-1964							2

Notes: The default of US states are not counted in the tally as the total number of episodes refers to sovereign credit events only.

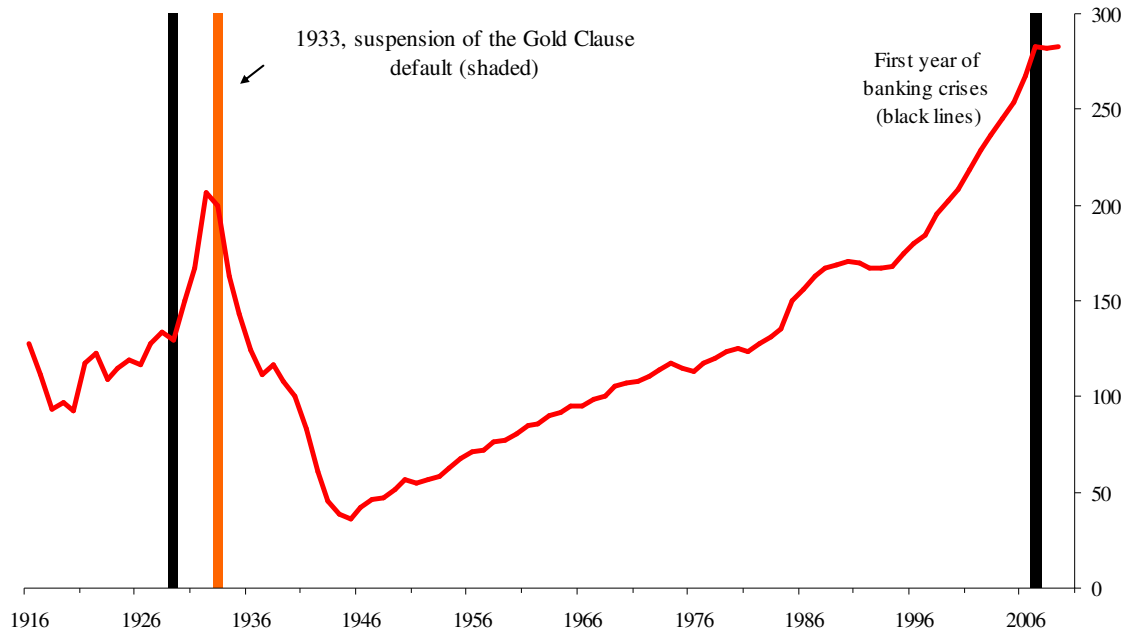
<sup>1</sup>Excludes World Wars I and II.

Figure 66b. United States: Private Capital Inflows from the United Kingdom and  
Banking Crises, 1865-1914  
(capital flows as a percent of exports)



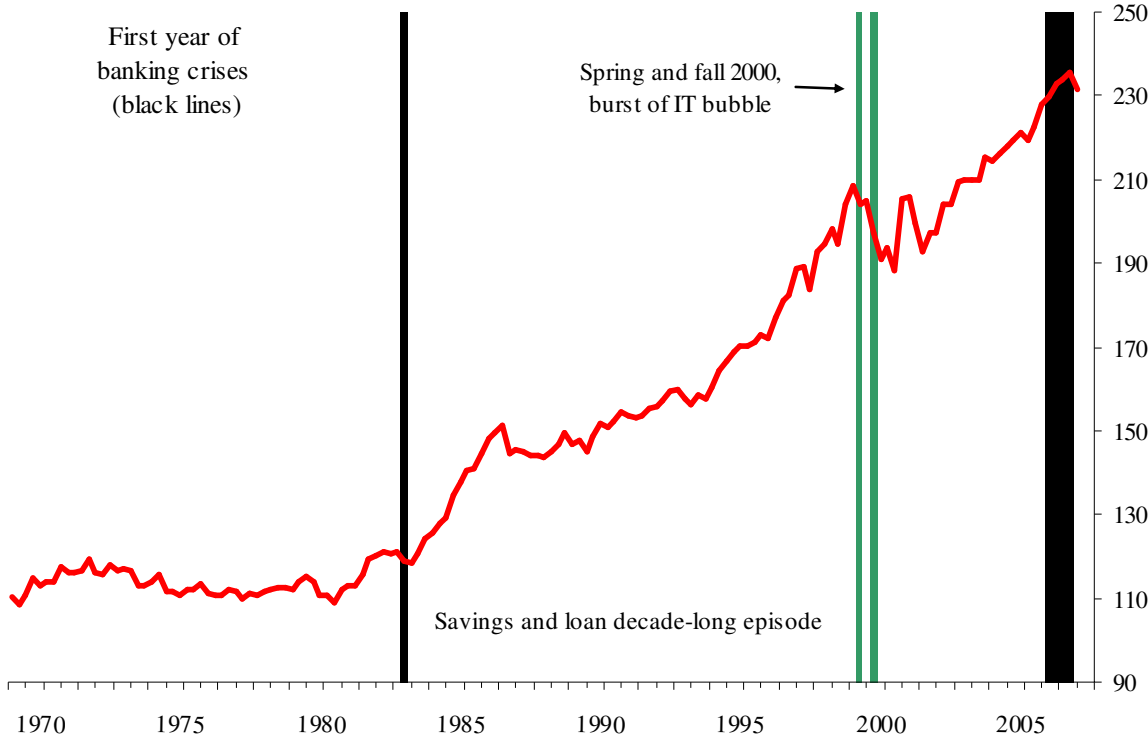
Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein.

Figure 66c. United States: Private Debt Outstanding, 1916-2009  
(end-of- period stock of debt as a percent of GDP)



*Notes:* Data for 2009 is end-of-June. The Flow of Funds is reported for 1945-2009; prior to that the Historical Statistics of the United States series is scaled (down) to match the Flow of Funds data.  
*Sources:* Historical Statistics of the United States, Flow of Funds, Board of Governors of the Federal Reserve, International Monetary Fund, *World Economic Outlook*, OECD, World Bank, *Global Development Finance*, and Reinhart and Rogoff (2009b) and sources cited therein.

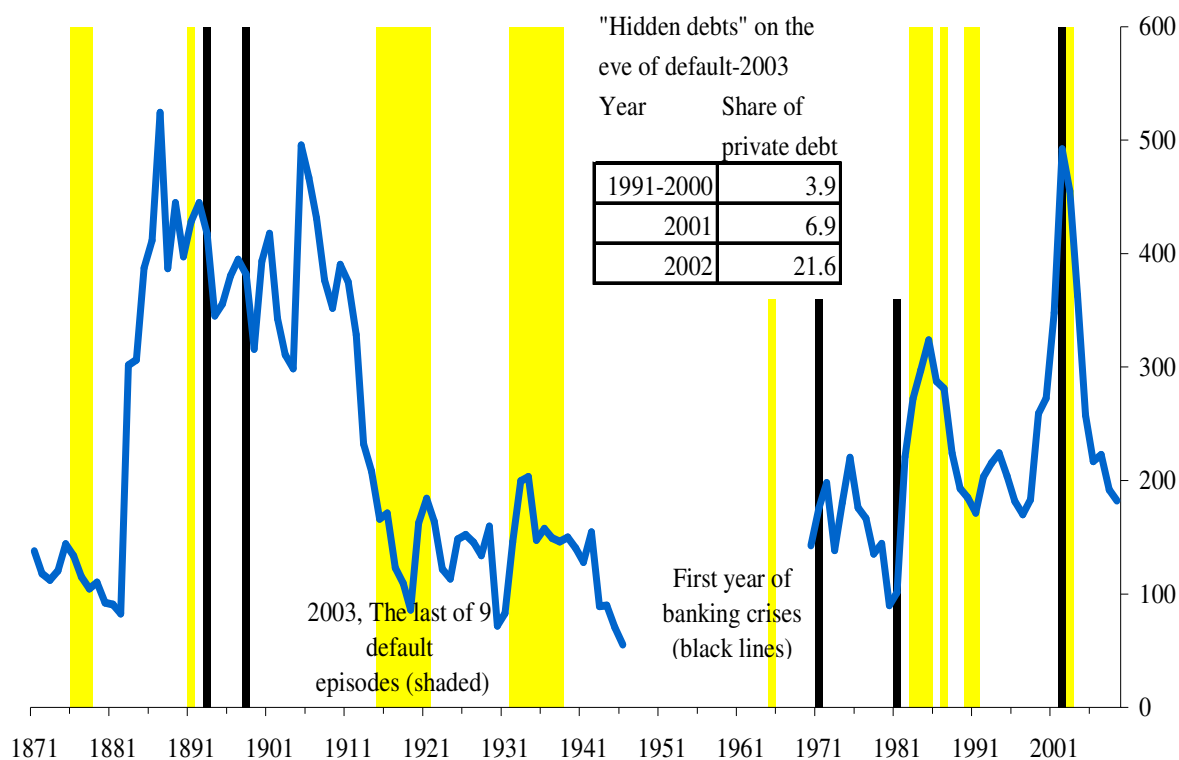
Figure 66d. United States Banking Survey: Domestic Credit  
and Banking Crises, 1970-2008  
(credit outstanding at end-of-period as a percent of GDP)



Sources: International Monetary Fund, *International Financial Statistics*, Reinhart and Rogoff (2009) and sources cited therein.



Figure 67a. Uruguay: Public (domestic plus external) Debt, Default, Restructuring, and Banking Crises, 1871-2009  
(debt as a percent of exports)



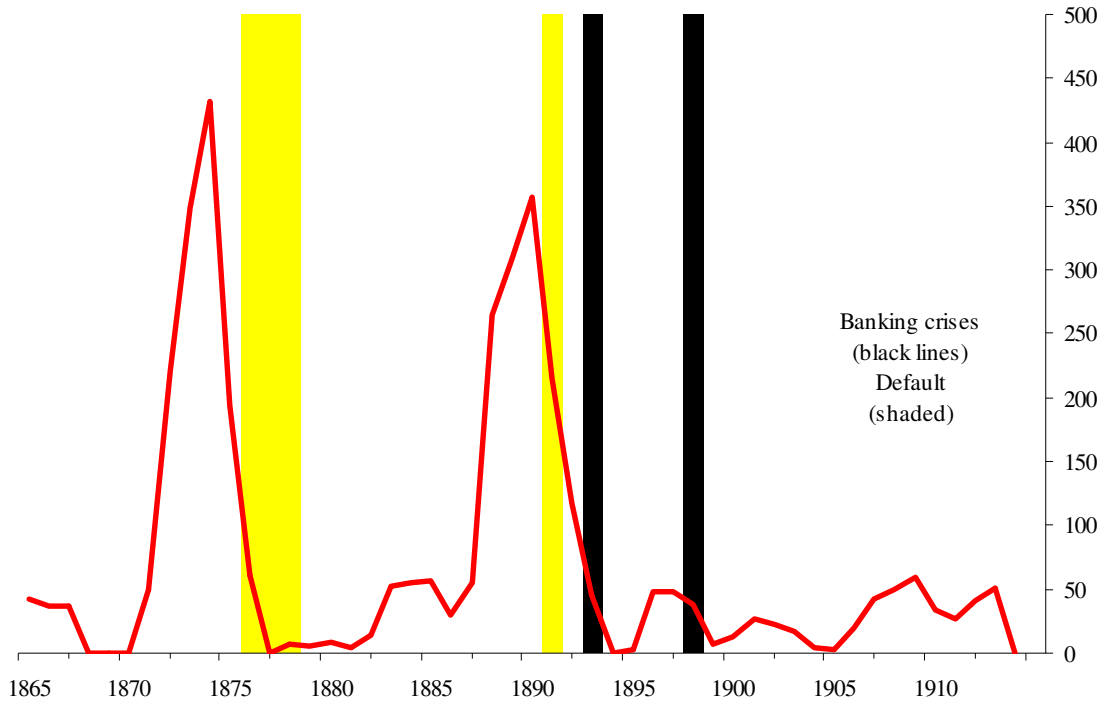
Sources: Reinhart and Rogoff (2009) and sources cited therein.

Notes: For the period 1871-1914 only external debt data is available. Domestic debts (only a few observations are available) was negligible during this period.

Default, Banking Crises, Growth Collapses, and IMF Programs:  
Uruguay, 1811-2009

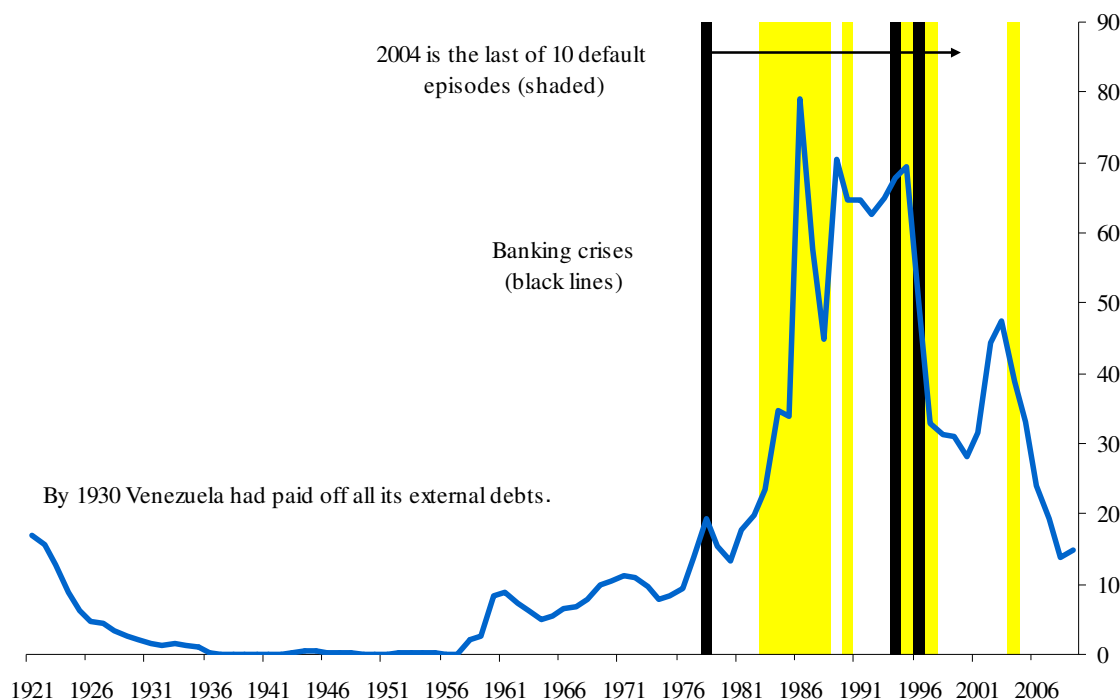
External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	6 worst output collapses year(decline)
1876-1878	3	1932-1937	1893	n.a.	13.0	18.0	1905(10.1)
1891	1		1898				1914(16.7)
1915-1921	7		1971				1920(12.8)
1932-1938	7		1981				1931(17.3)
1965	1		2002				1933(12.5)
1983-1985	3						1982(9.3)
1987	1						
1990-1991	2						
2003	1						
Number of episodes:							
9		1		5		0	
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1961-1962, 1966, 1968, 1970, 1972, 1975-1977, 1979-1981, 1983, 1985, 1990, 1992, 1997, 1999-2002							21

Figure 67b. Uruguay: Total (private and public) Capital Inflows from the United Kingdom and Default, and Banking Crises, 1865-1914  
(capital flows as a percent of exports, three-year sum)



Sources: Stone (1999), Reinhart and Rogoff (2009) and sources cited therein.

Figure 68. Venezuela: Central Government (domestic plus external) Debt, Default, and Banking Crises, 1921-2009  
(debt as a percent of GDP)

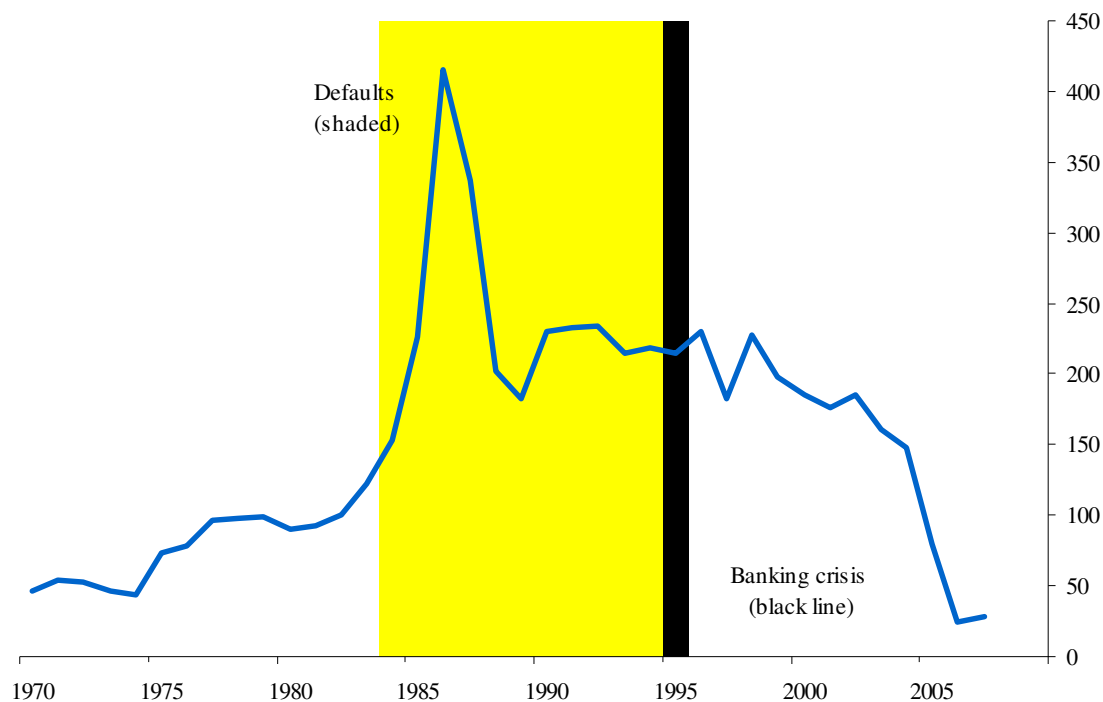


Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, and IMF Programs:  
Venezuela, 1829-2009

External default Dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1826-1840	15	1995-1997	1978	n.a.	35.9	11.0	1914(12.6)
1848-1859	12	1998	1993				1931(19.2)
1860-1862	3						1942(12.6)
1865-1881	17						1989(8.6)
1892	1						2002(8.9)
1898-1905	8						
1983-1988	6						
1990	1						
1995-1997	3						
2004-2005	2						
Number of episodes:							
	10	2	2	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total number
1960, 1989, 1996							3

Figure 69. Zambia: External (public plus private) Debt, Default, and Banking Crises, 1970-2009  
(debt as a percent of GDP)

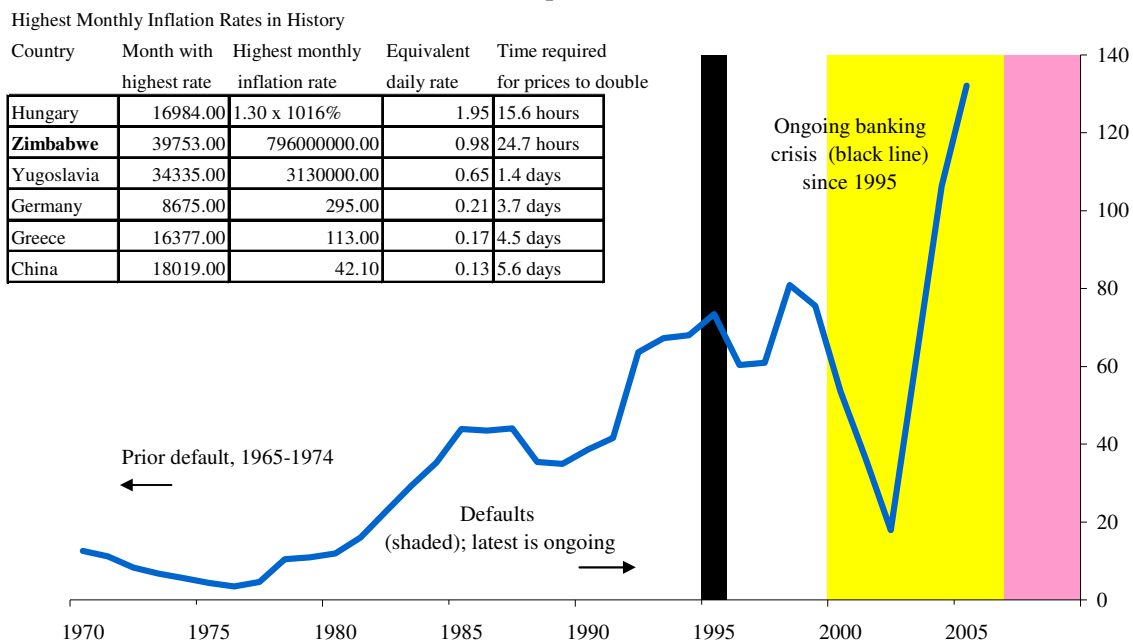


Sources: Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, and IMF Programs:  
Zambia, 1964-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	3 worst output collapses year(decline)
1983-1994	12	n.a.	1995	n.a.	24.0	40.0	1966(5.5) 1977(4.9) 1994(13.3)
Number of episodes:							
1		0	1	0			
Memorandum item on IMF programs, 1952-2009							
Dates of programs							Total
1973, 1976, 1978, 1981, 1983-1984, 1986, 1995(2), 1999, 2004, 2008							12

Figure 70. Zimbabwe: External (public plus private) Debt, Default, Restructuring, Hyperinflation, and Banking Crises, 1970-2009  
(debt as a percent of GDP)



Sources: Hanke (2008), Reinhart and Rogoff (2009) and sources cited therein.

Default, Banking Crises, Growth Collapses, IMF Programs and Hyperinflation:  
Zimbabwe, 1965-2009

External default dates	Duration (in years)	Domestic default dates	Banking crisis dates (first year)	Hyper-inflation dates	Share of years in external default	Share of years in inflation crisis	5 worst output collapses year(decline)
1965-1974	10	2006	1995	2006-2009	40.0	40.0	1977(8.0)
2000-2009	10						1992(8.4)
							2000(7.3)
							2003(10.4)
							2008(14.1)
Number of episodes:							
2		1	1	1			

Memorandum item on IMF programs, 1952-2009

Dates of programs	Total
1981, 1983, 1992 (3), 1998, 1999	7

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