

Η Χρηματοοικονομική Κρίση

Ιστορική αναδρομή

περιγραφή, συνέπειες, ποσοτικοποίηση, μετάδοση

Reinhard & Rogoff, Part V

τραπεζικές κρίσεις

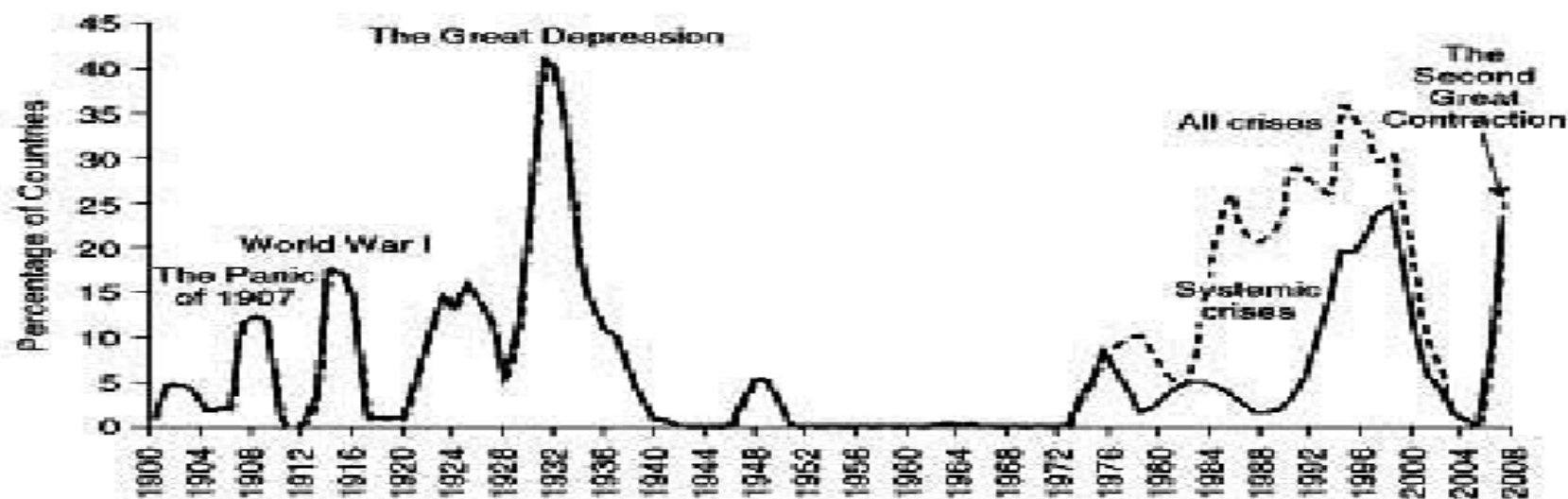


Figure 13.1. The proportion of countries with banking crises, 1900–2008, weighted by their share of world income.

Sources: Kaminsky and Reinhart (1999), Bordo et al. (2001),

Maddison (2004), Caprio et al. (2005), Jácome (2008), and the additional sources listed in appendix A.3, which provides the dates of banking crises.

Notes: The sample size includes all sixty-six countries listed in table 1.1 that were independent states in the given year. Three sets of GDP weights are used, 1913 weights for the period 1800–1913, 1990 weights for the period 1914–1990, and finally 2003 weights for the period 1991–2008. The dotted line indicates all crises, the solid line systemic crises (for instance, for the 1980s and 1990s, the crises in the Nordic countries, then Japan, then the rest of Asia). The entries for 2007–2008 indicate crises in Austria, Belgium, Germany, Hungary, Japan, the Netherlands, Spain, the United Kingdom, and the United States. The figure shows a three-year moving average.

TABLE 13.1
Post–World War II bank-centered financial crises
in advanced economies

| Country | Beginning year of crisis |
|---|--------------------------|
| Severe (systemic) crises: The “Big Five” | |
| Spain | 1977 |
| Norway | 1987 |
| Finland | 1991 |
| Sweden | 1991 |
| Japan | 1992 |
| Milder crises | |
| United Kingdom | 1974 |
| Germany | 1977 |
| Canada | 1983 |
| United States (savings and loan) | 1984 |
| Iceland | 1985 |
| Denmark | 1987 |
| New Zealand | 1987 |
| Australia | 1989 |
| Italy | 1990 |
| Greece | 1991 |
| United Kingdom | 1991 |
| France | 1994 |
| United Kingdom | 1995 |

Sources: Caprio and Klingebiel (1996, 2003), Kaminsky and Reinhart (1999), and Caprio et al. (2005).

TABLE 15.1

Global banking crises, 1890–2008: Contagion or common fundamentals?

| Years of bunching in banking crises | Affected countries | Comments |
|-------------------------------------|---|--|
| 1890–1891 | Argentina, Brazil, Chile, Portugal, the United Kingdom, and the United States | Argentina defaulted and there were runs on all Argentine banks (see della Paolera and Taylor 2001); Baring Brothers faced failure. |
| 1907–1908 | Chile, Denmark, France, Italy, Japan, Mexico, Sweden, and the United States | A drop in copper prices undermined the solvency of a trust company (quasi-bank) in New York. |
| 1914 | Argentina, Belgium, Brazil, France, India, Italy, Japan, Netherlands, Norway, the United Kingdom, and the United States | World War I broke out. |
| 1929–1931 | Advanced economies: Belgium, Finland, France, Germany, Greece, Italy, Portugal, Spain, Sweden, and the United States Emerging markets: Argentina, Brazil, China, India, and Mexico | Real commodity prices collapsed by about 51 percent during 1928–1931. Real interest rates reached almost 13 percent in the United States. |
| 1981–1982 | Emerging markets: Argentina, Chile, Colombia, Congo, Ecuador, Egypt, Ghana, Mexico, the Philippines, Turkey, and Uruguay | Between 1979 and 1982, real commodity prices fell about 40 percent. U.S. real interest rates hit about 6 percent—their highest readings since 1933. The decade-long debt crisis in emerging markets began. |
| 1987–1988 | Many small, mostly low-income countries; Sub-Saharan Africa was particularly hard hit | These years marked the tail-end of a nearly decade-long debt crisis. |
| 1991–1992 | Advanced economies: the Czech Republic, Finland, Greece, Japan, and Sweden | Real estate and equity price bubbles in the Nordic countries and Japan burst; |

(continued)

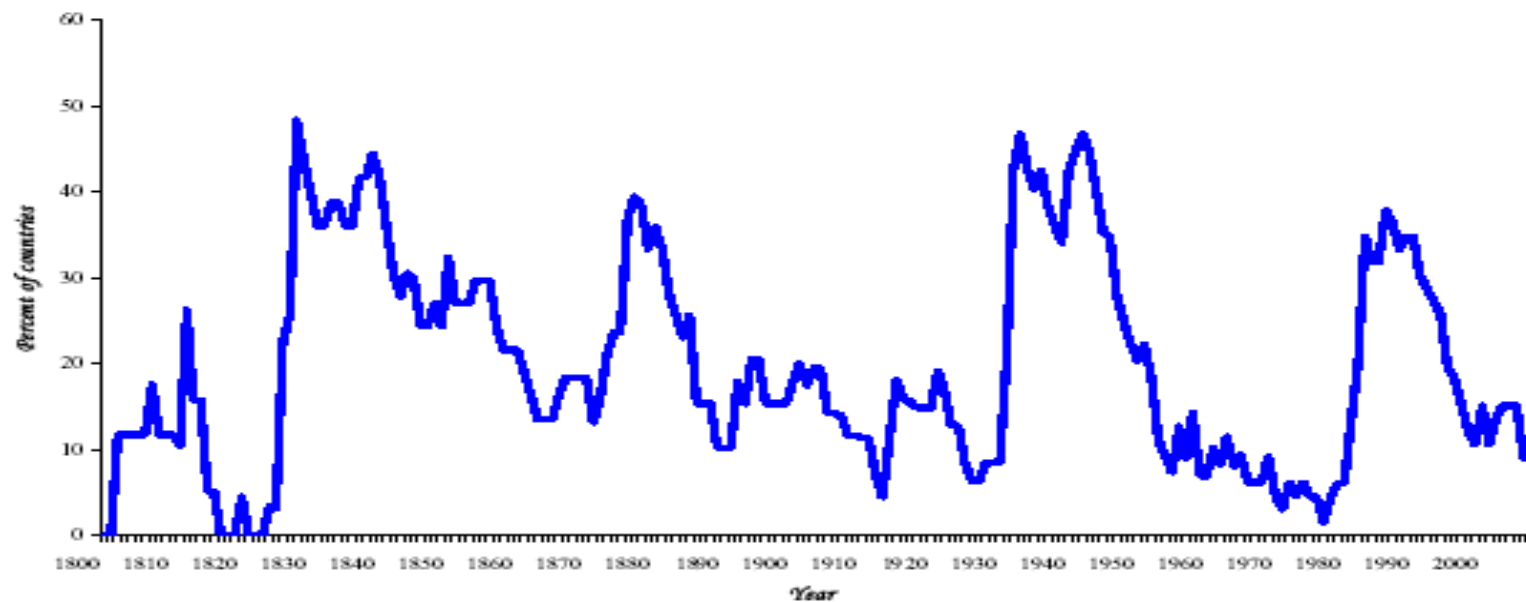
TABLE 15.1 Continued

| Years of bunching in banking crises | Affected countries | Comments |
|-------------------------------------|---|--|
| | Other countries: Algeria, Brazil, Egypt, Georgia, Hungary, Poland, Romania, and the Slovak Republic | many transition economies coped with liberalization and stabilization. |
| 1994–1995 | Argentina, Bolivia, Brazil, Ecuador, Mexico, and Paraguay Others countries: Azerbaijan, Cameroon, Croatia, Lithuania, and Swaziland | The Mexican “tequila crisis” dealt the first blow to the surge in capital inflows to emerging markets since the early 1990s. |
| 1997–1999 | Asia: Hong Kong, Indonesia, Malaysia, the Philippines, Taiwan, Thailand, and Vietnam Other countries: Brazil, Colombia, Ecuador, El Salvador, Mauritius, Russia, Turkey, and Ukraine | The second blow was dealt to capital flows to emerging markets. |
| 2007–present | Germany, Hungary, Iceland, Ireland, Japan, Spain, the United Kingdom, the United States, and others | The U.S. subprime real estate bubble—and other real estate bubbles in advanced economies—burst. |

Sources: Based on chapters 1–10 of this book.

Κρίσεις εθνικού χρέους

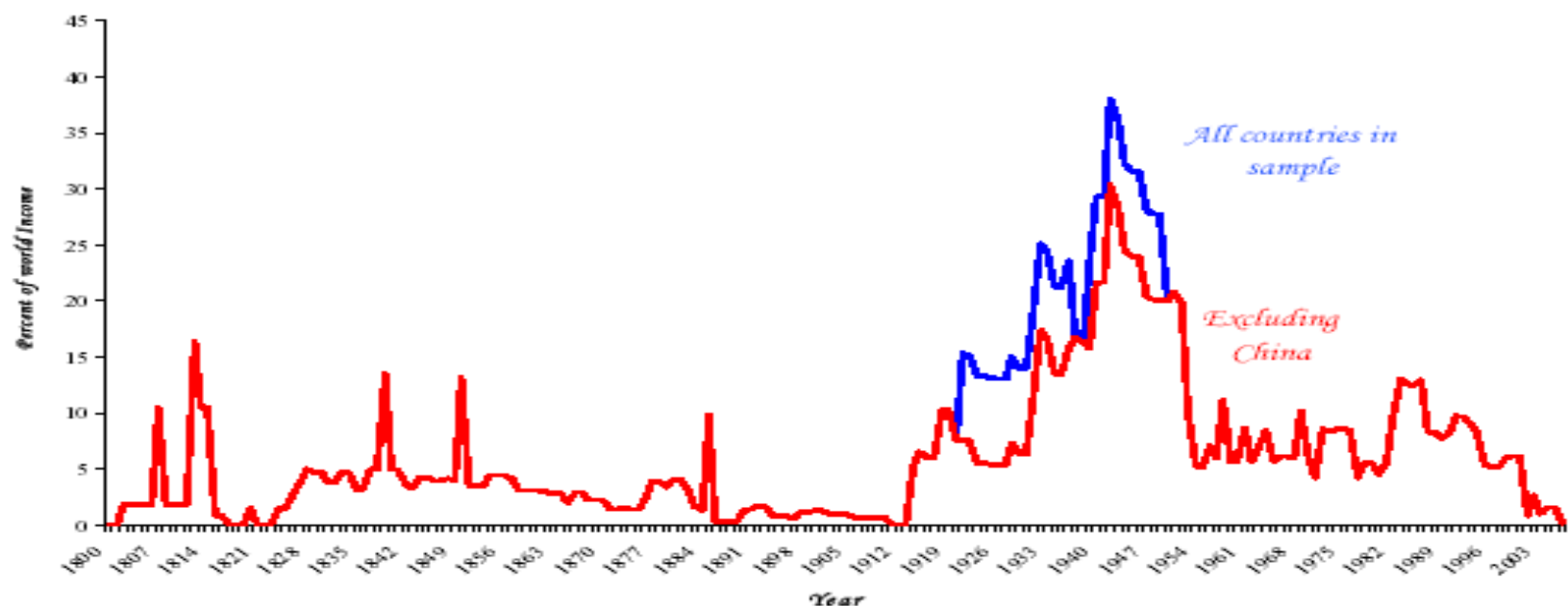
Sovereign External Debt: 1800-2006
Percent of Countries in Default or Restructuring



Sources: Lindert and Morton (1989), Macdonald (2003), Purcell and Kaufman (1993), Reinhart, Rogoff, and Savastano (2003), Suter (1992), and Standard and Poor's (various years).

Notes: Sample size includes all countries, out of a total of sixty six listed in Table 1, that were independent states in the given year.

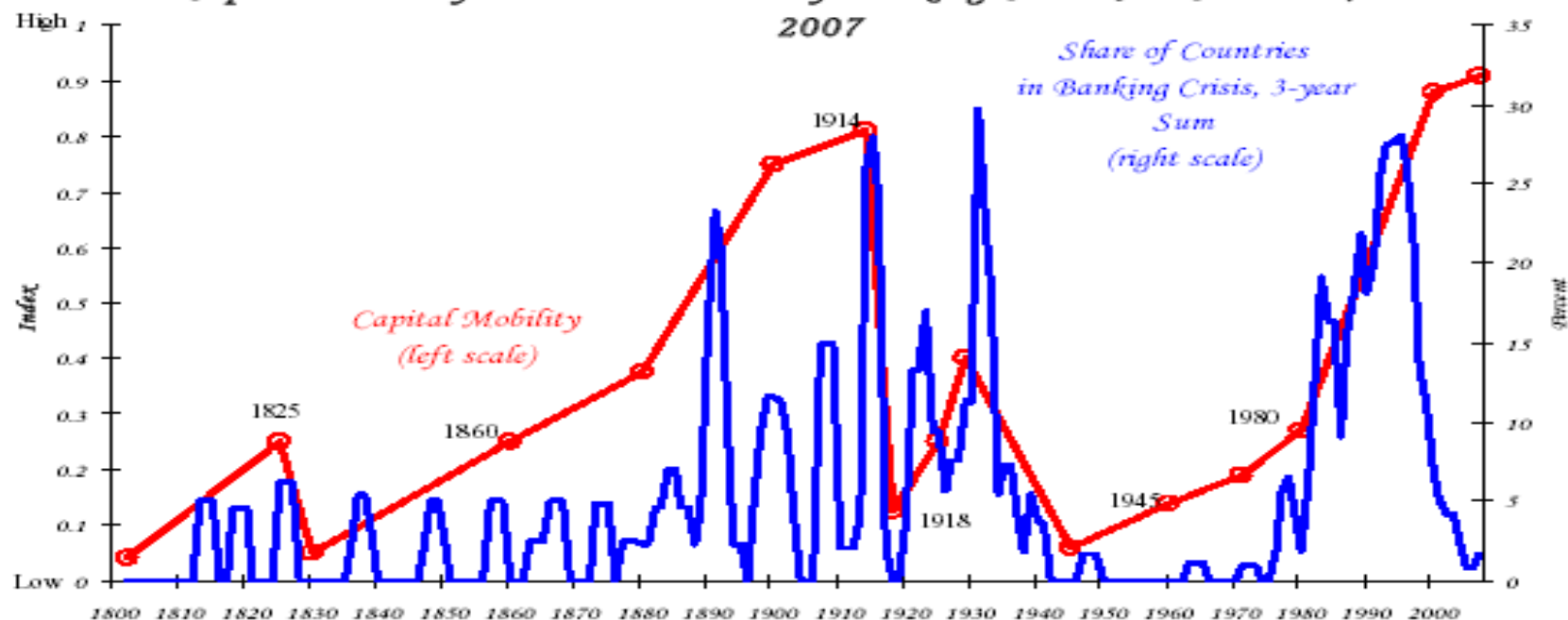
Sovereign External Debt: 1800-2006
Countries in Default Weighted by Their Share of World Income



Sources: Lindert and Morton (1989), Macdonald (2003), Maddison (2003), Purcell and Kaufman (1993), Reinhart, Rogoff, and Savastano (2003), Suter (1992), and Standard and Poor's (various years).

Notes: Sample size includes all countries, out of a total of sixty six listed in Table 1, that were independent states in the given year. Three sets of GDP weights are used, 1913 weights for the period 1800–1913, 1990 for the period 1914–1990, and finally 2003 weights for the period 1991–2006.

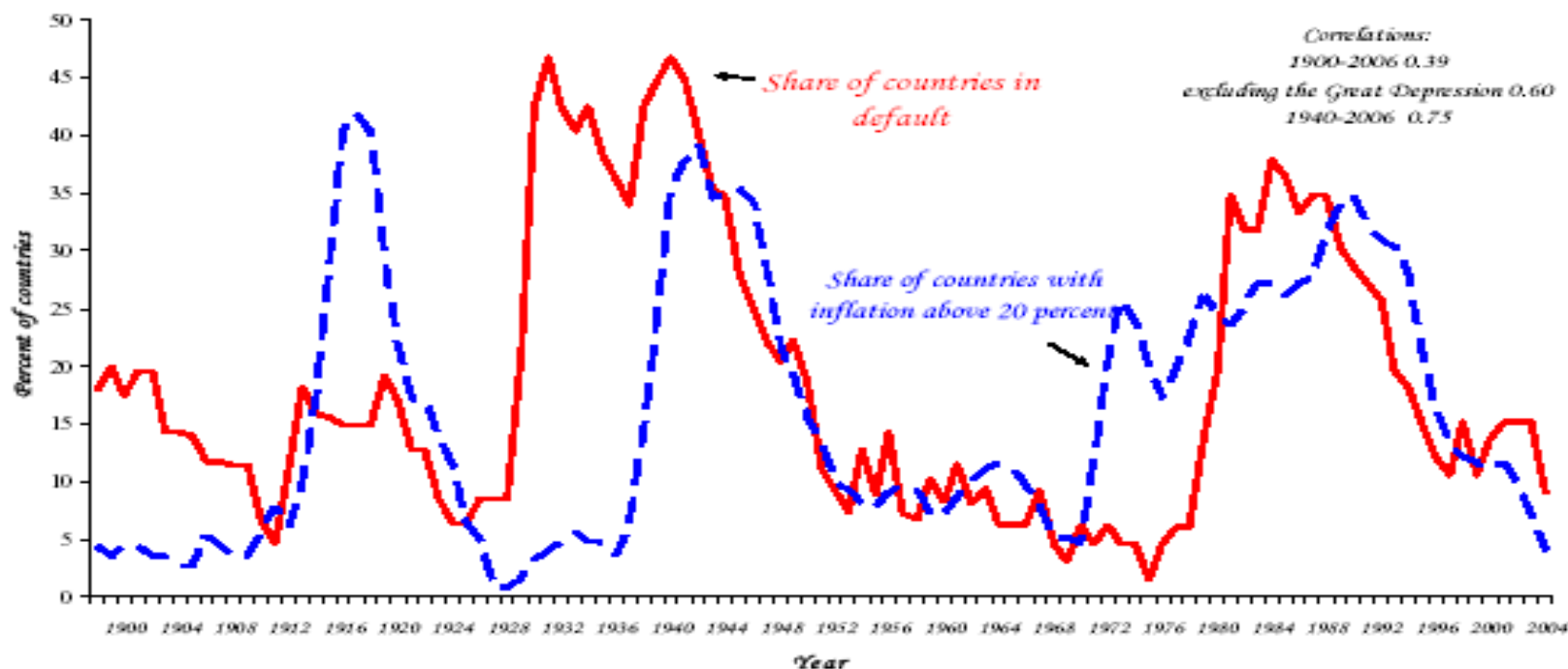
Capital Mobility and the Incidence of Banking Crisis: All Countries, 1800-2007



Sources: Bordo et al. (2001), Caprio et al. (2005), Kaminsky and Reinhart (1999), Obstfeld and Taylor (2004), and these authors.

Notes: As with external debt crises, sample size includes all countries, out of a total of sixty six listed in Table 1 that were independent states in the given year. The smooth red line (right scale) shows the judgmental index of the extent of capital mobility given by Obstfeld and Taylor (2003), backcast from 1800 to 1859 using their same design principle.

Inflation and External Default: 1900-2006

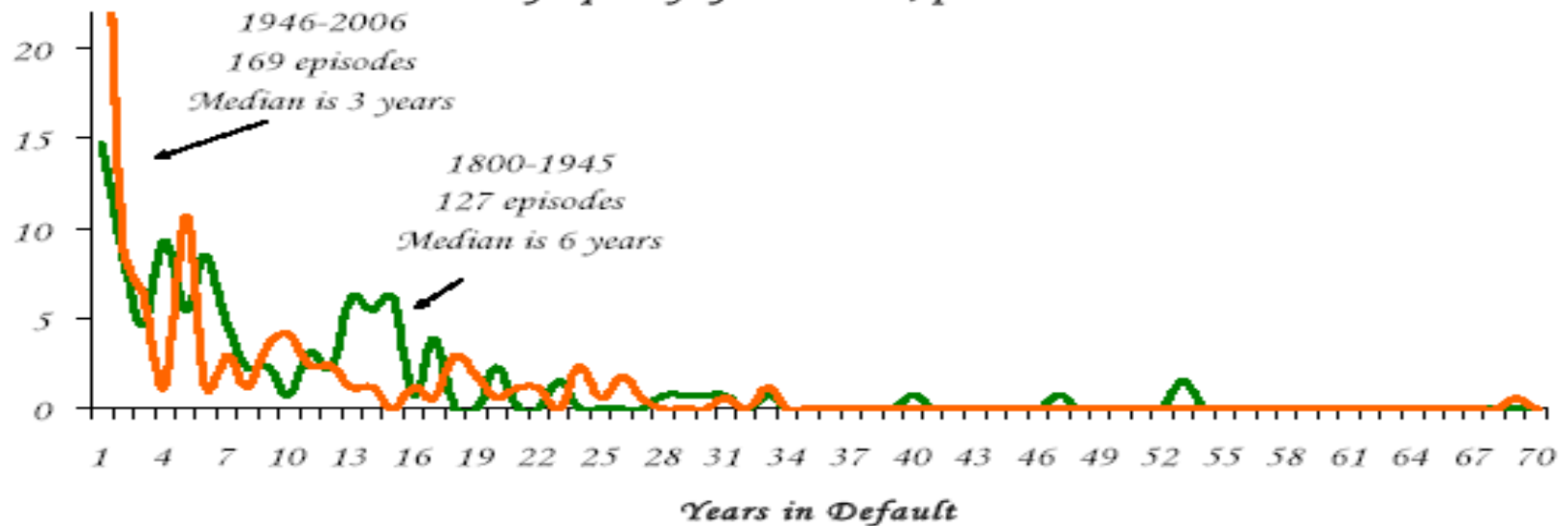


Sources: For share of countries in default, see Figure 1; for high inflation episodes, see Appendix I.

Notes: Both the inflation and default variables are simple unweighted averages.

Duration of Default Episodes: 1800-2006

frequency of occurrence, percent



Sources: Lindert and Morton (1989), Macdonald (2003), Purcell and Kaufman (1993), Reinhart, Rogoff, and Savastano (2003), Suter (1992), Standard and Poor's (various years) and authors' calculations.

Notes: The duration of a default spell is the number of years from the year of default to the year of resolution, be it through restructuring, repayment, or debt forgiveness. The Kolmogorov-Smirnoff test for comparing the equality of two distributions rejects the null hypothesis of equal distributions at the one percent significance level.

Table 2. The Early External Defaults: 1300-1899

| <i>Country</i> | <i>Years of default 1300-1799</i> | <i>Years of default 1800-1799</i> | <i>Number of defaults</i> |
|-----------------------------|--|---|---------------------------|
| Africa | | | |
| Egypt, 1831 | | 1876 | 1 |
| Tunisia | | 1867 | 1 |
| Europe | | | |
| Austria | 1796 | 1802, 1805, 1811, 1816, 1868 | 6 |
| England | 1340, 1594* | | 2 |
| France | 1558, 1624, 1648 1661, 1701, 1715 1770, 1788, 1797 | 1812 | 10 |
| Germany | | | 6 |
| Hesse | | 1814 | 1 |
| Prussia | 1683 | 1807, 1813 | 3 |
| Schleswig- Holstein | | 1850 | 1 |
| Westphalia | | 1812 | 1 |
| Greece, 1829 | | 1826, 1843, 1860, 1893 | 4 |
| Netherlands | | 1814 | 1 |
| Portugal | 1560 | 1828, 1837, 1841, 1845 1852, 1890 | 7 |
| Russia | | 1839, 1885 | 2 |
| Spain | 1557, 1575, 1596, 1607, 1627, 1647 | 1809, 1820, 1831, 1834, 1851, 1867, 1872, 1882 | 14 |
| Sweden | | 1812 | 1 |
| Turkey | | 1876 | 1 |
| Latin America | | | |
| Argentina, 1816 | | 1827, 1890 | 2 |
| Bolivia, 1825 | | 1875 | 1 |
| Brazil, 1822 | | 1898 | 1 |
| Chile, 1818 | | 1826, 1880 | 2 |
| Colombia, 1819 | | 1826, 1850, 1873, 1880 | 4 |
| Costa Rica, 1825 | | 1828, 1874, 1895 | 3 |
| Dominican Republic, 1845 | | 1872, 1892 1897, 1899 | 4 |
| Ecuador, 1830 | | 1826, 1868, 1894 | 3 |
| El Salvador, 1821 | | 1828, 1898 | 2 |
| Guatemala, 1821 | | 1828, 1876, 1894, 1899 | 4 |
| Honduras, 1821 | | 1828, 1873 | 2 |
| Mexico, 1821 | | 1827, 1833, 1844, 1866, 1898 | 5 |
| Nicaragua, 1821 | | 1828, 1894 | 2 |
| Paraguay, 1811 | | 1874, 1892 | 2 |
| Peru, 1821 | | 1826, 1876 | 2 |
| Uruguay, 1811 | | 1876, 1891 | 2 |
| Venezuela, 1830 | | 1826, 1848, 1860, 1865, 1892, 1898 | 6 |

Sources: MacDonald (2006), Reinhart, Rogoff and Savastano (2003) and sources cited therein.

* The dates are shown for those countries that became independent during the 19th century.

Table 3. Selected Episodes of Default and Rescheduling: 20th Century as of 2006

| <i>Country/date of independence¹</i> | <i>Dates</i> | | | |
|---|------------------|------------------|------------------------------|------------------------------|
| | <i>1900-1924</i> | <i>1925-1949</i> | <i>1950-1974</i> | <i>1975-2006</i> |
| Africa | | | | |
| Algeria, 1962 | | | | 1991 |
| Cote D'Ivoire, 1960 | | | | 1983, 2000 |
| Egypt | | | | 1984 |
| Kenya, 1963 | | | | 1994, 2000 |
| Morocco, 1956 | 1903 | | | 1983, 1986 |
| Nigeria, 1960 | | | | 1982, 1986, 1992, 2001, 2004 |
| South Africa, 1910 | | | | 1985, 1989, 1993 |
| Zimbabwe, 1965 | | | 1965 | 2000 |
| Asia | | | | |
| China | 1921 | 1939 | | |
| Japan | | 1942 | | |
| India, 1947 | | | 1958, 1969, 1972 | |
| Indonesia, 1949 | | | 1966 | 1998, 2000, 2002 |
| Myanmar, 1948 | | | | 2002 |
| Philippines, 1947 | | | | 1983 |
| Europe | | | | |
| Austria | | 1938, 1940 | | |
| Germany | | 1932, 1939 | | |
| Greece | | 1932 | | |
| Poland, 1918 | | 1936, 1940 | | 1981 |
| Romania | | 1933 | | 1981, 1986 |
| Latin America | | | | |
| Argentina | | | 1951, 1956 | 1982, 1989, 2001 |
| Bolivia | | 1931 | | 1980, 1986, 1989 |
| Brazil | 1902, 1914 | 1931, 1937 | 1961, 1964 | 1983 |
| Chile | | 1931 | 1961, 1963, 1966, 1972, 1974 | 1983 |
| Ecuador | 1906, 1909, 1914 | 1929 | | 1982, 1999 |
| Peru | | 1931 | 1969 | 1976, 1978, 1980, 1984 |
| Uruguay | 1915 | 1933 | | 1983, 1987, 1990, 2003 |
| Venezuela | | | | 1983, 1990, 1995, 2004 |

¹ Dates are shown for countries that became independent during the 20th century. For the full list see the working paper version. Sources: Standard and Poor's, Purcell and Kaufman (1993), Reinhart, Rogoff and Savastano (2003) and sources cited therein.

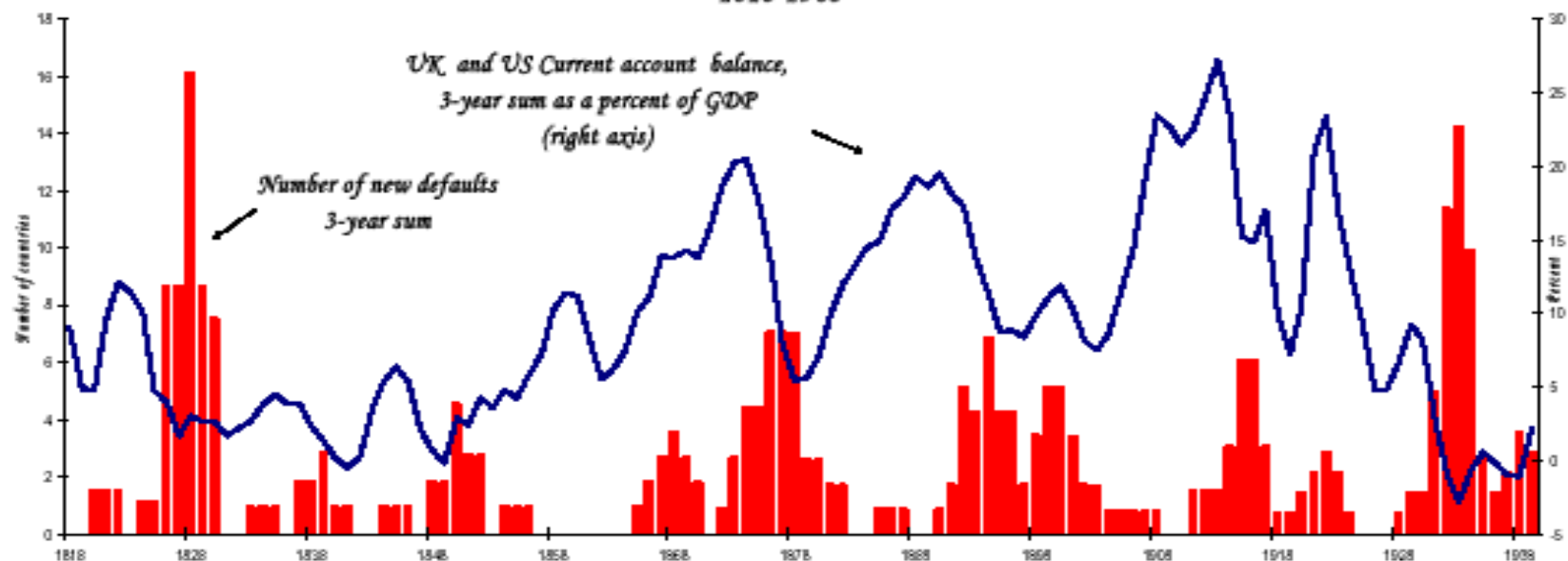
Table 4. The Tally of Default and Rescheduling: Year of Independence–2006

| <i>Country</i> | <i>Year of Independence</i> | <i>Share of years in default or rescheduling since independence or 1800</i> ¹ | <i>Total number of defaults and/or reschedulings</i> |
|--------------------------|-----------------------------|--|--|
| Africa: Algeria | 1962 | 13.3 | 1 |
| Angola | 1975 | 59.4 | 1 |
| Central African Republic | 1960 | 53.2 | 2 |
| Cote D'Ivoire | 1960 | 48.9 | 2 |
| Egypt | 1831 | 3.4 | 2 |
| Kenya | 1963 | 13.6 | 2 |
| Mauritius | 1968 | 0.0 | 0 |
| Morocco | 1956 | 15.7 | 4 |
| Nigeria | 1960 | 21.3 | 5 |
| South Africa | 1910 | 5.2 | 3 |
| Tunisia | 1591/1957 | 5.3 | 1 |
| Zambia | 1964 | 27.9 | 1 |
| Zimbabwe | 1965 | 40.5 | 2 |
| Asia: China | 1368 | 13.0 | 2 |
| India | 1947 | 11.7 | 3 |
| Indonesia | 1949 | 15.5 | 4 |
| Japan | 1590 | 5.3 | 1 |
| Myanmar | 1948 | 8.5 | 1 |
| Philippines | 1947 | 16.4 | 1 |
| Singapore | 1965 | 0.0 | 0 |
| Sri Lanka | 1948 | 6.8 | 2 |
| Europe: Austria | 1282 | 17.4 | 7 |
| Germany | 1618 | 13.0 | 8 |
| Greece | 1829 | 50.6 | 5 |
| Hungary | 1918 | 37.1 | 7 |
| Italy | 1569 | 3.4 | 1 |
| Netherlands | 1581 | 6.3 | 1 |
| Poland | 1918 | 32.6 | 3 |
| Portugal | 1139 | 10.6 | 6 |
| Romania | 1878 | 23.3 | 3 |
| Russia | 1457 | 39.1 | 5 |
| Spain | 1476 | 23.7 | 13 |
| Sweden | 1523 | 0.0 | 1 |
| Turkey | 1453 | 15.5 | 6 |
| Latin America: Argentina | 1816 | 32.5 | 7 |
| Bolivia | 1825 | 22.0 | 5 |
| Brazil | 1822 | 25.4 | 9 |
| Chile | 1818 | 27.5 | 9 |
| Colombia | 1819 | 36.2 | 7 |
| Costa Rica | 1821 | 38.2 | 9 |
| Dominican Republic | 1845 | 29.0 | 7 |
| Ecuador | 1830 | 58.2 | 9 |
| El Salvador | 1821 | 26.3 | 5 |
| Guatemala | 1821 | 34.4 | 7 |
| Honduras | 1821 | 64.0 | 3 |
| Mexico | 1821 | 44.6 | 8 |
| Nicaragua | 1821 | 45.2 | 6 |
| Panama | 1903 | 27.9 | 3 |
| Paraguay | 1811 | 23.0 | 6 |
| Peru | 1821 | 40.3 | 8 |
| Uruguay | 1811 | 12.8 | 8 |
| Venezuela | 1830 | 38.4 | 10 |

¹ For countries that became independent prior to 1800 the calculations are for 1800–2006.

Sources: Authors' calculations, Standard and Poor's, Purcell and Kaufman (1993), Reinhart, Rogoff and Savastano (2003) and sources cited therein.

*Net Capital Flows from the Financial Center and Default
1818-1968*



Sources: Historical Statistics of the United States (2007), Imlah (1958), Mitchell (1993), Bank of England.
Notes: The current account for the UK and the US is defined according to the relative importance (albeit in a simplistic arbitrary way) of these countries as the financial centers and primary suppliers of capital to the rest of the world: 1800–1913 UK receives a weight of 1 (US, 0); 1914–1939 both countries' current accounts are equally weighted; post-1940, US receives a weight equal to 1.

ΣΥΝΕΠΤΕΙΕΣ ΚΡΙΣΕΩΝ

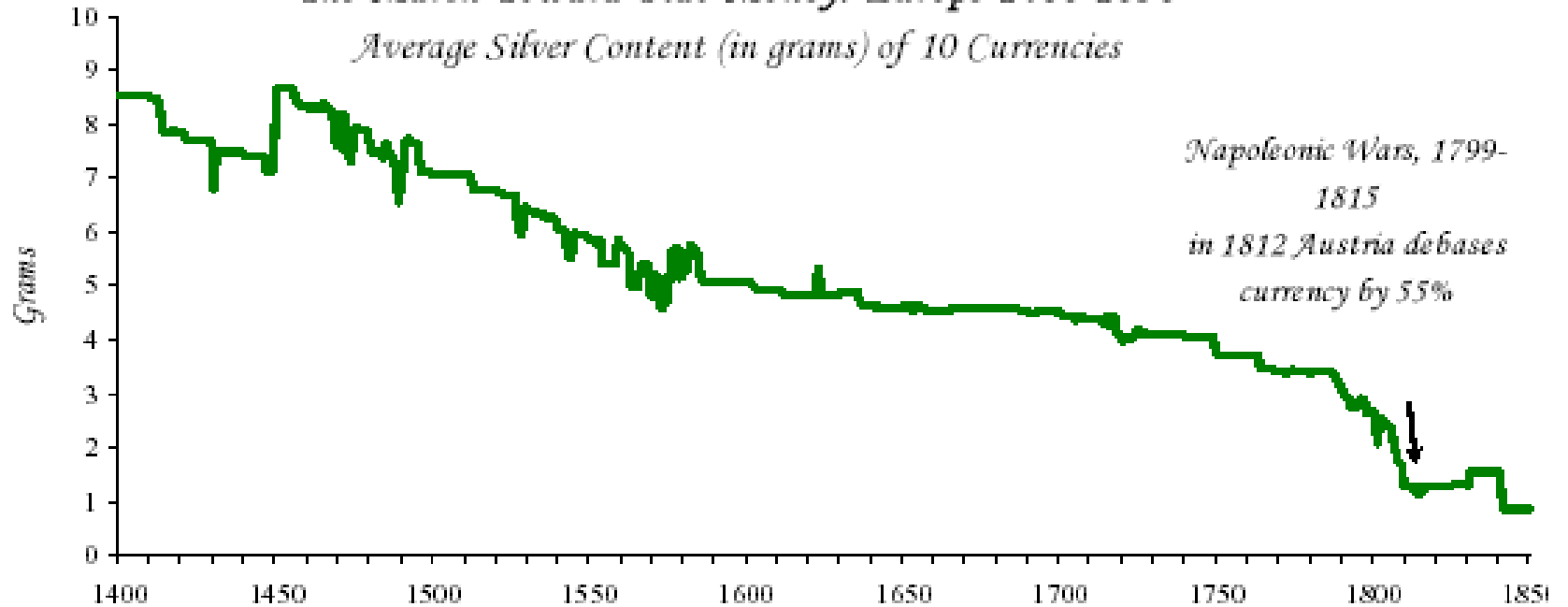
Συνέπειες λόγω μη αποπληρωμής χρέους

Table 5. Crises at the Financial Center and Their International Repercussions:
1800's

| Origin of the shock: country and date | Nature of common external shock | Contagion mechanisms | Countries affected |
|--|--|---|--|
| London, 1825–1826 | Major commercial and financial crises in London during 1825–26, which spread to continental Europe. Trade and capital flows with Latin America plummet. | Upon Peru's 1826 default, London bond holders immediately become concerned about other Latin American countries' ability to service their debts; bond prices collapse. | Chile and Gran Colombia (which comprised today's Colombia, Ecuador, and Venezuela) default later in the year. By 1828, all of Latin America, with the exception of Brazil, had defaulted. |
| German and Austrian stock markets collapse, May 1873 | French war indemnity paid to Prussia in 1871 leads to speculation in Germany and Austria. As far as the periphery is concerned, the world recession (1873–1879) results in a dramatic fall in trade and capital flows originating in the core. | Capital flows to the U.S. fall in the wake of German crisis (Kindleberger 2000). Ensuing world recession (1873–1879) leads to debt servicing problems in the periphery through reduced exports and tax revenues. Initial defaults in small Central American nations in January 1873 leads to a fall in bond prices. | Crisis spreads quickly to Italy, Holland, and Belgium, leaps the Atlantic in September and crosses back again to involve England, France, and Russia (Kindleberger, 2000). By 1876, the Ottoman Empire, Egypt, Greece, and 8 Latin American countries had defaulted. |

The March Toward Fiat Money: Europe 1400-1850

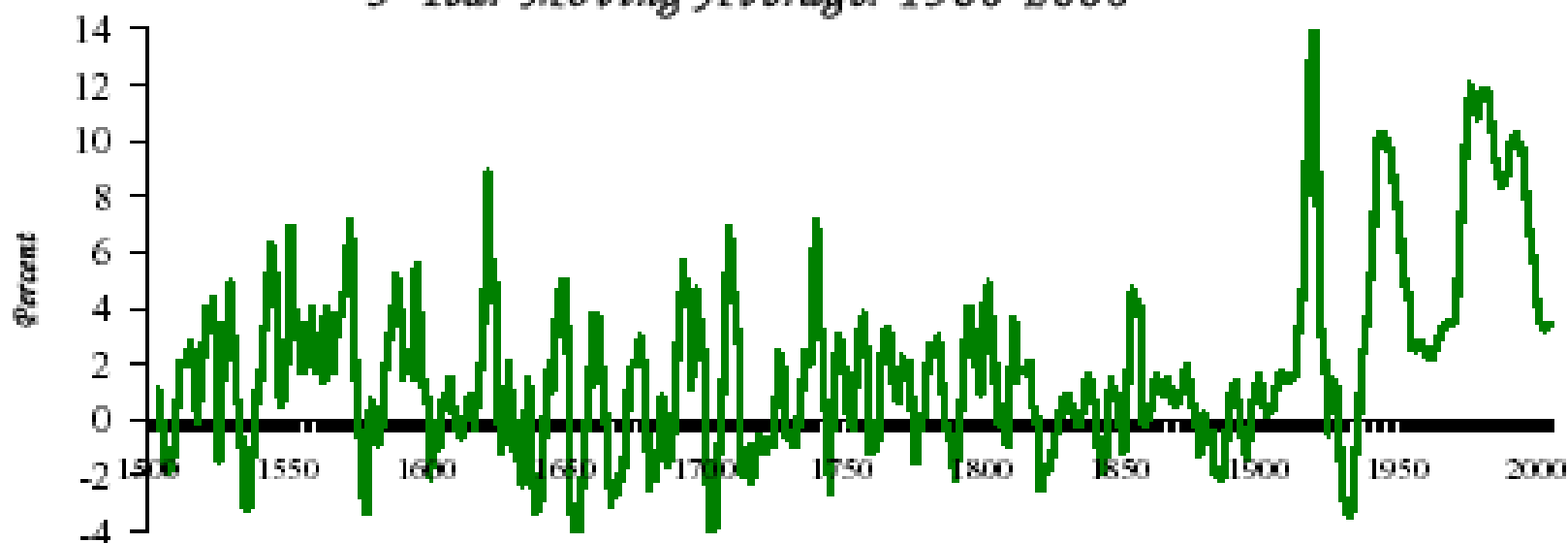
Average Silver Content (in grams) of 10 Currencies



Sources: Primarily Allen and Unger and other sources listed in Table A1.4.

Notes: In the cases where there is more than one currency circulating in a particular country (in Spain, for example, we have the New Castille maravedi and the Valencia dinar) we calculate the simple average.

*Median Inflation Rate All Countries
5-Year Moving Average: 1500-2006*



Sources: There are innumerable sources given the length of the period covered and the large number of countries included. These are listed in Table A1.

Table 6. “Default” through Inflation: Asia, Europe, and the “New World” 1500–1799

| <i>Country</i> | <i>Period covered</i> | <i>Share of years in which inflation exceeded</i> | | <i>Number of hyperinflations¹</i> | <i>Maximum annual inflation</i> | <i>Year of peak inflation</i> |
|------------------------|-----------------------|---|-------------------|--|---------------------------------|-------------------------------|
| | | <i>20 percent</i> | <i>40 percent</i> | | | |
| Asia: China | 1639 | 14.3 | 6.2 | 0 | 116.7 | 1651 |
| Japan | 1601 | 34.0 | 14.0 | 0 | 98.9 | 1602 |
| Korea | 1743 | 43.9 | 29.8 | 0 | 143.9 | 1787 |
| Europe Austria | 1501 | 8.4 | 6.0 | 0 | 99.1 | 1623 |
| Belgium | 1501 | 25.1 | 11.0 | 0 | 185.1 | 1708 |
| Denmark | 1749 | 18.8 | 10.4 | 0 | 77.4 | 1772 |
| France | 1501 | 12.4 | 2.0 | 0 | 121.3 | 1622 |
| Germany | 1501 | 10.4 | 3.4 | 0 | 140.6 | 1622 |
| Italy | 1501 | 19.1 | 7.0 | 0 | 173.1 | 1527 |
| Netherlands | 1501 | 4.0 | 0.3 | 0 | 40 | 1709 |
| Norway | 1666 | 6.0 | 0.8 | 0 | 44.2 | 1709 |
| Poland | 1704 | 43.8 | 31.9 | 0 | 92.1 | 1762 |
| Portugal | 1729 | 19.7 | 2.8 | 0 | 83.1 | 1757 |
| Spain | 1501 | 4.7 | 0.7 | 0 | 40.5 | 1521 |
| Sweden | 1540 | 15.5 | 4.1 | 0 | 65.8 | 1572 |
| Turkey | 1586 | 19.2 | 11.2 | 0 | 53.4 | 1621 |
| United Kingdom | 1501 | 5.0 | 1.7 | 0 | 39.5 | 1587 |
| The “New World” | | | | | | |
| Argentina | 1777 | 4.2 | 0.0 | 0 | 30.8 | 1780 |
| Brazil | 1764 | 25.0 | 4.0 | 0 | 33.0 | 1792 |
| Chile | 1751 | 4.1 | 0.0 | 0 | 36.6 | 1763 |
| Mexico | 1742 | 22.4 | 7.0 | 0 | 80.0 | 1770 |
| Peru | 1751 | 10.2 | 0.0 | 0 | 31.6 | 1765 |
| United States | 1721 | 7.6 | 4.0 | 0 | 192.5 | 1779 |

¹ Hyperinflation is defined here as an annual inflation rate of 500 percent or higher (this is not the traditional Cagan definition).

Table 7. "Default" through Inflation: Asia and Africa 1800–2006

| <i>Country</i> | <i>Beginning of period covered</i> | <i>Share of years in which inflation exceeded</i> | | <i>Number of hyperinflation years¹</i> | <i>Maximum annual inflation</i> | <i>Year of peak inflation</i> |
|--------------------------|------------------------------------|---|-------------------|---|---------------------------------|-------------------------------|
| | | <i>20 percent</i> | <i>40 percent</i> | | | |
| Algeria | 1879 | 24.1 | 12.0 | 0 | 69.2 | 1947 |
| Angola | 1915 | 53.3 | 44.6 | 4 | 4,416.0 | 1996 |
| Central African Republic | 1957 | 4.0 | 0.0 | 0 | 27.7 | 1971 |
| Cote D'Ivoire | 1952 | 7.3 | 0.0 | 0 | 26.0 | 1994 |
| Egypt | 1860 | 7.5 | 0.7 | 0 | 40.8 | 1941 |
| Kenya | 1949 | 8.3 | 3.3 | 0 | 46.0 | 1993 |
| Mauritius | 1947 | 10 | 0.0 | 0 | 33.0 | 1980 |
| Morocco | 1940 | 14.9 | 4.5 | 0 | 57.5 | 1947 |
| Nigeria | 1940 | 22.6 | 9.4 | 0 | 72.9 | 1995 |
| South Africa | 1896 | 0.9 | 0.0 | 0 | 35.2 | 1919 |
| Tunisia | 1940 | 11.9 | 6.0 | 0 | 72.1 | 1943 |
| Zambia | 1943 | 29.7 | 15.6 | 0 | 183.3 | 1993 |
| Zimbabwe | 1920 | 23.3 | 14.0 | 0 | 1,216.0 | 2006 |
| Asia | | | | | | |
| China | 1800 | 19.3 | 14.0 | 3 | 1,579.3 | 1947 |
| Hong Kong | 1948 | 1.7 | 0.0 | 0 | 21.7 | 1949 |
| India | 1801 | 7.3 | 1.5 | 0 | 53.8 | 1943 |
| Indonesia | 1819 | 18.6 | 9.6 | 1 | 939.8 | 1966 |
| Japan | 1819 | 12.2 | 4.8 | 1 | 568.0 | 1945 |
| Korea | 1800 | 35.3 | 24.6 | 0 | 210.4 | 1951 |
| Malaysia | 1949 | 1.7 | 0.0 | 0 | 22.0 | 1950 |
| Myanmar | 1872 | 22.2 | 6.7 | 0 | 58.1 | 2002 |
| Philippines | 1938 | 11.6 | 7.2 | 0 | 141.7 | 1943 |
| Singapore | 1949 | 3.4 | 0.0 | 0 | 23.5 | 1973 |
| Taiwan | 1898 | 14.7 | 11.0 | 0 | 29.6 | 1973 |

¹ Hyperinflation is defined here as an annual inflation rate of 500 percent or higher (this is not the traditional Cagan definition).

Table 8. “Default” through Inflation: Europe, Latin America, North America and Oceania, 1800–2006

| <i>Country</i> | <i>Beginning of period covered</i> | <i>Share of years in which inflation exceeded</i> | | <i>Number of hyperinflation years¹</i> | <i>Maximum annual inflation</i> | <i>Year of peak inflation</i> |
|----------------------|------------------------------------|---|-------------------|---|---------------------------------|-------------------------------|
| | | <i>20 percent</i> | <i>40 percent</i> | | | |
| Europe | | | | | | |
| Austria | 1800 | 20.8 | 12.1 | 2 | 1,733.0 | 1922 |
| Belgium | 1800 | 10.1 | 6.8 | 0 | 50.6 | 1812 |
| Denmark | 1800 | 2.1 | 0.5 | 0 | 48.3 | 1800 |
| Finland | 1861 | 5.5 | 2.7 | 0 | 242.0 | 1918 |
| France | 1800 | 5.8 | 1.9 | 0 | 74.0 | 1946 |
| Germany | 1800 | 9.7 | 4.3 | 2 | 2,22E+10 | 1923 |
| Greece | 1834 | 13.3 | 5.2 | 4 | 3,02E+10 | 1944 |
| Hungary | 1924 | 15.7 | 3.6 | 2 | 9.63+E26 | 1946 |
| Italy | 1800 | 11.1 | 5.8 | 0 | 491.4 | 1944 |
| Netherlands | 1800 | 1.0 | 0.0 | 0 | 21.0 | 1918 |
| Norway | 1800 | 5.3 | 1.9 | 0 | 152.0 | 1812 |
| Poland | 1800 | 28.0 | 17.4 | 2 | 51,699.4 | 1923 |
| Portugal | 1800 | 9.7 | 4.3 | 0 | 84.2 | 1808 |
| Russia | 1854 | 35.7 | 26.4 | 8 | 13,534.7 | 1923 |
| Spain | 1800 | 3.9 | 1.0 | 0 | 102.1 | 1808 |
| Sweden | 1800 | 1.9 | 0.0 | 0 | 35.8 | 1918 |
| Turkey | 1800 | 20.5 | 11.7 | 0 | 115.9 | 1942 |
| United Kingdom | 1800 | 2.4 | 0.0 | 0 | 34.4 | 1800 |
| Latin America | | | | | | |
| Argentina | 1800 | 24.6 | 15.5 | 4 | 3,079.5 | 1989 |
| Bolivia | 1937 | 38.6 | 20.0 | 2 | 11,749.6 | 1985 |
| Brazil | 1800 | 28.0 | 17.9 | 6 | 2,947.7 | 1990 |
| Chile | 1800 | 19.8 | 5.8 | 0 | 469.9 | 1973 |
| Colombia | 1864 | 23.8 | 1.4 | 0 | 53.6 | 1882 |
| Costa Rica | 1937 | 12.9 | 1.4 | 0 | 90.1 | 1982 |
| Dominican Republic | 1943 | 17.2 | 9.4 | 0 | 51.5 | 2004 |
| Ecuador | 1939 | 36.8 | 14.7 | 0 | 96.1 | 2000 |
| El Salvador | 1938 | 8.7 | 0.0 | 0 | 31.9 | 1986 |
| Guatemala | 1938 | 8.7 | 1.4 | 0 | 41.0 | 1990 |
| Honduras | 1937 | 8.6 | 0.0 | 0 | 34.0 | 1991 |
| Mexico | 1800 | 42.5 | 35.7 | 0 | 131.8 | 1987 |
| Nicaragua | 1938 | 30.4 | 17.4 | 6 | 13,109.5 | 1987 |
| Panama | 1949 | 0.0 | 0.0 | 0 | 16.3 | 1974 |
| Paraguay | 1949 | 32.8 | 4.5 | 0 | 139.1 | 1952 |
| Peru | 1800 | 15.5 | 10.7 | 3 | 7,481.7 | 1990 |
| Uruguay | 1871 | 26.5 | 19.1 | 0 | 112.5 | 1990 |
| Venezuela | 1832 | 10.3 | 3.4 | 0 | 99.9 | 1996 |
| North America | | | | | | |
| Canada | 1868 | 0.7 | 0.0 | 0 | 23.8 | 1917 |
| United States | 1800 | 1.0 | 0.0 | 0 | 24.0 | 1864 |
| Oceania | | | | | | |
| Australia | 1819 | 4.8 | 1.1 | 0 | 57.4 | 1854 |
| New Zealand | 1858 | 0.0 | 0.0 | 0 | 17.2 | 1980 |

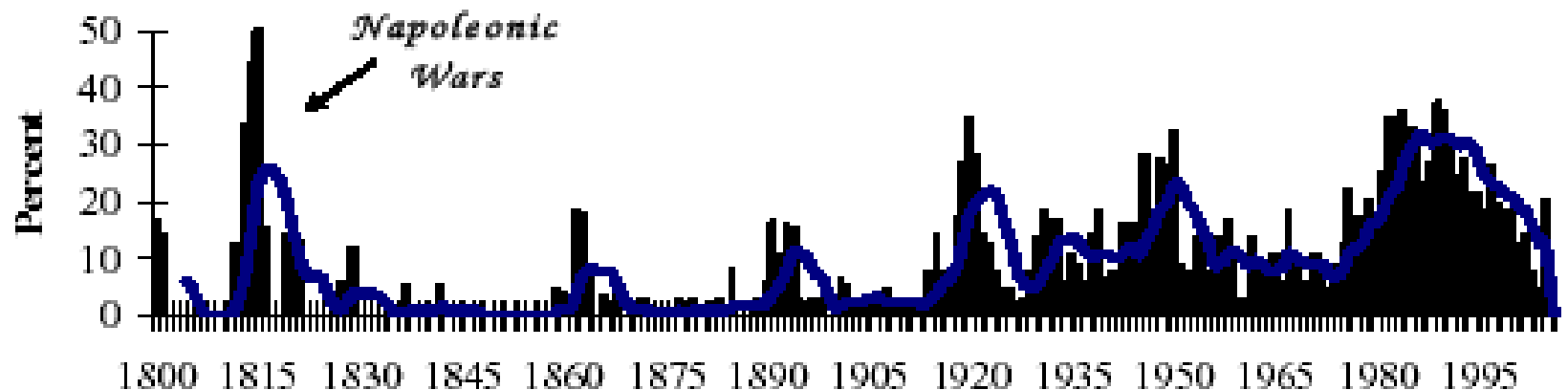
¹ Hyperinflation is defined here as an annual inflation rate of 500 percent or higher (this is not the traditional Cagan definition).

Table 5. Expropriation through Currency Debasement: Europe, 1258–1899

| <i>Country and currency</i> | <i>Period covered</i> | <i>Cumulative decline in silver content of currency (percent)</i> | <i>Largest debasement (percent) and year</i> | | <i>Share of years in which there was a debasement of the currency (i.e. a reduction in the silver content)</i> | |
|-----------------------------------|-----------------------|---|--|------|--|------------------------------|
| | | | | | <i>All</i> | <i>15 percent or greater</i> |
| Austria Vienna krenzer | 1371–1499 | -69.7 | -11.1 | 1463 | 25.8 | 0.0 |
| | 1500–1799 | -59.7 | -12.5 | 1694 | 11.7 | 0.0 |
| | 1800–1860 | -58.3 | -55.0 | 1812 | 37.7 | 11.5 |
| Belgium hoet | 1349–1499 | -83.8 | -34.7 | 1498 | 7.3 | 3.3 |
| | 1500–1799 | -56.3 | -15.0 | 1561 | 4.3 | 0.0 |
| France livre tournois | 1258–1499 | -74.1 | -56.8 | 1303 | 6.2 | 0.4 |
| | 1500–1789 | -78.4 | -36.2 | 1718 | 14.8 | 1.4 |
| Germany Bavaria–Augsburg pfenning | 1800–1830 | -2.2 | -2.2 | 1816 | 3.2 | 0.0 |
| | 1417–1499 | -32.2 | -21.5 | 1424 | 3.7 | 1.2 |
| Frankfurt pfenning | 1500–1799 | -70.9 | -26.0 | 1685 | 3.7 | 1.0 |
| | 1350–1499 | -14.4 | -10.5 | 1404 | 2.0 | 0.0 |
| Italy lira fiorentina | 1500–1798 | -12.8 | -16.4 | 1500 | 2.0 | 0.3 |
| | 1800–1859 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Netherlands Flemish grote | 1280–1499 | -72.4 | -21.0 | 1320 | 5.0 | 0.0 |
| | 1500–1799 | -35.6 | -10.0 | 1550 | 2.7 | 0.0 |
| Guilder | 1366–1499 | -44.4 | -26.0 | 1488 | 13.4 | 5.2 |
| | 1500–1575 | -12.3 | -7.7 | 1526 | 5.3 | 0.0 |
| Portugal reis | 1450–1499 | -42.0 | -34.7 | 1496 | 14.3 | 6.1 |
| | 1500–1799 | -48.9 | -15.0 | 1560 | 4.0 | 0.0 |
| Russia ruble | 1800–1855 | -12.8 | -18.4 | 1800 | 57.1 | 1.8 |
| | 1750–1799 | -25.6 | -3.7 | 1766 | 34.7 | 0.0 |
| Spain New Castille maravedis | 1800–1899 | -56.6 | -41.3 | 1810 | 50.0 | 7.0 |
| | 1761–1799 | -42.3 | -14.3 | 1798 | 44.7 | 0.0 |
| Valencia dinar | 1501–1799 | -62.5 | -25.3 | 1642 | 19.8 | 1.3 |
| | 1351–1499 | -7.7 | -2.9 | 1408 | 2.0 | 0.0 |
| Sweden mar ortug | 1500–1650 | -20.4 | -17.0 | 1501 | 13.2 | 0.7 |
| | 1523–1573 | -91.0 | -41.4 | 1572 | 20.0 | 12.0 |
| Turkey Akche | 1800–1899 | -83.1 | -51.2 | 1829 | 7.0 | 7.0 |
| | 1527–1799 | -59.3 | -43.9 | 1586 | 10.5 | 3.1 |
| United Kingdom pence | 1800–1899 | -6.1 | -6.1 | 1816 | 1.0 | 0.0 |
| | 1260–1499 | -46.8 | -20.0 | 1464 | 0.8 | 0.8 |
| | 1500–1799 | -35.5 | -50.0 | 1551 | 2.3 | 1.3 |

Sources: Primarily Allen and Unger and other sources listed in Table A1.4. See Appendix.

Currency Crashes: Share of Countries with an Annual Depreciation Greater than 15 Percent: 1800-2006



Sources: The primary sources are Global Financial Data, and Reinhart and Rogoff (2003), but there are numerous others that are listed in Appendix I to the working paper.

Συνέπειες στην οικονομία

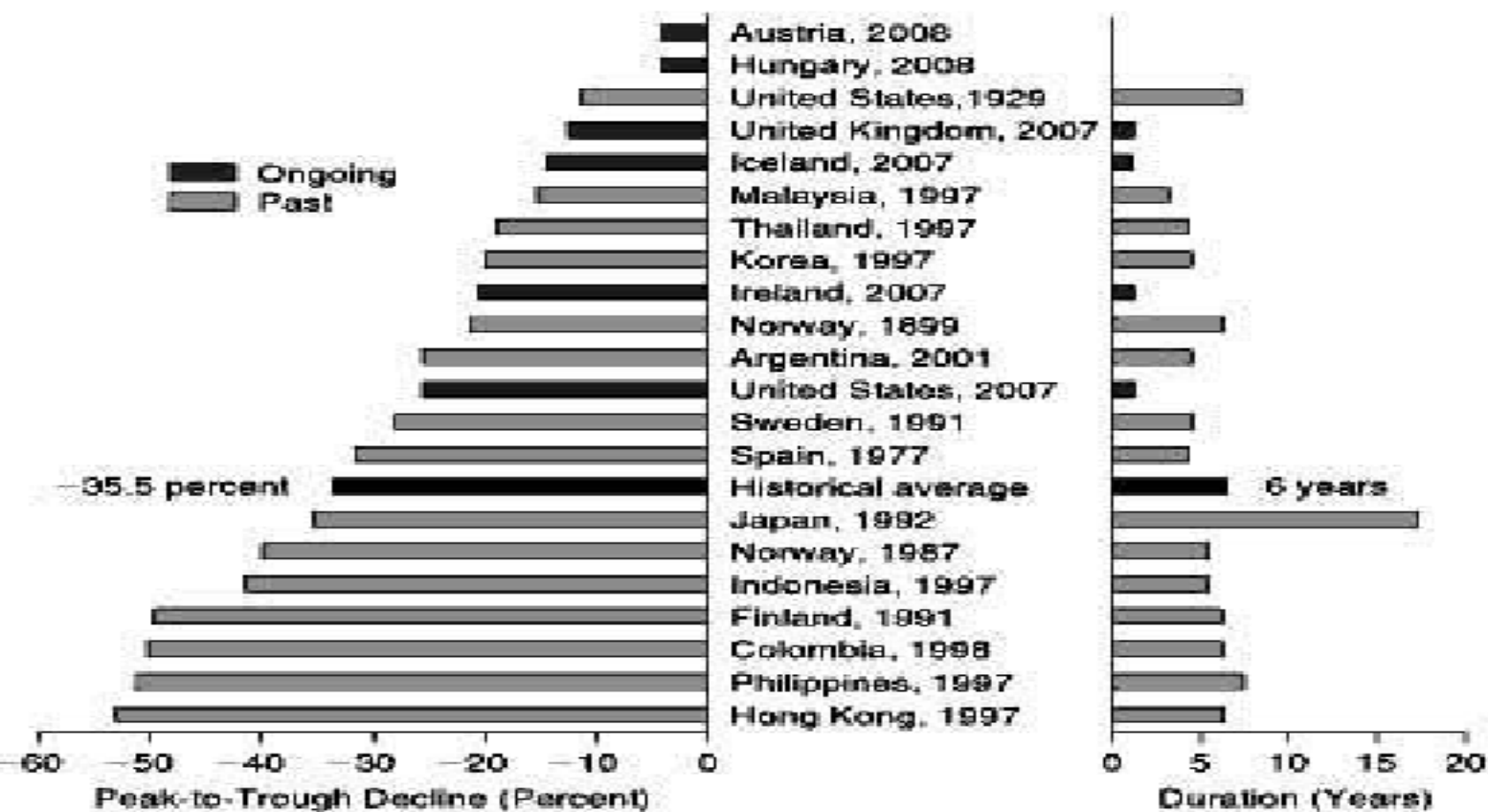


Figure 14.1. Cycles of past and ongoing real house prices and banking crises.

Sources: Appendixes A.1 and A.2 and sources cited therein.

Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crisis episodes are included, subject to data limitations. The historical average reported does not include ongoing crisis episodes. For the ongoing episodes, the calculations are based on data through the following periods: October 2008, monthly, for Iceland and Ireland; 2007, annual, for Hungary; and Q3, 2008, quarterly, for all others. Consumer price indexes are used to deflate nominal house prices.

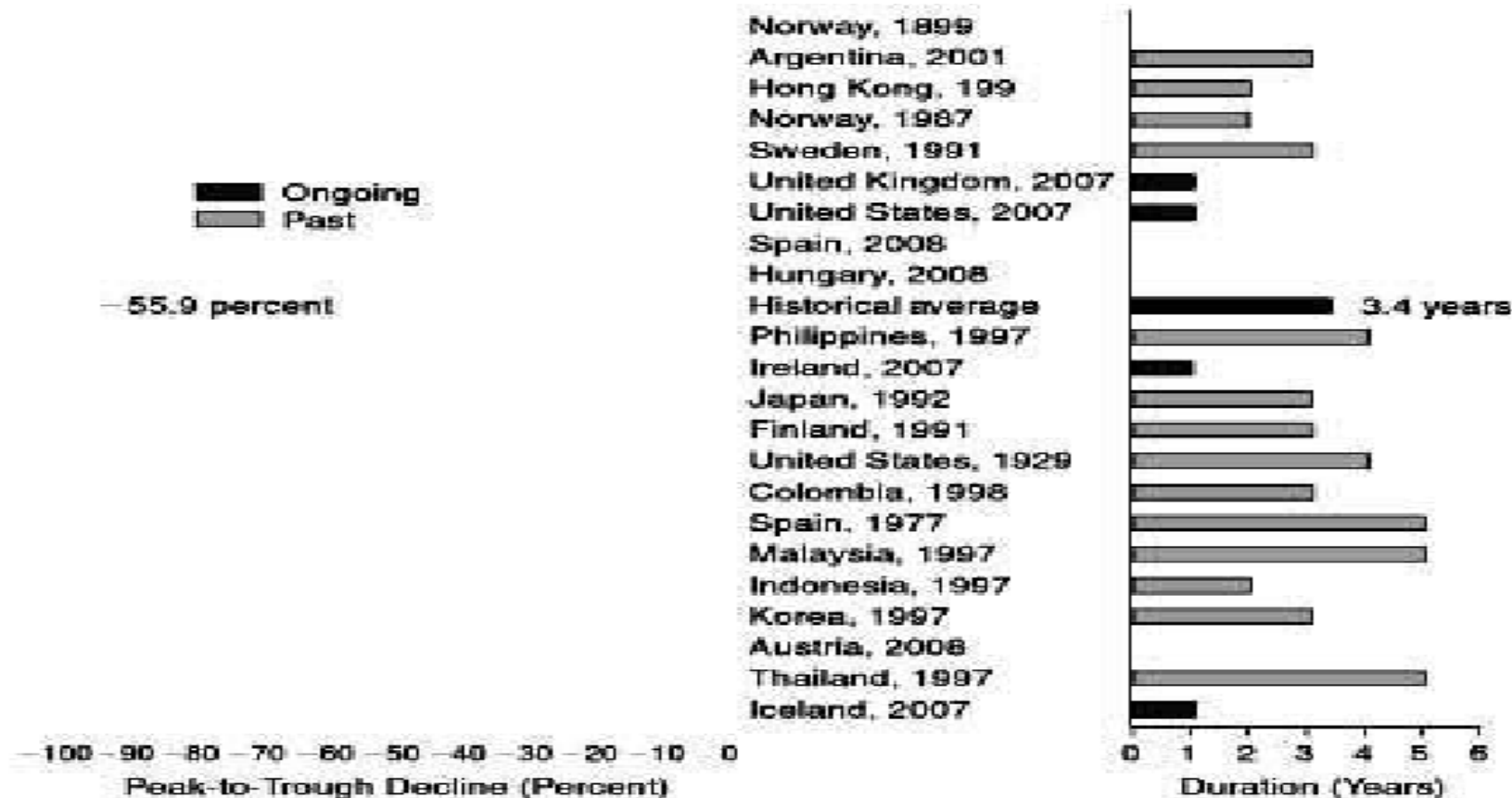


Figure 14.2. Cycles of past and ongoing real equity prices and banking crises.

Sources: Appendixes A.1 and A.2 and sources cited therein.

Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crisis episodes are included, subject to data limitations. The historical average reported does not include ongoing crisis episodes. For the ongoing episodes, the calculations are based on data through December 2, 2008. Consumer price indexes are used to deflate nominal equity prices.

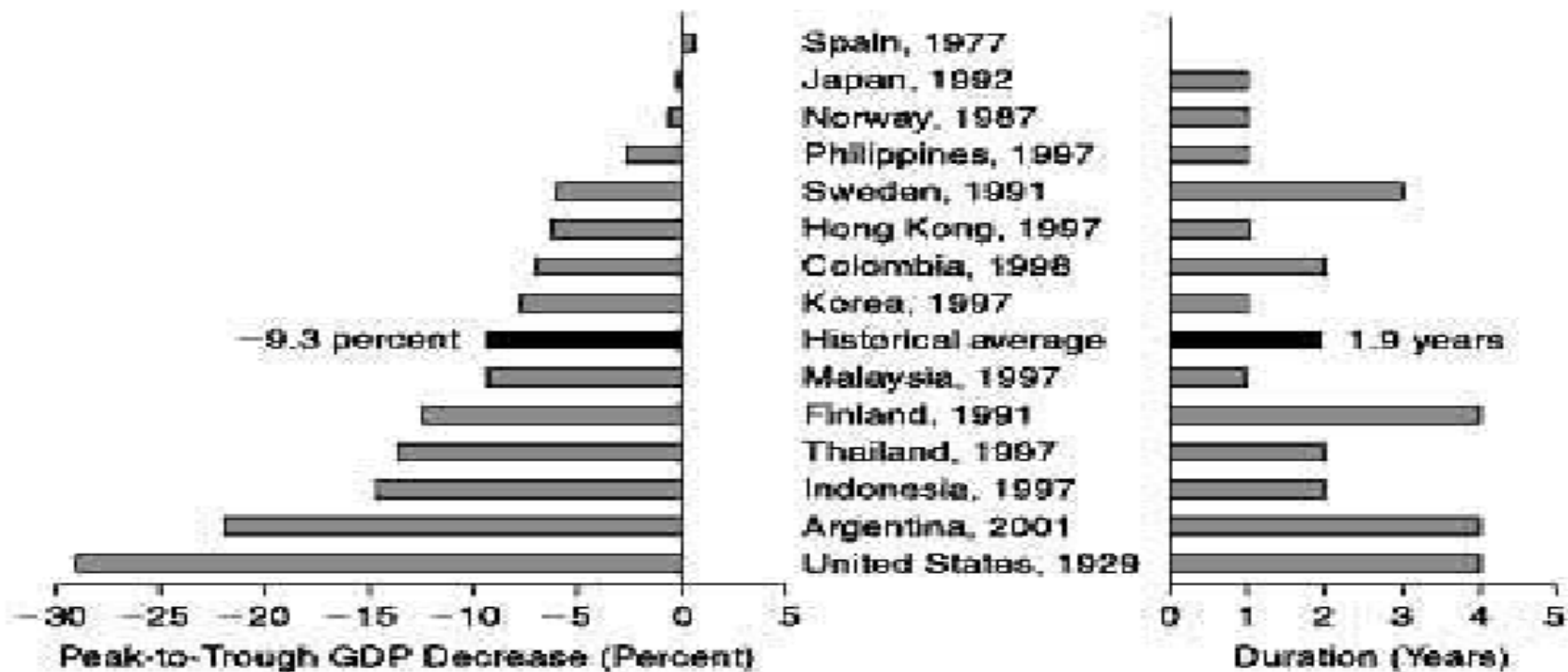


Figure 14.4. Cycles of past real per capita GDP and banking crises.
 Sources: Total Economy Database (TED), Carter et al. (2006),
 and the authors' calculations.

Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crisis episodes are included, subject to data limitations. The historical average reported does not include ongoing crisis episodes. Total GDP in millions of 1990 U.S. dollars (converted at Geary Khamis PPPs) divided by midyear population.

ΑΝΕΡΓΙΑ ΚΑΤΑ ΜΕΣΟ ΟΡΟ ΑΥΞΑΝΕΤΑΙ 7% ΣΕ 5 ΧΡΟΝΙΑ

TABLE 14.1
Fiscal deficits (central government balance) as a percentage of GDP

| Country, crisis year | Year before the crisis | Peak deficit (year) | Increase or decrease (-) in the fiscal deficit |
|-------------------------|---------------------------|------------------------|---|
| Argentina, 2001 | -2.4 | -11.9 (2002) | 9.5 |
| Chile, 1980 | 4.8 | -3.2 (1985) | 8.0 |
| Colombia, 1998 | -3.6 | -7.4 (1999) | 3.8 |
| Finland, 1991 | 1.0 | -10.8 (1994) | 11.8 |
| Indonesia, 1997 | 2.1 | -3.7 (2001) | 5.8 |
| Japan, 1992 | -0.7 | -8.7 (1999) | 9.4 |
| Korea, 1997 | 0.0 | -4.8 (1998) | 4.8 |
| Malaysia, 1997 | 0.7 | -5.8 (2000) | 6.5 |
| Mexico, 1994 | 0.3 | -2.3 (1998) | 2.6 |
| Norway, 1987 | 5.7 | -2.5 (1992) | 7.9 |
| Spain, 1977* | -3.9 | -3.1 (1977) | -0.8 |
| Sweden, 1991 | 3.8 | -11.6 (1993) | 15.4 |
| Thailand, 1997 | 2.3 | -3.5 (1999) | 5.8 |

Sources: International Monetary Fund (various years), *Government Financial Statistics* and *World Economic Outlook*, and the authors' calculations.

*As shown in figure 14.4, Spain was the only country in our sample to show a (modest) increase in per capita GDP growth during the postcrisis period.

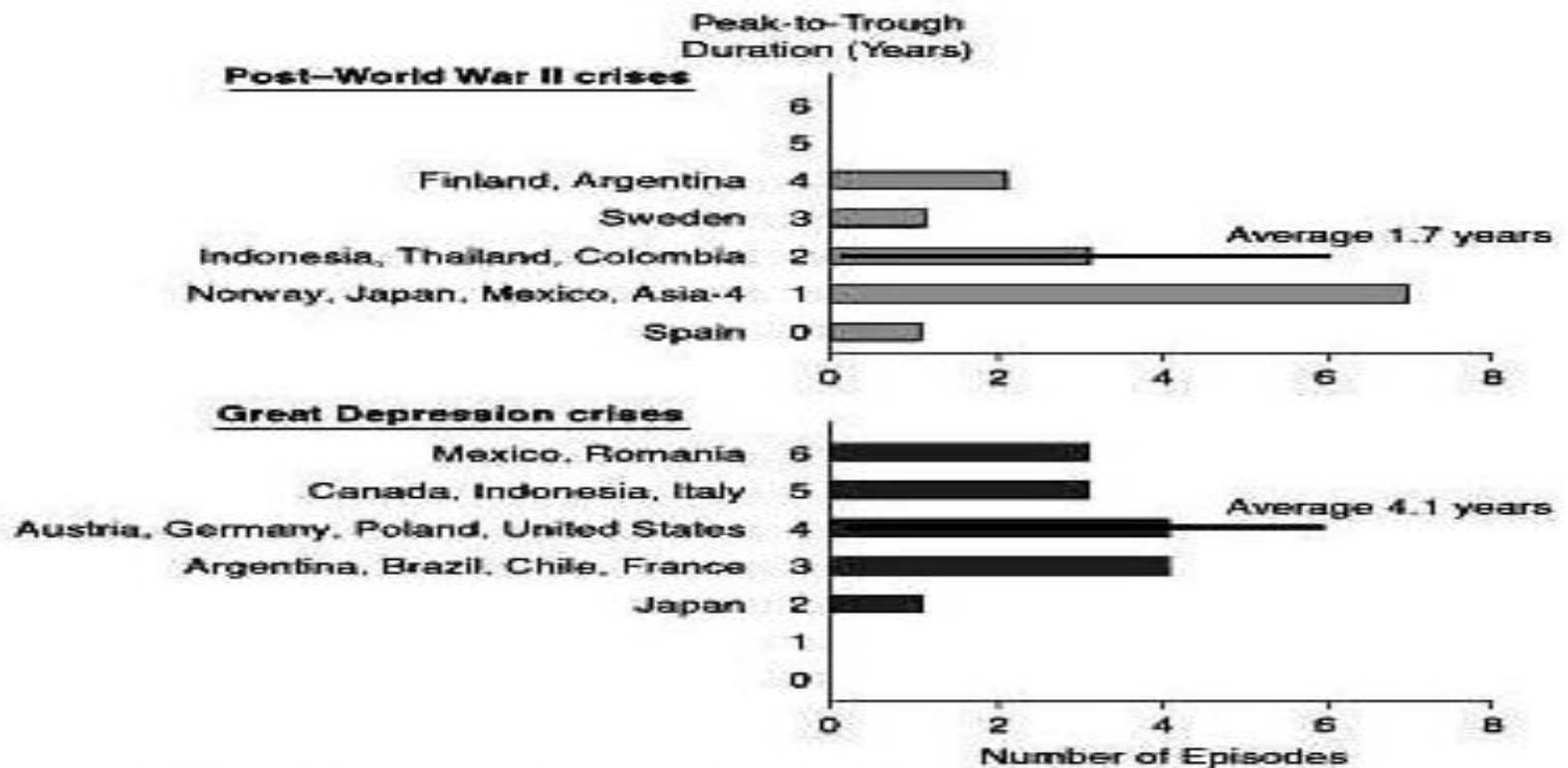


Figure 14.7. The duration of major financial crises: Fourteen Great Depression episodes versus fourteen post-World War II episodes (duration of the fall in output per capita).

Sources: Appendix A.3 and the authors' calculations.

Notes: The fourteen postwar episodes were those in Spain, 1977; Norway, 1987; Finland, 1991; Sweden, 1991; Japan, 1992; Mexico, 1994; Indonesia, Thailand, and (grouped as Asia-4 in the figure) Hong Kong, Korea, Malaysia, and Philippines, all 1997; Colombia, 1998; and Argentina, 2001. The fourteen Great Depression episodes were comprised of eleven banking crisis episodes and three less systemic but equally devastating economic contractions in Canada, Chile, and Indonesia during the 1930s. The banking crises were those in Japan, 1927; Brazil, Mexico, and the United States, all 1929; France and Italy, 1930; and Austria, Germany, Poland, and Romania, 1931.

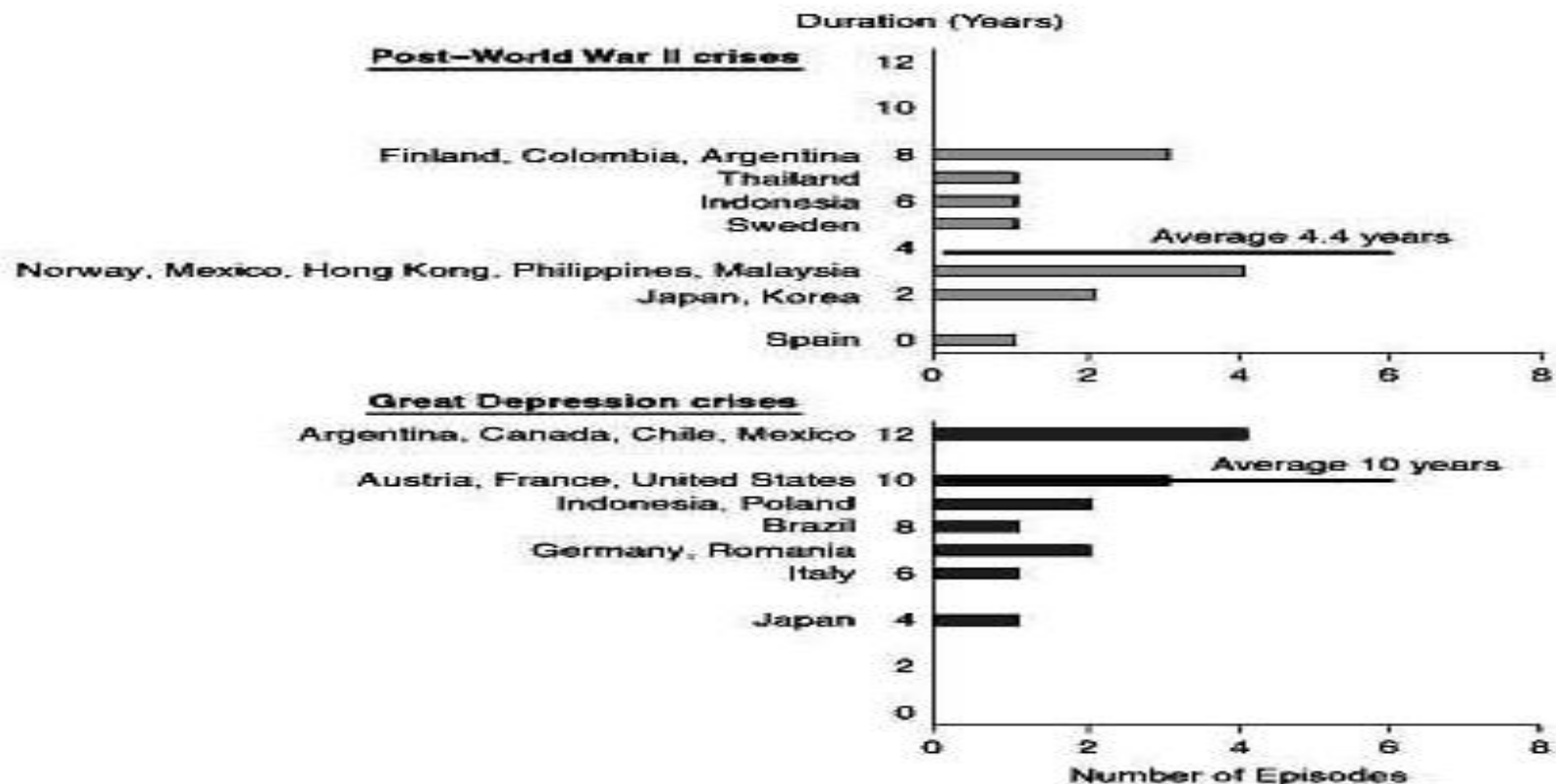


Figure 14.8. The duration of major financial crises:

Fourteen Great Depression episodes versus fourteen post-World War II episodes (number of years for output per capita to return to its precrisis level).

Sources: Appendix A.3 and the authors' calculations.

Notes: The fourteen postwar episodes were those in Spain, 1977; Norway, 1987; Finland, 1991; Sweden, 1991; Japan, 1992; Mexico, 1994; Hong Kong, Indonesia, Korea, Malaysia, the Philippines, and Thailand, all 1997; Colombia, 1998; and Argentina, 2001. The fourteen Great Depression episodes were comprised of eleven banking crisis episodes and three less systemic but equally devastating economic contractions in Canada, Chile, and Indonesia. The banking crises were those in Japan, 1927; Brazil, Mexico, and the United States, all 1929; France and Italy, 1930; and Austria, Germany, Poland, and Romania, 1931.

The precrisis level for the Great Depression was that of 1929.

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