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Growing up to Financial Stability

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Abstract:

This lecture revisits the evidence on the incidence and severity of different varieties of financial crises within the context of globalization then (pre-1914) and now (1980 to the present). I then discuss the determinants of emerging market crises from the perspective of the recent balance sheet approach. This approach puts at center stage the importance of financial development. I then peel the onion back further and consider the "deep" institutional determinants of financial development and their relationship to financial stability. I conclude by conjecturing about the ways countries learn from their financial crises to improve their institutions and grow up to financial stability.

JEL: F4, G2, N1, O1.

Keywords: financial crises, globalization, financial development, institutions.

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1. Introduction

Financial crises are an old problem. They go back to the origins of capitalism and beyond. Kindleberger's (2000) Manias, Crashes and Panics, describes crises as far back as the seventeenth century and earlier. The topic of financial crises is an important issue for today's emerging market economies in the current era of globalization. It was a similar issue in the earlier era of globalization from 1870-1914. However the incidence and virulence of crises was much less in the earlier era for the emerging countries than is the case today.

Advanced countries in recent years have experienced few crises, but they experienced many more in their course of economic development, when they were emerging market economies. Also, of course, during the interwar period and again in the 1970s/80s/and early 90s, advanced countries experienced both currency and banking crises.

What explains the incidence and virulence of financial crises? How do financial crises relate to the general process of financial development and even more to the general process of economic growth? Are crises a necessary part of the development process like teenagers and car accidents? How do countries grow up to financial stability, i.e. develop the sound institutions and policies so that they can prevent, contain (manage) and resolve financial crises? What is the role of institutions (both political and economic) in creating an environment for financial stability?

This lecture briefly revisits the evidence on the incidence and severity of different varieties of crises within the context of globalization then (pre 1914) and now (1980 to the present), in my earlier work with Barry Eichengreen and in my recent work with Chris Meissner. I then discuss the determinants of emerging market crises from the perspective of the recent balance sheet approach to financial crises which builds on the earlier literatures of banking crises, debt crises, and first and second generation currency crises. This approach puts at center stage the importance of financial development. I then peel the onion back further and consider the "deep" institutional determinants of financial development and their relation to financial stability. I conclude with some lessons from history.

2. A Brief Review of the Evidence on Financial Crises.

Before revisiting the empirical evidence on financial crises, let me briefly define my terms. Financial crises encompass banking, currency and debt crises and combinations of the three. Banking crises include both banking panics involving a scramble by the public for means of payment which, unless prevented by a lender of last resort leads to monetary collapse and recession, and a more recent variant,an insolvency crisis in an environment characterized by the presence of a financial safety net (explicit or implicit deposit insurance and fiscal bailouts). In our empirical work we identify banking crises as periods of severe difficulty in the banking sector when a large proportion of the banking sector's capital is eroded. A currency crisis is a market based attack on the exchange value of a currency. In our empirical work we identify currency crises as a period when there was a forced abandonment of an exchange rate commitment or a large change in the value of the exchange rate within a given year. In twin crises, both currency and banking crises occur together. Debt crises are defined as a situation where a debtor is unable to service the interest and or principal as scheduled, hence impairing the financial health of the lender. Debt crises include both defaults and repudiations. Finally a third generation crisis is defined as a twin crisis accompanied by a debt default.

Bordo, Eichengreen, Klingebiel and Martinez Peria (2001) provide evidence for a panel of 21 countries for 120 years (1880-1997) on the frequency and severity of currency, banking and twin crises..

Figure 1 shows the frequency of crises, where we divide the number of crises by the number of crisis year observations. We demarcate the data into four eras: the pre 1914 era of globalization (1880-1913); the interwar (1919-1939); the Bretton Woods era (1945-1971); and the recent era (1973-1997). As can be seen crises appear to be growing more frequent. Crisis frequency of 12.2 % since 1973 exceeds even the unstable interwar period and is now three times as great as the pre-1914 earlier era of globalization. Moreover a comparison of crisis frequency between emerging and advanced countries in figure 2 suggests that with the exception of the interwar, the majority of crises occurred in the emerging countries.

Bordo and Meissner (2006) expand the Bordo et al (2001) data base by adding in 9 more emerging countries to the pre 1914 sample and include debt and third generation crises. See figure 3. For the pre 1914 period we see the pattern in Bordo et al (2001),the predominant form of crisis before 1914 were banking crises, followed by currency crises, twin crises and then debt crises. The most recent period seems much more crisis prone in virtually all dimensions.

Finally, Bordo et al (2001) presented evidence on the output losses from crises. We calculated, over the years prior to full recovery, the difference between pre- crisis trend growth and actual growth - see figure 4 - and we found that output losses from currency crises were even greater before 1914 than today. The difference is most pronounced for emerging countries. Output losses from banking crises were also greater in the pre- 1914 regime than today. Twin crises are comparable across the two eras of globalization. The key unsurprising fact we found was the large output loss from both currency and twin crises in the interwar period

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3. Emerging Market country Crises Versus Advanced country Crises.

The advanced countries of western Europe: Britain, France, Germany, the Netherlands, Belgium and Switzerland learned to deal with crises by the eve of World War I. They had developed a sound institutional framework and learned to follow successful policies within that framework. The framework included sound fiscal institutions (efficient tax systems, balanced budgets, low debt ratios); sound monetary institutions (a nationwide banking system, a central bank which could act as a lender of last resort, and credible adherence to the classical gold standard). By pegging the values of their national currencies to a fixed price(weight) of gold, they adopted the gold standard rule which committed them to maintain gold convertibility except in the case of exceptional circumstances like wars (Bordo and Kydland 1995). This in turn meant that they would follow the time consistent policies of balanced budgets and monetary policy targeting the fixed parity. They also had developed financial markets (which largely overcame the problems of asymmetric information) and which allowed market participants (at home and from abroad) to efficiently channel their saving into productive investment.

These institutions and policies were embedded in an overarching framework of free trade, free capital and labor movements ("the liberal order") in an era of relative political stability which was free from major wars. Some attribute this state of affairs to the " Pax Brittanica", others to a finely tuned balance of power between Britain, France, Germany, Austria Hungary, Russia, Turkey and the United States. As we discuss below, behind this framework for the advanced countries lay the deep fundamentals of the rule of law, secure property rights (i.e. a legal system to protect them), and constitutional democracy.

By contrast, many of the emerging countries of the era, especially those in the peripheral areas of Southern Europe, Latin America and Asia, faced a more turbulent financial environment. These countries were in the process of developing fiscal and monetary institutions or adapting the institutions which they inherited from their mother countries in Europe (Bordo and Cortes Conde 2001) as well as the accompanying policies . They were more prone to the incidence of financial crises.

The forty years before World War I, ' the golden age of financial globalization" were characterized by unprecedented massive capital flows of financial capital from the Old world to the New world (net capital flows on average were between 3-5% of GDP in a number of countries for many years), Obstfeld and Taylor 2004). These were attracted by the higher returns from abundant land and resources.

These inflows on occasion, led to lending booms, especially in land , where prices were bid up above fundamental values, followed by busts (e.g. Argentina 1889, Australia 1893). The boom –busts often triggered banking panics in an environment without a central bank or any other effective lender of last resort. Booms were also often accompanied by fiscal expansion , financed by money creation, and by government debt accumulation. The resultant inflationary pressure often led to speculative attacks on the currencies of countries attempting to emulate and to attract capital from the advanced countries by pegging their currencies to gold. In other words they attempted to adopt the gold standard as a ' good housekeeping seal of approval' (Bordo and Rockoff 1996). In addition, many emerging countries were prone to debt crises when their economies collapsed consequent upon a lending bust and banking crisis. Often they were unable to raise sufficient tax revenues to service the debt with their inefficient procyclical tax regimes based on indirect excise taxes and customs duties.

In addition , all emerging countries had ' original sin" Eichengreen and Hausmann's (1999) term for the inability to borrow abroad (or even at home) in terms of their own currencies. This was manifest in debt requiring gold or exchange rate clauses. This meant that when their currencies crashed that the real burden of their debt servicing denominated in gold or hard currency soared, in turn increasing the likelihood of a government debt default and insolvency by private firms. This type of crisis, referred to as a "third generation crisis' or a" balance sheet crisis was at the heart of the Asian crisis of 1997 (Mishkin 2006). It was also an important part of the story in the pre 1914 era of globalization according to Bordo and Meissner (2006).

Finally, an important precipitating factor in emerging market crises both then and now were " sudden stops ", when circumstances in the advanced lending countries (such as a rise in the Bank of England's Bank rate in reaction to a decline in its gold reserves reflecting large capital outflows to the new world) would lead to a cut off of capital flows to the emerging countries, producing a massive current account reversal and contraction of domestic aggregate demand (a compression of consumption to generate the domestic saving needed to replace the lost foreign inflows. This could trigger severe banking, currency and balance sheet crises leading to serious economic distress. See figure 5.

Calvo et al (2004) view sudden stops (combined with liability dollarization) as the key trigger of many financial crises in Latin America in recent decades. Bordo (2006) and Catao (2005) find a similar pattern for the emergers in the 1870s and 1890s.

The pattern of emerging market crises in the first era of globalization just described was not universal. A number of countries, such as Canada, and the Scandanavian countries were able to avoid serious financial distress in the face of sudden stops in the pre 1914 era. Although these countries had original sin, they apparently had sufficiently sound fiscal and monetary institutions, what Caballero, Cowen and Kearns (2004) refer to as " country trust", to avoid excessive debt exposure, to hold sufficiently large gold reserves to minimize currency mismatch between their local currency revenue streams and sterling liabilities, and to protect their banking systems from panics. As we discuss below this ability of some countries to withstand sudden stops may be related to the deeper fundamentals of financial development.

4. Advanced Country Crises: The Interwar

The story we have told so far sees emerging market countries as prone to crises and the advanced countries as safe havens. That was generally the case before 1914 as it is today, but it was not the case in the interwar period which is of course "the mother of financial instability". The advanced countries also suffered currency crises in the 1970s, 80s and early 90s.

The interwar experience was largely an advanced country story. There has been considerable research on the financial instability of the interwar years and especially the Great Depression which I will only briefly discuss. The essence of the modern literature is that the Great Depression was largely a monetary phenomena with both domestic and international dimensions. Of most importance it reflected the severe policy mistakes by the newly formed Federal Reserve of killing the Wall Street boom in 1929, precipitating a serious recession and then not acting as a lender of last resort to stem a series of banking panics that followed. These actions were in turn a reflection of flaws in the design of the Federal Reserve (Friedman and Schwartz 1963), and in the monetary theory followed by Fed officials (Meltzer 2003).

In addition, the monetary standard adhered to by the majority of countries, the gold exchange standard restored beginning in 1925, is viewed by many scholars as a key cause. According to Eichengreen (1992), Temin (1989), Bernanke and James (1991) and others, the decision after World War I by the belligerents to return to the gold standard without successfully dealing with the imbalances produced in their countries by the war led to a series of fatal flaws (maladjustment, insufficient liquidity, fragile confidence and lack of credibility), which eventually led to the collapse of the international monetary system in 1931 and was either a crucial cause or an extreme exacerbating force in the world wide depression which followed.

According to Eichengreen, once the depression started, gold standard adherents, lacking the credibility of the prewar to attract capital inflows in the face of a temporary current account deficit, were unable to follow the expansionary policies needed to reflate their economies and offset banking crises, because they had 'golden fetters"—if they followed such policies they would be subject to a speculative attack forcing them off the gold standard. .Hence until they left the gold standard, they could not prevent deflation from taking its toll.

According to Friedman and Schwartz, the fixed exchange rates of the gold standard served to transmit the deflationary shocks coming from the collapse of the U.S. banking system and its economy, which the Fed failed to arrest, to the rest of the world. Thus unlike the case of the emergers, the crisis of the interwar did not reflect basic financial underdevelopment but largely egregious errors in policy and regime choice .

In reaction to the Great Depression, advanced countries imposed extensive controls on their financial sectors (interest ceilings, firewalls between investment and commercial banking, reserve, capital and liquidity ratios). They also established a financial safety net of deposit insurance (explicit and implicit) lender of last resort policies. In the international economy, in reaction to the currency crises of the 1930s, the perception that floating rates were destabilizing, the perception that devaluations were beggar thy neighbour, the Bretton Woods Agreement of 1944 led to an adjustable peg exchange rate system based on gold and the dollar and buttressed by capital controls. In sum, financial stability in the post war was ensured by financial repression.

As is well known, the Bretton Woods system was characterized by a series of currency crises reflecting misalignment between the currencies of member countries as well as a growing tension in many countries between internal and external balance with the growing emphasis on full employment. It also faced a fundamental imbalance because the center country, the U.S., followed inflationary policies in the late 1960s incompatible with its role as anchor of the dollar/gold exchange standard. Ultimately the Bretton Woods system collapsed by 1971 following a series of speculative attacks against U.S. gold reserves. Capital accounts were opened gradually and controls disappeared by the end of the 80s

.The advanced countries (with the principal exception of many European countries which formed the EMS and later EMU) adopted managed floating rates in the 1970s and 1980s. Like the gold standard pre 1914, managed floating exchange rates became the regime of choice (Bordo and Flandreau 2003). It took decades of turmoil, extensive financial innovation and learning (both in economic theory and practice) to operate a credible nominal anchor based on low inflation and compatible with floating exchange rates. The nominal anchor of today's central banks by anchoring inflation expectations is similar in some respects to the gold peg of pre 1914 (Bordo and Schwartz 1999). With these developments, the currency crisis problem in the advanced countries (with the principal exception of the EMS crisis in 1992) has greatly diminished.

Since the collapse of Bretton Woods, in the face of increased inflation in the 1970s, the extensive controls on the domestic financial sector were removed . In country after country, banking crises reappeared. A series of crises in the 1980s reflected the effects of disinflation on banks' balance sheets and financial liberalization. In all these cases the banking system was protected by the safety net and by the degeneration of the principles of lender of last resort away from Bagehot's strictures to lend freely at a penalty rate to solvent but illiquid banks, and towards the bailouts of "too big to fail". Banking crises became solvency crises , resolved by fiscal means. Since the early 90s, with the institution of better supervision and regulation based on market incentives and the return to price stability, banking crises in the advanced countries have become rare.

5. Globalization, Crises, Financial Development and Growth.

Globalization, in the sense of the reduction of barriers to international trade is widely viewed as contributing to growth and welfare (Bhagwati 2004). By contrast, financial globalization has a mixed press. In theory, opening up of the international capital markets should raise real growth because it produces a better allocation of resources across countries and over time and it reduces risks by improved portfolio diversification. Also as is argued below, financial openness combined with openness of trade should lead to financial development which in turn raises growth.

Yet the empirical evidence is mixed on this issue. Recent evidence from the IMF by Edison et al (2002) , Prasad et al (2006), Gourinchas and Jeanne (2006) all lead to the conclusion , based on data from the recent era of globalization, that international financial integration may not necessarily be associated with significantly higher growth. For the historical era of globalization, Schularick and Steger (2006) however do find evidence of a positive association between gross capital flows from Britain and growth between 1880 and 1913. they confirm the traditional view of Fishlow (1986), Foreman –Peck (1994) and Collins and Williamson (2001). Bordo and Meissner (2006) revisit this issue. Our empirical work suggests that when you condition standard growth regressions by the presence of financial crises, that the growth capital flows connection weakens considerably. Indeed it is only for the subperiod 1900 to 1913 that we find that controlling for crises, that opening up of international capital markets is good for growth. We also find some limited evidence , for at least one country with sound financial institutions , Canada, that by avoiding financial crises its growth experience was strongly enhanced by financial openness. This research suggests an avenue for future research—to condition financial crises on measures of financial development.

A second strand of literature which argues quite convincingly from the data of the recent period that financial globalization on net balance is good for growth, despite the fact that it inevitably leads to financial crises, is by Tornell and Westermann (2003). They provide evidence for a panel of emerging countries from 1980 to 2000, that both opening up international trade and financial liberalization (both doestic and international) increases growth. But financial liberalization by reducing borrowing constraints in the non traded goods sector, in an environment of imperfect contract enforcement, leads to an investment boom and then a bust. The bust episode is amplified because a collapse of the real exchange rate leads to a decline in net worth of firms with liability dollarization. However these boom-bust episodes are rare events, measured by negative skewness in real credit growth. On balance the benefits of liberalization by reducing the constraints on collateral outweigh the costs of the occasional crisis. Thus countries like Thailand which open up and suffer the occasional crisis are better off than those which maintain capital controls like India. Supporting evidence that financial liberalization is good for growth despite the occasional crisis is provided by Demigurc-Kunt and Detriache (1998).

One question that arises from the Tornell-Westermann study is how do countries grow up so that they can benefit from foreign capital without suffering the pain? Do they ever learn from their crisis experience or do they keep on banging their heads against the proverbial wall? How did today's advanced countries that were yesterday's emergers apparently learn from their experience?

6. Institutions, Financial Development and Crises: The Deep Fundamentals.

The remaining question is why are some emerging countries hardier than others and how do countries grow up to financial stability. An important answer is financial development and its deep institutional determinants: the rule of law and protection of property rights, political stability and representative democracy. The story has a number of strands.

A. Financial Revolutions and Growth

Extensive empirical research by King and Levine (1993) and others has established a strong connection between financial development proxied by the ratio of broad money to income and by various measures of stock market capitalization and future growth. Peter Rousseau and Richard Sylla have built upon this with their concept of "financial revolutions ". They argue , based on the history of the Netherlands, England,the U.S., France, Germany and Japan, that these countries grew rapidly after financial revolutions which created 'good' financial systems. Such systems have five key components: sound public finances and public debt management; a stable monetary regime, a banking system, a central bank and well functioning securities markets (Rousseau and Sylla 2003).

Each of the five countries studied went through a financial revolution that first led to the creation of sound public finances and a credible government debt market, which set the stage for the other elements to develop. The most famous case was the financial revolution in England following the Glorious Revolution in 1688 which gave Parliament control over public finances and ensured property rights. The English revolution followed that in the Netherlands earlier in the seventeenth century and built upon many of its innovations (DeVries and Woude 1997).

The creation of a constitutional monarchy led to the creation of a long –term government bond market because lenders were assured that Parliament, representing the wealth holding citizens, would generate the taxes required to service the debt. This was aided by improvements in tax collection (Dickson 1967) and the establishment of the Bank of England in 1694 as the government's bank to provide it with intermediate government finance.

Building upon these institutions, a nascent banking system and stock market quickly flourished. Based on these innovations, bond yields on government debt dropped dramatically and England was able to use bond finance to tax smooth and fight the wars which gave it global supremacy in the eighteenth century (Brewer 1974). The financial revolution led to the development of securities markets in England and the Netherlands and by the eighteenth century a viable and efficient capital market developed (Neal 1990).

B. Deeper Determinants of Financial Revolutions

Rousseau and Sylla's concept of financial revolutions builds upon earlier work by Cameron (1967) and Goldsmith (1969) as well as on North and Weingast's (1989) seminal article " Constitutions and Commitment: the Evolution of Institutions governing Public choice in Seventeenth Century England ". North and Weingast view the constitutional monarchy that followed the Glorious Revolution as creating the secure property rights needed for the financial revolution. The institutional changes that occurred (including the supremacy of Parliament, its exclusive authority to raise new taxes, the right to veto expenditures and audit the Crown, and the independence of the judiciary), by constitutionally enhancing the countervailing power of Parliament and the judiciary, ensured investors the credible commitment that the Crown would not attempt to expropriate them and repeat the policies followed by earlier monarchs. Since Parliament was composed of the landed gentry, merchants and financiers , this meant that contracts would be more secure , giving investors the confidence to invest (Rajan and Zingales 2003 p.137).

Rajan and Zingales (2003) peel back the onion of financial development a bit further than do North and Weingast. Focussing on the English case, they posit that the real breakthrough in the creation of secure property rights and enabling the power of Parliament, occurred in the reigns of the Tudors, Henry VII and Henry VIII. In his drive to secure his power, Henry VII eliminated the threats from the great nobles who had threatened the monarchy for centuries. Their lands were seized and sold on the open market. Henry VIII did the same to the monasteries.

According to Rajan and Zingales , these lands were purchased by yeomen farmers who had greater interest to put them to better use than the landlords or the church. The Tudors encouraged this class as allies against the nobles and the church. Moreover they realized that it was more in their interest to grant the gentry secure property rights to their lands and obtain steady tax revenue than to appropriate them in time of emergency. Further they argued, the members of the gentry used Parliament as a way to coordinate their common interest and power.

In addition, Rajan and Zingales dispute the view that the taming of the rapacious state by constitutional government is sufficient to achieve financial development. What blocks finance according to them is the power of wealthy incumbents who can control the government and keep out entrants. The incumbents according to them do not need access to external finance. Examples of this problem cited include the Haut Banque in early nineteenth century France, the Mexican banking system in the nineteenth century (Haber 1997), and the prohibition before the 1990s on interstate and branch banking in the U.S.. However they posit that the power of the incumbency can be overcome by changes in political power, eg Napoleon's conquest of Western Europe, by major technological change, eg the railroad which increased the size of the market and increased the need for external finance by the incumbents, and by external competition, especially via international trade combined with open capital markets.

Acemoglu, Johnson and Robinson (2004) go further. They see the deep determinants of economic institutions as coming from political power, which in turn depends on existing political institutions and the distribution of resources. However, political institutions are endogenous, determined by political power and economic institutions. Following the theme developed by North and Weingast, they argue that the major changes in political institutions that occurred in England in the seventeenth century leading to the financial revolution, reflected the rise in the economic and (de facto) political power of merchants who prospered from the opening up of the Atlantic trade. This group joined with the landed gentry (as emphasized by Rajan and Zingales) to change political power and political institutions. According to them, the political revolution didn't occur in Spain,Portugal and France because their political institutions were different. They were absolute monarchies who monopolized international trade for fiscal ends. They differed from England (and the Netherlands) where international trade was engaged in by individuals and small partnerships in a more competitive environment.

The heart of their story is the analysis of the evolution of economic institutions in the European colonies. According to them, areas which were hospitable to European settlers, those with sparse populations, abundant land and temperate climates (eg North America, Australasia, the southern cone of South America) , proxied by the disease environment in 1600, ended up with institutions producing a fairly equitable distribution of property rights . The institutions in these areas fostered an environment favourable to investment and future economic growth. By contrast, areas which were hostile to European settlement but had valuable resources to extract (areas like India ,Africa , the West Indies and much of South America with tropical climates and dense indigenous populations), ended up with institutions protecting property rights for the small minority of Europeans needed to extract the resources. The institutions which developed and persisted , concentrating wealth and power in a small elite, created an environment inimical to future economic growth.

A related explanation for the colonial experience of the Americas by Engerman and Sokoloff (2000), attributes institutional development to the inequality in wealth determined by initial factor endowments. Thus the greater concentration of land ownership in Latin America versus the U.S. and Canada explains their long-run institutional trajectories (North America with diffuse political power versus Latin America with power concentrated amongst elites), and the growing disparities in their levels of income. In terms of Rajan and Zingales approach, the incumbency blocking financial development would be stronger in Latin America than North America, as developed by Haber's work (1997).

The articles in Bordo and Cortes- Conde (2001) trace the legacy of fiscal and monetary institutions from the mother countries of Western Europe to the countries of new settlement in the Americas. Like Acemoglu et al, there is clear evidence that the fiscal institutions inherited from England, built upon the principles of representative democracy, differed markedly from those of Spain and Portugal. The fiscal systems of the latter based on the transfer of royalties and excise tax revenues to the crown in Europe persisted after these countries became independent. The major difference was that the resources accrued to the local successors of the viceroyalties.

Finally, the law and finance literature represented by La Porta et al (1997) asserts that a country's legal origins is related to its willingness and ability to protect private property rights and to enforce private contracts, and these factors in turn increase the propensity of potential investors to hold financial assets. This literature contends that the common law tradition from England provides for better protection of property rights than the French civil law tradition.

7. Empirical Evidence on the Deeper Determinants of Financial Development and Financial Crises.

The literature on the institutional sources of financial development suggests a number of factors that may help explain successful financial development and the conditions conducive to financial stability. These include: from Rajan and Zingales, openness to trade and financial flows and major technological breakthroughs capable of breaking the power of the incumbency; from Acemoglu et al, settler mortality as a proxy for institutions protecting property rights, indicators of political institutions and the distribution of political power; from Engerman and Sokoloff, measures of factor endowments; from Bordo and Cortes Conde, indicators of colonial legacy in fiscal (and monetary)institutions; from the law and finance literature, indicators of legal origin.

There has been some empirical research in economic history on the deeper institutional determinants of financial development and financial crises but there is definitely room for more. I will briefly describe a few efforts in this direction.

Rajan and Zingales (2003) present cross country panel evidence for 1913 showing that both openness to trade and open capital markets led to greater financial development proxied by the ratio of stock market capitalization to GDP. These results they argue reflect the effects of competition in reducing the power of the incumbency.

Acemoglu et al (2004) summarize the evidence from their research program. The incidence of settler mortality in 1600 is used as a proxy for the impact of institutions on growth. They find it to be well correlated with low enforcement of property rights (based on an index). They then use settler mortality as an instrument in cross country growth regressions. They find that most of the gap in per capita real income between rich and poor countries today can be explained by this proxy for economic institutions.

Bordo and Rousseau (2006) present evidence over the period 1880 to 1997 on the influence of legal origins (English common law versus French civil law) on financial development measured by the ratio of broad money to GDP. Legal origins dummies were used by La Porta et al (1997) to explain a considerable amount of cross country variation in financial development today. Our results show that civil law countries actually had better financial development than common law countries in the pre 1914 period. This may reflect the possibility that civil law procedures resolved contract disputes more rapidly than under English law.

Bordo and Rousseau (2006) also assessed whether political variables influenced financial development as suggested by Acemoglu et al. We found that Parliamentary systems as opposed to Presidential systems are related to higher levels of financial development. In addition we found that a measure of political instability, coups are negatively related to financial development.

Bordo and Oosterlinck (2005) focus on the determinants of debt defaults in the 1880-1914 period, with emphasis on measures of political instability. The variable that comes in strongest for us is coups. We also found that debt defaults trigger political changes.

Finally, Bordo and Meissner (2006) study the institutional determinants of financial crises in the pre 1914 period. We found that emerging countries with original sin but with sound financial institutions are less prone to crises than countries with weaker institutions.

In sum, empirical evidence is suggestive of the importance of deep institutional fundamentals determining financial development in explaining the incidence of crises. More research is clearly needed to tie together the literature on the institutional determinants of growth with that on financial crises.

8. Conclusion; Some Lessons from History.

My foray into financial history emphasizes the importance of sound institutions as the bedrock of financial development, which in turn creates the conditions for financial stability. A number of questions and possible suggestions for future research emerge from my survey.

First, what is the role for learning—both institutional learning and learning to follow the policies consistent with the institutions? Do countries learn from their financial crises to improve their institutions and how do they do this?

Historical research suggests that learning did take place in the advanced countries. In the nineteenth century, the Bank of England learned to manage the banking crises that occurred every decade or so from 1825 to the Overend Gurney crisis of 1867. They adapted and innovated so that no true financial crises ever followed that event (Schwartz 1983). They learned by managing successive crises and developing better techniques, such as the use of the Treasury Letter, temporarily releasing the Bank from its gold constraint. They learned from pressure by periodic Parliamentary commissions that considered the renewal of the Bank's charter, and above all from the writings of critics like Walter Bagehot.

In the United States, after the debacle of Andrew Jackson's veto over the renewal of the charter of the Second Bank of the United States, banking panics followed with regularity until the founding of the Federal Reserve in 1913. The advent of the National Banking system removed the threat of crises endemic to the Free banking era , coming from the difficulty in converting state bank notes into specie by creating a uniform safe national currency. The National Banking system however, did not deal with the problem of mass attempts by the public to convert deposits into currency. This required the institution of a lender of last resort. The Federal Reserve, established for this very purpose, maintained stability for 15 years and then failed miserably in its task in the 1930s. The Fed has subsequently learned its lesson from that experience. The learning involved major changes in the structure of the Fed in the Banking Acts of 1933 and 1935, concentrating its power in the Board in Washington. It also learned by having its power supplanted by the Treasury for over 25 years until the famous Fed-Treasury Accord of 1951. Finally, like the Bank of England after Bagehot, it learned from the critique of Friedman and Schwartz (Bernanke 2002).

One possible way that financial crises can promote institutional learning is by going through a "cathartic crisis " Bordo, James and Mody (2006). It occurs at a crucial point in a country's economic and financial development when the forces of economic reform are pitted against those of the incumbents. The crisis can tip the balance of power in favor of reform. Such conditions may have been present in the UK balance of payments crisis of 1976 and in the Korean financial crisis of 1997.

These lessons of learning, as well as Tornell and Westermann's evidence suggests that perhaps we should not be overly keen to make countries crisis proof before they are financially developed. In addition my survey suggests that more research is needed linking the deeper determinants of institutional change to financial development and to the conditions needed to grow up to financial stability. We need to better operationalize these concepts and develop better instruments to measure them.

Appendix.

Figure 1

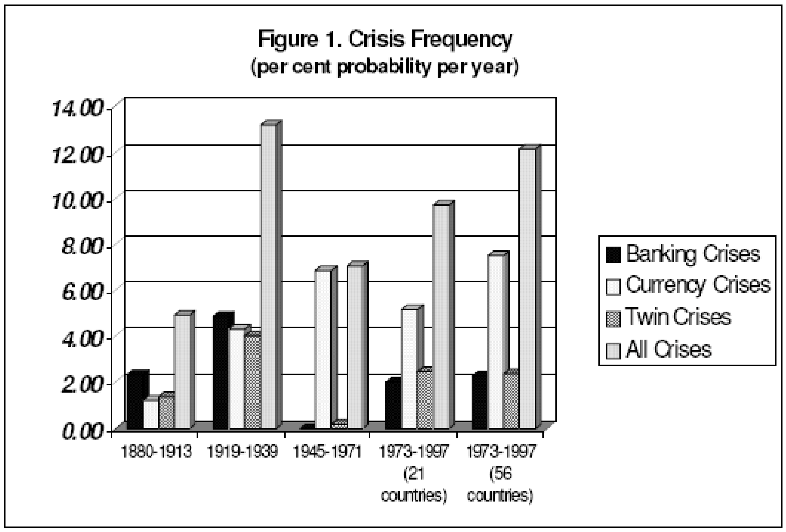


Figure 2

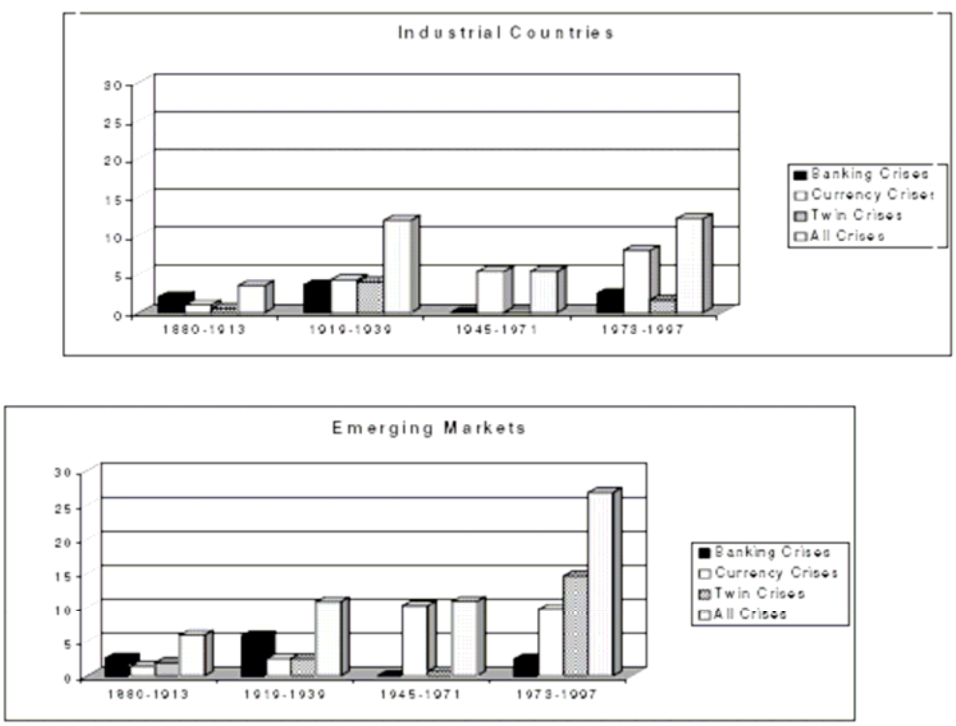


Figure 3

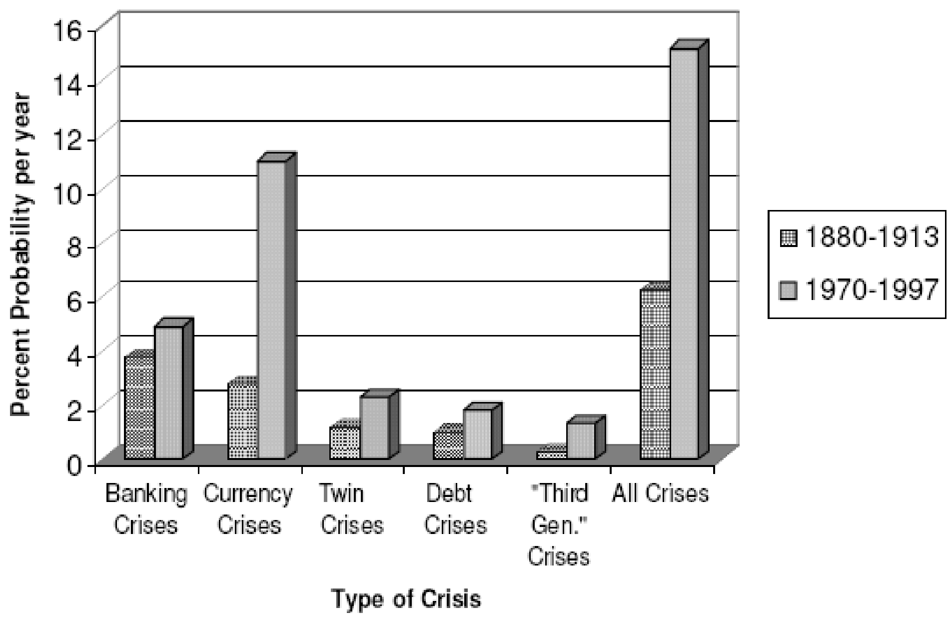


Figure 4

Figure 4. Output Loss per Crisis

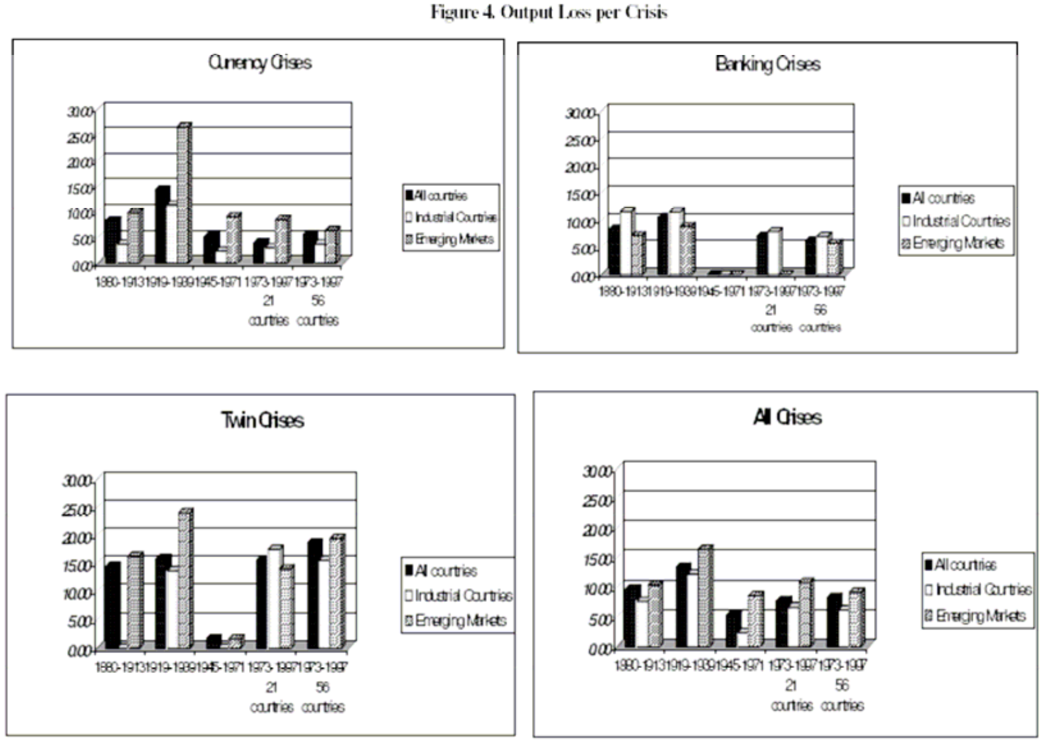
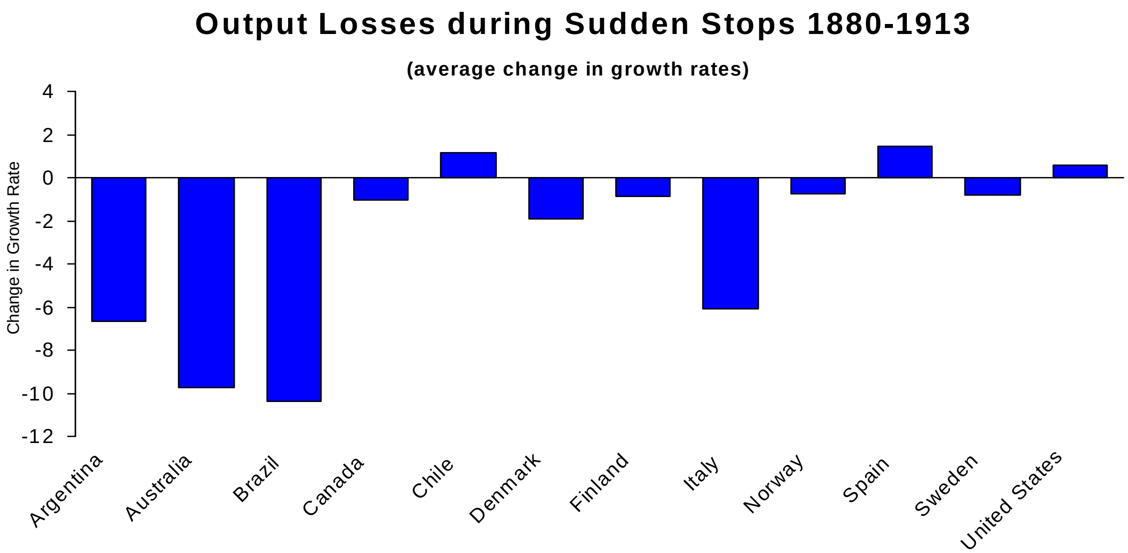


Figure 5



Notes:
-Output loss = average growth rate three years before the crisis – average growth rate 3 years after the crisis
-Australia 1903 case excluded

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