



HISTORY MATTERS

*Essays on Economic Growth,
Technology, and Demographic Change*

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FINANCIAL HISTORY AND THE LONG REACH OF THE SECOND THIRTY-YEARS' WAR

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1. INTRODUCTION: APPLYING THE PATH DEPENDENCE PARADIGM TO FINANCIAL HISTORY

This essay is about financial and monetary history, and the role of path dependence in understanding that history—specifically, the extent to which the shocks of the period 1914–44 had a lasting effect on the past five decades of financial and monetary history. In financial and monetary history, path dependence works most potently through the way historical accidents shape the private and public institutions that govern the financial sector—that is, choices about the structure and powers of private and public financial intermediaries, monetary standards, and commercial laws.

The “path dependence paradigm” (PDP) in this context boils down to a point of view with three separate, but related, elements: (1) that historical shocks can precipitate institutional innovation, (2) that the “specific history” of shocks can have lasting importance through its effects on institutional change, and (3) that institutions make a difference for economic outcomes. The first two elements imply that specific history matters for institutional history; the third element implies that specific history matters for important economic outcomes.¹

One way to “test” path dependence, and these three elements of the PDP, is to specify an “anti-PDP null hypothesis,” which evidence about path dependence would reject. The null is that specific history’s effects on important

institutions does not matter much for very long. In other words, the underlying structure of preferences, resources, and “technology” (broadly defined to include laws, norms, and institutions, as well as technical knowledge) evolves in a way that is not importantly influenced by the sequence of historical disturbances experienced.

Two different points of view about economic history can underlie the null: (1) that laws, institutions, and norms do not matter much for economic outcomes, *per se*, so that even if laws, institutions, and norms are affected by specific history, that is not important; or (2) that laws, institutions, and norms do matter, but that they are not influenced for long by specific history.

As a statement about the “immunity” of *all* institutional history to specific shocks in the long run, the second argument implies the existence of a mapping from a set of exogenous preferences, initial knowledge, and environmental conditions (predetermined by a combination of geological accident and human biology) to a set of derived laws, norms, and institutions. That is, if laws, norms, and institutions matter, but specific history does not, it must be that we never stray very far from the predetermined set of laws, norms, and institutions. Such would be the view of either a Marxist interpretation of financial history (governed ultimately by the history of class struggle), or a pure neoclassical (Darwinian/Panglossian) view that “efficiency” guides all institutional choice.

Anyone familiar with the history of economic development will be able to cite substantial evidence against the view that institutions do not matter for economic outcomes, or the Marxian or Panglossian views that financial institutions evolve along some predetermined path. The history of the past fifty years—particularly the persistence of basic institutional differences among countries, the persistent poverty of many of the world’s countries, and the close links that have been identified empirically between the political and institutional weaknesses in many countries and their poor long-run economic performance—makes it clear that institutional history both differs and matters across countries in the long run. Unstable, unwise, corrupt, and ineffective governments have been the rule rather than the exception in scores of countries for many decades.

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Nevertheless, rejecting the determinism of a Marxist or Panglossian view of institutional history is not the same as accepting the importance of path dependence in the history of financial institutions. There is an alternative perspective (which I will call political determinism) that views changes in financial institutions as determined in the long run by core social and political institutions, norms, and customs. That view sees those core elements (rather than the shocks that directly affect financial institutions) as the important conditions shaping financial history in the long run. Specific shocks that produce financial institutional change, according to this view, merely accelerate change that would have been produced in any case, as the result of political forces that were moving inexorably toward that end.

Indeed, much of the controversy over the long-run determinants of financial history consists of reasonable disagreement between advocates of path dependence (the view that specific shocks created long-run change in financial institutions) and advocates of political determinism. The version of the null hypothesis that is most difficult to reject typically is some version of political determinism.

Consider, for example, the current controversy over the interpretation to attach to the importance of legal origins as empirical predictors of both financial and economic development. La Porta et al. (1997) and Levine (1997) find that persisting institutional inadequacies in legal systems matter for long-run financial development, and that measures of legal system quality are good instruments in regressions that connect financial development and economic development (in other words, aspects of financial development predicted by legal system attributes—which are plausibly viewed as exogenous to contemporaneous economic growth—have explanatory power for economic growth in cross-sectional regressions of economic growth).

That research also emphasizes the dependence of specific contemporary attributes of the legal system on the initial conditions (the legal tradition) that shaped subsequent legal history. In these and many other studies, not only have researchers identified “bad” commercial laws and “bad” banking regulations that have persisted for many decades in many countries; they have also found that, to a very large extent, *distant historical accidents* (the specific history of a

country's legal origins) that determined which of four broad legal heritages a country adopted (British, French, German, or Scandinavian) explain to a large extent the relative efficacy of current legal and institutional arrangements affecting the financial sector, and the economic consequences of the quality of those financial institutional arrangements. In short: distant legal history seems to matter empirically for financial and economic development.

Is this convincing evidence of the importance of path dependence in the long-run development of financial laws and institutions? Did initial choices of legal tradition constrain the long-term legal, financial, and economic development of many countries? Not necessarily. It may be that political factors that influenced the concentration of political power over the past century produced both financial and economic underdevelopment, and that the correlation with legal origins is largely coincidental. Indeed, Rajan and Zingales (1999) make this argument. They show that legal origins were not good predictors of the level of financial or economic development achieved by countries before World War I, and thus question the argument of La Porta et al. (1997) and Levine (1997) that the distant choice of legal traditions determined legal, financial, and economic development. Initial legal origins may have influenced subsequent political development (as suggested by Fohlin 2000), but it is also possible that political history shaped legal and financial institutions, and that legal origins are simply correlated by coincidence with subsequent political history.

The same controversy between political determinism and institutional path dependence emerges repeatedly in the context of the financial institutional changes of the 1914–44 period. To advocates of path dependence, the shocks of World War I, the Great Depression, and World War II set the stage for institutional changes that would not otherwise have occurred, and which had profound consequences. To advocates of political determinism, those changes were inevitable and were merely hastened by the specific history of the “second thirty-years’ war.” In this essay I try to come to grips with that disagreement.

It is always difficult to argue for or against the importance of the PDP, because doing so requires the construction of a plausible counterfactual. It is easy enough to show that the specific institutions wrought by World War I, the Depression, and World War II would not have come into being at the same

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time, or with the same names or specific structures, as those that actually arose. But it is harder to show that reasonable facsimiles would not have arisen soon thereafter.

Consider the example of Mexico's 1994–95 financial crisis. Mexico's national deposit insurance system, and the U.S. Exchange Stabilization Fund (ESF) played important roles in the Mexican crisis (the first by encouraging the risks that sunk the Mexican banking system, the second by providing a mechanism for assisting the government during its collapse). Both of these institutions are traceable to the shocks of the Great Depression: Mexican deposit insurance—like all government deposit insurance—followed the 1934 precedent set by the Federal Deposit Insurance Corporation (FDIC), and the Exchange Stabilization Fund (through which \$12 billion was lent to the Mexican government by the secretary of the Treasury in 1995 after Congress refused to appropriate funds for that purpose) was established in 1934 as a monetary policy tool for combating the Depression (see Schwartz 1997). In that sense, the Mexican crisis (in its specifics) was a child of the Great Depression. But stating this fact is not the same as showing that Mexico would not have developed deposit insurance without the U.S. example, or that the Mexican bailout would have been substantively different in the absence of the ESF loan.

Chandler's (1972, 1977) opposite judgments about the importance of the specific histories of anthracite coal and railroads provide a model of how to reasonably argue for or against the PDP. After demonstrating how the discovery, mining, and transport of anthracite coal had been a crucial determinant of the locations of manufacturing and the growth of particular towns and cities during the antebellum period, Chandler concludes that the initial reliance on anthracite coal probably did not have an important effect on subsequent economic development.

His view of the effects of railroads on American economic history is quite different. Chandler properly bases his case for or against the PDP on judgments about the historical context in which shocks occur. The reach and speed of railroads fundamentally altered the scale, geographic scope, and structure of firms, with important implications for the organization of production, distribution, and management. Anthracite coal left its footprint in American economic history, but in the context of the broader history of technological

change, its specific history was of temporary significance, largely because railroads changed the resource and transportation constraints that had made the anthracite mines so important. Without anthracite, railroads still would have been invented, and coal-based industrialization still would have occurred, albeit a few years later. Thus Chandler reasonably concludes that the history of technological progress and industrialization in the United States was permanently altered by railroads, but not by anthracite coal.

Reaching firm conclusions about the importance of specific history for financial institutions is harder than for technology because institutional and legal change depends primarily on political processes. Defining counterfactual political history is inherently more difficult than defining technological counterfactuals. Yet the task is the same: to use the broader historical context to distinguish between events that matter for the long run and those that do not. In what follows I describe the significant shocks of the 1914–44 period from the perspective of financial and monetary history and try to sort out their relative long-run importance.

2. WHAT WORLD WAR I STOPPED

When Winston Churchill described the period 1914–44 as the “second thirty-years’ war” he was making a point about path dependence among the shocks that produced World War I, the Depression, and World War II. World War II grew out of the rise of Nazism, which would have had little hope as a political movement in the absence of the Great Depression (Temin 1989). The shocks that gave rise to the Great Depression (which revolved around global monetary policy errors and exchange rate misalignments) were the direct consequence of the failed attempt to restore the monetary/exchange rate system that was destroyed by World War I (Eichengreen and Sachs 1985, 1986; Temin 1989; Bernanke and James 1991; Eichengreen 1992).

If World War I had not occurred, the world economy likely would have continued the process of globalization and liberalization that had been under way for several decades, and would have retained the financial and monetary rules on which that process was based. World War I—and the shocks of the Great Depression and World War II that followed in its wake—brought to an

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end a period that had seen unprecedented success, a success that was based on the globalization of markets in gold, commodities, labor, and capital (Obstfeld and Taylor 1998).

From 1870 to 1913 a truly global system had developed with common basic institutional ingredients across countries. Despite unevenness in economic growth over time and across countries—which coincided with terms of trade shocks, or global deflationary episodes—growth was quite high, particularly among developing economies. Capital and labor flowed to markets where production and export opportunities were high (Argentina is the most striking example). Globalization was a powerful tool for progress, particularly for low wage earners migrating from Europe.

With respect to financial systems, there were three important common elements in the pre-World War I institutional structure, which had been adopted increasingly throughout the world in the four decades before World War I. These were (1) the chartering of privately owned commercial banks operating on a limited-liability basis, (2) openness to international capital flows (financed ultimately by exports), and (3) adherence to the gold standard. Financial systems were managed with very limited government involvement (relative to the post-World War I period) in most countries. Before World War I, central banks existed in some, but not all, countries. No global financial institutions existed to coordinate countries' policies, although central banks did cooperate extensively during crises (for example, by lending reserves to one another) (Eichengreen 1992). Government guarantees of financial institutions were quite limited and in most countries did not exist (see Calomiris 2000b).

Before 1913, there was a well-defined institutional "best practice" for developing countries. Participation in global trade was the means to gain access to global capital markets, which were seen as the necessary means to finance rapid growth. Adherence to the gold standard was a matter of national pride and a commitment to honesty in financial affairs, not just an exchange rate policy (Bordo and Kydland 1995). Similarly, the development of a healthy private domestic banking system was a top priority for most developing economies, and policymakers maintained a firm commitment to market discipline (based on the understanding that government protection promoted

undesirable risk-taking by banks). Bank insolvency was rare, and systemwide collapses of banking systems were virtually unknown.

Calomiris (2000b) finds only seven cases of a "significant degree of banking system insolvency" for a large sample of countries from 1870 to 1913. Significant insolvency is defined as a banking system whose failed banks' negative net worth in aggregate exceeds 1 percent of annual GDP. By that measure, Canada, Germany, France, Britain, the United States, Mexico, Russia, Japan, Holland, Denmark, Sweden, and Finland never experienced a significant degree of banking system insolvency. Norway, Italy, Brazil, Argentina, and Australia account for the seven significant crisis episodes (with Brazil accounting for three of the seven). None of these crises produced negative net worth-to-GDP ratios in excess of 10 percent, and the median ratio was 3 percent. This incidence and magnitude of crises appears small by modern standards. Over 100 severe banking crises have occurred in the past two decades, with more than twenty crises resulting in negative net worth-to-GDP ratios in excess of 10 percent (Calomiris 2000b).

I will argue that perhaps the most important legacy of the specific history of 1914–44 for financial policy has been the creation of fragile banking systems, which have been a direct consequence of the willingness of government to protect banks from the consequences of their own risk-taking. In the absence of the shocks of 1914–44, the domestic and international "financial architecture" of government policy that has protected banks was historically unprecedented and, I will argue, unlikely to have arisen in the absence of the shocks of 1914–44.

More generally, the collapse of the global economy after 1913 did not just increase poverty and economic isolation during the chaotic period 1914–44. That collapse also destroyed the institutional base on which the global economy had been built. Global private market capital flows are just now regaining their pre-World War I levels (as a ratio of GDP), and domestic banking privatization and liberalization in emerging market economies are also phenomena of the 1980s and 1990s.

The gold standard was never fully restored after its World War I collapse, and the result has been an international monetary system with higher average inflation and much higher inflation and exchange rate volatility than during

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the pre-World War I gold standard. After an unsuccessful attempt at restoring the gold standard in the 1920s, and the establishment of fixed exchange rates among industrial countries on a dollar standard after World War II, which ended in 1971–73 (Bordo and Eichengreen 1993), the United States, Japan, and Europe have allowed their exchange rates to float relative to one another. Until recently, emerging market countries have generally pursued pegged exchange rate policies, where currencies were weakly linked in a variety of ways to one of the “hard” currencies of the developed countries. That approach produced historically unprecedented volatility in nominal exchange rates resulting from frequent exchange rate collapses. Developed countries’ monetary authorities permitted high levels of inflation during the 1960s and 1970s, and developing countries experienced even higher rates of inflation during those decades. Indeed, before the 1990s, hyperinflations were not uncommon phenomena among developing economies.

Recently, monetary policy has changed in both developed and developing economies. The three central banks that have controlled developed country monetary policy (the Federal Reserve, the Bundesbank/European Central Bank, and the Bank of Japan) all have substantially reduced the levels of inflation in their economies since the 1970s. Beginning in the 1990s, developing economies have also moved away from loose exchange rate pegs and toward new policies of either freely floating rate systems (as in Mexico and East Asia since their crises), or rigidly fixed exchange rates via currency boards or dollarization (as in Argentina, Estonia, Lithuania, and Ecuador). Rates of inflation in developing countries have also fallen substantially from their levels in the 1960s, 1970s, and 1980s, when hyperinflations were not uncommon. Nevertheless, volatility in exchange rates among the three core currencies and those of the peripheries persists, as do market perceptions of the risk of exchange rate collapse even in currency board countries, indicating that the world is still very far away from the uniformity and reliability of exchange rates achieved under the classical gold standard.

Underlying the fifty-year interruption of globalization and its core institutional base was a political environment within emerging market countries—and more broadly an ideological movement around the world—that was hostile to globalization and economic liberalism. The collapse of the global

economy during the 1914–44 period, and the increasing use of government control over the economy as a wartime measure in World Wars I and II, did more than destroy trade and capital flows and the institutions of the global economy. These changes also undermined the legitimacy of globalization and the institutions that accompanied it, and pointed increasingly in the direction of state control as a substitute for markets. That was particularly true in developing economies, which had hitched their wagon to the global engine of growth only to see that engine take their economies over the cliff of the Great Depression.

Even in developed economies, the confidence in markets was substantially eroded by the chaos and collapse of the 1914–44 period. The post-World War II world was one where protectionism, socialism, and nationalization of enterprises became respectable policies, justified by a new emphasis on market failures within the economics profession.

3. FINANCIAL INSTITUTION INNOVATIONS OF THE 1914–44 ERA

Innovations in financial institutions during the 1914–44 era reflected these trends. Domestically, the regulation of money and banking changed dramatically. Central banks, which had not existed in many countries under the classical gold standard, became virtually universal. Central banks increasingly took on new powers in the areas of monetary policy, assistance to banks, and control of domestic and international payment systems.

The commercial banking sector became a key instrument of government planning, especially in developing economies, but also in Japan, and to a lesser extent in Europe. In many countries banks were nationalized, and in countries where they remained in private hands their lending typically was controlled by, and subservient to, government plans, and their activities were severely limited by regulations. Even in the United States, government loan assistance for special purposes (mortgage subsidies, farm credit subsidies) became a federal government activity, beginning with the Federal Land Banks (1916), which subsidized farm mortgages. The Federal Home Loan Banks were established in 1932 to promote mortgage lending, and Fannie Mae was chartered in 1938 to provide subsidies through purchases in the secondary mortgage market.

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National government protection of bank liabilities—an American novelty beginning in 1934—soon spread to other countries. Government assistance to weak banks (as opposed to assistance to depositors in those banks) began in the United States in 1932 in the form of the Reconstruction Finance Corporation (RFC), whose powers and resources were significantly expanded under Roosevelt in 1933. By the 1980s, those policies had been widely imitated throughout the world; government protection of failed bank depositors, bond holders, and even stockholders had become standard operating procedure in virtually all countries.

In the United States, the Depression saw the centralization of power within the Federal Reserve (the Fed), and the creation of new monetary powers for the Treasury, which resulted in roughly fifteen years of Treasury dominance over monetary policy (Calomiris and Wheelock 1998). Stripped of the discipline of the gold standard, post-World War II monetary policy, in the United States and worldwide, lost its long-run anchor. For countries other than the United States, the dollar would become that anchor until 1971 (through the Bretton Woods dollar exchange standard). But the supply of dollars was determined by the U.S. authorities (before 1951, that meant the Treasury Department, and after 1951 the Fed; see Calomiris and Wheelock 1998). Ultimately, the absence of the long-run discipline of the gold standard encouraged unprecedented peacetime inflation in the United States, which caused the Bretton Woods system to unravel and left the world with its current tripolar currency system.

The Bretton Woods financial institutions—the International Monetary Fund (IMF) and World Bank (WB)—were another important legacy of the 1914–44 period. These institutions were founded in 1944 as a means of restoring an orderly global financial system. The IMF's role was to restore convertibility on current account in international transactions and assist countries suffering short-term balance-of-payments problems to ensure stability in exchange rates, or make occasional exchange rate adjustments when necessary. The WB's role was to provide long-term international capital flows to substitute for the absence of private capital markets—initially with a focus on financing the rebuilding of Europe, and later, focusing increasingly on developing countries on the periphery.

4. DID THESE INNOVATIONS MATTER?

These changes in financial institutions within the United States, and internationally, were multiple and significant, and seem to have had lasting importance from a variety of perspectives (that is, political, as well as economic). Few legacies of the New Deal have been as far-reaching as the changes wrought in banking regulations and monetary policy (although some of those regulations—notably Regulation Q and the separation of investment and commercial banking, were undone respectively in the 1980s and in 1999; see Calomiris 2000a). The protection of banks offered by deposit insurance, bank bailouts, and central bank lending is now widely faulted for the unprecedented instability suffered by banking systems worldwide in the past two decades (Caprio and Klingbiel 1996; Calomiris 2000b; Beim and Calomiris 2000).

The IMF and the World Bank live on as reminders of post-World War II reconstruction policy, even though the environment in which they were created (one of fixed exchange rates and virtually no private capital flows) has given way to the new world of flexible exchange rates and massive private capital flows. Indeed, in the case of the IMF, its current operations reflect an adaptation to new circumstances that were not envisioned by its charter. Senator Phil Gramm has said that the “IMF is an agency that started out with a mandate . . . and like all government agencies, when that was no longer their mission, they found a new mission” (Drajem 2000). The IMF transformed itself into a crisis manager and long-term lender when the fixed exchange rate system it was charged with supporting collapsed in the 1970s.

The World Bank’s loans became a trivial proportion of world capital flows by the 1990s. For example, for the eleven countries that receive 70 percent of the World Bank’s loans, lending from the bank (and other multilateral development banks) totaled less than 2 percent of their capital inflows over the past decade. Like the IMF, the World Bank has been adapting to evolving circumstances, moving to help subsidize and guarantee private sector lending, in addition to making subsidized loans to governments, although all of its activities are dwarfed by the size of private capital flows unrelated to World Bank, or other development bank, programs.

Empirical studies suggest that, on average, the economic impact of the IMF and WB have been unimpressive in recent decades. All three studies of IMF

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programs (including one by its own staff) failed to find evidence of a significant positive effect of IMF programs on economic growth or asset values in recipient countries. The majority of the World Bank's programs are judged (by its own evaluations) as failing to achieve "satisfactory sustainable" results (International Financial Institution Advisory Commission 2000; Calomiris 2000c).

That poor average performance is not to say, however, that these institutions are unimportant. The IMF and WB control substantial resources and are active participants in the formulation of macroeconomic, microeconomic, and debt management policies of developing countries. Their resources may be small as a fraction of global capital, but the subsidies they deliver are large as a fraction of the wealth under the command of the government officials in recipient countries—a metric of greater relevance to understanding the political influence these institutions wield. The debates that have arisen in recent years about their shortcomings and their abuses of power attest to their central role in the economics and politics of developing countries (International Financial Institution Advisory Commission 2000; Calomiris 2000c).

For example, despite the small magnitude of IMF loan subsidies, researchers often argue that the IMF has had important effects (often detrimental effects) on economic performance, either through its *ex ante* effects on capital flows or its *ex post* effects on the resolution of sovereign distress. Sachs (1989) argues that IMF support for the delayed restructuring of sovereign debt imposed unnecessary burdens on developing economies. Eichengreen (1999, p. 71) agrees:

IMF policy through most of the 1980s was to lend to countries that had fallen into arrears on their external debts only after they had reached an agreement in principle with their creditors. The notion was that the Fund should provide assistance only if the banks contributed to burden sharing by at least clearing away the country's arrears. Eventually, however, experience with the debt crisis raised doubts about that approach. The banks, their balance sheets strengthening as they drew down their Latin American exposure, hardened their positions. Rather than the policy providing the IMF with a lever to encourage burden sharing by the banks, the banks realized that they could use [the IMF] as a club in their battle with governments.

The IMF essentially lent to countries to permit them to maintain the fiction that they were meeting their debt service, while in fact, no new flows of capital

were being sent to those countries, and IMF assistance resulted in an escalating debt burden over the 1980s. After the resolution of the debt (with substantial effective default on debts under the Brady Plan), capital flows increased almost immediately, suggesting that an earlier debt resolution would have allowed Latin America to share in the growth enjoyed by Asia in the 1980s.

With respect to the *ex ante* consequences of IMF lending, several critics have noted that IMF support provides an incentive for capital suppliers to make loans to insolvent or risky developing country banks or enterprises—particularly international banks providing short-term, dollar-denominated debts, which are the first to exit with the assistance of IMF protection. The buildup of such debt before the Mexican, Asian, and Russian crises, and the rush for the exits that eventually ensued by these debtholders, is generally viewed as a central contributing influence on the magnitude of exchange rate depreciation and banking collapse (Beim and Calomiris 2000, Chap. 8). In Mexico the cost of banking sector resolution will be roughly 20 percent of annual GDP. In Thailand and Korea estimates place the cost at 30 percent of GDP, and in Indonesia the costs are estimated at a staggering 55 percent of GDP.

According to market participants, the IMF's role in generating these capital inflows was central. Consider the following quotations, which are drawn from emerging market advisory newsletters issued by some of the most influential traders in these markets:

[December 1997] The massive Asian-crisis-inspired injections of high-powered global money by the IMF will . . . ensure a market in which there is tremendous technical support. Add in the clear moral hazard caused by the IMF bail-outs—two investors last week told me that they were planning to put on large Brazilian positions (even though they were very unhappy with the currency regime) because they were convinced that a Brazilian crisis would result in an immediate IMF bail-out—and it is hard to see why fundamentals should matter. (Calomiris and Meltzer 1999, p. 90)

Within months of this newsletter's publication, Russia's markets had collapsed, and Brazil had devalued.

Argentina, perhaps more than any other country, has depended on IMF conditional lending over the past several years to maintain its access to international markets. It is now widely perceived as on the verge of a public finance

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meltdown, which many commentators blame, in part, on the IMF and U.S. Treasury. The chronology of policy failure in Argentina is aptly summarized in a recent financial markets newsletter:

[May 2000] Between 1996 and 1999, the IMF and IDB [Interamerican Development Bank] all but led the marketing effort for Argentine bonds. The two institutions voiced strong endorsements each time that there was a confidence crisis in Argentina. The IDB went so far as to dispatch its most senior economist to New York last summer to recommend that U.S. portfolio managers buy Argentine bonds. At the same time, the Street came to realize that the U.S. Treasury was the real force behind the IMF and IDB support for Argentina. It was never clear why there was such unwavering support. The motivation could have been geo-political. Argentina was a staunch supporter of U.S. political policies around the world and across the region. Argentina was also the poster-child of the so-called Washington Consensus. . . . Therefore, the U.S. needed Argentina to succeed. At the beginning of the year, when the Machinea team traveled to Washington to seek a revised Standby Facility, the team met first with the U.S. Treasury before meeting with the IMF and the World Bank. These actions sent clear signals to the market that the country had an implicit guarantee from Washington. Otherwise, it would have been irrational for any creditor to lend so much money to such a leveraged country with such little flexibility. (Calomiris 2000c, p. 89)

Among their political influences, the existence of the multilaterals and the ESF has substantially boosted the powers of the U.S. Treasury (and the other G7 finance ministries) in international policy, often tilting the balance of power within the G7 toward the executive branch and away from the legislative branch of government. The IMF, the WB, and other multilateral agencies can channel assistance where the G7 finance ministers dictate that it go, without the "inconvenience" of legislative debate and approval that would otherwise precede foreign aid.

Fannie Mae and its sister institution, Freddie Mac, also are roundly criticized as ineffectual and undesirable mechanisms from the standpoint of the public interest (Calomiris 2000d; Jaffee 2000; Wallison 2000; Ely and Wallison 2000). Nevertheless, they are very large institutions and are quite influential politically (through their lobbying efforts and campaign contributions in Washington, which many critics regard as their primary area of expertise).

Fannie and Freddie now hold roughly half of the conventional (non-jumbo) mortgages outstanding in the United States and are projected to hold 100 percent of outstanding conventional mortgages by the year 2003 (Ely and Wallison 2000).

The departure from the gold standard may be the single most important change in the financial system since World War I. No substitute for the international gold standard has been established. Historically, the departure from a monetary system based on a specie numeraire typically was a temporary phenomenon, and usually a wartime measure. But the world has yet to restore gold convertibility, indicating an unusually lasting shock to the world financial system. The Fed, the European Central Bank, and the Bank of Japan still lack a long-run nominal anchor to guide monetary policy, and despite the reduction in inflation over the past two decades, inflation remains higher and more volatile than during the pre-World War I era. Empirical evidence indicates that both the higher level and the greater volatility of inflation have been associated with important economic costs in the form of lower real output (Judson and Orphanides 1996).

5. WOULD THESE INSTITUTIONAL CHANGES HAVE HAPPENED ANYWAY?

Even if these financial innovations can be traced to the shocks of the second thirty-years' war, even if they have persisted, and even if they remain important, that does not necessarily imply that they are examples of important path dependence. One must also argue that in the absence of the specific shocks of 1914–44 these institutional changes (or similar ones) would not have occurred.

Would government deposit insurance, bank bailouts, and farm loan and mortgage subsidies have arisen in the absence of the shocks of the 1920s and the Great Depression? Would the gold standard have disappeared even if World War I had not occurred? Would global economic institutions like the World Bank and the IMF have come into existence without the collapse of fixed exchange rates, international trade, and international capital flows that precipitated them in 1944?

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Reasonable people can (and do) disagree in their answers to these questions. The most reasonable arguments against the importance of path dependence are based on political determinism. For example, Eichengreen (1996) and Bordo and Eichengreen (1998) take the positions, respectively, that the long-term decline in countries' willingness to maintain credible monetary/exchange rate policies, and the disappearance of gold as the global standard of value, were inevitable. Bordo and Eichengreen (1998) argue that even if the shocks of 1914–44 had not occurred, the physical supply of gold would have eventually made adherence to the gold standard impracticable. Eichengreen (1996) sees the adherence to the gold standard in the decades before World War I as something of a historical aberration and argues that the credibility of the system was fragile and unlikely to have survived for long even if World War I had not occurred. Furthermore, he argues that a decline in adherence to credible exchange rate targets was the inevitable result of the expansion of the democratic franchise throughout the world over the course of the nineteenth and twentieth centuries:

The extension of the franchise and the emergence of political parties representing the "working classes raised the possibility of challenges to the single-minded priority the monetary authorities attached to convertibility. Rising consciousness of unemployment and of trade-offs between internal and external balance politicized monetary policy" (Eichengreen 1996, p. 43).

Eichengreen's argument about the effect of the spread of democracy, and its short-term political pressures, for undermining the commitment to long-term monetary rules is a powerful one. Indeed, it can also be applied to deposit insurance, bank bailouts, and credit subsidies—all policies that appeal to populist pressures for short-term stabilization, with long-run costs to taxpayers that are hard to measure and distant in their incidence, making them particularly attractive to myopic, democratically elected government officials.

Nevertheless, there are weak spots in these lines of argument. The Bordo-Eichengreen view of the necessary collapse of the gold standard is based on a mechanical model of gold reserve adequacy. There are many margins through which the deflationary scarcity of gold reserves could have been avoided: (1) endogenous increases in the supply of gold in response to deflation (as had occurred in the past, according to Rockoff 1984), (2) reductions in the reliance

on government-supplied high-powered money (movements into substitutes for paper cash in response to deflationary pressures), and (3) the establishment of bimetalist or symmetalist monetary regimes that would have permitted the substitution of alternatives to gold as reserve assets.

It is implausible to argue that a peacetime collapse of the gold standard would have occurred as the result of diverging growth trends in money demand and gold supply that would have produced gold scarcity, not least of all because there is no evidence that a monetary standard has ever collapsed for this reason. Indeed, there is much contrary evidence that monetary standards have adapted to changes in the relative price of gold or silver. Supplies of precious metals expanded, and token (or bimetallic) currencies were adopted or withdrawn in response to changes in the value of the standard of value. For example, Redish (1994) shows how the decline in the value of gold in the nineteenth century precipitated the movement away from a bimetallic standard, and away from the use of silver token currency, toward a pure gold standard. It seems reasonable to expect that a rise in the value of gold would have reversed that process.

With respect to the question of whether political changes associated with the spread of democracy made exchange rate volatility, deposit insurance, bailouts, and targeted credit subsidies inevitable, it is worth noting that many of the economic trends associated with greater political enfranchisement—including state ownership of firms; government ownership, control, and regulation of banking systems; and high rates of inflation—have been reversed in the past twenty years. Liberalization, deregulation, and disinflation are a worldwide trend of the past twenty years that has spread to developing as well as developed economies. Indeed, as noted above, there is a new movement (of uncertain long-run credibility) to reestablish currency boards (in Hong Kong, Argentina, Estonia, and Lithuania) and to dollarize Latin America (so far, only Ecuador has chosen this option). The recent bank regulatory changes in Chile, Argentina, and Mexico also represent a startling reversal of the safety net policies that had produced bailouts and disastrous losses for taxpayers during those countries' previous financial crises. The central goal of the new regulatory regimes in these countries is the establishment of credible market discipline through a combination of openness to foreign bank entry and credible

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prudential regulation of banks. In Argentina, the regulatory process heavily relies upon market signals of bank risk (Calomiris and Powell 2000).

These changes are symptoms of the poor fit between global economic liberalism and unstable monetary and bank regulatory policies. The primary force underlying the trend toward privatization, liberalization, deregulation, and disinflation has been globalization. Emerging market economies have increasingly felt the pressure to compete in international markets to reap the rewards of access to export markets and sources of capital. But those rewards are not unconditional. Competition for access to export and capital markets takes place not only at the level of firms and individuals, but also at the level of governments. Governments have been prodded to develop environments more conducive to efficient production of exports and more inviting to foreign capital. And governments that subsidize risk-taking by their domestic banks and other firms, or that otherwise fail to provide a stable financial environment, have found that sudden outflows of capital, and banking and exchange rate collapses, are punishments worth avoiding. The realization by governments of the need to compete produced the privatization, financial liberalization, and disinflation of the 1980s and 1990s, and the lessons of the costs of unstable liberalization have produced the regulatory reform and changes in exchange rate regimes (the movement away from pegging, and toward either firmly fixed or floating exchange rate policies) now under way.

It follows that, absent the demise of global competition for export markets and foreign capital produced by the shocks of 1914–44, the tendency Eichengreen (1996) identifies of democracy to promote statism, inflation, and protection of domestic special interests would have been substantially mitigated. From this perspective, I think it is reasonable to argue that without World War I, and the shocks that followed in its wake, the global economy, the gold standard, and the market discipline that banks faced before World War I would have continued. Individual countries, particularly on the periphery, no doubt would have strayed from global orthodoxy from time to time, but the centripetal forces favoring conformity to global norms should not be underestimated.

In the case of deposit insurance in particular, it would be hard to argue that a different history of shocks would have produced the same institutional

innovation. Deposit insurance was a very unpopular idea in the United States as of 1929. It had been attempted in eight states during the early twentieth century and had produced moral hazard and banking system collapse that was widely recognized at the time (Calomiris 1990; Flood 1991; Calomiris and White 1994). Congressional initiatives to sponsor federal deposit insurance were attempted again and again from the 1880s until the 1930s. They were routinely rejected in committee and only once before 1933 reached Congress for a vote (in 1913). Deposit insurance was opposed by Roosevelt, by the Treasury, by the Fed, and by the American Bankers Association. Its victory in 1933 was largely a result of momentary political opportunism, not destiny (Calomiris and White 1994).

It is also noteworthy that the main advocates of deposit insurance—small bankers in agricultural states, who saw deposit insurance as a means of transferring subsidies from taxpayers and large, low-risk banks to small, high-risk banks—were also in retreat economically during the 1920s. Agricultural distress had produced a wave of small-bank failures and the repeal of many states' laws prohibiting branch banking (Calomiris 2000a). Bank consolidation was proceeding rapidly in the 1920s and early 1930s. A similar phenomenon occurred in the wake of the small bank failures of the 1970s and 1980s and led to the repeal of branching limits within and across states from 1980 to 1994. If deposit insurance (which gave a new lease on life to small banks) had not passed because of the specific history of the Great Depression, then (even if the agricultural distress of the 1920s—itsself linked to the shocks of World War I—had not occurred) it is likely that the U.S. banking system would have moved rapidly in the direction of consolidation and branching during the 1930s and 1940s. The United States would have developed a much more stable banking system based on large, branching banks at a much earlier date.

Without the U.S. deposit insurance system to imitate, and in the presence of global competition in export markets and capital markets, there is little reason to believe that deposit insurance, and the bank bailout policies engineered initially by the RFC, would have spread to other countries.

Without the shocks of 1914–44, it is also hard to imagine how or why the major industrialized countries would have created the IMF or the World Bank. On this point, Bordo and Eichengreen (1998, pp. 445–46) concur: Initiatives

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to coordinate macroeconomic policy were hardly pervasive under Bretton Woods, but it is likely that they would have been even less frequent and less successful after World War II had there been no IMF.

The IMF and the World Bank are an excellent example of an asymmetry in political decision-making. The principle behind their continuing survival (as noted by Senator Gramm) was recognized by Alexander Hamilton in the eighteenth century as an important source of path dependence:

To undo . . . requires more enterprise and vigor. . . . than not to do. . . . This is particularly true where a number of wills is to concur. . . . In collective bodies, *votes* are necessary to ACTION; absences may produce INACTION. It often happens that a majority of voices could not be had to a resolution to undo or reverse a thing once done, which there would not be a majority of voices *to do*.
(Hamilton 1795)

In a conversation I had with the late former secretary of the Treasury William Simon (an outspoken IMF critic), he expressed regret at not having moved more aggressively to dismantle the IMF during the collapse of the Bretton Woods system, and expressed doubts as to whether the inertia that now protects the IMF and World Bank from reform could ever be overcome.

While the collapse of the gold standard, the creation of the bank safety net, and the founding of the IMF and World Bank are prime examples of the importance of path dependence, other financial institution changes of the 1914–44 period are less clear examples. The long-term trend toward subsidizing particular markets for credit—especially credit toward farmers and mortgagors—probably was not importantly affected by the shocks of 1914–44. Both of these tendencies were apparent during relatively normal times, as well as during episodes of severe shock. Federal Land Banks were created in 1916 during a period of agricultural boom. Freddie Mac (which expanded the mortgage subsidy already provided by Fannie Mae) was created in 1970.

Agricultural credit and mortgage credit subsidies, and the institutions that provide them, appear to be good examples of financial innovations guided by the inevitable forces of political determinism. They illustrate principles that seem to have general predictive power for understanding the relative success of special interests (see Olson 1965; Stigler 1971; Peltzman 1976; Becker 1983,

1985; and Goldin and Libecap 1994): (1) policies that provide significant transfers to a small and well-defined minority with clear common interests are likely to succeed in the political process; and (2) policies that succeed in transferring smaller subsidies to a large proportion of the population are unlikely to have large deadweight costs and are likely to include politically important groups of voters among the recipients of the subsidies. Agricultural subsidies of various kinds, including credit subsidies, are an obvious example of the first principle, while mortgage subsidies targeted to the middle class (toward which Fannie's and Freddie's programs are geared) are an example of the second principle.

6. CONCLUSION

To a great extent, the financial institutions and rules that dominate the domestic and global economies remain influenced by the specific history of the second thirty-years' war. The end of the gold standard, the ensuing volatility of exchange rates, high and volatile rates of inflation, the creation of an aggressive domestic and international safety net for banks, and the creation of powerful international multilateral institutions (the IMF and WB), are long-run consequences of the specific history of 1914–44. Other institutional inventions—including the development of new farm credit and mortgage intermediaries—were important, but their development seems to have been less dependent on the specific history of that period.

Long-run, of course, does not mean permanent. The financial architecture that emerged from the 1914–44 period is subject to change, particularly as new global competition provides motives for institutional innovation. The new interest in currency boards and dollarization is one example of such innovation, as are recent improvements in emerging market bank regulation, and bipartisan movements to reform the IMF and the WB. The new concern about the role of domestic government safety nets for banks and multilateral lenders in promoting excessive risk-taking in global financial markets may also be an early indicator that the return to pre-World War I globalization will bring with it new international competition among governments and new pressures to reform government and multilateral policies. That prospective emphasis on

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market discipline would constitute a partial return to the financial institutional basis of the pre-World War I economy.

Even Fannie Mae and Freddie Mac are facing a bipartisan movement calling for the elimination of the subsidization of their operations—a movement that brings together officials of the Reagan, Bush, and Clinton administrations, Ralph Nader, and the large commercial banks (Wallison 2000).

The success of all these reform efforts is by no means ensured, and would be contingent on political exigencies that are difficult to define, much less predict. But if successful, those reform movements would be a shock with potentially widespread and long-lived ramifications.

NOTES AND REFERENCES

Note

1. For reviews of the role of path dependence in financial institutions, see Calomiris and Hanes (1995); Calomiris and Ramirez (1996); and Calomiris (2000a, 2000e).

References

- Becker, Gary S. 1983. "A Theory of Competition among Pressure Groups for Political Influence." *Quarterly Journal of Economics* 98: 371-400.
- . 1985. "Public Policies, Pressure Groups, and Dead Weight Costs." *Journal of Public Economics* 28: 329-47.
- Beim, David O., and Charles W. Calomiris. 2000. *Emerging Financial Markets*. Boston: Irwin/McGraw-Hill.
- Bernanke, Ben S., and Harold James. 1991. "The Gold Standard, Deflation, and Financial Crisis in the Great Depression: An International Comparison." In R. Glenn Hubbard, ed., *Financial Markets and Financial Crises*. Chicago: University of Chicago Press: 33-68.
- Bordo, Michael D., and Barry Eichengreen. 1998. "Implications of the Great Depression for the Development of the International Monetary System." In M. D. Bordo, C. Goldin, and E. N. White, eds., *The Defining Moment: The Great Depression and the American Economy in the Twentieth Century*. Chicago: University of Chicago Press: 403-53.
- . eds. 1993. *A Retrospective on the Bretton Woods System: Lessons for International Monetary Reform*. Chicago: University of Chicago Press.
- Bordo, Michael D., and Finn Kydland. 1995. "The Gold Standard as a Rule: An Essay in Explorations." *Explorations in Economic History* 32: 423-64.
- Calomiris, Charles W. 1990. "Is Deposit Insurance Necessary?" *Journal of Economic History* 50: 283-95.
- . 2000a. *U.S. Bank Deregulation in Historical Perspective*. Cambridge: Cambridge University Press.
- . 2000b. "Victorian Perspectives on the Banking Collapses of the 1980s and 1990s." Manuscript, Columbia University.

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- . 2000c. "When Will Economics Guide IMF and World Bank Reform?" *The CATO Journal* 20 (Spring–Summer): 85–103.
- . 2000d. "Are Fannie and Freddie 'Optimal Mechanisms'? An Economist's Case for GSE Reform." In Peter J. Wallison, ed., *Conflicting Duties at Fannie Mae and Freddie Mac: Public Purposes and Private Interests*. Washington, D.C.: AEI Press.
- . 2000e. "Banks and Banking: A Short History." Manuscript, Columbia University.
- Calomiris, Charles W., and Christopher Hanes. 1995. "Historical Macroeconomics and American Macroeconomic History." In Kevin D. Hoover, ed., *Macroeconometrics: Developments, Tensions, and Prospects*, pp. 351–416. Boston: Kluwer Academic Publishers.
- Calomiris, Charles W., and Allan H. Meltzer. 1999. "Fixing the IMF." *The National Interest* (Summer): 88–96.
- Calomiris, Charles W., and Andrew Powell. 2000. "Can Emerging Market Bank Regulators Establish Credible Discipline? The Case of Argentina, 1992–1999." NBER Working Paper, forthcoming.
- Calomiris, Charles W., and Carlos D. Ramirez. 1996. "The Role of Financial Relationships in the History of American Corporate Finance." *Journal of Applied Corporate Finance* (Summer): 52–73.
- Calomiris, Charles W., and David C. Wheelock. 1998. "Was the Great Depression a Watershed for American Monetary Policy?" In M. D. Bordo, C. Goldin, and E. N. White, eds., *The Defining Moment: The Great Depression and the American Economy in the Twentieth Century*, pp. 23–65. Chicago: University of Chicago Press.
- Calomiris, Charles W., and Eugene N. White. 1994. "The Origins of Federal Deposit Insurance." In Claudia Goldin and Gary D. Libecap, eds., *The Regulated Economy*, pp. 145–88. Chicago: University of Chicago Press.
- Caprio, Gerard D., Jr., and Daniela Klingebiel. 1996. "Bank Insolvency: Bad Luck, Bad Policy, or Bad Banking." In Michael Bruno and Boris Pleskovic, eds., *Annual World Bank Conference on Development Economics, 1996*.
- Chandler, Alfred D. 1972. "Anthracite Coal and the Beginnings of the Industrial Revolution in the United States." *Business History Review* 46: 142–81.
- . 1977. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge, Mass.: Harvard University Press.

- Drajem, Mark. 2000. "IMF Board to Review Lending Policies in Answer to Reform Calls." *Bloomberg News*, May 31, 2000.
- Eichengreen, Barry. 1992. *Golden Fetters: The Gold Standard and the Great Depression, 1919–1939*. New York: Oxford University Press.
- . 1996. *Globalizing Capital: A History of the International Monetary System*. Princeton, N.J.: Princeton University Press.
- . 1999. *Toward a New International Financial Architecture: A Practical Post-Asia Agenda*. Washington, D.C.: Institute for International Economics.
- Eichengreen, Barry, and Jeffrey D. Sachs. 1985. "Exchange Rates and Economic Recovery in the 1930s." *Journal of Economic History* 45: 925–46.
- . 1986. "Competitive Devaluations in the Great Depression: A Theoretical Reassessment." *Economic Letters* 22: 67–71.
- Ely, Bert, and Peter Wallison. 2000. *Nationalizing Mortgage Risk: The Growth of Fannie Mae and Freddie Mac*. Washington, D.C.: AEI Press.
- Flood, Mark D. 1991. "The Great Deposit Insurance Debacle." *Federal Reserve Bank of St. Louis Review* 74: 51–77.
- Fohlin, Caroline. 2000. "Economic, Political, and Legal Factors in Financial System Development: International Patterns in Historical Perspective." Social Science Working Paper 1089, California Institute of Technology, May.
- Goldin, Claudia, and Gary S. Libecap, eds. 1994. *The Regulated Economy*. Chicago: University of Chicago Press.
- Hamilton, Alexander. 1795. *Report of the Secretary of the Treasury*.
- International Financial Institution Advisory Commission. 2000 [a.k.a. "The Meltzer Report"]. *Report of the International Financial Institution Advisory Commission*, Allan H. Meltzer, Chairman, March.
- Jaffee, Dwight. 2000. "The Effects on the Mortgage Markets of Privatizing Fannie Mae and Freddie Mac." Presented at the American Enterprise Institute Conference, "Thinking about the Future of Fannie Mae and Freddie Mac." May 23, 2000.
- Judson, Ruth, and Athanasios Orphanides. 1996. "Inflation, Volatility, and Growth." Working Paper 96–19, Federal Reserve Board.
- La Porta, R., F. Lopez-De-Salines, A. Shleifer, and R. Vishny. 1997. "Legal Determinants of External Finance." *Journal of Finance* 52: 1131–50.
- Levine, Ross. 1997. "Banks and Economic Development: The Legal Determinants of Banking Development and the Impact of Banks on Long-Run Growth." Manuscript, University of Minnesota.

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- Obstfeld, Maurice, and Alan M. Taylor. 1998. "The Great Depression as a Watershed: International Capital Mobility over the Long Run." In M. D. Bordo, C. Goldin, and E. N. White, eds., *The Defining Moment: The Great Depression and the American Economy in the Twentieth Century*, pp. 353–402. Chicago: University of Chicago Press.
- Olson, Mancur. 1965. *The Logic of Collective Action*. Cambridge, Mass.: Harvard University Press.
- Peltzman, Sam. 1976. "Toward a More General Theory of Regulation." *Journal of Law and Economics* 19: 211–40.
- Rajan, Raghuram, and Luigi Zingales. 1999. "The Politics of Financial Development." Working Paper, University of Chicago.
- Redish, Angela. 1994. "The Latin Monetary Union and the Emergence of the International Gold Standard." In M. D. Bordo and F. Capie, eds., *Monetary Regimes in Transition*, pp. 68–85. Cambridge: Cambridge University Press.
- Rockoff, Hugh. 1984. "Some Evidence on the Real Price of Gold: Its Costs of Production and Commodity Prices." In M. D. Bordo and A. J. Schwartz, eds., *A Retrospective on the Classical Gold Standard, 1821–1931*, pp. 613–50. Chicago: University of Chicago Press.
- Sachs, Jeffrey D., ed. 1989. *Developing Country Debt and the World Economy*. Chicago: University of Chicago Press.
- Schwartz, Anna J. 1997. "From Obscurity to Notoriety: A Biography of the Exchange Stabilization Fund." *Journal of Money, Credit, and Banking* 29: 135–53.
- Stigler, George J. 1971. "The Theory of Economic Regulation." *Rand Journal of Economics* 2: 1–21.
- Temin, Peter. 1989. *Lessons from the Great Depression*. Cambridge, Mass.: MIT Press.
- Wallison, Peter J., ed. 2000. *Conflicting Duties at Fannie Mae and Freddie Mac: Public Purposes and Private Interests*. Washington, D.C.: AEI Press.