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The Economic History of Monetary and Financial Markets in the Nineteenth and Early Twentieth Century in Argentina: Observers, Actors and Outcomes

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WORKING PAPER N° 55

**The Economic History of Monetary and Financial Markets in the
Nineteenth and Early Twentieth Century in Argentina:
Observers, Actors and Outcomes.**

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First Draft, February 1999

Abstract: The systematic study of the Argentine monetary and financial history is a phenomenon of recent and growing interest. Perhaps the fact that during the 1980s Argentina experienced drastic credit and monetary crunches that lead to the virtual disappearance of the domestic currency encouraged an important number of scholars to address the subject. The paper survey several factors that influenced the pattern of growth. The first sections address the phenomenon of inflation during the early national period, the colonial inheritance, emphasizing the mechanism that generated and propagated price instability. The same section addresses a critical problem confronting the monetary authorities in a federal system, namely the “appropriation of seigniorage”. This is reflected in the ambivalent position of economic and political policymakers facing the choice between establishing a monopolistic type of monetary institutions or allowing competing monies. The second section discusses the classical dilemma of floating versus fixed exchange rates: the choice of the monetary regime, anchor for prices and interest rates. The third section focuses on the most vexing element in the conduct of an expansionary fiscal and monetary policy: the phenomenon of currency substitution. The fourth section considers the management of the public debt, the market for bonds and the significance of reputation and credibility in a recently settled economy. The fifth draws on the Gesell-Fisher paradigm (disruptive effects of deflationary pressures on investment) to consider policy options used to combat the impact of the Great Depression. The final section uses contemporary and current analysis to examine macroeconomic and microeconomic tensions resulting from having at the same time, a Conversion Office (i.e. Currency Board) and a system of banks that “create” money.

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Introduction

The systematic study of the Argentine monetary and financial history is a phenomenon of recent and growing interest. Perhaps the fact that during the 1980s Argentina experienced drastic credit and monetary crunches that led to the virtual disappearance of the domestic currency encouraged an important number of scholars to address the subject. They have used new techniques to analyze the evolution of monetary, financial and capital markets of this newly settled society. Amongst the most prominent of these new works are those by Amaral (1988), Cortés Conde (1989), della Paolera (1988, 1994), della Paolera and Taylor (1997, 1998), Fishlow (1986), Bordo and Vegh (1995), Zarazaga and Nakamura (1997), Ortiz and della Paolera (1995) and Regalsky (1994). The new methodology employed in these studies and their approach, examining the behavior of monetary and financial institutions in an open, peripheral economy, extend earlier classical works by Williams (1922), Prebisch (1921) and Ford (1962).

The turn of the century is a fascinating period for scholars wishing to study, in a small open economy, the design of credible monetary, financial and fiscal institutions consonant with Argentine desires to participate in the rapid growth of international trade and formidable flows of international capital and labor that characterized the time. The 1820-1930 period is a laboratory in which to study the intricate linkages among economic and political actors engaged in the construction of institutions that shaped the secular behavior of crucial macro and micro variables such as prices, interest rates, exchange rates, capital flows and taxation.

The paper will consider several factors that influenced the pattern of growth. The first sections address the phenomenon of inflation during the early national period, the colonial inheritance, emphasizing the mechanism that generated and propagated price instability. The same section addresses a critical problem confronting the monetary authorities in a federal system, namely the “appropriation of seigniorage”. This is reflected in the ambivalent position of economic and political policymakers facing the choice between establishing a monopolistic type of monetary institutions or allowing competing monies. The second section discusses the classical dilemma of floating versus fixed exchange rates: the choice of the monetary regime, anchor for prices and interest rates. The

third section focuses on the most vexing element in the conduct of an expansionary fiscal and monetary policy: the phenomenon of currency substitution. The fourth section considers the management of the public debt, the market for bonds and the significance of reputation and credibility in a recently settled economy. The fifth draws on the Gesell-Fisher paradigm (disruptive effects of deflationary pressures on investment) to consider policy options used to combat the impact of the Great Depression. The final section uses contemporary and current analysis to examine macroeconomic and microeconomic tensions resulting from having at the same time, a Conversion Office (i.e. Currency Board) and a system of banks that “create” money.

Section I.

The Search for a Monetary Authority and the Appropriation of Seignoreage.

The Argentine Confederation had to wait for almost seventy-five years since its independence to address the establishment of a veritable national monetary standard. It is only in 1881, that Congressmen of all provinces discussed and approved the establishment of a national monetary system to end up with a situation of numerous competing monies. Williams (1922) characterized the prevalent situation as one of monetary anarchy: “...national money did not exist. Each province had its own money, and the same money had a different value between one province and another, and even between cities in the same province...” (della Paolera, 1988, p.4). In fact anarchy was the characterization of a situation in which the currency issue was not centralized under a sole monetary authority. In spite of the Monetary Law of 1881 that established the gold and silver peso as the official monies of Argentina, it was not clear that the system converged towards a situation of government monopoly of issue. During the eighties, the prevalent mentality was the doctrine of a plurality of banks of issue, banks that would respect an inelastic relationship between specie and the convertible notes issued. Cortés Conde (1989) and della Paolera(1988) analyzed the successive institutional failures of the 1883-1885 and 1886-1890 attempts to establish a well-framed system of plural banks of issue. Paradoxically, the sequels of the financial and monetary crisis of 1890 generated the conditions to definitely settle the currency question and the creation, in 1891, of the Caja de Conversion as the sole monetary authority of Argentina. The search for a centralized Monetary authority came, one might say, by default.

In Table 1, we introduce the approximate annual inflation rate for Argentina for different sub-periods in between 1820-1935. In the left first column we included two somewhat polar opposite situations: wars denoted W and gold standard denoted GS. For the 1820-1860 period the inflation rate considered is the one in fact generated by the fiduciary regime in place in the Province of Buenos Aires. Wars are inflationary prone situations while the fixing of the external value of the domestic currency such as in a gold standard is a regime that anchors the international price level. Scholars such as Amaral (1988), Bordo and Vegh (1995), Còrtés Conde (1989), della Paolera (1988) and Irigoin (1997) have studied the dynamics and propagation of inflation as a function of different institutional arrangements as well as different macro-shocks. They analyze stops and go in the inflationary experience and they present models in which you should explain those experiences in a broader fiscal general equilibrium context including the following determinants of the inflation path: (1) exogenous shocks to the economy such as wars; (2) fiscal regime which is based in a sub-optimal tax base; (3) credit rationing or poor prospects to develop a market for long term public bonds; (4) banks of issue or monetary authorities that deviate from their commitment to preserve price stability; (5) Interest Groups that could benefit from situations of high inflation. In the remaining sections of the paper, I address some of these fundamental issues, all of them potentially disruptive for the adoption of a strategy of a secular stable price level.

Section II.

The Choice of A Monetary Regime: Dynamics of Prices and Interest Rates.

There is no exaggeration in characterizing the Argentine Monetary History at the turn-of-the-century as an “unending search” for the establishment of a credible monetary regime. The adherence of Argentina to a monetary regime internationally approved such as the Gold Standard was a subtle political economy decision that should be understood beyond the mere anchoring of the domestic price level of internationally tradable goods (della Paolera 1994, Bordo and Kydland 1995). In Table 1, we can effectively see that the different periods of convertibility were successful in bringing down the inflation rate and typical tests of the purchasing power parity equilibrium have confirmed the idea that Argentina was, during periods of convertibility and fixed exchange rates regimes, well

integrated into the world market for commodities (della Paolera 1988). It is interesting to note here that Argentina experiences a fairly well known contemporary phenomenon, which is a slight real exchange rate appreciation. In the Gold Standard Period of 1899-1914, the domestic accumulated inflation rate was equivalent to 27.5 percent, a phenomenon shared also by a still importing capital economy such as the United States which experienced in the same period an accumulated inflation of 26.3 percent. The European countries did not experience the same phenomenon: i.e. United Kingdom had an accumulated inflation rate of around 6 percent during the same years.

However, for a young borrower country such as Argentina, the most important aspect of an efficient monetary standard relies in its ability to integrate this small open economy to the world capital markets to take advantage of foreign savings. Therefore, the optimal political economy decision appeared to adopt a credible regime that could be characterized as a transparent set of monetary rules designed to insure macroeconomic stability that would, at the same time, put a limit to the future actions of the monetary and fiscal authorities to deviate from its pre-committed policy. In that sense the first best strategy was the adoption of metallic regimes or to “mimic” monetary metallic regimes. The credibility that was generated by the gold standard regime is reflected in the important reduction of the so-called country risk. In Figure 1 we present, for the 1884-1935 period, the time series for (a) the country risk, defined as the spread between a long term Argentine Public Bond yield and the yield of an external asset such as the British Consul (della Paolera and Ortiz, 1995) and (b) the nominal exchange rate (paper pesos per gold dollar). The figures clearly show the accelerated process of decline in the country risk rate during prolonged phases of convertibility such as in the 1899-1913 and 1927-1929 periods. It is fair to say that the adoption of a credible monetary regime represents an institutional non-neutral innovation which has the cost of the building-up of a huge stock of international reserves to foster the credibility and reputation very much needed to shelter the inflow of foreign capital.

Section III.

The Phenomenon of Currency Substitution as a Limit to Expansionary Monetary and Fiscal Policies.

The “flight to quality” or currency substitution phenomenon by which Argentine residents speedily exchanged ‘gold-backed” paper notes for specie until the virtual depletion of the specie stock in the financial system had its origin in a domestic monetary and fiscal experiment: The Law of National Guaranteed Banks. The process of capital flight occurred during the 1887-1891 boom years and the time series estimation of the flight to specie by the public was done by della Paolera (1988). In 1887, instead of resuming once more a bi-metallic standard, the federal government launched a banking law in which any banking organization with a minimum required capital could issue gold bond- secured paper notes.

The rules of the game to start the business of issuing bond-secured paper notes worked in the following way: banks could issue paper money, provided that they purchase National Gold Bonds to the full amount of the notes to be issued; the bonds, and this is an important detail, were to be paid for with gold bullion; and the bullion and the bonds were to be deposited in the vaults of the official public bank: the Banco Nacional.

By 1888, the volume of paper notes issued by the banks attained the ceiling prescribed by the Law. The majority of these banks were national and mixed provincial-private banks that floated foreign loans in Europe to purchase the national bonds with gold. The scheme was an arbitrage operation by which foreign investors were implicitly partners in the business of issuing government guaranteed paper money.

From the macroeconomic point of view, the scheme acted as an implicit “one way road “gold – exchange standard by which all the supplementary note issues were backed with a hundred percent marginal bullion reserve. But, early in 1889, the fiscal regime changed when the Argentine government decided to pay off in paper pesos part of the funded internal debt service denominated in hard dollars. The decision was tantamount to a partial default and foreign and domestic investors became then reluctant to absorb more Argentine government debt; it seemed that Argentina had hit its debt ceiling.

In Buenos Aires, the public anticipated the serious fiscal constraint and started to attack continuously the guaranteed paper-peso depreciating its value relative to gold. The federal government decided to intervene in the foreign exchange market to calm down the expectations of devaluation with part of the gold stock in guarantee of the paper issues. By 1889, the government lost almost 90 percent of

the specie stock but, even worse, it sterilized the effects of its own open market operation by rediscounting the notes initially absorbed to cover the substantial “off-the-budget” fiscal deficits, perpetuating then the excess supply of the guaranteed paper notes.

One ex-ante possible rationale to sterilize was that, by “rigging” the gold market to maintain a flat gold premium, the government tried to signal foreign investors that resumption at par was still a feasible goal. But, the capital flow ebbed by the end of 1889 and the government could not avoid using the paper notes to buy gold exchange to service the public debt. This simply meant that the rules of the game of the Law of National Guaranteed Banks were broken. The lack of coordination in the monetary and fiscal policies resulted in an acute reallocation of gold specie in between the public and the banking system for the 1887-1891 years.

The demand of the public for gold was financed by the banking sector, in particular by the banks of issue, who provided the stock of specie in order to defend notes against expectations of devaluation. The “dirty” float ceased once the bank’s specie stock was depleted in 1890. By 1891, the year of the Baring crash, the public holdings of specie amounted to 90 percent of the existing national stock, while at the beginning of the monetary and financial experiment they represented 15 percent.

The inconsistency between the monetary and fiscal policy which provoked the Baring crash was immediately recognized by a privileged contemporaneous observer and policymaker such as Jose Terry (1893, p.137-139) :[Own Translation] ”...what the Government decided was to mobilize this enormous mass of assets, only guarantee of the Banks founded lately and of the issues in circulation...What? Is it the case that Mr. The Minister could not foresee that that enormous mass of gold, once freed would, on spot, leave the country and the banks?...To mobilize 76 million of gold pesos was to condemned them to their immediate exportation, and to put the country in the harsh situation of losing its only gold stock...”

In terms of the burden of the debt for the country, I estimated that Gold hoarding by the public after this institutional failure accounted for up to 22 percent of the external gross indebtedness of the national administration. In this historical experience, the currency substitution phenomenon could be

defined, in modern terms, as capital flight, not in the sense that specie fled the country, but in the sense that the specie “pocketed” by the public was financed with government external debt.

Section IV

Public Debt Management, Credibility and the Market for Public Bonds .

Between 1881 and 1889, the Funded Public Debt of the Provinces, mainly held by foreign investors, grew at an accumulated rate of 746 percent (Memorias de Hacienda, 1892, 1893) in real terms. A 41 percent of that augmentation in the level of indebtedness of the provinces can be attributed to the debt incurred in relation to the origination of the provincial banks of issue. At the same time, the Federal Funded Public Debt grew at an accumulated rate of 95 percent. This extremely expansionary fiscal policy had the blessing of the Juárez Celman’s administration.

It is interesting to emphasize here the fact that the Province of Buenos Aires, the only province that before the euphoria of the eighties had a genuine access to the international capital markets, augmented its level of indebtedness at the same pace than the Nation. Only in 1883 10 new provinces and the same number of Municipalities could float bearer long-term bonds in the London Stock Exchange Market. In that year, the consolidated provincial external debt was equivalent to 35 percent of the consolidated National Bearer Debt. On the eve of the Baring crash in 1891, this proportion reverted to 114 percent!

By 1891, almost all municipal and provincial foreign bearer debt was technically in default. Thanks only to the extraordinary leadership of President Carlos Pellegrini, Argentina could avoid all-across-the-board default on its national foreign debt. In January 1891, the Bank of England acted implicitly as “a modern IMF” when it advanced to Argentina a bridge loan of 15 million pounds sterling for three years to enable her to cover the service and amortization of the due foreign debt. In 1893, a new administration could negotiate the so-called Romero-Agreement , which conceded a handsome grace period and a temporary reduction in interest rates on the outstanding bonds. The provincial and municipal bearer debt remained in a generalized situation of default until 1898 when under the Jose Terry’s initiative, the Argentine Republic decided to recognize and “nationalize” the provincial debt.

Even if, ex-post facto, it appeared that Tim Duncan’s (1986) characterization of the Argentine Roaring Eighties as of an audacious financial strategy of Juárez Celman conducive to economic

growth might, at first sight, stand the case, the question that we should ask here is: What were the inter-temporal costs for Argentina of such a financial bubble and the lack of credibility in international bonds markets for the last decade of the Nineteenth century? What about the generalized bankruptcy in the financial system? In between 1891 and 1902, Argentina suffered from a stringent credit rationing and financial isolation: in 10 years, the government could not float any loan that would imply fresh inflow of funds to a young growing economy.

An indirect indicator of the effort of the Argentine economy to overcome credit rationing and autarky, related to the idea of the “transfer problem”, is an analysis of the trade balance account. The inflow of capital and the amount of foreign direct investment that occurred during the 1862-1875 and 1884-1889 period explain the accumulated trade balance deficits. The natural phenomenon that in a young small open economy which is experiencing a drastic structural change and with a very primitive capital markets could sustain for years accumulated trade balance deficits was immediately understood by Jose Terry (1893,p.64-68): [Own Translation] “...It is true that, after all, products should be settled with products, but it is also the case that a country can have a number of years in which it settles products with credit, the credit in that case represents the product to export in the future...here we observe that after any crisis, in which the country loses the external credit and capital, imports diminishes considerably, because then, Say’s law is totally exact, that in those moments there is no money nor credit that could replace it...”

Since 1891, Argentina had to adjust severely the economy to generate sizeable accumulated trade balance surpluses. Here again, This process of stopping in the inflow of capital was at the turn of the century a precocious and misfortunate event in an economy that badly needed venture capital for the incipient sectors of the industry. How many attempts of industrialization were futile due to this credit rationing situation?

Section V

Deflation, Expectations and Investment.

The trauma of 1890-1891 was to leave its mark in the design of the macroeconomic measures of the 1892-1899 period. The outcome of the political economy constraints of the moment produced an

original but very costly macroeconomic phenomenon: deflation under a pure paper standard. In the aftermath of the 1891 Baring Crisis, the paper peso, previously equivalent to one gold dollar by the virtue of the 1881 Convertibility Law, suffered a depreciation of 274 percent. In spite of this misalignment, in 1893, and in the middle of the negotiations with international creditors to settle the external debt situation, Argentine monetary authorities assured international investors that convertibility would be resumed at anytime at par (della Paolera and Taylor, 1998). Deflation pursued.

Argentina's authorities were successful in fixing the quantity of money and in allowing the money to be determined freely in the foreign exchange markets. As a result of this extraordinarily restrictive monetary policy, in 1897 a debate began as to whether a return to a convertible monetary regime would be advisable or not. The political economy debate was centered on whether the paper peso should be convertible at par or at the then prevailing market exchange rate, thus accommodating devaluation. Urban sectors and commercial interests favored a convertibility plan fixed at par, while exporters and industrial sectors called for a higher nominal exchange rate because they believed that any further deflation of the economy would undermine the profitability of the real sector.

The most important political economy argument denouncing the damaging effects of deflation for investment and economic growth originated with Silvio Gesell (1862-1930). In an article entitled "Monetary Anemia", Gesell anticipated the Fisher's ideas about the problem of the debt-deflation trap: "If money gets more expensive, debts increase in exact proportion to the rise in the cost of money. Nominally nothing changes, but materially the debt load increases. With the prospect of having to pay triple what one received, who will dare go into debt to start a new industry in the country? The increase in the value of money is the common cause for all the country's economic troubles..."

In another work, I estimated the "pernicious" effects caused by deflation. An index of profitability in the export sector was constructed, defined as the nominal exchange rate multiplied by export prices and divided by rural nominal wages. Analyzing the evolution of this indicator in the deflationary context of 1892-99, one finds that in that sub-period there is a declining tendency in the profitability in the export sector but as low as 8 percent. While monetary forces produced a sharp appreciation of

the paper peso, this negative effect was almost neutralized by an exceptional increase in international prices for agricultural goods as of 1895 (della Paolera and Ortiz, 1995).

A more convincing argument for putting a stop to deflationary policies was the behavior of real interest rates, which held at an average rate of 10.4 percent per year in the 1892-1899 period della Paolera, 1988). In this sense, a move toward a more expansive monetary policy (adopting convertibility at the prevailing high rate of exchange) seemed, in principle, to be the appropriate course of action to take. In defense of the rigid monetary policy which had been implemented as of 1893 and prevailed until 1899, we might ask, what were the options in terms of the government's monetary policy, given the economic and political restrictions at the time?

In a more recent work, Alan Taylor and I analyzed how Argentina overcame the Great Depression and we investigated whether active macroeconomic interventions made any contributions to the recovery. In particular, we emphasized the change in macroeconomic regime that took place in 1931 to destroy the prevailing deflationary expectations. We have shown that recovery derived from changes in beliefs and expectations surrounding the shift in the monetary and exchange rate regime (della Paolera and Taylor, 1998).

Section VI.

Convertibility and the Financial System: Walking a Tightrope?

In a paper titled "Finance and Development in an Emerging Market: Argentina in the Interwar period", I and Alan Taylor addressed the important question of what were the institutional and economic impediments to establish a fully-fledged and resilient financial system that could sustain the process of capital formation. The record was not smooth, in spite of an extensive branch banking, financial crises were recurrent in Argentina. To understand why the prevailing monetary and financial institutions could not avert bank panics even when macroeconomic policy seemed under control we introduced the concept of intertwined macroeconomic monetary and financial risk for a small, open economy under, mostly, a fixed exchange standard.

It is important here to recall that until 1935 the Argentine monetary and financial regime operated without a central bank. Until that time, a possible cause for a sub-optimal financial structure came from the existence of the Caja de Conversion (i.e. Currency Board), which had the exclusive macroeconomic responsibility of guaranteeing the external value of the domestic currency. However, it could not, at the same time, for all possible macroshocks, guarantee the internal convertibility of banking deposits (a multiple of the currency issue) into cash in the event of general bank runs. That is, the Caja de Conversion could not act as a lender of last resort of the financial system without threatening its macroeconomic responsibility of defending the external value of the domestic currency.

In Table 2 I include several macrovariables to understand the anatomy of three financial crises to highlight the main channels of transmission to the real economy. A common characteristic of real financial crises is that the fall in bank money or in the ratio of inside to outside money (due to a persistent run on bank deposits) is translated into a severe loss of output. By focusing on the 1913-1914 crisis we can see that, although a major devaluation of the currency was avoided (a major cost during the Baring crash), the banking industry was devastated. Bank stock prices fell by 38 percent in one year. There was an intense process of “capital crunch”.

The story for 1913-1914 is compelling. Let us suppose that a foreign shock hits the economy and starts a financial crisis when economic agents begin to panic to try to convert all their deposits into currency. If the Caja de Conversion acts as a lender of last resort to stave off the liquidity problem, the money market could at first absorb the fall in the nominal quantity of money. However, if the intervention is of a magnitude such that the relationship between the monetary base and international reserves increases significantly (that is the backing of money goes down), this would exacerbate the expectation of an eventual devaluation of the currency. This, in turn, would feed a new run on bank deposits, but this time to convert peso deposits into specie. That is, under the event of twin macroshocks, the monetary authorities were walking a tightrope with the institutional design at hand.

Table 1

Approximate Inflation Rate (In % Per Year)
Argentina 1820 – 1934

Periods	Salient Fact	Inflation Rate
1820-1830	W	20/22
1830-1838		0
1838-1842	W	25/45
1842-1845		-11
1845-1848	W	14
1848-1861		4
1861-1864	W	9
1864-1867		-15
1867-1875	GS	0
1875-1878		+9
1878-1884	GS	-4
1884-1889		8
1889-1891		48
1891-1899		6
1899-1913	GS	3
1914-1918		13
1918-1927		-3
1927-1929	GS	-1
1929-1934		-0

Note: Own Calculation on the basis of data in SA (1988); MAI (1995); MB (1995); GDP (1988,1994)

W: Wars

GS: Adherence to Convertible Regimes

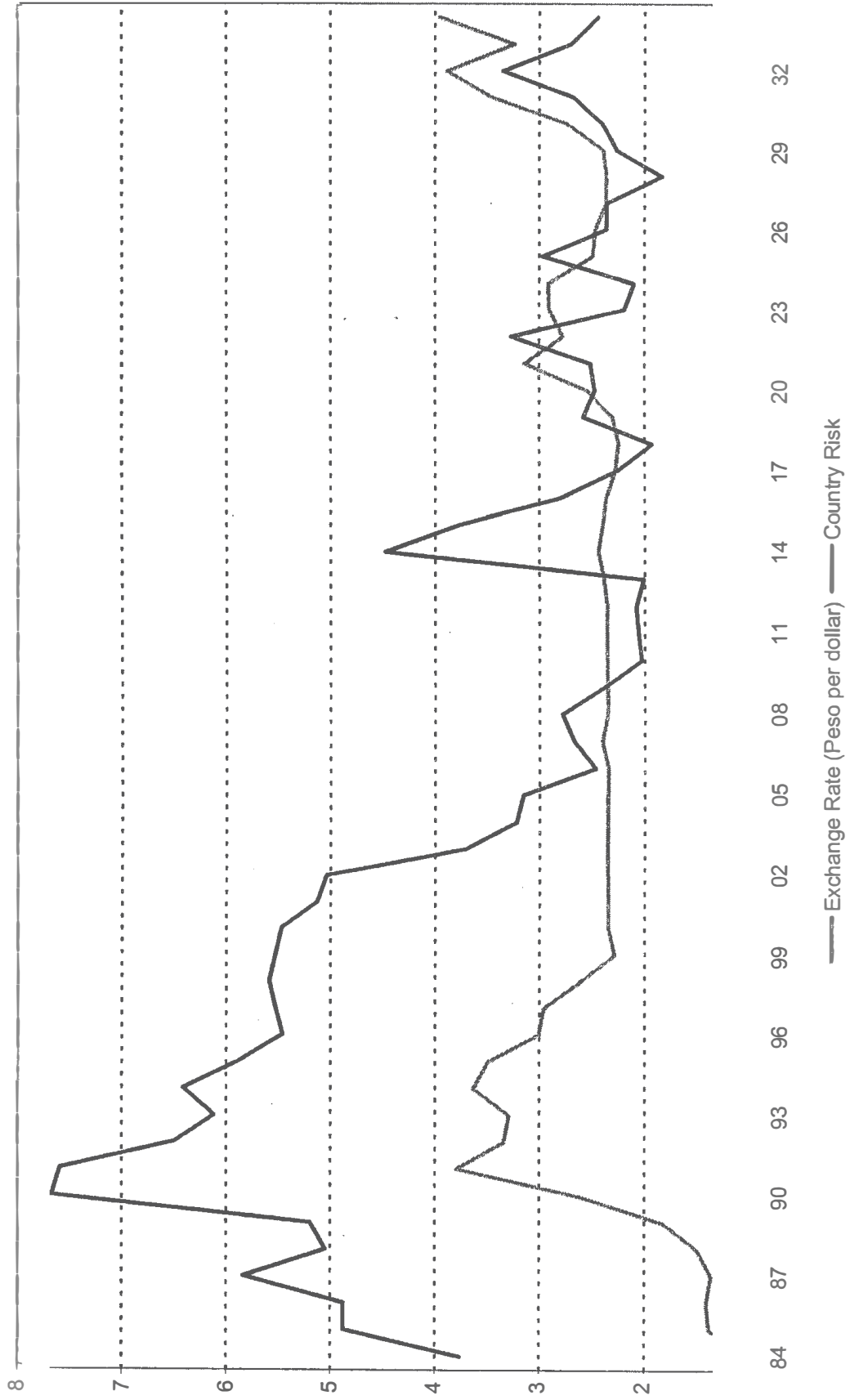
TABLE 2

Anatomy of Financial Crises

	Baring Crisis		World War I		Great Depression	
	1890	1891	1913	1914	1930	1931
(a) Real Activity						
Real Output (% change)		-10.9		-11.0		-3.9
(b) Monetary Variables						
Money Supply (% change, M0)		-25.9		-10.7		-8.3
Money Base (% change, M3)		6.7		-3.6		1.3
Bank Created Money (% change, M3-M0)				-17.5		-11.3
International Reserves Backing (%)	21.0	4.0	72.6	66.3	82.1	47.6
Devaluation (% change in \$mn/\$oro)		45.0		1.7		25.0
Inflation (% change, WPI)		56.0		1.2		-3.3
(c) Banking Variables						
Deposits (% change)		-47.2		-15.4		-8.6
Banking Fractional Reserves (%)	20.0	27.0	32.4	33.8	11.6	14.9
Money Multiplier (M3/M0)	2.3	1.6	2.1	1.9	3.7	3.3
(d) Financial Market Variables						
Ex-Post Real Interest Rate (% , internal bonds)				6.5		10.8
Nominal Interest Rates (%)						
High month		10.3	8.1	8.8	7.7	7.9
Low month			7.5	7.5	6.4	6.7
Bank Stock Prices (Dec. 1913 = 100)			100	62	69	64
Stock Price Index (Dec. 1913 = 100)			100	94	147	
Paid-In Capital (millions \$mn)			513	449	498	485

Source: della Paolera et al. (1884), Baiocco (1937), Nakamura and Zarazaga (1997).

Country-Risk and Nominal Exchange Rate
1884-1934



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