



# Crises and Punishment : Moral Hazard and the pre-1914 international financial architecture

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**CRISES AND PUNISHMENT:  
MORAL HAZARD AND THE  
PRE-1914 INTERNATIONAL  
FINANCIAL ARCHITECTURE**

Marc Flandreau

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# **CRISES AND PUNISHMENT: MORAL HAZARD AND THE PRE-1914 INTERNATIONAL FINANCIAL ARCHITECTURE**

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## **ABSTRACT**

### **Crises and Punishment: Moral Hazard and the Pre-1914 International Financial Architecture**

This Paper argues that the backbone of the pre-1914 international financial architecture was the concern about moral hazard. No decentralized system can leave without safeguards against free riding and this typically means that problem countries must find by themselves the means to fix their domestic problems. We review the origins of crises as well as the remedies that were commonly applied one century ago and find that the international financial world was fairly similar to the setting in which we live today, and for the same reasons. Today, just like one century ago, in the absence of an international lender of last resort with huge regulatory powers, countries must muddle through, with the occasional – and imperfect – help of international finance.

JEL Classification: F02, G14, N10 and N20

Keywords: financial architecture, financial crises, moral hazard, relationship banking and self-insurance

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# CRISES AND PUNISHMENT: MORAL HAZARD AND THE PRE-1914 INTERNATIONAL FINANCIAL ARCHITECTURE

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“C’est avec ces femmes qu’Oreste

Dépense l’argent de Papa.

Papa s’en fiche bien – au reste,

Car c’est la Grèce qui paiera!”

(“These are the women Orest

Spends Daddy’s money with

Daddy doesn’t care anyway

For he knows that Greece will pay!”)

Libretto from *La Belle Hélène*, a French musical by Jacques Offenbach (1864).

This chapter’s basic premise is that the 19<sup>th</sup> century international financial order rested on two principles. The first was the notion that moral hazard was a formidable evil. That concern was a consequence of the Western principle of *laissez-faire* which flourished and expanded during that century. The permissive and inefficient Leviathan had been replaced by an open society which was based on individual responsibility. In its positive form, the fear of moral hazard was rooted in the Darwinian belief that only the fittest could survive, that the weakest did not deserve support, and that appropriate

reforms and policies, not a helping hand, was what was needed. In its religious version, it came along with the notion that sinners had to suffer to earn their redemption.

The second building block provided intellectual foundations. It was the belief in universalism and causality, inherited from 18<sup>th</sup> century's European Enlightenment. Universalism implied that there were economic laws that were valid everywhere, so that no country – contrary to what Russian nationalists were already saying – could claim to be an exception. These laws, once identified, could provide guidelines for the establishment of a “sound” currency. Causality implied that crises had their roots in the functioning of the economy, so that they could be explained in reference to the events that had surrounded them: crises were the consequences of decisions taken in normal times. In short, international macroeconomics was a *science*: the actual French name was “*science des finances*.”

The political and intellectual principles went hand to hand. Science and morale were reinforcing each other. This point of view was widespread, and largely shared by authorised people. It was at the centre of a consensus between those actors involved in the macro-economy from an international point of view. These consisted of two main groups. On the one hand were international financiers, ranging from stock exchange people to the leading investment bankers who underwrote new government bond issues and had an important advising role in the process. On the other hand were the government officials in charge of running their country's institutions in the ministries of finance and proto central banks. The exchanges between the two communities were numerous and important facilitating the flow of information and fostering a common understanding.

Academia also participated in the debate, although its role was not prominent, especially in Europe. It is not that the questions that were being discussed had little

relevance for the subject of Political Economy – much to the contrary. However, there was a gap between the academic State of the Art which recognised a number of simple principles such as the quantity theory and the practical requirements of actual international financial problems. These problems were the subject matter of a discipline that had been mostly developed by practitioners with strong links with either governments or financial institutions: often, these experts made their way onto the academic world by writing books or becoming lecturers, rather than the other way round. Prominent authors (some of which being often remembered as “economists”) included, from West to East, Charles A. Conant, a former US treasury representative in London in the period of the dollar stabilisation of the 1870s, Léon Say, the French Minister of Finances, architect of the 1871–2 successful payment of the War indemnity to Germany and Rothschild protégé, Paul Leroy-Beaulieu the editor of *L'Economiste Français*, Ludwig von Mises, the Austrian ultra orthodox finance minister of the early 20th century, and Arthur Raffalovitch, the Paris based financial chronicler, occasional lecturer, but most prominently, Czar’s Paris agent for financial matters.

These contemporaries had to come to grips with the real life problems of the pre-1914 era, not with the subsequent myth which emerged in the interwar of a absolutely tranquil period. The decade 1890 deserves from that point of view special attention for its was paved with international and national crises. While other turbulent periods had been experienced, the 1890s were to be remembered as a difficult time for the international financial system, and left deep prints in the architecture of global capitalism. The decade opened with the Argentinean default, followed by other suspension of interest payments in Greece, Portugal, Brazil. Banking crises occurred, both in developed countries such as Britain, the US, Australia, and in problem nations such as Portugal and Argentina, or Italy. Exchange rate turmoil followed with massive

devaluations in Greece, Portugal, Argentina and Brazil. “Twin” or “triplet” crises as they are now known were becoming a fact of life.

Thus the popular textbook vision that the pre-1914 era was a wonderful place where crises just never happened because countries believed in the merits of rules and carefully adhered to gold is a plain lie. Behind the facade of the gold standard, the men of the previous century had to construct mechanisms that would serve to limit the occurrence of crises and help them to deal with them once trouble was in. This chapter addresses this issue in the following way: Section I reviews the “origin” of crises from the vantage point of contemporary analyses, emphasising the contribution of earlier experiments in shaping a monetarist approach in which the quantity theory and later the tax based theory of money played a central role (section I). Section II reviews the remedies applied, showing from a discussion of the stabilisation plans of the period that they involved a mix of macroeconomic workouts and institutional reform (section II). Finally, section III how the monitoring of macroeconomic policies operated: we find that it rested upon a bilateral relation between a bankers and a customer states, with routine support being transformed in extensive help in periods of problem, but at reasonable conditions that reflected the information which bankers had of their client’s outlook (Section III). The conclusion makes a number of points on the importance of these findings for the analysis of the role of money doctors.

## ***DISEASES: THE ORIGIN OF CRISES***

### **Fiscal misconduct, the quantity theory, and exchange depreciation**



Just like the modern “early warning indicators” literature, the macroeconomic wisdom of 19<sup>th</sup> century experts was based on history. A number of “episodes” became the source of case studies which in turn served as models to interpret later crises. These models carried lessons which in turn served to shape policy recommendations. This way of looking at evidence was the natural approach of the time: leading underwriting banks worked that way (Flandreau 1998 and 2003), officials thought that way, and economists wrote that way. Defining experiences included the French *assignats* hyperinflation during the Revolution and the British floating of the pound during the French wars.

To contemporaries, a common feature of these episodes was the presence of a fiscal channel which had fed back on monetary policies. In all cases, it was the predation of monetary policies by governments which had caused an exchange rate depreciation that had in turn magnified other difficulties. These problems were in turn naturally seen as being at the root of the difficulties experienced by countries with floating currencies such as Russia, Austria-Hungary and the nations of Southern Europe and Latin America. Observers noted that in Russia the Bank had been set up in 1860 as a State institution with an initially quite restrictive cover system. This rule had been quickly emptied from its significance when the Treasury started to circulate its own notes along with those of the bank. Moreover, short term advances to the Russian State were unlimited, because the State controlled the discount rate and thus could force the bank to take as much treasury bills as it wanted. As Conant put it: “The Bank of Russia has been so entirely a mere organ of the State from its foundation to the present time that its history is closely bound up with that of the paper issues of the government.”<sup>1</sup> The Austro-Hungarian case revealed similarities. Until the late 1870s the central bank of the dual monarchy, was the private Bank of Austria. The strict rules on specie backing were annihilated by the Treasury which could short-circuit the bank and issue its own notes:

in 1877 the outstanding government issues totalled 350 millions of florins when the mean circulation of the bank was 286 millions in 1875 and 316 in 1880. According to one observer: "As long as the State got involved in the business of issuing paper, disorder predominated. The coexistence of two circulation, emanating one from public treasuries and the other one from a private institution, has been a source of difficulties."

2

While large Central and Eastern European empires, or federal governments such as the US took the direct and brutal route of issues of fiscal notes in periods of war, the treasuries in South European countries preferred the more gradual routes of central banks' advances. This had been the case of Italy in the war of 1866. Again, in the late 1880s, fiscal problems developed in a number of heavily indebted States because gold deflation increase the real burden of interest service (Flandreau *et al.* 1998): the response was to increase facilities granted by central banks. For instance, in 1887, both Portugal and Greece loosened the constraints upon short term advances. The process accelerated after 1890: at that date, the Spanish government decided that the bills issued to finance the Treasury's overseas expenses would be discounted by the Bank of Spain which was further forced in 1891 to grant a 150 million peseta credit to the state. In Portugal, Greece and Italy, short term advances were granted to the treasury in exchange of deposit of government bonds. The results were the suspension of convertibility and exchange rate depreciation. These experiences, and the way they were told, shaped an analysis of exchange crises which relied on the role of debt monetization and the quantity theory.

While modern economists keep discussing the validity of the price-specie flow mechanism to characterise the operation of the 19th century monetary system, the consensus view, among pre-1914 writers, was that it was of little interest.<sup>3</sup> For

practitioners, it was obvious that the Hume-Ricardo self-equilibration mechanism, while dubious for convertible currencies was of no use at all for inconvertible ones since these were left out of the analysis. Instead, the consensus view was reflected in works such as Leroy-Beaulieu's *Traité de la Science des finances*. The book contained a classic treatment of the role of government policies in influencing the money supply and had a considerable impact on subsequent writers – chiefly Conant and Lévy. The backbone of the analysis was the quantity theory. The quantity theory initially developed to explain the behaviour prices in a pure commodity money system, was adapted to inconvertible regimes, this time to explain the determination of the exchange rate: the domestic supply of banknotes determined the value of the currency measured by its price on the foreign exchange market.

According to Leroy-Beaulieu, emergencies or more generally fiscal problems created a need for considerable, immediate and cheap resources which in some cases neither taxes (because they are too slow to collect), nor bond issues (because in extreme circumstances they are only granted a very high interest rate if at all) could bring.<sup>4</sup> The only way to get those resources was seigniorage: “when opportunity knocked” States thought of the central bank “as institutions meant to lend to the Treasury, especially since, almost everywhere, these institutions have been granted special privileges.”<sup>5</sup> The creation of paper money out of proportion with the bank reserves implied exchange rate depreciation. Contemporaries conceded that over the short run these new issues would bring “a veil of prosperity, a fake and short lived expansion” so that they might be met with political support.<sup>6</sup> Yet new issues were called in to continue the boom and this amplified exchange rate depreciation. Such was the ruthless “Law of the acceleration of paper issues and depreciation.”<sup>7</sup> Soon enough new issues could not keep up with exchange depreciation as the *Assignat* hyperinflation had demonstrated. Only if the

public understood that the fiscal machine rather than the printing press would be the instrument of choice to finance public expenditure would they give some trust to the currency: contemporaries obviously adhered to what modern scholars call the “tax-based theory of money”.

### **The “reverberation” of financial crises**

The belief that economic laws were mostly driven by “fundamentals” went along a general distrust that there was such a thing as “pure” contagion in the modern sense, i.e. that otherwise sound and solid countries might collapse as a pure result of external events. The early 1890s suggested that there was indeed some form of association between crises: the Argentinean default after triggering problems in London was followed by difficulties in a number of other countries. Recently, economists have debated the point of deciding whether there was “contagion” (see Mauro *et al.* 2000 and Trinner 2001 for opposite views). In the late 19<sup>th</sup> century, the word “contagion” did not exist as such and contemporaries preferred the word “reverberation.” Crises initiated in some part of the world could lead investors to take a closer look at their portfolio or abruptly change their mind regarding the international investment: Lombard street could become a carrier.<sup>8</sup> Other channels of transmission included the dynamics of emigrant remittances. Fenoaltea (1988) shows the tight link between Italy’s financial stability and emigrant remittances. Similarly, the numbers reported by Lains (1999) show that the declining sterling value of remittances from Portuguese emigrants to Brazil to their home country, caused by the depreciation of the Brazilian currency, itself caused by the Argentinean problems.<sup>9</sup>

But the point is that, according to contemporaries the “reverberation of the Baring crash over Europe, America and Australia” merely amplified existing troubles, but did not cause them: according to Conant, “circumstances which might have impaired America and Australia credit *under any conditions* were *emphasised* by the general distrust aroused by the Baring failure.”<sup>10</sup> Thus the Italian problems of the early 1890s had their true origins in cronyism or, to use the words of the time “evils generated by corruption among her bankers and public men.” But these deeper flaws were revealed and magnified by “the prevailing distrust” that ensued the Baring collapse and “intensified by the return of Italian securities and the steady outflow of gold [under the pressure of a depreciated currency]”.<sup>11</sup>

Sound countries by contrast, were to survive. For instance, it is revealing that the financial market analysts at *Crédit lyonnais* (a leading underwriter in the Paris market) emphasised that Austria and Hungary had had to suffer from German sales of their securities which resulted from the heavy involvement of German banks in Latin America: since the securities of the Latin American Republics depreciated heavily after 1890, cash strapped German banks were reported to be selling the firmer bonds of the Habsburg monarchy thus causing instability on their price as well as on the exchange rate.<sup>12</sup> But the Habsburg monarchy, instead of what had happened in Italy, Portugal or Greece, had been able to weather the crisis because it did not have fundamental problems. In the end, the general feeling was that well behaved countries would never be seriously threatened by such movements since in the end, a creditable nation would always find someone prepared to hold its bonds. Only misbehaving countries would experience trouble.

Raffalovitch’s reading of the aftermath of the Baring crisis is illuminating in this respect: “There was a repercussion effect that affected a number of highly indebted

States living on expedients, spending for military and infrastructures more than they could afford to, financing their deficits through official or secret loans, paying coupons with the help of bankers, through advances that were later consolidated in new loans. When bankers decided that they would stop, one saw, without an expensive war, in the middle of the peace, the credit of several states collapsing under the weight of their own errors.”<sup>13</sup> The point here is that while crises were “brutal facts,” they had their virtue as well: it was to remind governments “in a straightforward and striking way the existence of economic laws which one does not violate without the risk of being punished.”<sup>14</sup> The implicit philosophy was the same as the old wisdom of political economists such as John Stuart Mill, according to whom, “Panics do not destroy capital” but “merely reveal the extent to which it has been previously destroyed by its betrayal into hopelessly unproductive works.”<sup>15</sup> To be immune from disease one had to be sober in the first place.

### **Advantages and pitfalls of exchange rate flexibility**

Contrary to the modern prejudice according to which floating was before 1914 just not an option, there was a good deal of discussion regarding the most desirable exchange rate policy. By the late 1890s, contemporaries had understood that gold convertibility was no protection against fiscal or monetary misbehaviour. They knew that the link between the gold standard and international financial stability was weak: throughout the entire century, so many countries had adopted a gold standard only to leave it soon after in a debauch of paper printing. Nor was it a necessary condition either: countries such as Austria-Hungary had been able to operate a fluctuating exchange rate system without damaging their credibility (Flandreau and Komlos 2001, Jobst 2001). Finally, the

intrinsic virtues of the gold standard were far from obvious: contemporaries realised that the deflation of 1873–95 could in part be traced to insufficient gold output and this led to calls for an adoption of bimetallism. It is only when gold became an inflationary standard that its appeal became widespread – obviously not for matters of orthodoxy (Flandreau *et al.* 1998).

The controversy over exchange rate regimes was initiated by Austrian, Russian and German writers. It coagulated in the early 1890s when two commissions of experts were gathered in Vienna and Budapest to discuss the stabilisation of the florin.<sup>16</sup> The notion that the quantity theory ruled exchange rate determination meant that there was a mechanism to price the currency even when convertibility did not prevail. Moreover, inconvertibility, because it disconnected the currency from foreign monetary shocks, enabled one to conduct monetary policy without the constraints imposed by a fixed exchange rate regime. According to Walther Lotz (1889: 1288) the flexibility of the exchange rate was a kind of “Chinese Wall” erected around domestic monetary policy: the value of the currency would in the end reflect the underlying monetary policy itself geared towards domestic imperatives rather than foreign forces. As a matter of fact, more recent research has shown that inconvertible currencies were able to insulate themselves from the international cycle which participation to the gold standard induced (Flandreau and Maurel 2001).

At the same time, a number of authors emphasised that the policy of inconvertibility could entail some difficulties. While convertibility entirely stabilised the exchange rate and connected the value of the currency to that of convertible ones – and thus to their problems, too – floating could create mirror image troubles since it exposed the currency to all kinds of idiosyncratic vicissitudes. The quantity theory determined the value of the exchange rate over the “medium run:” over the very short run however, the

trade balance, the payments of dividends to foreign creditors and the income from foreign holdings or emigrant remittances, the invisible balance, etc., were perceived as causing the exchange rate to move in a somewhat erratic fashion.

These erratic moves could be magnified by speculation. The focus on the fiscal origins of exchange depreciation led contemporaries to consider the role of expectations in determining exchange rate dynamics. Not only current money issues, but future ones mattered. This introduced a relation from anticipated deficits to current depreciation. Expectations translated into exchange rate depreciation, since in the end these would have to be financed by money printing. This mechanism – which from an analytical point of view was seen as a refinement of analysis rather than an alternative view – was especially emphasised by financial economists and practical men who dealt with actual exchange rate movements rather than general theory. Evidence of an understanding of this link may for instance be found in bank archives. For instance, commenting on the behaviour of the Spanish peseta during the 1898 war against the US, *Crédit lyonnais*' economists wrote: "In 1898, the gold agio [i.e. the exchange rate of the peseta in terms of gold] was not determined by the current circulation but by the circulation people expected to take place as a result of the war. Since the State was to ask from the Bank the means that it needed, all the events relating to war were interpreted by the public as if new issues had already taken place, while all those pertaining to the peace as if new issues were becoming implausible." <sup>17</sup> Similarly Raffalovitch emphasised that "the course of exchange also reflects the opinion one has on State solvability, on the budgetary situation, on the general economic condition, and on foreign policy. This is the 'sentimental' or 'moral' aspect of exchange rate dynamics, while the other factors are more 'physical'." <sup>18</sup>



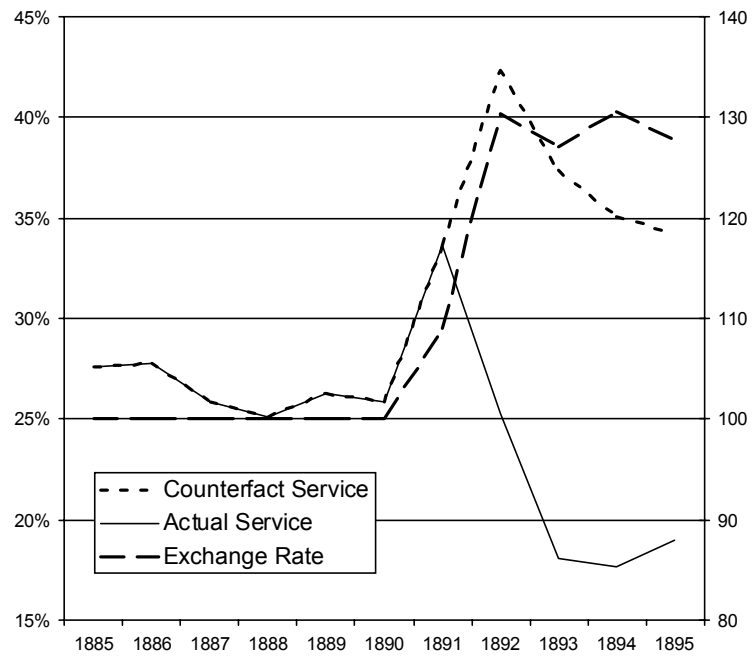
When there were both large economic flows and exchange rate volatility, forward market developed in order to manage the resulting uncertainty. However, the first forward markets had typically short horizons, so that it was quite difficult to get cover over the longer run and we find no evidence of a large supply of swaps for bondholders. This could become a serious problem for domestic agents with large foreign obligations. Indeed, international debts were typically denominated in a limited number of currencies because of the liquidity services that these currencies provided (Flandreau and Sussman 2003). A downward movement of the exchange rate meant a higher bill when coupons had to be paid. As described by Leroy-Beaulieu a “floating currency could become a problem when a large portion of the foreign debt is being held abroad.”

<sup>19</sup> Governments worried about short term “speculations,” and there were accusations that agents were taking adverse bets on the currency thus putting the country’s finances at risk. One famous instance was the conflict that developed between the Russian government and Berlin bankers who were bearish on the ruble and were selling it short before foreign payments were done in anticipation of the exchange depreciation that the purchase of foreign exchange by the government would cause. In 1894, using a number of foreign agents, the Russian finance minister Witte began buying secretly in Berlin, the rubles notes that were used for forward speculation. When Berlin bears realised that there was a tension on the spot rate and that they might get squeezed, it was already too late. On the day of reckoning, they had to go to St Petersburg to negotiate a settlement with Witte.<sup>20</sup>

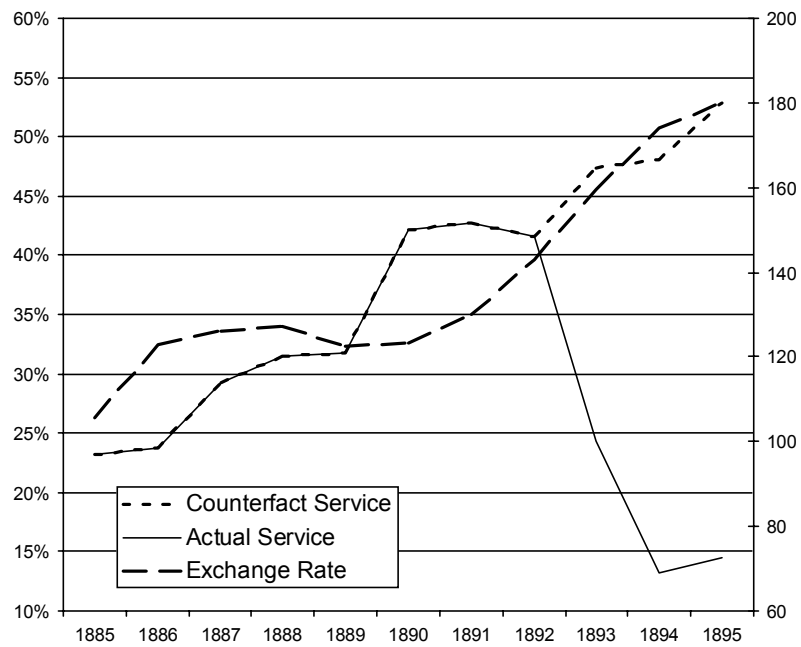
The Russian experiment may be thought of as a lesson of how a government can defeat adverse speculation. It is also a reminder that governments tend to be very concerned about speculation when they rely heavily on foreign capital. It is probably no coincidence that the Russian squeeze occurred in 1894: it closely followed the less

happy experience of South European countries in the early 1890s. The sovereign defaults of Greece and Portugal of 1893 and 1892 respectively could be traced to the exchange crises that had followed the Baring collapse. The deteriorating borrowing prospects had led these countries to resort to seigniorage, but since most of the Greek and Portuguese debts were denominated in gold, exchange depreciation pushed up exchange depreciation (Figure 1.1A and 1.1B). Since inflation did not follow immediately, the ratio of interest service to revenues deteriorated, approaching 45%. Additional credits were initially used to continue servicing the debts. But as adjustment required rising taxes while at the same time the gold value of the new taxes declined. It was not long before default occurred. As a result, a certain fear of floating developed, especially in developing countries. As Leroy-Beaulieu had concluded more than ten years before the Portuguese and Greek defaults, the mixture of exchange rate volatility and a large public debt issued abroad could be deadly so that in the end one had to chose between only two courses of action – either put checks on external borrowing, or make sure that the convertibility of the currency would never been seriously questioned.<sup>21</sup> And thus the overall suggestion, in a world where international borrowing was perceived as an essential ingredient of development, that a fixed exchange rate was perhaps to be recommended.

**Figure 1.a Exchange depreciation and sovereign default: Portugal**



**Figure 1.b. Exchange depreciation and sovereign default: Greece**



## ***CURES: STABILISATION WORKOUTS, INSTITUTIONAL FIXES, AND EMERGENCY FINANCE***

In this section, we turn to a discussion of the remedies that were implemented to stabilise ailing economies. They inform, perhaps even more than a discussion of the existing views regarding the sources of instability, on the beliefs of the time, since the therapies employed rested on an analysis of problems: the role of inappropriate macro-economic policies were seen as the heart of difficulties and thus inspired prescriptions.

### **Turning back the clock: stabilisation as repentance**

Here again, views were heavily influenced by the early experiences of large powers such as Britain, France or the United States. These countries' past financial troubles had emerged from military conflicts which had put a strain on public finances. Stabilisation had meant a return to "normality" which implied, inasmuch as the exchange rate was concerned, a return to the old parity. If the goal was to bring back the exchange rate to its pre-crisis level, then macro-economic policy had itself to turn back the clock of history by restoring the initial conditions. In other words, the State was responsible to mop up the paper issues – preferably by running surpluses that could be used to repurchase the outstanding excess money supply. Raffalovitch's discussion of the ways to "go back to the good currency" for instance, emphasised that "from a fiscal point of view, one had to restore the balance through fiscal surpluses, since the State needs were what brought in the crisis and disease" in the first place.<sup>22</sup> Alternatively, a stabilisation loan – or to use the language of the time "consolidation loan" – could be issued. Consolidations loans were used to lengthen the maturity of government liabilities: the

short term debt the government had accumulated by circulating paper certificates or possibly interest bearing Treasury bills was transformed into a long term, “funded” debt. The rationale for this clearly emphasized the liability aspect of money: the state had obtained from the circulation a short term “credit” which needed to be paid back once the emergency was over. The result was a contraction of the supply of notes. It induced what was eloquently called in English a process of “starving” (Conant 1915). Starving the demand for money led domestic agents to find other ways to accumulate balances, e.g. by selling international securities in order to accumulate gold.<sup>23</sup> This propped up the value of the currency on exchange markets at the same time when gold flowed in. Once the situation was brought under control, the currency could finally be pegged, either by reintroducing straight convertibility, or by using foreign exchange interventions to defend the parity.<sup>24</sup> From which we may conclude that contemporaries were routine users of the monetary approach to the balance of payments.

“Starving” had been a key ingredient of virtually all adjustment programmes implemented during the 19th century. The British stabilisation of 1821, the American experience after 1873, the Italian experience of 1884, etc. had all rested on this principle. It was again used for the exchange rate stabilization programs of Austria-Hungary and Russia of the 1890s (respectively in 1896 and 1897). These programs were intensely discussed and became a testing ground for existing theories. They involved a mix of fiscal effort and monetary restraint.<sup>25</sup> Figures 1.2A and 1.2B illustrate these experiences by documenting (a) the evolution of the cover ratio and (b) the fiscal performance of these two countries, along with those of Italy which followed suit in 1902 and followed very much the same pattern. The benchmark year is the date when stabilisation was implemented (i.e. successful pegging of the currency), and the performance is examined before and after the stabilisation took place. The cover ratio in

a given year is represented as a fraction of the cover ratio on the year the currency was stabilized. As can be seen, turn of the century writers were basically summarising the historical evidence. Successful stabilisation programs had all gone along with a fiscal effort and a drastic decline in the supply of high powered money in relation to the reserve. While it appears that the fiscal pressure was released after the stabilization, the monetary effort was maintained.

Figure 2.a. Fiscal Performance and Stabilization Programs

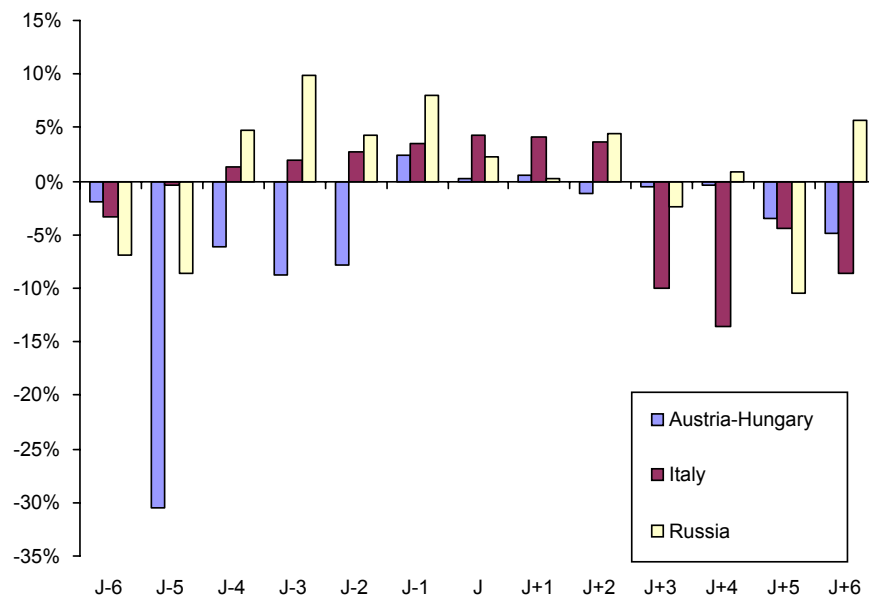
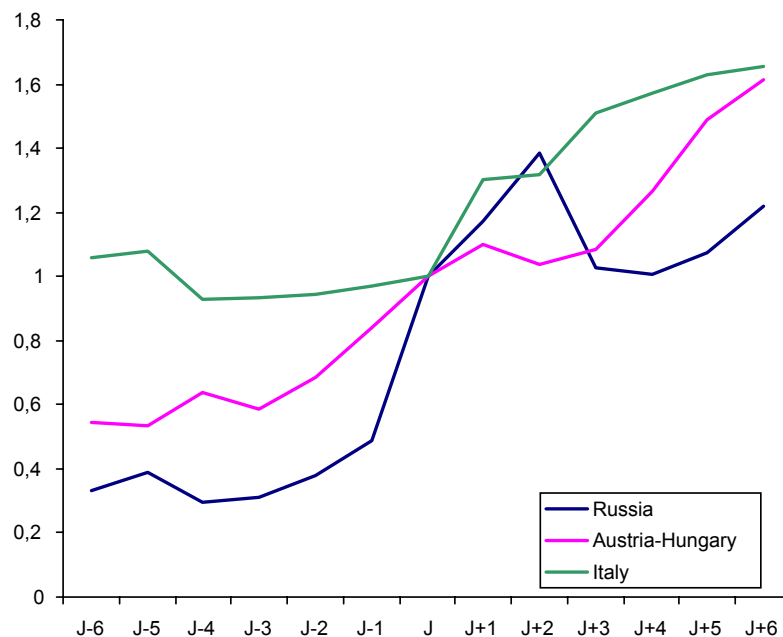


Figure 2.b Cover Ratios and stabilization programs



Within this general consensus view on how should stabilization be achieved, there was nonetheless a measure of debate regarding both the sequencing and precise policies that needed be applied. Various authors attached various weights to the different parameters of the stabilisation equation, and thus could differ in their recommendations. In some cases violent controversies developed. One debate was on the degree of short term fiscal effort needed. In practice, there was no reason why there should have been any preliminary accumulation of surpluses. As long as the fiscal situation was brought under control, and provided that existing indebtedness permitted it, there was no reason why one should not be allowed to borrow the funds necessary to implement the stabilisation rather than to save them: as a matter of fact, we saw that the fiscal effort was typically released just after the stabilization had been achieved. This means that in order to secure the funds to stabilize the currency, a government could issue additional securities, and use them to consolidate the note issues it had forced into the circulation. This did spread

out over an extended time period the resulting fiscal effort. On the other hand, a number of writers emphasised that fiscal effort was required by the “moral” aspect of exchange rate determination: “the good opinion one has of public credit shall facilitate the operation.”<sup>26</sup> One possible interpretation is that investors had to make sure that a given government was able to demonstrate a capacity for frugality. If foreign resources were merely used to stabilise the currency while adding to outstanding public obligations, there was a risk that monetization would resume in the very future. In such a case the stabilization funds would truly mean a net deterioration – not an amelioration – of the borrower’s prospects: the modern word is “credibility.”

Similarly, the degree of monetary effort was under debate. First, depending upon the parity chosen as an anchor for the stabilisation program, a greater or lesser amount of price deflation was needed. Returning to the old parity was costly as it meant forcing a downward movement of prices. Contemporary sources show that it was widely understood that deflationary policies slowed domestic activity down and increased unemployment. This explained why a number of countries such as Austria-Hungary and Russia eventually decided to stabilize their currency on a new, devalued exchange rate. At the same time achieving a stabilisation program without inducing an increase in reserves by reducing the supply of money put the country at risk of a quick reversal of money inflows. This was a direct threat to exchange rate stability. The issue was brought up in the debates that surrounded the Japanese stabilisation of 1898 where it was recognised that no change in the level of prices would be induced by the chosen exchange rate. When subsequent current account deficits put pressure on the reserve and called for the negotiation of foreign loans, observers remarked that the foundations on which Japan had laid its gold standard were perhaps not deep enough.<sup>27</sup> Again, a bit of recession appeared as an inescapable step.



The question was thus of determining the optimal mix of international reserves borrowing versus starving. For instance, while discussing the official report of December 1904 on the stabilisation of the Mexican currency on a gold basis, *The Economist* opposed the starving policy to the reliance on an international loan on the basis of their different short term and long term costs. The starving policy had been the report's recommended action. *The Economist* did not dispute that such a policy was feasible: "it is permissible to trust that when [silver] coinage shall have been suspended, the necessity of an increase in the circulating medium will begin to be felt, and that of itself will cause gold to flow into the Republic, for only in exchange for gold will silver dollars be coined and the currency augmented." But the British journal emphasised that "this method of starving the circulation in order to impart a scarcity value to the silver dollar cannot fail in practice to cause disturbance and dislocation of trade, with results probably much more costly to the country than would be the raising of a loan for the creation of a gold fund."<sup>28</sup> Thus, an exceedingly strict monetary policy would induce a recession. And in practice, many countries, followed Russia and Austria's lead in stabilizing their currency on a lower, devalued parity. In practice, the measure of devaluation depended on a mix of political factors that reflected the relative power of the various interest groups involved as currency depreciation was always met with the fierce opposition of rentiers.<sup>29</sup> In any case, the conclusion is that discussion on the costs of stabilisation was not an invention of the interwar: some element of "proto-keynesianism" stood in the way of simple macroeconomic orthodoxy. Moreover, that such views were developed in journals such as *The Economist* shows that these concerns were fully internalised by investors.

## **Institutional fixes: from central bank independence to the privatisation of public finances**

The previous discussion of the degree of monetary or fiscal effort needed to signal a change in macroeconomic policy provides a natural transition to an analysis of the debates surrounding the accompanying institutional reforms. These reforms proceeded from the notion that problems developed in the fiscal process before infecting the money supply and eventually the exchange rate. To curb such difficulties, remedies needed to be applied upstream, by making sure that the central bank would be made independent, or in a more extreme form, by using an international agency to control the fiscal process.

No view could be more distant from the actual concerns of the 1890s and 1900s than the modern prejudice according to which central bank independence was the normal state of affairs before WWI and the “cause” of the period’s stability. In the years immediately preceding the world war, the protection of central banks against political pressures was seen as the result of a patient construction which had only recently been met with success. The doctrine of central bank independence developed in advanced countries during the first half of the 19th century. In the words of the introduction, it was the product of the liberal notion that there needed to be checks and balances on government power. It was a product of the liberal notion that there needed to be checks and balances on government power. While parliaments controlled the door of deficit, it was important that banks of issue would not let the window open. As a result, the charters of the first banks of issue – such as the Bank of England, the Bank of France, or later the Bank of Belgium, made sure that the amounts the state could borrow from them would be statutorily limited. Independence was fostered by incorporating the bank of issue as a

private company, or by assigning it the constitutional goal of preserving the value of the currency.

The experience of France's payment of the war indemnity to Germany in 1871–3 was a turning point. The large payments which the State had to do and which were achieved through bond issues nonetheless implied substantial short term liquidity problems which a number of politicians thought would be fixed by putting the Bank of France under government control. France premier Adolphe Thiers, however, resisted these calls, and preferred to go through a contractual route, with the period of reimbursement of Bank loans being specified at the same time they were granted. The French government made sure that it would pay back the loans at the due dates, and even in advance, in order to impress the public. At the end of the process, a triumphant Thiers could claim that “the Bank saved the State, because it was not a State Bank,” a clear evidence that the costs of time inconsistency were perfectly understood.<sup>30</sup>

From that point on, the doctrine was gradually illustrated through new case studies but not fundamentally changed. It acquired the status of a dogma. In 1889, Octave Noël's monograph on banks of issue discussed it in detail. The doctrine was also at the heart of Conant's *History of banks of issue* which emphasised that “the currency of a commercial country should be regulated by commercial conditions and not by the whims of politicians.”<sup>31</sup> In 1897, the parliamentary commission in charge of discussing the renewal of the privilege of the Bank of France provided evidence that there was a correlation between exchange rate instability and close relations with the State and used this to argue that the Bank of France should remain a private concern.<sup>32</sup> Finally, in 1911, Raphaël-Georges Lévy, a leading monetary expert, systematised the “theory that calls for the separation of the central bank from the State” (Lévy 1911: 157). According to Lévy, central bank independence was an absolute pre-requisite for exchange rate

stability: in his opinion, banks of issue could render services to public treasuries inasmuch as their “existence [is] more independent, and their administration more separated, from that of the State. The less public authority gets involved into the management of the banking system, the better national credit and wealth are protected.”

<sup>33</sup> The natural extension of this view was the creation of a super-central bank, located in a neutral country, in which one may see the blueprint for the Bank of International Settlements.

As a result, it is not surprising to find that the reform of the statutes of the central bank was traditionally an important step in any stabilisation program. Restricting our focus on the 1890s only we find that this kind of institutional reform was present in all the experiences under study. In Austria-Hungary, full independence was a central aspect of the 1892 reform package aimed at stabilising the florin. It was decided that the outstanding government paper money would have to be repurchased gradually, and that the Treasury would no longer be allowed to issue notes. Statutory advances were kept to minimum and government bonds were not part of the reserve. The bank could still invest in public securities, but strictly for reasons of profit, and it could not be forced to do so. Despite some resistance from the treasuries of Hungary and Austria, the Bank was able to make sure that the reforms would indeed be implemented. Italy followed after the crisis of 1893. The crisis had emerged from a combination of capital flight caused by the Baring problems and the discovery of a network of connected lending which had involved the former banks of issue, the State and local politicians. The Bank of Italy was transformed into a monopoly of issue to handle the mess and make sure that such a situation would not be able to occur again. It was decided to impose tight limits on central bank credit to the government, for both short and long term. A strict cover ratio was introduced, and defined in a way that explicitly excluded government bonds.

The stabilisation of the ruble in 1897 included similar features. While the bank remained under State control, the government could no longer exploit the bank at will. The reserve was protected by one of the highest cover ratios on the continent, and parallel issues on government account were ruled out.<sup>34</sup> Finally, Greece followed suit in 1898. As part of the stabilisation implemented under the auspices of international powers, automatic advances from the Bank to the State were ruled out in 1899, investment in public securities was kept at its 1885 statutory maximum of one third of the outstanding note issues.

Even in those countries that did not peg to gold, such as Spain, but that nonetheless sought to stabilise their currency, a similar institutional trend took place. The debate on stabilisation began under the Villaverde ministry, at the turn of the century. It was decided in 1902 that the short term advances which had been granted to the Treasury should be gradually reimbursed. A formal contract between the bank and the treasury (the so-called *convenio*) provided for this. While investment in public securities was still unlimited, the Treasury made a substantial effort at consolidating its balance sheet and repurchasing the former advances. As a result the government share in central bank credit declined and the proportion of specie in the reserve increased: specie (gold and silver) represented 80% of the note issue in 1909. Portugal, finally, was the only country where no serious effort was made at separating the central bank from the state. Until the eve of the first world war, the Portuguese treasury continued to draw on the Bank of Portugal.<sup>35</sup> This easy door to debt monetization was never shut down, and the political turmoil of the last years before the war led to a return to automatic central bank credit, and a resulting depreciation of the Portuguese exchange rate. On the eve of the first world war, Lévy emphasised that Portugal was one of the countries that had the least independent central bank.

International control should be seen as a limiting case of the same basic principles. Such schemes implied a loss of sovereignty which states were always reluctant to accept, and which for that reason creditor countries could be reluctant to impose. Withdrawal of fiscal authority from the hands of an inept agent and its transfer to an external authority were generally perceived as the necessary responses to extreme difficulties. In Egypt, the Ottoman Empire and Greece, international control arose as a combination of two factors: on the one hand domestic problems led to bankruptcy. On the other hand was the international political situation which created an opportunity for multilateral creditor action. The various schemes rested on the notion that in some extreme circumstances it was better to “privatise” not only the central bank, but the administration of finances as well. If the ability of the country’s leaders to manage their accounts was so poor that they could not be trusted with it, it was better to appoint some independent agent to make sure that the funds were used “appropriately.”

In practice, these schemes all involved restrictions on the country’s sovereignty. In Egypt, the government entirely surrendered its sovereignty regarding the management of its assets and the allocation of its expenses. In the Ottoman Empire, the administration of taxes was placed by the decree of September 1881 under the control of an independent council and out of the reach of the ottoman government (Herbault 1901: 26). The council was controlled by the representatives of the holders of Turkish bonds. The Ottoman government could not change the tax system without the consent of the council, since a number of taxes were earmarked for the service of foreign obligations.

The Greek experience takes particular significance because it involved a greater domestic ingredient. For years, Streit, the governor of the National Bank of Greece had fought a uphill battle against domestic politicians who sought to control the money

supply. Greece's defeat against Turkey and subsequent indemnity occurring at a time when Greece's unilateral default had shut down its access to Western financial markets put the Greek government in a dead end. The evacuation of Turkish troops implied a measure of cooperation with creditors. The domestic balance of power was entirely reshaped, and Streit was appointed to chair the International Financial Commission for Greece.<sup>36</sup> The commission opted for a privatisation of tax collection. This gave birth to the famous "*Société de Régie des Monopoles de la Grèce*" which was itself placed under the direct surveillance of the International Control Commission. The income of this *Société* was earmarked for service and amortisation of the debt with government revenue acquiring junior status.

The extreme forms of institutional reform implied by international control admittedly corresponded to very specific situations. Reviewing the three experiences discussed above, Herbault (Herbault 1901: 50–1) emphasized that control had been motivated by Turkey's "political weakness," Greece's "unfortunate war" and Egypt's predicament which made it a prey of Franco-British appetites and rivalry. In general however, sending gunboats was not easy (not as easy as it is supposed now). Herbault thus favoured what would be known today as "market" solutions. Bondholders, he argued, had a weapon in their ability, through various associations (the *Council of foreign bondholders* in London, the *Association nationale de porteurs de valeurs étrangères* in Paris), to shut down financial markets to defaulting borrowers. In addition their "relations" and their lobbying with European Foreign Offices put them in such a position that they could force borrowers to accept clauses that would ensure the transfer to creditors of the management of some public monopolies in case of trouble. Herbault predicted that such solutions would give "excellent results" especially because they did not have the "humiliating character of formal control by a foreign power." Similar

creditors' solutions were set to work in the Balkans with the Serbian monopolies on the one hand and the monitoring of Bulgarian macroeconomic policies by French bondholders on the other hand (see Avramov, this volume).

### **Bridging trouble: funding loans, exchange stabilization funds, and financial innovation.**

While bondholders played an important role once trouble was there, private banks, and especially investment banks, appear to have been associated with crisis prevention. Adverse shocks could jeopardize fiscal balance: a decline in the price of primary commodities, a fall in foreign remittances, the adoption of protectionist policies in export markets, or an outright confidence crisis following a war or a revolution, sent government bonds South. If one was caught unable to meet one's obligations there was a risk of investors' retaliation (including a legal action by the bondholders), which could only worsen the situation. When such "funding crises" were in sight, the price of public securities fell dramatically in anticipation of the incoming mess, meaning that it was becoming more difficult to get money from the stock exchange. States could then resort to overdrafts granted by investment banks, and that served to maintain a record of interest payments. The advances were to be repaid or consolidated through new bond issues once stabilisation was achieved.<sup>37</sup> Investigating the balance sheet of the *Banque de Paris et des Pays-Bas* for the period 1885-1913 Flandreau and Gallice (2003) found extensive foreign overdrafts that were granted to foreign "official" borrowers: in particular the governments of the so-called "peripheries" of Southern Europe and Latin America relied extensively on the short term funds of top European institutions: this is especially perceptible in the 1890s which were precisely years of financial turmoil.



Alternatively, funding loans could be arranged. These were securities backed by some collateral such as gold deposits, and arranged with bankers who took a large share portion of the issue. Unlike the overdrafts, the funding loans often remained on the market for a long time period after the crisis had receded. This way Greece arranged with Hambro a funding loan in the Spring of 1893 that was secured through gold transfers to London. Brazil did something similar in 1898 with the Rothschilds of London, here again with gold being secured in London.<sup>38</sup> In a different vein, access to the market could be re-established by the use of foreign power guarantees. This way the Greek loan of 1898, issued under the auspices of the International Control Commission was guaranteed by England, France, Germany, Russia and the Habsburg monarchy. Unsurprisingly its yield rivalled and even surpassed those of the best signatures in Europe.

As mentioned above, the source of the disturbance was often the foreign exchange market with its destabilizing oscillations. In those case, temporary fixes could be desirable: they provided ways to keep the situation under control. There is ample historical evidence of support of private banks to monetary institutions in order to deal with exchange crises. For instance, in 1855–7, the Bank of France relied on a pool of private banks with international connections to purchase gold reserves abroad (Flandreau 2003). Gille (1967) describes the support provided by the French Rothschild to the Bank of Italy in 1864–5.<sup>39</sup> Similarly, Reis (1999) shows that throughout the 1870s and 1880s, the Bank of Portugal stabilized its gold reserve through overdrafts granted by foreign banks (Baring was one). Similarly, Conant recounts that a run on the Imperial Ottoman Bank (Turkey's currency board) in 1895 was checked by a gold loan from the Bank of France.<sup>40</sup> And the accounts of *Banque de Paris et des Pays-Bas* display extensive overdrafts to such institutions as the Bank of Spain.<sup>41</sup>

There is also evidence of formal crisis support through the creation of exchange stabilisation funds. One example was the famous “*Syndicat des Francs*”. The *Syndicat* was a peseta stabilization scheme created in 1903 and aimed at preventing the payment of gold coupons by Spanish debtors to foreign (mostly French) investors from destabilising Spain’s precarious exchange rate balance. It thus sought to co-ordinate, under the auspices of the Bank of Spain the foreign exchange purchases of the private concerns (railways and mining companies) and the government (State bonds) in an orderly fashion.<sup>42</sup> Technically, operations were conducted through the creation of a lending facility that was negotiated with two French banks.<sup>43</sup> The central bank had to provide the various concerns with the sums, which they had stated in advance, drawing on the credit line, rather than from the market.<sup>44</sup>

Finally, financial innovation could in cases be used in order to deal with financial problems. For instance the experience of the “twin” crises of the 1890s had shown how exchange depreciation, by raising the burden of external liabilities had triggered a fiscal crisis. But as contemporaries realized, the same mechanism that had made the exchange rate the lever of capital flight and sovereign default could be worked backward provided that the link between the external value of the currency and the burden of external obligations be appropriately designed. In the instance, this took the shape of the 1898 stabilisation program of the drachma implemented under international supervision. The program – designed jointly by foreign financiers and the governor of the Bank of Greece – involved a drastic debt reduction and conversion in paper drachma: however, a provision was introduced that coupon payments would be improved in proportion to the increase of the exchange rate. In other words the interest service, while essentially made in drachma, would be increased as the exchange rate recovered. Figure 1.3 shows the effects of this arrangement: as the exchange rate recuperated, so did the coupon and of

course of the price of the Greek bonds. Capital flowed in, and Greece's external equilibrium was restored. Brady type solutions were born.

Figure 3. Stabilization in Greece



## ***MONITORING: PRIVATE BANKS' SUPERVISION BETWEEN COOPERATION AND COMPETITION.***

The previous discussion of various forms of international support brings up the issue of monitoring, since it is clear that no financier in his right mind would accept to provide funding without a measure of control on how the monies are used. Otherwise, funding loans would have turned out to be just another form of Ponzi finance. In this section, we discuss the precise channels through which the perceptions of desirable policies were communicated to policy makers.

## **Bankers as confessors: relationship banking before 1914**

At a very broad level, the market place, where the bonds of sovereigns and quasi-sovereigns were being traded provided information on what investors thought of the appropriateness of domestic policies. Investors devoted increasingly larger amounts of resources to get timely and accurate information. Information was processed with avidity. This motivated a number of innovations. It was in 1871 that the *Crédit lyonnais* set up its large research department (Flandreau 1998). Similarly, bondholders lobbies provided for the circulation of facts and figures about borrowers.<sup>45</sup> Envoys could be sent to examine the macroeconomic outlook of heavily indebted countries.<sup>46</sup> The effects of market perceptions on the price of public securities can be felt: when one examines the factors that determined the risk premia charged on in those years on borrowing governments, one finds that “fundamental” measures of debt sustainability loomed very large (Flandreau et al. 1998). As James de Rothschild explained in a letter to the Austrian finance minister Beust, “the price of government bonds is the exact measure of the credit which a state deserves.”<sup>47</sup> This ensured that in a broad sense, there was a consistency between the perception of policies which states pursued and the borrowing conditions they faced.

This discipline of the secondary markets was complemented by the direct “primary” relation between borrowers and bankers. This is a key dimension of the pre-1914 international financial architecture, and surprisingly, it is one which is little discussed. The study of the relations between bankers and borrowing governments is often left to biographical research or authors of bank histories despite its relevance for an understanding of the way the system operated. In other words, the economics of pre-1914 sovereign lending remains to be understood. However, from the historical

evidence, it is possible to outline a number of features, whose attempted interpretation may in turn shed some light on the issue.

Throughout the 19<sup>th</sup> century, leading investment banks – the prototype was the Rothschild bank – and a few deposit houses with an investment arm played a prominent role in introducing foreign securities in the London and Paris markets. Because of their standing and position these bankers were in a position to offer a wide array of services to both investors and borrowers. They underwrote new loans, gave macroeconomic advice to borrowers, counselled them on debt management: they informed governments of what were the “requirements” of the market. They also acted as bankers for the government, paying coupons on their behalf, providing short term advances until the debt was actually issued, or increasingly after the turn of the century, taking the proceeds of the loans with them and running the borrowing governments current accounts. On the other hand, as investment banks, they provided information to their clientele of investors, helped their customers to assess the risks, gave indications on how to manage their portfolio, and so on.

Their outstanding position at the cross roads between demand and supply naturally provided bankers with a way to induce borrowers to adopt certain policies, since the continued supply of services in the end rested upon the adoption of appropriate policies. From that point of view, their position was quite different from that of bondholders syndicates which behaved mostly like lobbies and used retaliatory devices such as legal actions, political pressure, or attempts to exclude defaulting states from stock market listing. While the bondholders associations were able to inflict penalties to bad governments and might thus have reduced the incentive to default in the first place, investment banks provided support on a regular basis and were thus able to manage a

kind of conditionality lending which rested on positive incentives. Unlike the bondholders who used a stick, the investment banks had carrots.

One striking feature of the relation between banking firms and borrowing governments is the link that seems to have often existed between given banks and given states, over extensive periods of time. Gille's study of the French Rothschild show that this one bank provided money and advice to their almost exclusive sovereign customers Piedmont and Sardinia (later Italy), the Habsburg Monarchy, and, albeit only at an early stage, Spain (Gille 1967). In a similar fashion, there was a privileged relation between the London Rothschilds and Brazil: the bankers did underwrite virtually all the loans floated by this country between 1880 and the 1900s. Similar links also existed between banking houses Gibbs and Huths and Chile, between Shroder and the State of Sao Paolo, between Crédit Lyonnais and Russia, and possibly most infamously between the Barings and Argentina. At the turn of the century, the author of a noted critical pamphlet declared: "Each bank has its clientele of foreign states, it has its influence zones. This is known as the 'game preserves'. These preserves are jealously defended, its rights do not suffer any reduction, and trespassers are asked to walk away. One cannot do business with a foreign government without the authorization of the landlord." <sup>48</sup>

The observation of special relations between a limited number of bankers and given states discussed in the previous paragraph raises an intriguing question, which may be formulated as follows: everybody knows that the collapse of Baring resulted from its overexposure to Argentinean securities. But as far as we know, nobody has ever wondered why it was only Baring who took a deadly beating in the Argentinean default: basic prudence should have implied that the bank would not take a long position in one state whose frailty it knew only too well, precisely from its close relation with it. One

simple answer would be that some gigantic mistake was made. At a deeper level, however, the exposure of Baring to Argentina had been a fact of life in the preceding decade, just as the exposure of other investment banks to their main client. That must have reflected deeper motives.

To understand the emergence of the pattern described above (and which the literature on the economics of banking calls “relationship banking”) it is useful to review several features of the business of sovereign lending. One was the problem of information already referred to. Borrowers have a natural inclination to use the disclosure of information in a strategic way. They are little inclined to have fully transparent accounts. As a result, public returns typically concealed evidence from market participants, so that the “market” as such could only rely on second hand information. This created incentive for banks to acquire information beyond what was publicly available but this came at a cost, since banks had to organize themselves to achieve this end (Flandreau 1998). In the first half of the 19<sup>th</sup> century, this was done by developing close contacts with local officials. The links could in some case be extremely tight: one of the first post unity Italian finance minister had been the Rothschild house correspondent. In the second part of the 19<sup>th</sup> century, these efforts were extended through data gathering, some bankers sought to assess the accuracy of public returns, fostering systematic comparisons. But the point is that there was a cost that had to be incurred to beat the market.

The second key aspect of this information gathering process was that each new loan, created by itself an externality: it improved the information of the banker who had concluded the deal. Each contract gave an experience of the negotiating counterparts, consolidated the personal network, and gave a number of useful tips that would give an informational edge in the future. It was one Portuguese official who reportedly

explained to Crédit lyonnais, in 1898, how the Portuguese accounts were fudged (Flandreau 1998). Finally, this private information, which enabled its recipient to better interpret and better analyse future situations, was bound to remain its own: there was no reason why this expertise should be disseminated, as it represented a strategic asset for the lucky banker.

The combination of these three features (costly information, information increasing with number of interaction, and confidential nature of information) is known to form the basis of relationship banking (Berger 1999, Boot 1999). The relation emerges out of the scale economies resulting from the repeated interaction. Rather than having all bankers competing on all issuers, and thus tending to under-invest in information gathering, relationship banking provides extra incentives for each banker to take a close look at his client.

Under such a regime, the quality of the information gathered by the banker improves through a number of channels. One direct effect of close relations is the better quality of the information flows. This is magnified by the fact that, since the balances of the borrower are kept in the books of the lender, the latter always knows the exact cash situation of the former. An indirect channel is that this situation induces the borrower to disclose more information than he would otherwise. Governments could, by talking directly to their banker, conceal their short term problems from the market place – and thus prevent adverse moves in bond prices, while at the same time working on solutions to sort out pending problems. The privileged, on the other hand, had time to assess the situation – e.g. to decide whether the problem was one of illiquidity or insolvency – and arrange for some form of finance: it is no surprise, from this point of view that the funding loans of Greece and Brazil were precisely provided by their respective privileged bank. In counterpart to confessing the sins, the governments received very



precise and detailed instructions on how to earn their redemption.<sup>49</sup> The banker was a confessor.

Of course, all scheme aimed at solving informational or monitoring problems are only “second best” solutions, and as such, they display unavoidable flaws. Relationship banking does suffer from two potential and opposite problems. One, known in the theoretical literature as the “soft budget constraint problem,” is the risk of inadequate monitoring by the lender, who under invests in information gathering, and fails to provide the borrower with adequate incentives. The other, known as the “hold-up problem” arises when the information monopoly of the bank is such that a considerable rent can be extracted from then borrower.

The soft budget constraint problem implied that the community of investment banks needed to make sure that each member would do its job properly, and thus behave in the interest of investors. The ability to induce the “monitors” to behave well was tightly related to the degree of competitive pressure on the lender side (see Boot and Thakor (2000) for a theoretical discussion in the context of corporate lending). Relationship banking is subject to a pervasive free rider problem: once a bank has done its homework and has issued the bonds of a given sovereign, there is a temptation for other banks to join in and take their share of the gains, without investing in information. Weak states, taken in the midst of fiscal trouble, were typically calling all bankers at once, trying to live on short term credit, until default inevitably occurred. In the archives of *Crédit lyonnais*, we find evidence of Portugal in 1876, albeit a customer of Baring, turning to the French bank and waving the bait of a change in privileged relations. Similarly, in the years preceding its incoming collapse in 1880, the Argentinean government turned alternatively to French and German sources of finance, thus increasing the competitive pressure on their main banker Baring.

While the extent to which the fall of Baring had to do with competition among lenders remained to be determined, there are strong grounds to believe that reduced competition is key to prevent the appearance of the soft budget constraint problem. In a regime of limited competition the relation bank takes a disproportionate share of the underwriting. He will thus make both greater profits if the job was performed properly and greater losses in the opposite case. If support is granted while the situation was beyond repair, the privileged banker would take the beating. This may account for the emergence of the “game preserves” described by Lysis. On economic grounds, it makes perfect sense that bankers as a group would want to make sure that there be no trespassers on each bank’s preserve. The extent to which they were successful in so doing must have remained imperfect. In fact the improvement in the macroeconomic position of a vast majority of states after the turn of the century (Flandreau *et al.* 1998) meant that in general the bargaining terms were moving in favour of governments. The monitoring role was somewhat eroded, something which traditional investment bankers such as Nathaniel Rothschild, interpreted in their own words as a decline in moral standards.<sup>50</sup> Reputation could be another mechanism mitigating the emergence of a soft budget constraint problem. Investment banks with a long record of sound banking had their reputation at stake if it turned out that they had in effect cheated the market. This certainly played a role in inducing the older, more conservative houses to be on average somewhat more careful than the younger ones, and in principles it would suggest that highly reputed banks were, other things being equal able to secure better conditions for their customers – a factor which again worked against competition and free riding. Obviously, no mechanism could entirely prevent accidents from happening as the Baring episode reminds us. But in a sense these were the inevitable casualties given that

full insurance against misbehaviour and information manipulation could not be provided – but only incentives reducing their likelihood.

At the other end of the spectrum, the “hold up” problem, was probably less serious from the point of view of international financial stability. Borrowing governments could quickly demonstrate their relative credit worthiness by displaying a record of timely coupon payments and financial stability. As soon as this was done, bankers were rushing to get the opportunity to lend. An example of this was the way the French government, after exclusively relying on the Rothschilds in order to issue the first part of the 1871 indemnity loan, switched to a broader syndicate for the second part, with a resulting drastic reduction in fees. Another example is the way the Austrian state, after having exclusively worked with the Rothschild European network, gradually repatriated the floatation of their loans after the 1890s. They came to rely increasingly on domestic saving institutions, against which their bargaining position must have been much stronger. One could not be captive of a bank for long.

In the end, the important conclusion however, is that pre-1914 international support and conditionality were shaped by the policies and organization of “investment” bankers who, because they provided finance to governments in normal times, were in a position to acquire information that helped them in turn to form their own operational distinction between illiquidity (problems that could be solved provided help be given) and insolvency (problems that could not). From a functionalist point of view, international banks had a very important role that was quite distinct from the global financial markets, which priced sovereign risks, or from bondholders associations who came after the fall. Investment bankers by contrast were those who got the emergency call.

### **Diminishing expectations: competitive conditionality**

The previous discussion of the role of competition in shaping monitoring suggests that recommendations were also influenced by competitive pressure. To illustrate this point, we focus on a debate that was initiated by Crédit lyonnais' chairman Henri Germain. In 1902, Germain circulated a study entitled "How to stabilize the peseta without a stabilization loan," the paper had been issued at a time when Spanish authorities were trying to restore their currency after the crises of the late 1890s.<sup>51</sup> The pamphlet gave rise to a debate to which the economic establishment of continental Europe participated. In particular, it triggered a series of replies published in the business newspaper *Il Sole* by the former Italian premier and finance minister Luzzatti. Germain's report relied on empirical work done by Lyonnais' research unit.

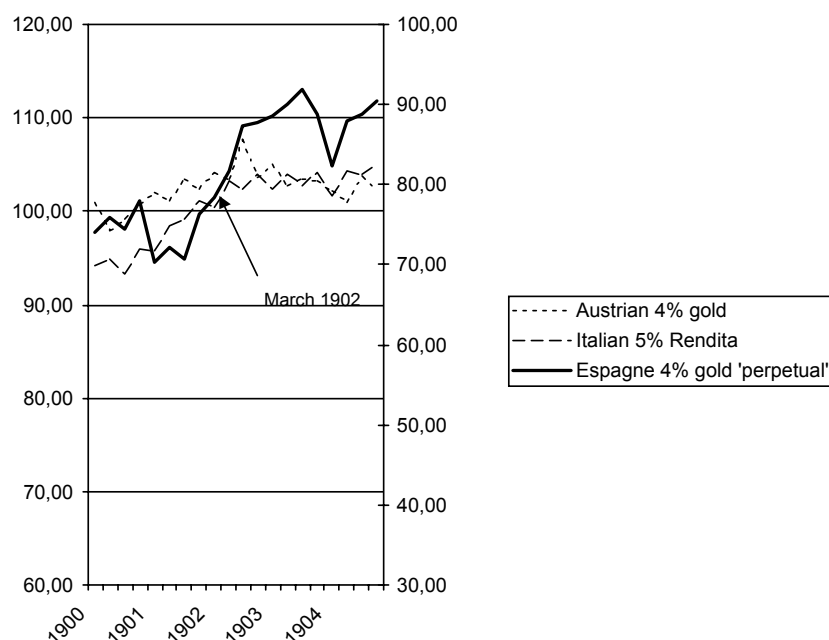
In line with what we described earlier, it emphasized the role of excessive money supply in causing the depreciation of the peseta. The case was illustrated by statistical tables, which we represent graphically in Figure 1.4. As can be seen, by and large, the relation had been very stable and could be used as the basis of a macroeconomic adjustment program. The "innovation" in the *Lyonnais* proposal however, was its claim that stabilisation could be implemented without relying either on a loan, or on the traditional "starving" policies. The trick rested on a reallocation of the money supply, which reduced the number of large banknotes and increased the supply of small ones. Since the smaller notes competed with silver coins in daily payments, they were bound to drive specie out, bringing about a contraction of the money supply, without any need for fiscal surplus or external borrowing.<sup>52</sup> Quite importantly, the advice was given on "pure academic" grounds: Germain signed "Membre de l'Institut," that is, he signed as an expert, not as a financier.<sup>53</sup> The paper stirred opposition. Theoreticians complained

that the insights which Germain was putting to work were “not new.”<sup>54</sup> Others suggested that the contraction of the money supply would cause just as much domestic disruptions, as if they had been achieved through a more classic tightening of monetary policy.<sup>55</sup> Luzzati was much more critical, considering that the measures recommended were too soft. According to him, there was an “intimate” relation between the budget, the reserve, and a sound currency: for a given money supply, a country with stronger finances was bound to have a higher exchange rate than one with weaker ones, because the resulting discredit in foreign markets would send the foreign price of government securities below their domestic level thus causing arbitrage operations: foreign purchases of domestic residents would lead to sales of the currency and cause a depreciation of the exchange rate.<sup>56</sup> With its excess of paper money, Spain had deteriorated its credit. Could it restore it without some effort? Or to put it in another way, without repentance, could there be absolution?

“Experts” Luzzati and Germain kept for a while debating about theory, emphasising the need to “diagnose” in an appropriate fashion the “disease” in order to design the appropriate “therapy” and calling themselves “true fellows of science.” But nobody was fooled by the academic ring which Germain had sought to give to his proposal. Similarly, it was only too obvious that Luzzatti had other things in mind than a pure theoretical case. Italy was precisely stabilizing its currency on that very year, and for this it used, as we saw, the traditional package of fiscal consolidation and monetary austerity. Thus as economics were being discussed, the public reached for its wallet. It was generally perceived that Germain’s move was very meaningful because it signalled an overall good opinion of the Lyonnais assessment of Spain’s outlook, or at least a preparedness to endorse and support its policies.<sup>57</sup> As one observer noted: “This proposal is modestly signed: Henri Germain, *membre de l’Institut* [...] But Mr Germain

cannot prevent the public, when he signs *membre de l'Institut*, to read nothing else than Chairman of Executive Office of Crédit lyonnais.”<sup>58</sup> This opinion was also shared on the Spanish side which welcomed such an interest as good news for the country. As the Spanish counterpart of *The Economist* wrote: “In addition, it is very important to note that M. Germain, with his advice and counselling in financial matters, has favoured and helped various countries, among which Russia, in their monetary and financial difficulties.”<sup>59</sup> In the end, as one journalist ironically noted, with so many “doctors” with an interest in Spain’s “recovery,” it was pretty clear that its exchange rate problems would soon be over: “Do not worry: by one medicine or another, the exchange rate disease cannot wait longer to starts healing, if for no other reason than the fact that there are so many rich doctors who find their interest in the patient’s recovery.”<sup>60</sup> Holders of Spanish bonds could “rejoice, for having found such a protector, they could see the future with relief.”<sup>61</sup> The price of Spanish securities soared (figure 1.4).

Figure 4. Spanish bonds and Germain's comments

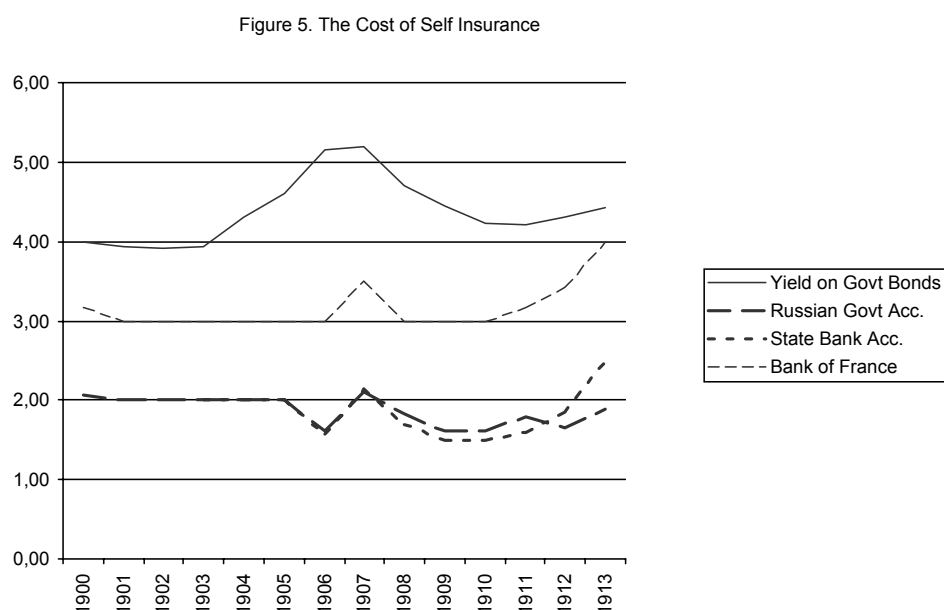


### Self insurance: the Witte doctrine

In the previous paragraph, we reviewed the borrowing countries' practice of having their privileged banker's taking care of their account as part the bankers' monitoring role. It might be useful, before we bring this Chapter to a close, to take for a while a debtor's view and discuss the implications of the specific monitoring regime that existed before WWI on the behaviour of resource scarce governments. The fact is that some debtors found that the friendliness and help of foreign bankers less than satisfying, and as a response began accumulating very large balances abroad, above and beyond their strict needs.

The champion of this policy was Russia who had, under Count Sergei Witte, the iron finance minister, began accumulating balances in the 1890s and early 1900s. Since this policy was initially met with domestic criticism, Witte had to explain its rationale in

several occasions.<sup>62</sup> According to him, the policy had grown out of a critique of the “flawed” theory according to which a State would go beyond its prerogatives in “accumulating pecuniary reserves.” The traditional view was that budgets should be balanced. Surplus had to be spent, or used to pay back the public debt. Holding a balance, even one that would earn an interest, entailed a cost for tax payers since the price at which loans were contracted typically exceeded the price at which the deposits were made. Figure 1.5 illustrates this by constructing a measure of the opportunity cost of Russia’s balance between 1900 and 1914.<sup>63</sup> As shown, the average cost of holding a reserve was somewhere around 200 basis points a 2% interest rate on the overall foreign balance.



Witte argued that this expense was necessary. While conceding that states with “small debts,” or those whose debts were “primarily held at home” could safely avoid accumulating foreign holdings, he emphasised that this course of action “would be imprudent in Russia, since our country has so large a debt of which so much is held



abroad.” One reason was the need for strategic money holdings. The market, especially the foreign market, was only generous with those who did not need money: thus funds were always more cheaply acquired when they were not needed than when the State had a pressing need for them.<sup>64</sup> Another reason was the need for precautionary money holdings. A bad harvest had to be met with grain imports, which the State had to finance. But this could destabilise the external balance if international means of payments were not readily available.<sup>65</sup> Finally, foreign balances ruled out credit rationing as they were a collateral on which States could always draw. Witte explained it in reference to Russia’s political influence and sovereignty. International conflicts created sudden needs for resources which might not be found in emergencies.<sup>66</sup> Therefore, the holding of balances was an “insurance premium” against various risks. This insurance “purchase[d] for the country a protection against enormous tax increases that would result from financial disasters, and provide[d] the State with the means to buffer without delay regional calamities.”

The interpretation of the origins of self insurance provided here suggests several lessons. One is that the constraints and limitations of the pre-1914 monitoring regime were understood and priced by governments who reacted in seeking ways to avoid being put under creditors’ control. In a sense, this was fully consistent with the ideas with which this Chapter opened: namely that Moral Hazard had to be eliminated, which in turned meant that foreign help could not in general be free. Another lesson is obviously the role of politics. The Witte doctrine was a tight combination of political and economic considerations. It seems obvious that Russia’s determination to limit external interference had to do with both its political ambitions and domestic problems. The sharp contrast between the record of Argentina on the one hand and that of Russia

suggests that within a common economic framework, political positions could lead to quite contrasted behaviour and results.

Finally, one may speculate on the implications of self-insurance for the operation of the pre-1914 international monetary system. Obviously, the demand for insurance should increase when people get richer. It might thus be fairly understandable that the growth of international balances in Russia, Japan and other countries precisely occurred when the financial situation of borrowing governments experienced the cyclical improvement outlined by Flandreau *et al.* (1998) and which coincided with the post-1896 gold inflation. Thus, one effect of the private monitoring regime of the pre-1914 period would have been to have induced a pro-cyclical tendency for States to purchase more insurance when their situation improved and less when their prospects deteriorated. If sustained, this conclusion would go a long way in explaining the highly cyclical stability of the gold standard.

## **CONCLUSIONS**

This chapter has surveyed the theories and policies of financial crises before 1914. From a theoretical point of view, the discussion highlights the persistence of problems, which have shaped across time and space the international advising relation. In effect, the chapter has shown (somewhat discouragingly) how little has been learned over one century of crises. The basic interpretation of financial crises in the late 19<sup>th</sup> century is not strikingly different from the one that still prevails today. The debate over the appropriate mix of fiscal and monetary adjustments is still on the agenda. There would certainly be people who would be prepared to agree that IMF adjustments programs may be called “starving” policies. Moreover, it seems that contemporaries already knew

about some dangers, which we seem to have only recently relearned. One is the risks of floating with a large debt denominated in a foreign currency: this has caused several crises both recently in a more distant past.

From a historical point of view, just in the same way as we saw people reacting to the crises that they had experienced in the 19<sup>th</sup> century, and then more specifically, in the 1890s, there was a keen continuity between the pre-1914 experience and the design of subsequent policies, most notably by the League of Nations. Everything happens as if the responses of every period were shaped by the most recent crises. In particular, the League would undoubtedly share the late 19<sup>th</sup> century's writers' wisdom that the source of evils was the budget, and that no stabilisation could take place unless the central bank would have been made independent from the government. Thus its famous and often criticized insistence on central bank privatisation.

It is probably from a political point of view that the differences between the pre-1914 set up and the modern one are the most striking. The bilateral confidential relation that united bankers and governments has been replaced to some extent by a more multilateral system with the IMF as a centrepiece. This has occurred gradually, with the League of Nations emerging undoubtedly as an attempt to overcome some of the flaws of the pre-1914 monitoring regime discussed here. While the creation of multilateral agencies have made headway in helping to fix co-ordination problems, they have also created their own difficulties. Back in the pre-1914 years, the "normal" times banker was also the one in charge of dealing with crises. This probably meant higher rewards for information disclosing. Separating the crisis management role from other attributions, has probably created other difficulties with which our own fin de siècle is currently dealing.

The shortcomings of the current set up have increased the pressure on multilateral agencies. Many voices now support a broader use of “market” solutions. This Chapter has shown that many of these “new” suggestions to “bail in” lenders, to develop bankruptcy procedures with bondholders, or to encourage “self insurance” emerged “naturally” in the pre-WWI order.<sup>67</sup> But the historical experience is that such recipes were not enough to guarantee global financial stability, and led to an attempt to improve the system by increasing the role of multilateral agencies. There is a real danger, in reacting to the recent history, to forget the lessons from the more remote one.

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## Notes

<sup>1</sup> Conant (1896: 235) described it in the first edition of his book.

<sup>2</sup> Lévy (1911: 142).

<sup>3</sup> This was obvious for instance in Nogaro's undergraduate lectures (Nogaro 1909), where this author emphasized that the connection between exchange rate, relative price movements, the trade balance and bullion flows was not as simple as posited in Ricardo's interpretation of Hume's "tought experiment" which was concerned with tracing the effects of a sudden and massive increase in one country's money supply. He suggested that offsetting flows of bullion (working e.g. through the trade balance would eventually restore the balance). Ricardo derived from it a theory of the "normal" operation of a specie system with relative prices triggering bullion flows. It is obvious from Nogaro however that academic writers did not have a fully fledged alternative.

<sup>4</sup> Raffalovitch (1901a: 3) suggests as a possible list: "war, revolution, waste of resources, insufficiency of tax receipts."

<sup>5</sup> See Raffalovitch (1901b: 2).

<sup>6</sup> Raffalovitch (1901b: 3). This interesting quote suggests that it is not that 19<sup>th</sup> century international macroeconomists did not know about one key prediction of the Mundell-Fleming model (that monetary expansion brings domestic prosperity by booster demand), but rather that they did not believe in it.

<sup>7</sup> Raffalovitch (1901b: 3).

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<sup>8</sup> A recent paper which puts the operation of leading financial centers at the heart of the transmission of problems from country to country is Calvo (1999).

<sup>9</sup> There is evidence that contemporaries understood the importance of this channel. Raffalovitch explicitly writes about the aggravating role for Portugal of the “repercussion of the Brazilian crisis.”

<sup>10</sup> Conant (1915: 668–9).

<sup>11</sup> Conant (1915: 669).

<sup>12</sup> Arch. Crédit Lyonnais. Similarly, Conant (1915: 669) argued that “The shock drove Austrian securities homeward from Germany as a result of the scramble for ready cash in the Berlin market”.

<sup>13</sup> Raffalovitch (1901a: 16–7). The French word for repercussion was “contrecoup”.

<sup>14</sup> “ The fall of powerful banking houses, stock market crashes, are brutal facts that remind in a concrete and striking way that there exists economic laws that one does not violate with impunity. Studying crises is interesting. It provides some dramatic episodes and brings practical lessons. It is not we may praise ourselves of being able to prevent or avoid those crises, but they bring a number of rules which individuals and governments may profitably use”, Raffalovitch (1901a).

<sup>15</sup> As quoted in Powell (1916: 325 fn 1).

<sup>16</sup> See Conant (1896).

<sup>17</sup> Arch CL, 73248.

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<sup>18</sup> Raffalovitch (1901a). It is interesting to remark that “fundamentals” are identified with physical phenomenon (and thus physical laws) while expectations are interpreted as a more social phenomenon. The fact is that experts reckoned that while agents were forward looking, they could also be wrong.

<sup>19</sup> Leroy-Beaulieu (1878). Leroy Beaulieu had in fact precisely in mind the experience of Russia.

<sup>20</sup> On this, see Raffalovitch’s detailed account.

<sup>21</sup> “This burden is very heavy, because it is an almost entirely external debt. Its weight thus depends on the exchange rate. It rises in terms of crises. The existence of an inconvertible paper regime renders this burden untimely and painful. Assume that as a result of political anxiety or risks, or again because of some economic crisis, the paper ruble, which is the currency in Russia, depreciates by 20 per cent. This is equivalent to an increase of 20 per cent of the service. States should thus be very careful when they borrow abroad” (Leroy-Beaulieu 1879: vol 2, p. 580).

<sup>22</sup> Raffalovitch (1901b: 4). This view was pervasive. In the Lyonnais discussions of what needed to be done to stabilize the Spanish exchange rate after 1898 we read: “In order to bring back the peseta to its parity, one only needs to restore the situation that prevailed between 1874 and 1891. During those years, the exchange rate stood at par, while the Law prescribed that the cover ratio should be at least 1/4 and that total note circulation should not be in excess of 700 millions.” “In restoring the legislation of 1874 [...] one will restore the situation of 1874.” Arch. CL, 73248.

<sup>23</sup> The emphasis on starving implies that contemporaries understood that the change in relative prices worked through relative money demands, not through the balance of trade. In other words, the monetary approach to the balance of payments, not the price specie flow mechanism, was what was relied upon. See Conant as well as the articles of Willis in *Sound Currency*.

<sup>24</sup> This clearly shows that 19<sup>th</sup> century applied economists believed in the monetary approach to the balance of payments rather than in Ricardian relative prices-trade balance effects. See Nogaro (1905).

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<sup>25</sup> Raffalovitch (1901b).

<sup>26</sup> Raffalovitch (1901b).

<sup>27</sup> Bourguin (1897), Pallain (1905), Conant (1915: 562–3).

<sup>28</sup> *The Economist*, December 17, 1904, p. 2049. The *Economist* reacted on the plan that had been circulated by the Mexican Minister Limantour. The issue raised by *The Economist* had been at the centre of a fierce controversy that pitted together the various members of the Commission on International Exchange to which early money doctors Conant and Jenks participated. The report of the commission was published as *Report on the introduction of the gold exchange standard into China and other silver using countries*, by Commission on International Exchange, 2 vols. Washington 1903–4. On this controversy, see Conant (1915).

<sup>29</sup> Raffalovitch (1901b) argued that the longer the period of float the more difficult it was to stabilize — probably, one would say, because market participants had already adjusted to it: “those who want to withdraw paper money from the circulation meet the opposition of those who want more credit and higher prices especially if convertibility had been introduced long ago.” The political economy of the new parity involved a typical conflict between holders of government bonds (who favored revaluation) and industrial interests.

<sup>30</sup> Quoted in Lévy (1911).

<sup>31</sup> Conant (1896: vii).

<sup>32</sup> *Journal Officiel de la République Française* (1897).

<sup>33</sup> Lévy (1911: 625).



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<sup>34</sup> It is interesting to compare Conant's 1896 description of the Bank of Russia as an abject agent of the Russian State to the one included in the 1915 edition of his book: "The history of the Bank of Russia is of interest" he wrote "because it is the most successful instance on a large scale of a bank of issue owned by the State, and because it carried through in the closing decade of the nineteenth century the most serious operations ever undertaken in Europe for the restoration of stability of exchange upon a gold basis" (Conant 1915: 251).

<sup>35</sup> Technically, the Treasury could undertake buyback at a depreciated price, deposit the bonds at the bank and then draw short term advances against the bonds using them as a collateral at face value.

<sup>36</sup> Conant (1896).

<sup>37</sup> Of course the outcome depended upon the actual efforts made by the country under review: while Greece defaulted soon after the funding loan was arranged, Brazil "courageously adhered" to the set of stabilization measures that were defined under Rothschild's pressure (Conant 1915: 504).

<sup>38</sup> See *Economiste Européen*, March 11, 1898, XIII. Both funding loans were made at a nominal interest rate of 5%. Burdett's Stock Exchange Official Intelligence does not provide information on the actual yield. Since the yield on outstanding Greek bonds were above 20% in the first half of 1893, and that of Brazil in 1898 went above 15%, it would be interesting to know whether the guarantees did improve borrowing terms as they should have.

<sup>39</sup> Gille (1967: 422).

<sup>40</sup> *Bankers magazine*, December 1895, p. 726.

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<sup>41</sup> Flandreau and Gallice (2003). Note that the central bank cooperation that allegedly prevailed before 1914 should be understood within the broader framework of these private schemes. The fact is that all these scheme were typically profitable for the lender. See Flandreau (1995).

<sup>42</sup> Arch CL: 73244/2, “Le syndicat des francs.” According to Conant, the goal was thus to create a cartel between these interests so that institutions in need of foreign exchange would “not bid against one another for bills at a higher price.” Conant (1915: 317).

<sup>43</sup> The goals of the Syndicate were initially leaked by a catalonian business newspaper, the *Diario de Barcelona*.

<sup>44</sup> While it was reported that the scheme had indeed permitted to temporarily mitigate exchange rate fluctuations, the 50 million francs of the lending facility were quickly run down and proved in the end unable to contain exchange rate depreciation once the facility was exhausted. The episode suggested to observers that intervention schemes that would not be backed with substantial reform were essentially useless in the absence of genuine stabilisation efforts. On this see Mitjavile (1904), Fochier, (1906), and *Economiste Européen*, January 24, 1904, XXV, 156.

<sup>45</sup> The British corporation of foreign bondholders had a large reference library which investors could get access to.

<sup>46</sup> Such was the case for instance of Major Law who had been sent by the British Foreign Office under pressure from the bondholders.

<sup>47</sup> Quoted by Gille (1967).

<sup>48</sup> Lysis (1908: 105).

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<sup>49</sup> Gille describes the insistence that James de Rothschild displayed towards the policy adjustments he expected from the Italian government (Gille 1967). Similarly, Ferguson describes how Brazil's stabilization's plan was notified to the country in 1898 (Ferguson 1999: 871).

<sup>50</sup> As Ferguson (1999: 871) describes, after 1900, the Rothschild position "came under attack in both Chile (from the Speyers and Deutsche bank) and Brazil (from Shröders)."

<sup>51</sup> *Le change espagnol au pair, sans emprunt*, Arch. Crédit lyonnais.

<sup>52</sup> The origins of this idea may be traced back, Conant (1896) and (1915) traces it back to a paper by Max Wirth.

<sup>53</sup> The "Institut" was the *Institut des Sciences Morales et Politiques* a kind of social sciences *Académie Française* created in the first half of the 19th century.

<sup>54</sup> Leroy-Beaulieu, *Journal des Débats*, 23 avril 1902.

<sup>55</sup> Siegfried, *Le Matin*, 27 avril 1902.

<sup>56</sup> Luzzatti had obviously in mind the Italian experiences and the violent arbitrage operations which had accompanied it.

<sup>57</sup> As a matter of fact, Germain's proposal did not conceal its positive assessment of Spain, a country "which had made genuine sacrifices" and "brought balance in its books."

<sup>58</sup> *Le mouvement financier*, 16 avril 1902.

<sup>59</sup> *El Economista*, 12 April 1902.

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<sup>60</sup> *Le mouvement financier*, 16 avril 1902.

<sup>61</sup> *Le mouvement financier*, April 9, 1902

<sup>62</sup> See e.g. Witte (1901), Report on the Empire's Budget, "De la nécessité pour la Russie d'avoir une encaisse importante. Avantages que comporte une encaisse importante au moment de réaliser un emprunt. A quel moment la Russie doit-elle emprunter." Annotated translation, Archives du Crédit Lyonnais, 73216.

<sup>63</sup> The opportunity cost of holding the reserve is measured by the cost of the loans that would not have had to be made had the reserve not been accumulated. The revenue from Russian deposits is measured using the figures from Crédit Lyonnais' analytical accounts. Contemporaries indicated that the typical rate at which deposits were taken was 100 basis points below the Bank of France base rate.

<sup>64</sup> "There is a great difference between the situation of a state which, having holdings, can wait for better conditions and one which, without those holdings, has to accept the lenders terms."

<sup>65</sup> "Where shall the State find the means that are necessary to help population if the administration merely balances its books and does not save anything for the rainy days?."

<sup>66</sup> "The political destinies of a first class power such as Russia tightly link its life to those of other nations. Wherever important political event take place, and whatever the countries whose interests they involve, these events have almost always an effect on Russia. They are sometimes directly determined by the course of action we take. In other cases they lead us to take steps that protect our country's position in the world. The first result of this impact of political events is, obviously, the need to collect the means necessary to deal with the situation [...] Generally, needs resulting from political events are unpredictable and, when they occur, absolutely urgent. From where we see that, if we did not have reserves, we would see ourselves, in such a circumstance, either to sacrifice political interests, or to borrow at any price. But then, experience shows that states, like individuals, are often offered loans at attractive prices when they

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have no use for them, while by contrast, regardless of their solvability, they sometimes just can't find resources at an affordable price, when they need it urgently. In such situations, the lack of a pecuniary reserve might cause to the State a political prejudice."

<sup>67</sup> Such proposals include Mussa (1999) and Feldstein (2000).

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