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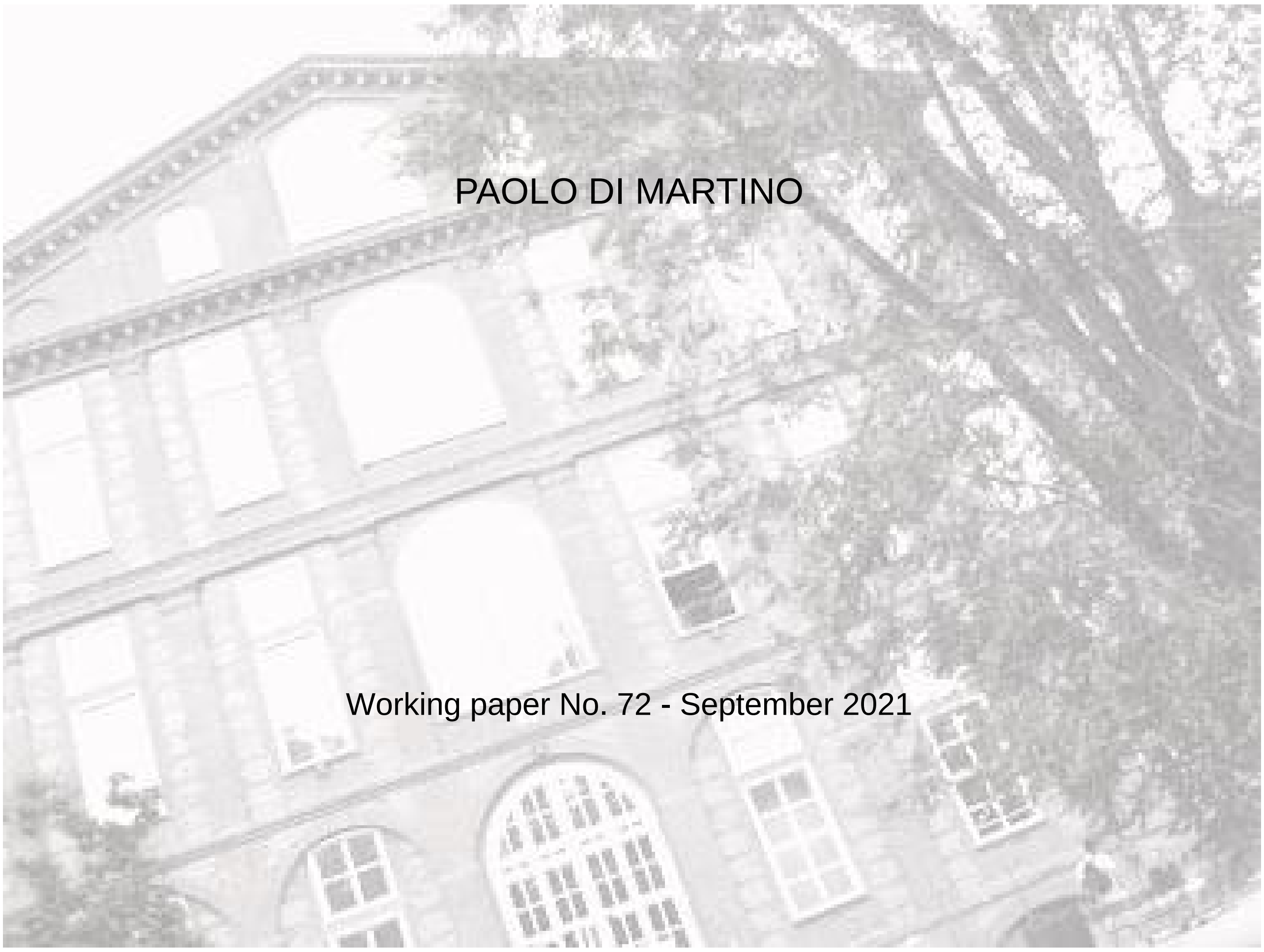
CENTRAL BANKS' INTERVENTION IN EXCHANGE RATE MARKETS DURING THE "CLASSICAL" GOLD STANDARD: ITALY 1880-1913



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Central banks' intervention in exchange rate markets during the "classical" gold standard: Italy 1880-1913

Paolo Di Martino

Abstract

This paper reconstructs the history of direct interventions to support the exchange rate performed by Italian banks of issue between 1880 and 1913. The paper, based on coeval documents, shows how in Italy "central banks" played an active role over the whole period targeting, in particular, the price of public bonds traded internationally as the difference between this price and the one in domestic markets could activate arbitrages able to influence the exchange rate. The paper shows that the end-result of these interventions depended on the interconnection between three variables: the volume of Italian bonds traded internationally, the amount of forex reserves held by "central banks", and the trust in the Italian public finances.

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Usual caveat applies

Central banks' intervention in exchange rate markets during the "classical" gold standard: Italy 1880-1913

Introduction

In the last two decades a growing literature has shown how central banking during the classical gold standard was a very active exercise, in conflict with the established view of banks of issue during this period having the mere task of converting banknotes into gold and vice versa. For instance, central banks of core countries actively "sterilized" the impact of international shocks deriving from the exogenous rise of the discount rate in Britain (Bazot et al., 2016, Bazot et al., 2019). At the periphery this policy of resistance to shocks was run with less effectiveness, yet studies on Portugal, Scandinavia and Austria[1] have shown how central banks, in general, pursued strong policies of direct intervention aimed at stabilizing the exchange rate (Reis, 2007, Ögren, 2012, Øksendal, 2012, Jobst, 2009). Well aware that, in the periphery, variations of the discount rate were meant to be detrimental to commerce but to have a much lower positive effects on the exchange rate than in core countries, central banks decided to make wide recourse to alternative devices, usually based on the use of foreign exchange reserves. In fact, interventions on monetary and financial markets, both at home and abroad, represented more the rule than the exception; as noticed in the case of Norway, "the core of monetary policy was not to play along, rather, to avoid having to dance to the tunes of 'the rules'".[2]

In general terms, it has been claimed that the same applied to Italy too; according to Bonelli and Cerrito (Bonellli and Cerrito, 1999), for instance, the development of central banking in Italy since the early 1890s was "not of the adherence to the rules of the gold standard … rather of their failure".[3] Despite such strong statements, in fact little is known of the actual policies put in place for the management of the exchange rate, in particular about direct interventions in markets. In contrast with the abundance of the macroeconomic literature (Fratianni and Spinelli, 1997, Tattara, 2003, Tattara and Volpe, 1997), specific and detailed micro studies of the exchange rate policies conducted by the Italian banks of issue are de-facto non-existing, while a handful of publications treat the topic only as part of wider subjects. Among these, Spinelli and Trecroci (Spinelli and Trecroci, 2012) analyzed discount rate policies during the pre-WWI period but they struggled to establish a clear direction of causality between the discount rate and the exchange rate. De Cecco (De Cecco, 1990), on the other hand, looked at the role played by the so-called "gold devices" and at direct intervention performed

[1] Reis 2007, Jobst 2009, Ugolini 2012, Ögren 2012, and Øksendal 2012.
[2] Øksendal , 2012, p. 37.
[3] P. 289 (author's translation).

by Italian banks of issue, but his analysis is limited to a section of a book's introduction and leaves most aspects just sketched. The most detailed micro studies of central banking in Italy between 1893 and WWI are the ones by Bonelli and Cerrito (Bonelli, 1991, Bonellli and Cerrito, 1999, Bonellli and Cerrito, 2000, Cerrito, 1999), which provide key information on various institutional aspects of the operation of the main Italian bank of issue (the *Banca d'Italia*, from now on BdI), but dedicate little space to the specific analysis of the exchange rate policy.

The de facto absence of micro institutions-based explanations of the pattern of the exchange rate in the decades up to WWI represents a significant gap in the Italian historiography of the period during which the country made substantial steps in its journey from the periphery to the core of the global economy. But the absence of studies on Italy also leaves a gap in that international literature aiming at re-assessing the nature and functioning of the international gold standard. Italy is not just a relevant case study because of the size of its economy, but also offers the possibility of looking into specific issues such as the impact of a deep institutional changes, the effect of financial dependence from the international markets and, considering that the exchange rate was more stable out of gold than during the years of formal adherence to the system, the actual meaning of "the gold standard".

The aim of this paper is to fill this gap by looking at the policies of direct intervention in financial and exchange rate markets performed by the main Italian banks of issue - the BdI and its predecessor, the *Banca Nazionale nel Regno* (from now on BN)[4] - between the 1880s and WWI.

The paper is based mainly on coeval documents from the BdI's archive[5] and it is structured as flowing: Section 1 looks at the evolution of the exchange rate over time, while Section 2 analyses the causes of its variations and the general background in which direct intervention on domestic and international markets took place. Section 3 to 7 offer a chronological study of these policies, focusing on specific sub-periods such the early interventions in the 1880s (Section 3), the critical phase of the late 1880s-1890s (Section 4), the transition and short-term crises around the turn of the century (Sections 5 and 6), and the time of stability since 1905 (Section 7). Section 8 provides some concluding remarks.

[4] In Italy the monopoly over money issuing was only established in 1936. Before 1894, there were six banks of issue: the *Banca Nazionale nel Regno* in Piedmont, the *Banco di Napoli* and the *Banco di Sicilia* in the south, the *Banca Romana* in Rome and two smaller banks in Tuscany. As a result of scandals and crises culminating in 1893, a reform reduced their number to three, with the incorporation of the Tuscan banks and the *Banca Nazionale* into the newly-born *Banca d'Italia* and the liquidation of the *Banca Romana.* Despite the absence of a proper monopoly over money issuing, in terms of volume of operations the *Banca Nazionale* first and later the *Banca d'Italia* were the market leaders. Although commercial entities, the two institutions also played the role of "central banks", even if within the meaning of this term in the late 19th-early 20th century. For a general reconstruction of these events see, among others, DI NARDI, G. 1953. *Le banche di emissione in Italia nel secolo XIX,* Torino, UTET.

[5] Our main source is the collection of documents edited by Marcello De Cecco (De Cecco 1990). Despite their relevance and wide coverage, to the best of our knowledge this source has never been deeply explored and used behind the (limited) De Cecco's introduction to the volume. The annual report published by the BdI and some data series complement our main source (for details, see footnote 7 and the Appendix).

1. The pattern of the Italian exchange rate over time

To analyze the pattern of the lira exchange rate, in figure 1 below we plot the monthly average price of the French Franc at the Rome stock exchange[6] for the period 1880-1913.

[Figure 1 here]

In terms of general trends, following the return of convertibility in 1883 the exchange rate stabilized around the parity, remaining below the gold export point (sometimes even below the gold import one) until the end of 1886.[7] The banking and economic crisis started towards the end of 1887, culminating with the collapse of the main commercial banks in 1893 and the suspension of the gold standard in January 1894,[8] marked a progressive decline of the Italian currency culminating in open crisis in the mid-1890s. Since then, a combination of factors such as growing migrants' remittances, the influx of tourism, the improvement of state budgets and of monetary circulation - thanks to the liquidation of the legacy of the 1893 crisis - all contributed to a progressive improvement of the exchange rate that reached again the par in 1902. This was kept, although with issues in the last two years, till WWI.

It seems that the period, overall, can thus be divided into three different phases: stabilization up to 1886, crisis and fluctuations between 1887 and 1900, and a second period of stability since the turn of the century.

[6] In the case of Italy, the French Franc, rather than the British Pound, was the key reference, given the weight of the commercial and financial exchanges between the two countries. The study is based on the short-term exchange rate for banknotes from official publications (*Annuario Statistico Italiano*) published by the Ministry for Agriculture, Industry and Trade (*Ministero di Agricoltura, Industria e Commercio*, MAIC) derived directly from the source and, up to 1893, from Di Nardi (1953) and for 1912-1913 from the annual report for 1913 published by the BdI. For the years where this source is not available, data are from SPINELLI, F. & TOSO, L. 1990. Il tasso di cambio settimanale a breve della lira nelle rilevazioni de Il Sole 24 Ore: 1865-1985. *In:* SPINELLI, F. (ed.) *Per la storia monetaria Italiana.* Torino: Giappichelli.When possible we preferred the former source over the latter. The reason being that while the former directly indicated monthly averages of consistent daily observations, the latter provides the monthly observation as an average of weekly averages and, because the authors collected different types of exchange rate, such average is not always provided when data were not considered as consistent enough.

[7] The par value of the exchange rate was 100 liras for 100 francs, the gold export point at about 100.5 (and the import one at 99.5). See FERRARIS, M. 1901. Il ribasso del cambio. *La Nuova Antologia,* 16 Novembre**,** 358-379..

[8] In the early 1880s a giant bubble took place on the real estate market in Rome; around the end of 1887 the market burst and, also because of the contraction of the international economic cycle, this led to a banking crisis, first at local level, than at national one. In 1893 the main commercial bank of the time the *Società generale di Credito Mobiliare* fell. These dramatic events generated a wide set of coeval commentaries as well as historical reconstructions. Among them see, in particular, PANTALEONI, M. 1895a. La caduta della Società Generale di Credito Mobiliare. *Il Giornale degli Economisti, Serie seconda,* 10**,** 357-429, PANTALEONI, M. 1895b. La caduta della Società Generale di Credito Mobiliare (Continuazione e fine). *Il Giornale degli Economisti, Serie seconda,* 11**,** 437-503. And CONFALONIERI, A. 1979. *Banca e industria in Italia (1894-1906). I. Le premesse: dall'abolizione del corso forzoso alla caduta del Credito Mobiliare,* Bologna, Il Mulino.

When looking at short-term fluctuations, however, the picture also shows a number of cases of sudden and deep depreciations lasting, in general, 1-2 months. In various instances these crises tended to take place when exogenous financial tensions in the core added-up to an already difficult situation of the Italian economy, for example in the late 1880s-early 1890s. For example, in November 1890, in conjunction with the Baring crisis in London, the average monthly exchange rate depreciated from 100,88 Lire per 100 Francs 101.27. Similarly, in November 1891, at the time of a crisis on the French stock market, the exchange rate reached the value of 102,82 Lire per 100 francs. Finally, the crash of the American stock market in May 1893 pushed the exchange rate from the already high value to 104.2 to 104.6. Interestingly, however, not necessarily the appearance of these short-term fluctuations happened in conjunction with domestic difficulties and, on the other hand, sometimes international crashes did not affect the Italian exchange rate. In fact, some episodes of exchange rate crises took place during what appeared a rather stable mid-term situation; for instance, in April 1885, during a year when monthly averages were constantly below the gold export point, at a time of a short-term crisis in the Paris stock market the exchange rate reached 100.74, well above the March average (100.35) and the "upper gold point". Similarly, during the very (overall) stable year of 1904, in conjunction with the political crisis between Russia and Japan the exchange rate went above the gold export point in January (100.6) and in February (100.76). On the other hand, little impact is visible in relation to famous episodes of international financial panics, for instance the one on the America stock market in October-November 1907, when the exchange rate remained around the par.

2. Exchange rate policy: issues, conditions and devices

Data on exchange rate thus reveal two different aspects which, in turn, lead to different directions of inquiry into the policies implemented by monetary authorities. The first aspect regards the general trends, the other issue concerns short-term crises and their management.

As far as general trends are concerned, these are not of particular interest for the study of exchange rate policies. As mentioned above, the different behavior of the exchange rate in the three sub-periods 1883-1886, 1887-1902 and 1903-1913 can be explained largely by looking at macroeconomic and institutional factors. In fact, as we will see in the next sections of the paper, during the most acute phase of structural instability of the exchange rate in the 1890s central banks de facto renounced to intervene, while during "normal" times both the BdI and its predecessor the BN accommodated the impact of positive macro factors using a relative passive discount rate policy consisting in keeping it 2 points higher that the French rate.[9]

[9] De Cecco (1990), p. 874, footnote 2.

Things were very different, however, during the various short-term crises described above. Ample evidence suggests that the use of the discount rate in Italy played a very contextualized role in Italy; central banks saw it as a useful device to mitigate limited exchange rate fluctuations during "normal" times, but too expensive for the economy if pushed above a certain limit and, at the same time, not effective enough to be used during what were considered as exogenous crises.[10] If standard policies were applied only to an extent, the question that emerges is what kind of alternatives, if any, were used, to navigate short-term crises. The answer to this question leads to unveiling a set of direct interventions whose frequency and extent, similarly to what happened in other peripheral countries, can hardly allow us to dismiss them using the reductive label of "gold devices".

The best way to introduce these strategies is to start from what were seen as the causes of short-term exchange rate crises. According to coeval observers, both economists and policymakers, such exchange rate crises were, in fact, the mechanical reflection of issues concerning the price of public bonds (*Rendita*) on international markets, mainly Paris. Public bonds were floated in lire in domestic markets and in gold abroad; when tensions on international markets pushed down the gold price of Italian bonds abroad relative to the Italian price, it became convenient for Italian investors to sell their bonds on domestic markets and buy them on the international ones. This, however, led to an export of gold (or of gold-denominated currencies) with negative repercussions on the exchange rate. As international markets were fully integrated, the exchange rate quickly worsened till the equilibrium was reached again, i.e. till the international price multiplied by the exchange rate equaled the domestic price in lire (Tattara, 2003). Despite fast market-driven re-equilibrating responses, the exchange rate could keep deteriorating for a length of time, as long as the price of *Rendita* abroad kept reflecting negative moods of international investors to a bigger extent than the Italian price. Also, a decline of the value of the lira generated a vicious circle whereby Italian investors also tried to cash the coupon (in gold) abroad, leading to the need for the Treasury to export metal to face such payments and further depreciation of the lira.

These problems appeared very commonly in the 1880s-1890s; in fact, as we will analyze in the following sections of this paper, the perverse interaction between public bonds prices and the exchange rate will remain the nightmare of monetary authorities until at least 1905. The key to exchange rate stabilization during crises was therefore indicated in the need to keep the domestic price of bonds in line with the international one and to avoid speculative operations on the coupon. One of the main variables affecting the process was the general exposure to the international market,

[10] A position that transpires from both official sources such as the annual reports published by the BdI (for instance in 1894, 1898 and 1899), as well as private documents at the time of the 1885 and the 1904 crises. See, Letter by Giacomo Grillo to the Treasury Minister Luigi Luzzatti, 12th November 1889 *(Lettera di Giacomo Grillo a Luigi Luzzatti*, in De Cecco 1990, 706-711 and document quoted in footnote 40 below.

i.e. the sheer volume of bonds floated abroad. In fact, the actual amount of Italian public bonds traded in foreign markets still remains a matter of debate; lacking direct data, this variable was (and still is) computed looking at the value of coupons paid in international markets, but the lack (or the permeability) of filters to stop Italian bond-holder to cash the coupon abroad makes (and made) such calculation prone to mistakes.[11] With these caveats in mind, figure 2 below plots the estimated share of *Rendita* floated abroad as calculated by Zamagni (Zamagni, 1998, Zamagni, 1999).

[Figure 2 here]

Notwithstanding the limitations of statistical reconstruction, the trend seems uncontroversial. After the return to gold in 1883, in fact since its credible announcement in 1881, Italy benefited for a very brief period of time from the benevolent attitude of international financial markets. A wide share of Italian bonds was sold abroad, something that helped to by-pass the shortage of national savings. Since the middle of the decade, however, the amount increased almost exponentially, exposing Italy to the detrimental effects of the flows of "hot money" typical of the gold standard era. The share of bonds sold internationally, however, was progressively reduced by policies of "re-purchasing" of Rendita made possible mainly by the growing flow of migrants' remittances. Although the exact amount and pace of this operation remains, to an extent, a matter of debate[12], it is clear that towards the mid-1900s the problem of the exposure to international financial markets had been substantially reduced. In fact, while in both the 1898 and 1899 Annual Report the BdI lamented the depth of the effects of international turbulences on the Italian economy because of the large amount of bonds quoted internationally, only few years later (1904) the banker Otto Joel, director of the main Italian commercial bank of the time (the *Banca Commerciale Italiana,* from now on BCI) argued that "the country, thanks to its own strength, had emancipated itself from the hegemony of foreign financiers."[13]

If it is uncontroversial that the volume of the exposure of Italian public finance to international markets provides a good first-glance general indication of the environment in which Italian monetary authorities had to operate, it is also trues, as we have seen, that short-term exchange rate crises punctuated the whole period under consideration, including when such exposure was more limited.

[11] On the limitations and problems of this approach, see Tattara (2003).

[12] This view is in line with the one of coeval authors such as Ferraris who argued that between 1894 and 1902 about 1 billion worth of Italian public bonds quoted abroad have been repurchased. See, FERRARIS, M. 1903. Politica monetaria. *La Nuova Antologia*., quoted by De Cecco, 1990, p. 775, footnote 12.

[13] *Lettera di Otto Joel a Bonaldo Stringher* (Letter by Otto Joel to Bonaldo Stringher), 8th February 1904. Source: *Archivio Storico della Banca d'Italia* (Archive of the BdI from now on Asbi), Carte Stringher, 205/2.02/75, reprinted in De Cecco (1990), p. 894 (author's translation).

This consideration suggests that other variables were at play too, and paves the way for a chronological analysis of direct interventions performed by the Italian banks of issue, in order to provide a comprehensive view of the full set of constraints and limitations that impacted on the possibility, viability and degree of success of such policies.

3. Early days: 1880-1886

Evidence of these interventions certainly dates back to the 1880s and they established modalities which in the following phase will be reinforced and perfected, but not substantially altered. In this early period, the strategy of intervention appears twofold: direct support of the exchange rate via the supply of foreign currencies in domestic markets, and interventions on the international bond market. The former type of intervention, suitable for minor depreciation of the exchange, relied on the BN to write cheques in hard currencies payable in international markets and to make them available to Italian traders to ease the demand for gold/anchored currencies. This approach was a common device at the time, very similar to the one adopted by the Portuguese central bank (Reis, 2007). Discrete and effective, it was a much preferred alternative to gold export. Immediately after the return to convertibility in 1883, although in a phase of substantial stability of the exchange rate, there is indeed a constant monitoring of this variable, and interventions take place even when variations are only marginally above the par and below the gold export point. Between October 1884 and March 1885, the BN committed about 43 millions of foreign assets (bills owned in its portfolio as well as advances on lines of credit with foreign correspondents) to offer cheques on Paris and London and on the main national financial centers.[14] The long-term viability of this device, however, relied on the possibility of keeping a stable amount of foreign exchange bills in the portfolio and reliable lines of credit with correspondents. In fact, these resources dried-up by quite soon; from 1886 in the BN balance sheet this entry (*disponibilità sull'estero* in Italian) simply disappeared. A coeval document reveals that for two reasons the BN struggled to build-up a durable portfolio of international assets. Firstly, the Italian bankers lamented a general lack of bills available in the market. But the key reason, relevant also for the analysis of the following years, and the weight of these operations for the economies of the banks of issue in the absence of a legislation that allowed foreign assets to be used also as part of the statutory reserves.[15]

The scarcity of forex reserves proves particularly tricky during short-term crises characterized by profound reduction of bond prices abroad. This problem could not be simply addressed supporting

[14] *Lettera di Giacomo Grillo all'economista Ottomar Haupt* (Letter by Giacomo Grillo to the economist Ottomar Haupt), May 1st 1885. Source: Asbi, Studi, copialettere 62, reprinted in De Cecco (1990), p. 664.

[15] Ibidem; see, in particular, footnote 6 to the document.

the exchange rate on domestic financial centers, but also needed a different type of intervention: the direct support of the price of Italian bonds on international markets, mainly Paris. Differently from the use of cheques on domestic markets, usually meaning the commitment of relatively small amounts of resources for a long time, this type of intervention necessitated instead of a bigger amount of ammunition to be spent relatively quickly. A first example of this type of problems materialized in October 1884, when the increasing level of the exchange rate (from 100,12 to 100,22) worried the government and the BN identified the *Rendita* price in Paris as the main cause of the problem. In this specific occasion the response to the limited resources of the BN is found in the foreign reserves owned by the Treasury, and the bank used 6 million of Treasury deposits at the Rothchild to intervene to support the price of Italian bonds in the French market.[16] The ability to intervene in foreign markets, however, was much more solidly tested by the financial crisis that took place in the Paris stock market in April-May 1885 as a result of international military-political tensions. To give a visual sense of the impact of the events, Figures 3 and 4 below plots the daily price of Italian public bonds in Paris and Rome (Figure 3), as well as the Lira-Franc (Lire per 100 Franc, Figure 4) during this crisis.

[Figure 3 here]

[Figure 4 here]

The repercussions of the crisis on the price of Italian bonds appeared very seriously since the 9th of the month, when the *Rendita* in Paris (whose nominal value was 100) was sold at 92.8 against the price of 95.25 of the previous day. The impact of a spread of 2.3 vis-à-vis the price in Italy, immediately affected the exchange rate that reached 100.75, well above the gold export point. The pressure kept mounting and on the 16th, with the *Rendita* in Paris 93.65 and the exchange rate at 100.98, in one single day the BN had to export 25 million worth of gold to Paris to purchase Italian bonds. But the attack seemed to come from many other directions at the same time, and the BN had to commit further 20 million in the Swiss market to contrast the sales of Italian private bills, and sell domestically 9 million of cheques payable on Paris and London.[17] The result of this painful operation, run at the cost of depletion of gold reserves, appears successful in the very short term - the *Rendita*

[16] *Lettera di Giacomo Grillo a Agostino Magliani, ministro del Tesoro* (Letter by Giacomo Grillo to the Treasury Minister Agostino Magliani), 13th October 1884. Source: Asbi, Rapporti con l'estero, cart. 129, fasc.9, reprinted in De Cecco (1990), pp. 652-654.

[17] *Verbale del Consiglio superiore della Banca Nazionale nel Regno* (Minutes of the governing body of the BN), May 6th 1885. Source: Asbi, Segretariato, Verbali del consiglio superiore, 1885, reprinted in De Cecco (1990), pp. 667-670.

in Paris improved reaching 94 on the 20th – but does not insulate the price of Italian assets from further depreciations in the following days At the end, it is only towards the end of May, when international tensions fade-out and calm is restored in Paris, that the Italian bonds price returns near the pre-crisis level and the exchange rate below the upper gold point.

Besides the limitation of their effectiveness, the interventions made in April 1885 also reveal a degree of casualness. In fact, in that occasion the maneuver consisting in exporting gold to purchase public bonds was made possible only thanks to the fortunate combination of an institutional technicality and sheer luck: according to the law, the BN could hold a share of its reserves (up to 1/5 of its capital) in public bonds, and in April 1885 the level of this component of the reserves was by 27 million below the maximum legal threshold, leaving the bank an occasional wide margin of operation.

4. In the middle of the storm: 1887-1900

The chronology of interventions made in the early 1880s thus reveals a very unstable situation where a chronic scarcity of foreign assets in the portfolios of the banks of issue pushed towards the use of creative sets of arrangements in front of the impact of potentially-devastating exogenous international crises. Difficult as they were, however, the interventions in the early-mid 1880s took place in a much better contest than in the following decade. Since 1887, the definite exhaustion of foreign assets reserves in the BN balance sheet teams-up with the progressive deterioration of financial and economic conditions of the country. To complete the picture, the breaking-up of the traditional political-military alliance with France, and the decision to gravitate instead in the German sphere of influence, contributed to alienating the sympathy for Italian bonds and bills in their main international market, while the support by German banking institutions appears timid and weak.

Italian monetary authorities thus found themselves in the position of having to face growing difficulties with a progressively narrower set of options. During these years the tendential stability of the price of Italian bonds and of the exchange rate, visible up to 1887, deteriorated and Italian financial assets became even more prone to depreciations in case of international crises and shocks. A relevant example is the one of November 1891, when the French market had to cope with the growing tensions derived from a series of events such as the *Comptoir d'Escompte* failure in 1889 and the Bring Bank crisis of October 1890. The events of November 1891 are an effective mirror to look at how much the situation had worsened as compared to the previous decade and how, in such a new blinker scenario, the power of Italian authorities to influence the events had become ineffective. As for the previous cases, the crisis took the standard form of a general scarcity of funds in the market and massive liquidation of foreign bills and bonds; among them, noticed the Italian Treasury minister, "the most mistreated were the ones of debtor countries".[18] Figure 5 below gives a sense of the degree of such depreciation plotting the weekly price of Italian public bonds on the French exchange market between the end of October and the beginning of December 1891.

[Figure 5 here]

If the crisis does not reveal, at first instance, a major difference vis-à-vis various similar episodes of the 1880s, what has changed is the ability to tackle it. The intervention by the "new" allies (a consortium of German banks) did not lead to any improvement in the prices of Italian assets in front of the still-negative attitude of other financial investors. Squeezed between the harshness of the crisis, the weakness of German support, and the lack of foreign reserves, contrary to what happened in 1885, the BN this time explicitly surrendered in the awareness that an intervention in the market would have been a "useless venture".[19] Again in contrast with the situation of the early 1880s, when the storm got over things only minimally improved; with the exchange rate consistently well above the gold export point, the difference between navigating medium-term patterns and addressing short-term crisis blurred, leading to the need of a constant, painful yet relatively ineffective defense of Italian bonds and of the exchange rate. With this aim, the Treasury leads a consortium, participated by the banks of issue, with a twofold strategy. The first one was to try and absorb foreign exchange bills in the Italian market and to re-sell them at a cupped price to stop the speculators, the other one to restrict domestic credit to importers to use these foreign assets resources to finance the purchase of public bonds abroad without affecting the exchange rate.[20] But - the Treasury Minister claimed - with two billion worth of *Rendita* floated aboard and the banks already weakened by the effects of the building crisis in Rome, the fight was tiring and the results maigre: stopping the exchange rate to reach more than a 10% depreciation, and the price of Bonds abroad to go below 80.[21] And not much more result

[18] *Nota di Luigi Luzzatti in Appendice al suo interrogatorio alla Commissione parlamentare d'inchiesta sulle banche* (Note by Luigi Luzzatti, appendix to the minutes of his hearing before the parliamentary inquiry commission on banks). Source: Atti parlamentari, 1892-94, reprinted in De Cecco (1990), pp. 772

[19] *Lettera di Giacomo Grillo a Luigi Luzzatti* (Letter by Giacomo Grillo to Luigi Luzzatti), 13th October 1884. Source: Asbi, Studi, Copialettere 17, reprinted in De Cecco (1990), pp. 756.

[20] *Nota di Luigi Luzzatti in Appendice al suo interrogatorio alla Commissione parlamentare d'inchiesta sulle banche* (Note by Luigi Luzzatti, appendix to the minutes of his hearing before the parliamentary inquiry commission on banks). Source: Atti parlamentari, 1892-94, reprinted in De Cecco (1990). See, in particular, pp. 777 (footnote 17) for the former aspect and p. 775 for the latter.

[21] Ibidem, p. 776.

brought the effort of trying to influence the international press, by "spending some thousands Lire … to defend and let Paris know the truth on our *Rendita* and on our economic and financial situation".[22] If possible, things have gotten even worse since 1893. The fall of the two main commercial banks of the time as well as the scandals emerging on irregular or even illegal behavior from banks of issue marked the peak of a crisis that, as we have noticed, found its roots in the previous years.[23] While up to then the reputation of Italian finances appeared compromised yet not completely hopeless, since 1893 the trust of the International markets appeared lost. In February, in a letter to the French correspondent Fournier, Grillo bitterly admitted: "I can see that, unfortunately, things there took a bad turn and I cannot get a great deal of consolation thinking about our situation, as things here are not going well either".[24] The decision to suspend the gold standard in 1894 represents the natural ending of this critical phase. In this scenario, Italian authorities can only make recourse to some desperate strategies, in the attempt of supporting the value of *Rendita* abroad, such as influencing the press. Even these strategies, however, are quickly dropped in the evidence of their lack of effect.[25] For the remaining part of the decade, it appears that no active intervention is put in place for the defense of the exchange rate.

5. Improving situation and still-open issues: 1900-1903

Although the 1890s probably marks the hardest phase of intervention on exchange rate markets, two positive institutional changes were in motion. The one was a direct consequence of the 1893 crisis: the emergence of new commercial banks replacing the older French-style institutions; in particular one of them, the already-mentioned BCI, will prove in the following years a strong partner in direct interventions in the exchange rate market as well as in the market for public bonds. The second aspect was a key institutional reform that, at the time of its establishment, allowed the BdI to keep reserves in foreign exchange. Although within limitations, the BdI was allowed to use foreign exchange assets to cover money issuing (up to 17,5 % of the statutory reserves) and to build further free reserves up to the limit of 6 million lire.

This possibility paved the way to intervene effectively on exchange rate markets as foreign exchange assets could have been accumulated when the exchange rate was favorable and sold when tensions

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[22] *Interrogatorio di Giacomo Grillo alla Commissione parlamentare d'inchiesta sulle banche* (Giacomo Grillo's hearing before the parliamentary inquiry commission on banks). Source: Atti parlamentari, 1892-94, reprinted in De Cecco (1990), p.793.

[23] See footnote 9.

[24] *Lettera di Giacomo Grillo a Fiorillo Fournier* (Letter by Giacomo Grillo to *Fiorillo Fournier*), 13th February 1893. Source: Asbi, Studi, Copialettere 66, reprinted in De Cecco (1990), p. 790

[25] *Lettera di Giuseppe Marchiori, direttore generale della Banca d'Italia, a Fiorillo Fournier* (Letter by Giuseppe Marchiori, general director of the Banca d'Italia, to Fiorillo Fournier), 23th December 1894. Source: Asbi, Studi, Copialettere 68, reprinted in De Cecco (1990), pp. 833-834.

arose.[26] Besides, the chance given by the Treasury to hold foreign exchange reserves was seen by the banks of issue as a convenient privilege which helped smoothing-out the relations with the government and make them happier to operate on its behalf.

Around the turn of the century, these institutional changes combined with improvement of both the national and the international macroeconomic scenario made room for a much less frantic situation. Nonetheless, well informed players such as the director of the BdI Bonaldo Stringher realized that Italy was still walking on a fragile ground in relation to the balance between the exposure towards international financial markets on the one hand, and the amount of foreign exchange reserves to be used in cases of sudden crises on the other. Towards the end of November 1903, Stringher wrote to the Treasury minister demanding more elasticity in the management of foreign exchange reserves, arguing that such strategic resources were still too limited to neutralize the effects of possible withdrawal of still very volatile international investment.[27] Although the request to increase the level of foreign exchange reserves also responded to corporate goals, a comparison between the exposure to international markets and the amount of ammunition to be used during crises somehow supports the banker's fears. Although it is virtually impossible to argue with precision what a safe level of foreign exchange resources would have been, some useful indications came from a 1889 document. During a short-term crisis of the Italian bonds, German investors claimed that with about 9 billion worth of *Rendita* in the market and "the great amount still floated in France", a support of no less than 50 million liras would have been ineffective.[28] According to Zamagni's calculations, in 1889 about 1/3 of Italian bonds were floated abroad which, roughly, suggests that if the Germans were rightly informed an effective intervention would have required an amount of forex reserves no smaller than about 2% of the amount of bonds floated abroad. By 1903, at the time of Stringher's request, according to Zamagni's figures the annual average amount of bonds floated abroad would have been around 1,3 billion (13 billion of bonds, about 10% of which sold in international markets). In November 1903 "free" forex reserves (i.e. reserves not included in the statutory ones) were about 15 million[29] as a result of the Treasury decision to allow the BdI to go above the official 6 million

[26] On the various uses of free exchange rate reserves, see *Lettera di Bonaldo Stringher a Luigi Luzzatti, ministro del Tesoro* (Letter from Bonaldo Stringher to the Treasury Minister Luigi Luzzatti), 18 April 1906. Source: Asbi, Studi, copialettere. 80, reprinted in De Cecco (1990), pp. 932-938.

[27] *Lettera di Bonaldo Stringher a Luigi Luzzatti, ministro del Tesoro e ad interim delle Finanze* (Letter from Bonaldo Stringher to the Treasury Minister Luigi Luzzatti), 24 November 1903. Source: Asbi, Studi, copialettere 79, reprinted in De Cecco (1990), pp. 876-879

[28] *Lettera di Eberhard von Solms al cancelliere Otto von Bismarck* (Letter from Eberhard von Solms to Bismarck), 5 Agosto 1889. Source: PA, IA Italien 73 geheim, volume 2, reprinted in De Cecco (1990), pp. 691-692.

[29] Source: Ministero del Tesoro (1904), see Appendix.

threshold.[30] Nonetheless, despite this more liberal approach, the free foreign exchange reserves were equivalent to about 1.1% of the volume of Italian bonds abroad. In other words, even taking into account the difference in the level of the Italian credibility in the international financial arena, well below the safety line suggested by German banks in 1889.

6. "The roar of artilleries": the 1904 crisis

Whether in November 1903 Stringher had crystal ball or only a good sense for international finance it is impossible to say, but a fact remains that it took only about two months for his fears to face the test of moody international markets reacting to firstly political tensions, then open military conflict, between Russia and Japan. The correspondence between the central banker and Otto Joel offers a privileged point of view of the events, their repercussions, and the exchange rate policies implemented, opening a window not only of what was materially done, but also on the more general attitudes of the monetary authorities, the devices they could use, and their effectiveness. A privileged window also because, it is important to stress, nothing of this transpires from the official annual report for 1904 produced by the BdI, to indicate the very reserved (if not openly secret) character of these types of operations.

After a few months of exchange rate below the par (and below the gold import point), towards the end of January, in conjunction with growing tensions between Russia and Japan, the exchange rate weakened, reaching again the par. A trend that worries the Treasury which puts pressure on both the BdI and the BCI to "monitor and intervene."[31] The reaction is indeed very quick and, on Monday the 25th, The BdI injects half million lira worth of foreign exchange bills in the Italian market. In the following days the speculative nature of the exchange rate crisis appeared very clear and the following week the situation worsened further. In the period up to Saturday the 6th, the BdI and the BCI, which also offers the BdI logistic support in the actual running of the operations, reacts with decision to the monetary tensions by injecting, at daily pace, a total of more than 23 million of foreign exchange bills in various Italian financial centers.

[Table 1 here]

This first part of the 1904 crisis seems to reveal, at least at first glance, some interesting changes vis-à-vis the previous ones. Firstly, up until February the 6th, the crisis was fought directly on domestic

[30] Since 1903 the Treasury started keeping a blind eye in front of lack of respect by the BdI of the upper limit of 6 million. Source: see documents quoted in footnote 26.

[31] *Lettera di Otto Joel a Bonaldo Stringher* (Letter by Otto Joel to Bonaldo Stringher), 22nd January 1904. Source: Asbi, Carte Stringher, 205/2.02/25, reprinted in De Cecco (1990), p. 880 (author's translation).

exchange rate markets, with only marginal attention paid to the bond prices abroad.[32] Secondly, it appears that the firepower in the hands of the Italian institutions (BdI and BCI together) was sufficient to successfully defend the relative brave target of 100.2-100.25, a “virtual” gold point well below what the official one would have been had Italy still been on the official gold standard.

Despite the relative satisfaction for the achievement,[33] however, awareness surfaces that continuous success was meant to be conditional on international political contingencies, and that a worsening of tensions was destined to turn the maneuver into a failure.[34] The beginning of the following week saw the materialization of such fears: on the 8th the Japanese fleet attacked the Russian base of Port Arthur and on the 10th Japan formalized the war declaration. Italian authorities have only to wait another day for old ghosts to re-appear in the form of a crash of the bond prices in Paris; on February the 11th the Italian *Rendita,* from the value 102.17 of the beginning (the 2nd) of month, dropped to the price of 99.95.[35] In commenting on the events two days later, Bonaldo Stringher bitterly wondered whether “the roar of the Japanese artillery would not have called Italy back to reality.”[36] The exchange of correspondence between Stringher and Joel during these critical days reveals how little, in practice, seems to have changed for the position of Italian finances in front of sudden international crashes as compared to the 1880s or 1890s. The “reality” Stringher referred to is the one of a country still too dependent on foreign finance and whose bonds and currency markets are excessively “impressionable” by even minor turbulences taking place on international financial centers.[37] Stringher’s pessimistic view on the situation is indeed confirmed by the combination between the depth of the issues to address on the one hand, and the narrowing down of the available options for the BdI on the other. De facto, a type of situation that bounces-back the monetary authorities to the scenario of the previous two decades. Very quickly, despite both Joel’s and the Treasury minister suggestion to keep the intervention focused on the domestic exchange rate markets in the crisis, Stringher decided instead to play as safely as possible and to operate on the international bond market,[38] in the fear that the liquidation scheduled on the 15th of the month might end-up with

[32] In a letter dated February the 6th, Joel mentions generically the purchase of some bonds in Paris arguing, at the same time, that his concerns were mainly for the exchange rate. *Lettera di Otto Joel a Bonaldo Stringher* (*Letter by Otto Joel to Bonaldo Stringher*), 6th February 1904. Source: Asbi, Carte Stringher, 205/2.02/66, reprinted in De Cecco (1990), p. 893.

[33] In the same document, Joel argues that they (Stringher and himself) should consider themselves “rather satisfied” by the results of the operations. (author’s translation).

[34] *Telegramma di Bonaldo Stringher a Otto Joel* (Telegram by Bonaldo Stringher to Otto Joel), February the 6th. Source: Asbi, Rapporti con L’estero, cart. 307, reprinted in De Cecco (1990), pp. 897-901.

[35] De Cecco (1990), p. 902, footnote 1.

[36] *Lettera di Bonaldo Stringher a Otto Joel* (Letter by Bonaldo Stringher to Otto Joel), 13th February 1904. Source: Asbi, Carte Stringher, 205/2.02/99, reprinted in De Cecco (1990), pp. 911-912. Author’s translation.

[37] Ibidem.

[38] *Lettera di Otto Joel a Bonaldo Stringher* (Letter by Otto Joel to Bonaldo Stringher), 12th February 1904 (morning). Source: Asbi, Carte Stringher, 203/3.01/7, reprinted in De Cecco (1990), pp. 907-910.

dramatic consequences.[39] The real issue, however, was not on which market to intervene, but how and with which resources. Likewise in the previous decades, the suggestion arose to use the discount rate but, in line with what claimed during international crises in the 1880s and 1890s, the BdI once again reiterates its lack of trust in the effectiveness of this device to face international financial shocks.[40] With limited forex reserves, the only viable and potentially effective solution appeared a direct intervention on the international market committing "various tens of millions of the gold stock-piled by the Bank [of Italy] and the Treasury during the period of exceptionally low exchange rate."[41] In front of differences of opinions with the Treasury about targeting Italian bonds or the exchange rate, the minister's uneasiness about the use of gold and foreign assets to defend the bond prices and the suggestion to make recourse, instead, to an international loan, the crisis simply lingers on for another ten days till, on the 23th of February, the BdI de facto abandoned the battlefield and renounce to intervene.[42]

As Stringher claimed, at the end the international financial tensions ease-up when fears of the involvements of other European powers in the conflicts disappeared and the war acquired a regional dimension.[43] The mood of international markets went back to optimism with distinctive improvements of the prices of all financial assets, including Italian public bonds: by the beginning of April, their price in Paris had come back to the one of the beginning of February (Figure 6).

[Figure 6 here]

Despite its relative short duration, the February 1904 crisis remained a distinctive example how Italy, despite substantial institutional and economic improvements remained exposed to international shocks, and how the ratio between the size of the target (i.e. the amount of bonds still floated abroad) and the one of the ammunitions (the forex reserves) remained insufficient.

7. After 1904

The 1904 crisis, however, had a short life; by April of the same year the exchange rate returned under control and did not depart significantly from the par till 1911, despite relevant international crises

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[39] *Lettera di Bonaldo Stringher a Otto Joel* (Letter by Bonaldo Stringher to Otto Joel), 13th February 1904. Source: Asbi, Carte Stringher, 205/2.02/99, reprinted in De Cecco (1990), pp. 911-912.

[40] Ibidem.

[41] Ibidem, author's translation.

[42] *Lettera di Bonaldo Stringher a Otto Joel* (Letter by Bonaldo Stringher to Otto Joel), 23rd February 1904. Source: Asbi, Carte Stringher, 203/3.01/49, reprinted in De Cecco (1990), pp. 924-925.

[43] Source: document quoted in footnote 26, p. 936

such as the 1907 one. This pattern raises the question of whether the BdI interventions became more effective, the pressure on Italian finances smaller, or both.

Although a precise answer to this question remains a matter of debate, it is possible to indicate four positive changes vis-à-vis the previous period, something that suggests that the overall stability of the exchange rate after 1904 was likely the result of a number of factors.

The first positive aspect was a further acceleration in the reduction of the share of public bonds floated abroad visible since around 1905; although, as mentioned, these data should be taken with caution, data by Zamagni indicate that while in 1904 this amount was still in the order of about 18%, it dropped to 10% or less in the following year. The contraction of the size of the target for speculators went hand-in-hand with a general increase in the credibility of Italian public finance, the second positive change vis-à-vis the previous period. In 1906 the Italian government undertook the risky, giant operation of replacing about 8 billion worth of bonds with a 5% nominal interest rate into new bonds carrying a 3.5% interest. The operation was conducted successfully without depreciation either in the national or international market.

Combined together, these two aspects show that, quite clearly, Italian monetary authorities started facing a scenario incomparably more favorable than in the years before. It is probably also because of the awareness of higher chances of success that the very attitude of the BdI for direct intervention became braver, a further difference in respect to the previous years. That reluctance at committing reserves, noticed also during the 1904 crisis, leaves in fact the place to a much bolder approach praised, among others, by the Italian economist Luigi Einaudi (Einaudi, 1960 (1913)). At the same time, by 1906 the already-mentioned more relaxed attitude taken by the Treasury since 1903 had allowed free foreign exchange reserves themselves to rise and to constitute a valid weapon for intervention.[44]

The overall stability of this improved scenario is tested by the crisis taking place in 1907. Despite the perverse combination of a domestic component (the crisis of one of the main commercial banks of the time, the *Società Bancaria Italiana*) and of an international one (the Wall Street crash of October) the exchange rate remains stable below the gold point. As claimed in the classic reconstruction of the crisis provided by Bonelli (Bonelli, 1971) growing level of reserves allowed an expansion of money in circulation to support the domestic banks, while at the peak of the international crisis the limited exposure towards international markets limited the fluctuations of the exchange rate.

[44] Also as a result of the 1904 events, the stock-piling of forex reserves was openly tolerated if not explicitly supported. Source: see documents quoted in footnote 26.

8. Conclusions

Little is known on the link between central banking and exchange rate stabilization in Italy during the so-called international gold standard. This paper aims at filling this gap, showing how the analysis of the Italian case between 1880 and WWI supports the emerging picture of central banking during the classical gold standard years as a very active exercise. The constant commitment and central role of central banks in exchange rate stabilization via direct intervention in the market, already analyzed in a number of case studies, is indeed confirmed for Italy.

In the Italian case the main source of exchange rate instability was the wide exposure of public finances in international markets and, more specifically, the institutional mechanisms of having public bonds traded in gold aboard and in Lire domestically. For most of the period the attention of Italian monetary authorities was absorbed by the effort of keeping these two prices in line and up until 1904 direct interventions in exchange rate markets were, in fact, mainly intervention in bond markets. These operations took place mainly at times of short-term crises, while the discount rate lever was left to keep the long-run route on the straight path.

The massive reduction of the exposure to international markets, visible since 1905-1906, changed dramatically the picture: the exchange rate showed substantial stability in the medium run, while milder short-term emergencies were dealt with acting directly on the market for foreign exchange which became the main theatre of operations.

It would be a mistake, however, to tell the story of the nature and results of the operations to support the exchange rate by simply focusing on the volume of the exposure of public finance to international markets. This was, in fact, only one aspect of a triangular relation that also involved two other variables: the general status of the international credibility of the Italian economy and finances, and the amount of foreign exchange reserves that could be used to operate in the markets. Through the lens of this triangular relation we can observe how between 1883-1886 and 1900-1904 Italy operated in a climate of high international financial credibility, but also high exposure to international financial shocks and low level of "ammunitions", making the resistance to international shocks possible yet painful. Between 1887 and 1900, the worst possible combination of the three aspects (high exposure; low credibility; low reserves) made the fight uneven and virtually impossible, and keeping the exchange rate below 110 was seen as a victory. It was only after 1904 that the overall scenario changed and all the three variables turned from negative to positive.

The mounting tensions leading to WWI will determine the end of this hard-to-reach equilibrium and the conflict will open the door for a completely different scenario with new challenges and objectives.

Appendix - Sources

Archival documents

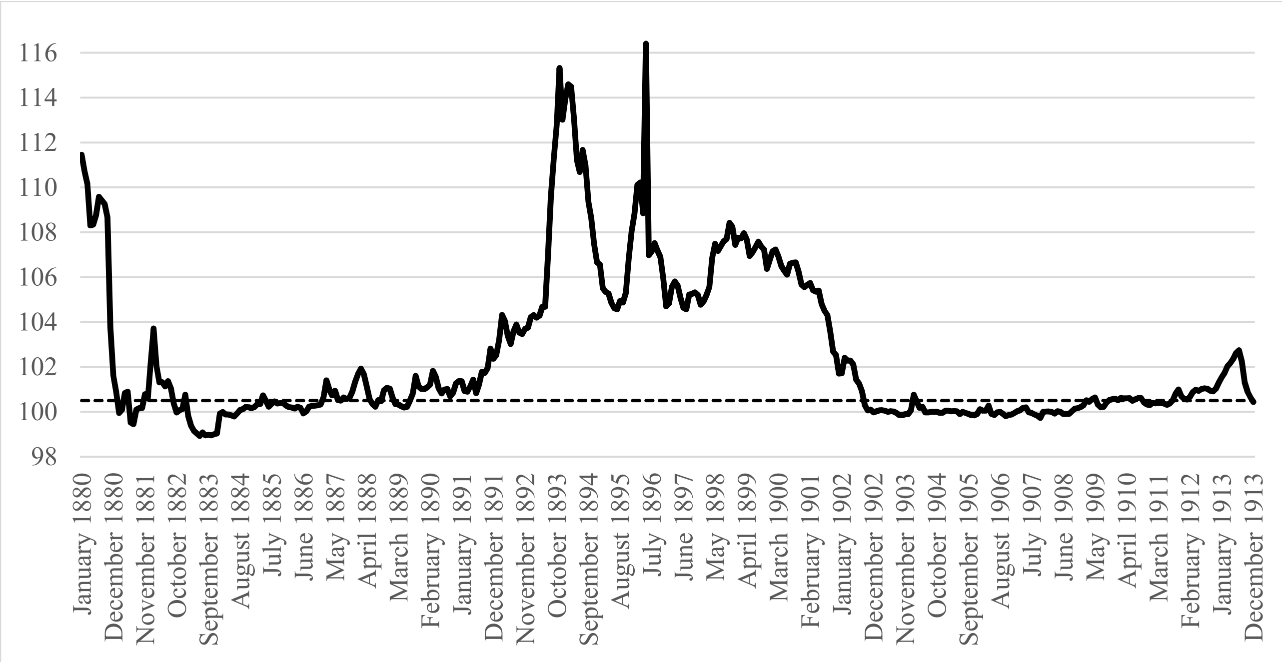
The core of the archival documents comes from the archive of the BdI (*Archivio Storico della Banca d'Italia*, Asbi) and published in De Cecco (1990). A complementary source is the annual reports by the BI between 1895 and 1914 published as: Banca d'Italia, *Adunanze Generali Ordinaria e Straordinaria degli Azionisti*, Roma, Banca d'Italia, 1895-1914

Statistics

- Data on monthly foreign exchange reserves held by the BdI in November 1903 from Ministero del Tesoro, *Bollettino dell'Ufficio centrale di ispezione per la vigilanza sugli istituti di emissione e sui servizi del tesoro*, Rome, Tipografia dell'Unione Editrice, 1904.
- Data on weekly price of Italian public bonds in Rome and Paris from the newspaper *Sole 24 ore* and kindly provided by Giuseppe Tattara.
- Data on daily prices of Italian bonds and exchange rates for 1885 from Ministero delle Finanze, *Annuario del Ministero delle Finanze*, Rome, Tipografia dell'Unione Editrice, 1886.

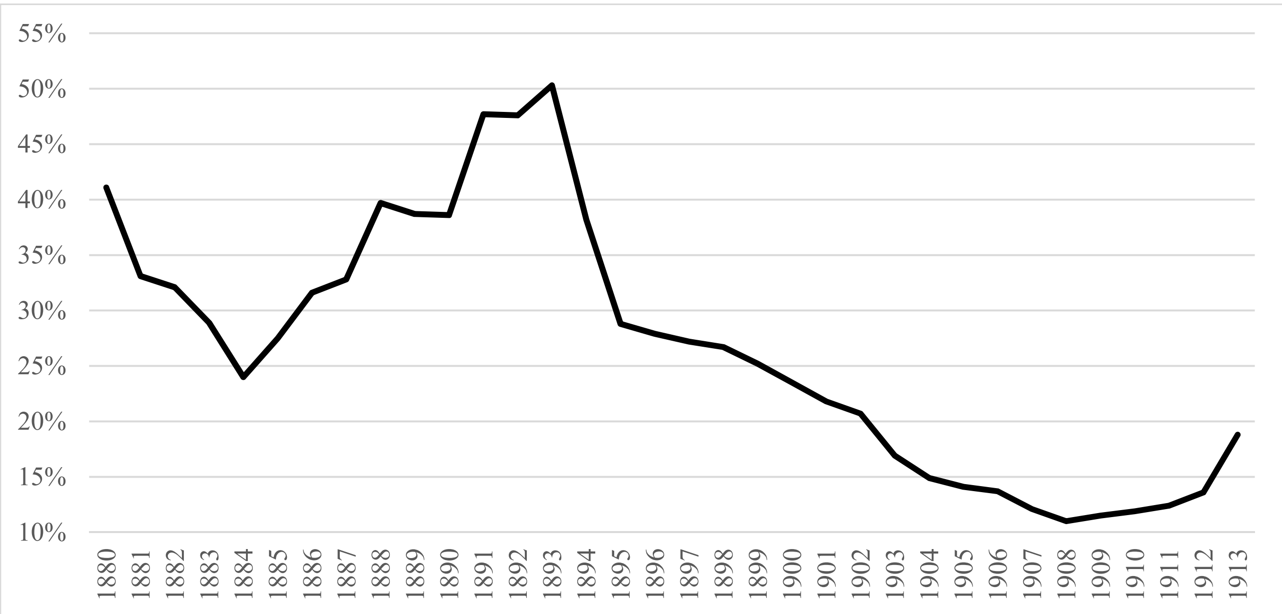
Figures

Figure 1: Monthly exchange rate (Lire per 100 French Franc), 1880-1913



Source: see footnote 7.

Figure 2: Estimated share of Italian public bonds floated abroad, 1880-1913



Source: Zamagni 1998 and 1999.

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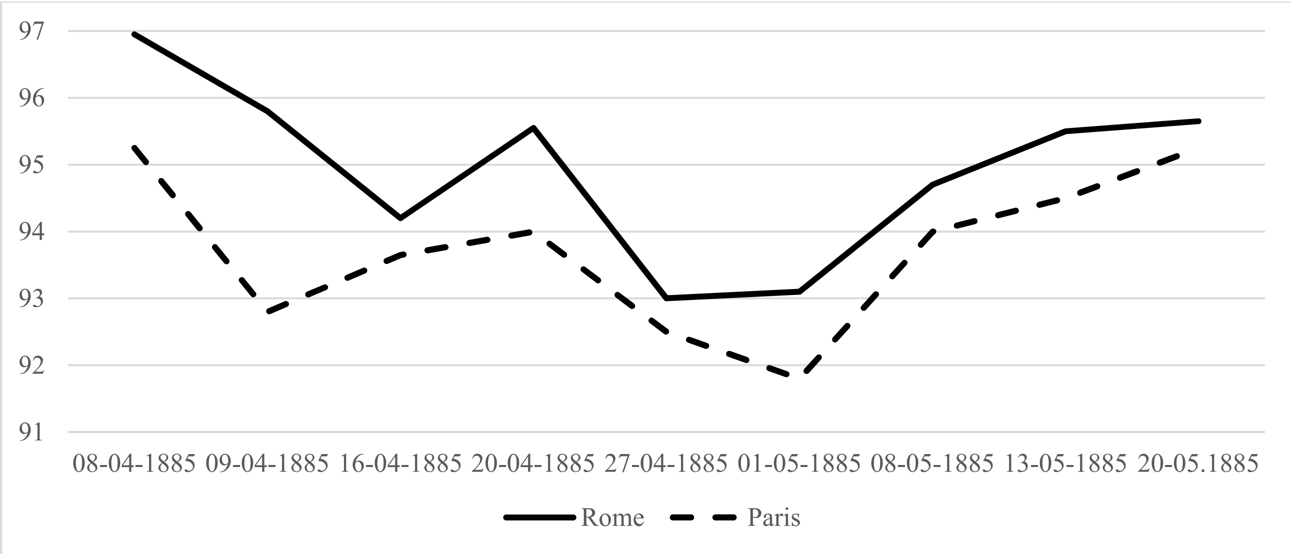
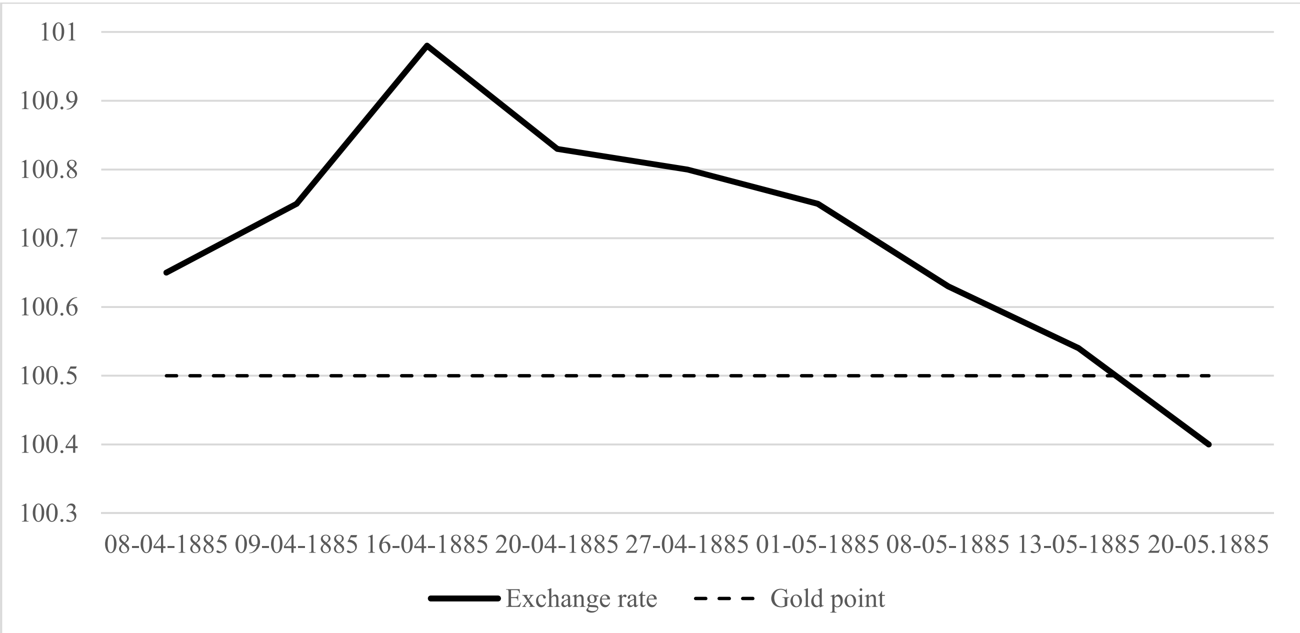
Figure 3: daily price of Italian public bonds in Paris and Rome (April 8th - May 20th 1885)



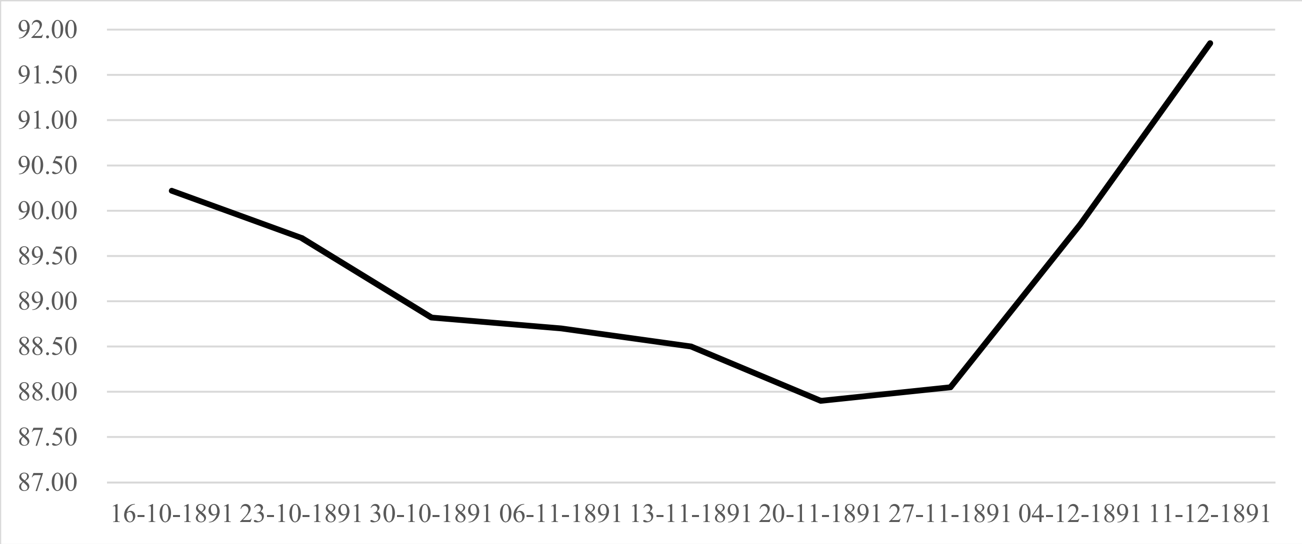
Source: ***Ministero delle Finanze*****, 1886 (see appendix)**

Figure 4: daily exchange rate Lire per 100 French Francs (April 8th – May 20th 1885)



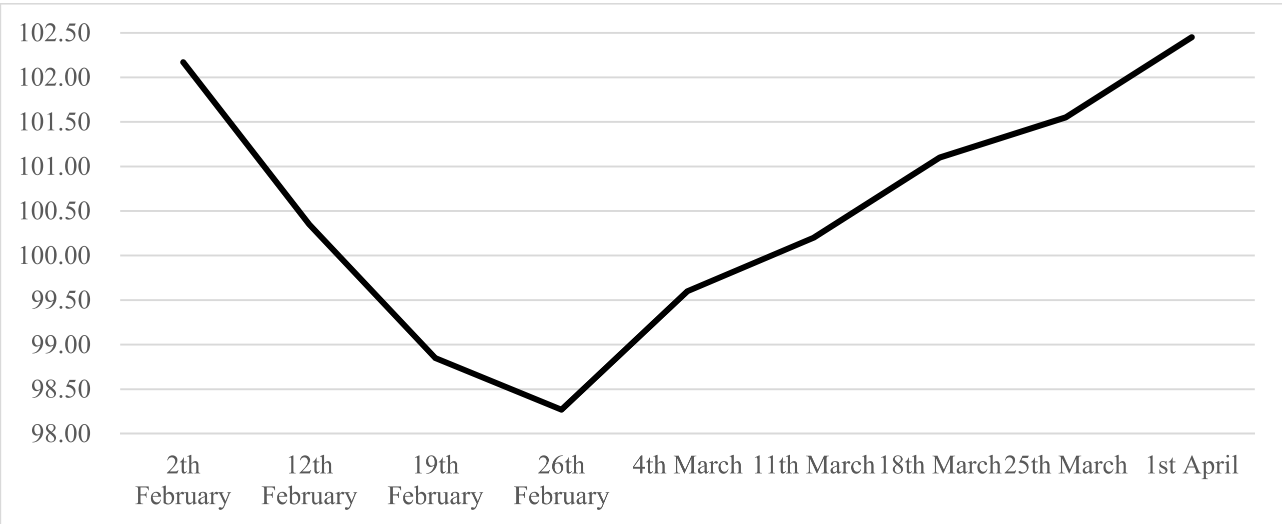
Source: ***Ministero delle Finanze*****, 1886 (see appendix)**

Figure 5: weekly Price of Italian public bonds in Paris (October 16th – December 11th 1891)



Source: ***Sole 24 ore***

Figure 6: Daily price of Italian public bonds in Paris (February the 2nd – April the 1st 1904)



Source: ***Sole 24 ore.***

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Tables

Table 1: amount of operations (in million Lire) by the BdI and the BCI to support the exchange rate between January 25th and February the 6th 1904

	BdI	*BCI*	**Total**
Up to February 3rd	n.a	n.a	**13**
February 4th	2.5	2.5	**5**
February 5th	2	2	**4**
February 6th	1	0	**1**

Sources: De Cecco (1990), pp. 886-901

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