

“Money Creation under the Gold Standard: The Origins of the Italian Banking Crisis of 1893”¹

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JEL Codes N13 N23 N43 N83

Abstract:

The aim of the paper is to study the monetary origins of the Italian banking crisis of 1893. The Italian experience under the Gold Standard can be seen as paradoxical. Italy came back to the gold standard in 1881 and very soon after, its economy suffered inflation, asset prices inflation and a major banking crisis. Was the Gold Standard rule at the origin of the crisis? In fact, Italy came back to the gold standard after a long period of suspension of convertibility (since 1866). An international borrowing allowed the country to restore an official gold convertibility. With this international borrowing, Italy has taken commitments toward international community (especially France) to respect the constraint of the Gold Standard. Nevertheless, the structural deficit in public finance (public spending was always above the revenues of the Italian state for military reasons and infrastructure development) was not resolved. Public spending was financed by borrowing and money creation. The government managed to keep inflation repressed and used every desperate means to prevent gold to flee from Italy. These means were the restrictions to bank clearing and protectionism. The Italian government has been led to intervene more and more in the economy for easing the consequences of the inflation.

The banking crisis was forwarded by inflation in assets prices (especially housing boom) and consumer prices at the end of the 1880 years. The paper explains the links between state borrowing, restrictions to bank clearing and economic crisis. We used banks of issue balance sheets to show the monetary creation in order to finance public deficit. Our major sources for data are Da Pozzo and Felloni, De Mattia, Di Nardi, Fratianni and Spinelli, Weber and Zamagni.

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Introduction

This Italian experience is a very interesting in the perspective of the conference on the Gold Standard (G.S.). This experience shows the paradox between the common thought on G.S. (an automatic rule to avoid inflation) and an Italian reality where in spite of gold convertibility, the economy suffered inflation that ended in an economic crisis.

Common wisdom associates the nineteenth century price stability with the G.S rule. This common wisdom is sustained by a change in the perception of the notion of inflation. In fact, price stability has not the same meaning today that it used to have in the past.

As a matter of fact, the link between nineteenth price stability and G.S. rules is defined more by the instability of the twentieth century than by its own stability. The Italian case illustrates this point, it could exist at the same time G.S. and monetary creation. Italian monetary difficulties are directly the consequences of the endless financial needs of the government, and no rule was enough strong to discipline the greediness for governmental expenditures.

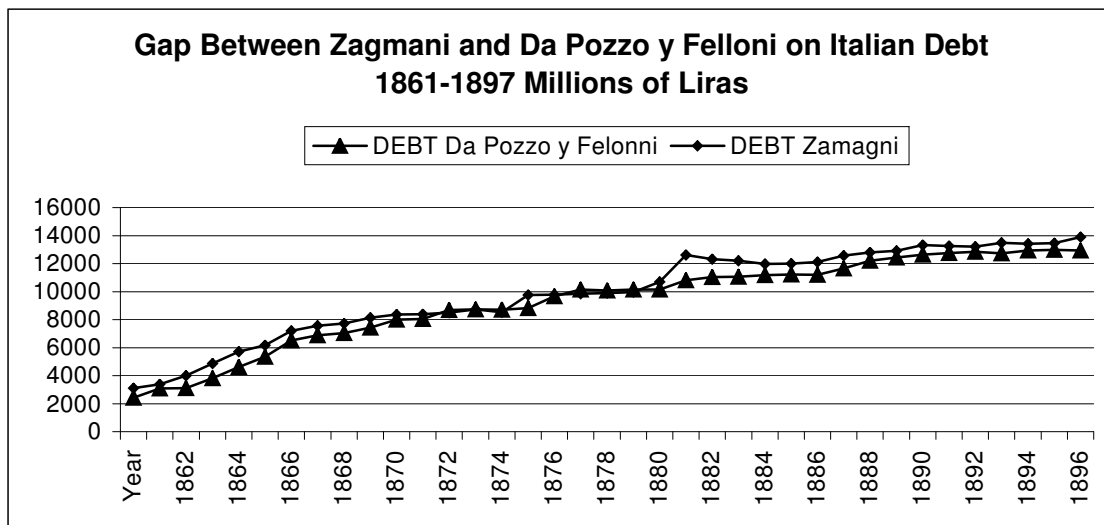
The paper will show the link between the monetization of the national debt and the destabilization of the Italian banks of issue, and will explain the monetary origins of the 1893 crisis. The main argument lays on the fact that government intervention in banking industry is one of the major factor of the crisis. This focusing on this specific aspect of the crisis does not mean that there just only one origin to this crisis. Nevertheless the return to the G.S. do not prevent Italian economy from monetary creation because the government could not meet the commitments of an equilibrate budget. Moreover, the financial commitments of the G.S. has lead the Italian to an escape ahead to prevent a gold flee that worsen the crisis.

The paper will explain the background of the 1893 banking crisis by exposing the fiscal question (section 1) and the organization of the bank of issue (Section 2). Then we will focused on the monetization of the national debt by the banking system (Section 3) and the evaluation by the stock market of the banking crisis (Section 4).

1. Fiscal question, the return to the GS and money creation

The period 1861-1914 is dominated by the fiscal question¹. The Italian government was unable to equilibrate its budget. The fiscal base was too poor to finance the governmental ambition in military spending and infrastructure (railways). The military spending has two origins : a arms race and several costly military expedition (during the last two decades of the nineteenth century Italy started its colonial policy). The railways construction was seen as symbol of political unification that could not be postponed. The results are a growing national debt, essentially financed by money creation. 82 % of the public deficits was monetized during 1862 and 1914². There are just marginal differences between Da Pozzo y Felloni series (1964) and the more recent evaluation of Vera Zamagni (1998)³. The conclusion drawn from these data confirm an increase of the national Italian debt in absolute value, and as relative part of the GDP. The graph 1b shows that Debt/GDP ratio increased from 35.8 % in 1861 to 117% in 1897. Between 1880 and 1894, the Debt/GDP ratio increased from 80.3 to 113.7 %.

Graph 1a Comparison between Da Pozzo y Felloni (1964) and Zamagni (1998) series

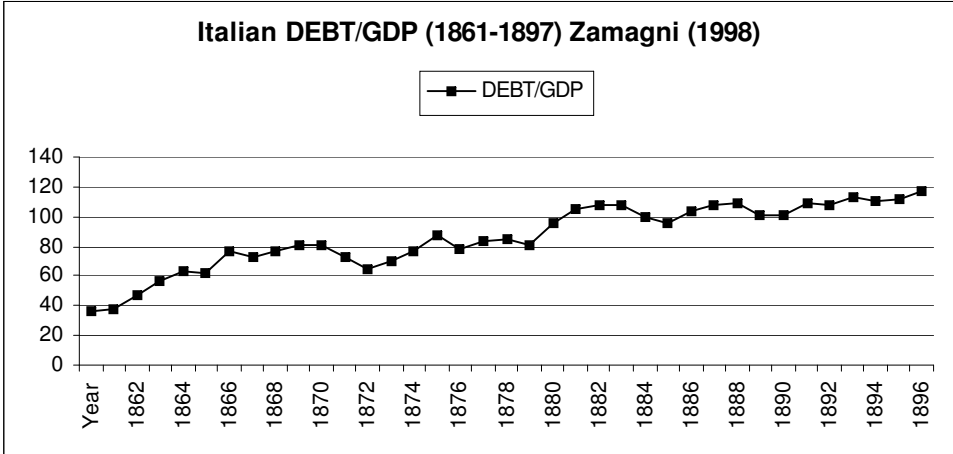


¹ Fratianni and Spinelli

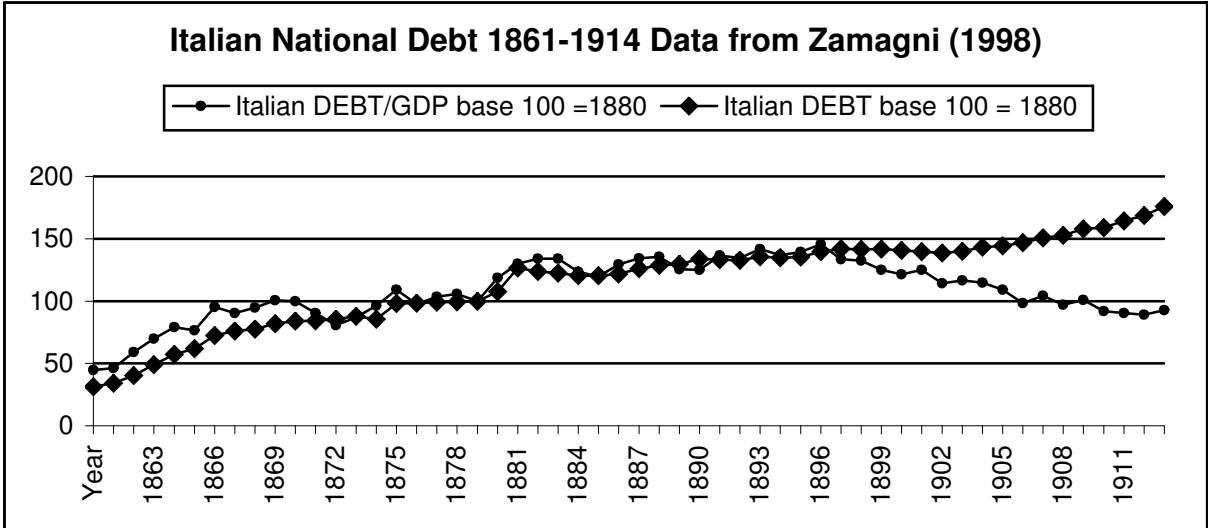
² Fratianni and Spinelli (1997) p.23 tab. 1.4.

³ See graph 1a

Graph 1b Ratio Debt/GDP (1861-1897)



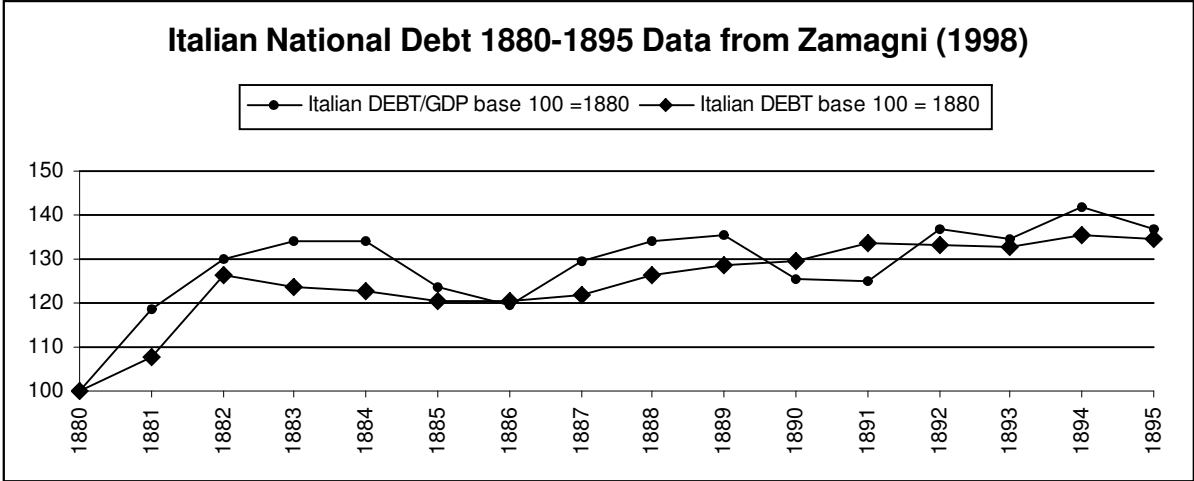
Graph 1c Italian National Debt 1861-1914



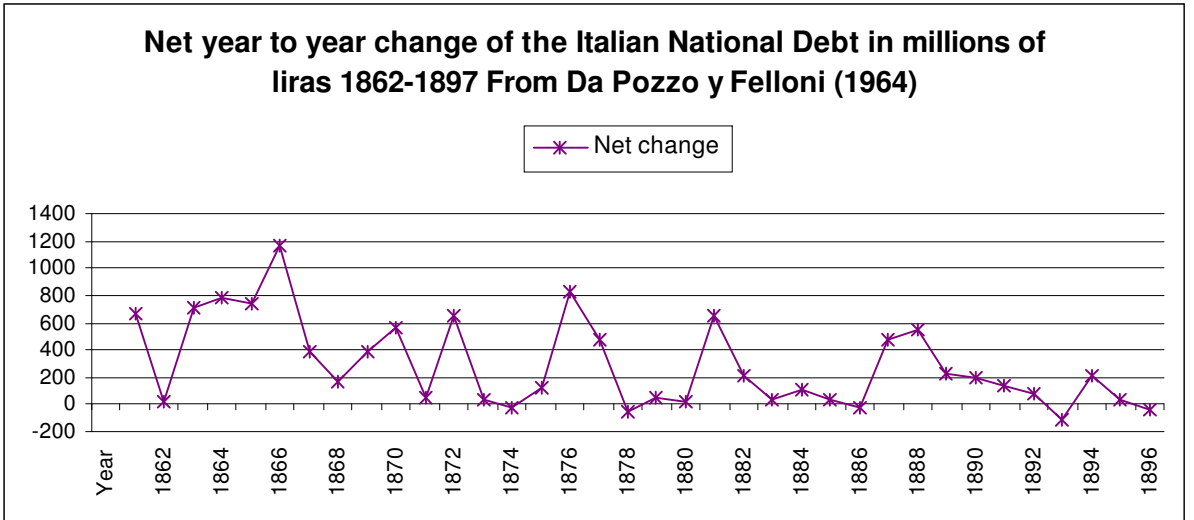
The return to the GS has not changed the Italian public spending policy. The period 1881-1894 is also characterized by public deficits. Only five years have known budget surpluses (1874, 1878, 1886, 1893 and 1896, for detail see Graph 2). Italian national debt has risen from 2419 millions of liras in 1861 to 12979 millions of liras in 1896, the amount was multiplied by 5.5¹ (See Graph 1a). The first three years after the return to the GS (1882, 1883, 1884) had smaller deficits but after the Italian state returned to the same pace of borrowing (Graphs 1c, 1d).

¹ Da Pozzo and Felloni, (1964) p. 65 and Zamagni (1998).

Graph 1d Italian National Debt: a focus on 1880-1895



Graph 2 Net year to year change of the Italian National Debt



As stated above, the endless financial needs of the young Italian government could be covered by the banks of issue. The succession of internal monetary regimes are due to the government will to capture seigniorage. In section 2, we briefly expose the background of the 1893 banking crisis. The succession of internal monetary regime is linked to the governmental seek to capture seigniorage and financing its deficits. The governmental financial needs has lead to a destabilization of the banking system. The main difference between 1873 and 1893 crisis is in the way to adjust the monetization of the deficit. In 1873, the external convertibility was suspended, but internal clearing mechanism worked, in 1893 the external convertibility was maintained but internal clearing mechanism were hampered that lead to a major banking crisis.

2. The early history of the Italian banking system: a fragmented banking system with a succession of internal monetary regimes

In this section we will first briefly relate the major episodes of the early history of the Italian banking system - before the creation of the Bank of Italy. 1861 celebrated the creation of the unified state of Italy. Italy chose bimetallism (gold and silver) and became in 1865 a member of the Latin Monetary Union together with France, Switzerland, Belgium and later Greece. The new born state inherited from the 5 banks of issue which used to operate before the unification in the different kingdoms: Banca Nazionale Sarda (BNS)¹ from Piemonte, Banca Nazionale Toscana (BNT) and Banca Toscana di Credito (BTC) from Tuscany, Banco di Napoli (BN) and Banco di Sicilia (BS)². Before the banking law in 1874, the banks of issue' activities were regulated by their own statute.

The early Italian banking history can be divided in 4 sub-periods during which there was a specific monetary regime:

- 1- 1861-1866: Full convertibility and competition in notes issuance but without free entry in the market
- 2- 1866-1874: Suspension of convertibility exclusively granted to BNI notes
- 3- 1874-1881: Creation of the consortium and suspension of convertibility exclusively granted to the notes issued by the consortium
- 4- 1881-1893: Full convertibility resumed and suspension of the interbank settlements

We first briefly expose the events relevant to our study characterizing each sub-period:

2.1 1861-1866: the “competition” years

During this period the business of the 5 banks of issue - BNS, BNT, BTC, BS, BN - was regulated by its own statute and the notes were not enjoying legal tender. BN and BS were not even actually issuing notes in bearer form redeemable on demand but issued in the name of the depositors. Those two institutions were issuing notes similar to certificates. Moreover the BS certificates were issued against 100% metallic reserves. Most of the time the amount of notes issued was regulated by the amount of metallic reserves and/or equity held. The 5 banks

¹ The BNS Banca Nazionale Degli Stati Sardi became BNI in 1867 Banca Nazionale nel regno d'Italia and BI Banca d'Italia in 1894.

² The Banco di Napoli and Banco di Sicilia had been both created by the local kingdoms. They were not privately owned.

were issuing notes redeemable into gold. Their circulation was limited to their local territory except for the BNS notes circulating nationwide. As a matter of fact, before the unification of Italy the only bank represented extensively over the territory was the BNS. It was then possible for BNS note's holders to pay with BNS notes outside of the BNS territory since the note could be redeemed at a BNS branch against other local notes or against gold. *De facto* the players were not of the same size: the BNS was the big player and the other 4 were of a relatively smaller size. Moreover in 1862 the BNS was granted the monopoly over coinage. Given the fragmentation of the banking system the use of notes for inter-regional payments was low and to the exclusive benefit of the BNS given its extensive network.

2.2 1866-1874: Suspension of convertibility into specie exclusively granted to BNI notes

In 1866, the suspension of the BNI notes convertibility into metallic currency was declared in exchange of a 250 billion lira loan to the government at a preferred rate of 1,5%. Legal tender was granted to all banks of issue's notes on their respective territory. Moreover the certificates issued by the BN and BS became notes in bearer form. Nonetheless the amount of notes privately issued by the BNI was still regulated by its reserves in specie. The other 4 banks of issue - and then 5 in 1870 – had to redeem their notes into metallic currency or into BNI notes. They could hold BNI notes as reserves in an amount not exceeding 2/3 of their metallic reserves but they could not be used to further expand their notes circulation. The BNI notes held as reserves by other banks were not counted in the BNI circulation. *De facto* BNI notes became the monetary base of the monetary system enjoying a higher demand compare to the previous period. The BNI became temporarily a legal monopoly bank even though legal tender was restricted. To conclude on this period it is worth noting the discount rate was no longer set by the banks but instead by the Finance Minister.

2.3 1874-1881: the “consortium” years and partial suspension of convertibility into specie

In 1874 was issued the first banking law. Moreover a “consortium” of the 6 banks of issue was created exclusively to accommodate the government financial needs by issuing distinct notes not redeemable into specie in the name of the government. The 6 banks of issue were equal stakeholders in the consortium. These 2 changes were designed to make the rules under which the 6 banks of issue were operating fair. The first banking law regulating the private circulation stated that:

- Issuing private notes could not exceed 3 times metallic reserves and 3 times the equity capital;
- Notes issued privately were redeemable into metallic currency or into state notes issued by the “consortium”;
- Interbank settlements were from now on subject to a common regulation.

Notes issued against loans granted to the state were no longer exclusively managed by the BNI but by the “consortium”. The “consortium” was seen as the first step before resuming full convertibility of notes into gold. The BNI notes privately issued like any notes issued by the other five banks of issue were redeemable into “consortium” notes or into specie. The regime under which the BNI was operating was no longer different from the one under which the other banks of issue were operating. They were still all enjoying legal tender in their respective territory. Under this new ruling, the BNI position in the market was no longer similar to the legal monopoly case. The notes issued by the consortium became the monetary base of the system.

2.4 1881-1893: full convertibility resumed and interbank settlements suspended

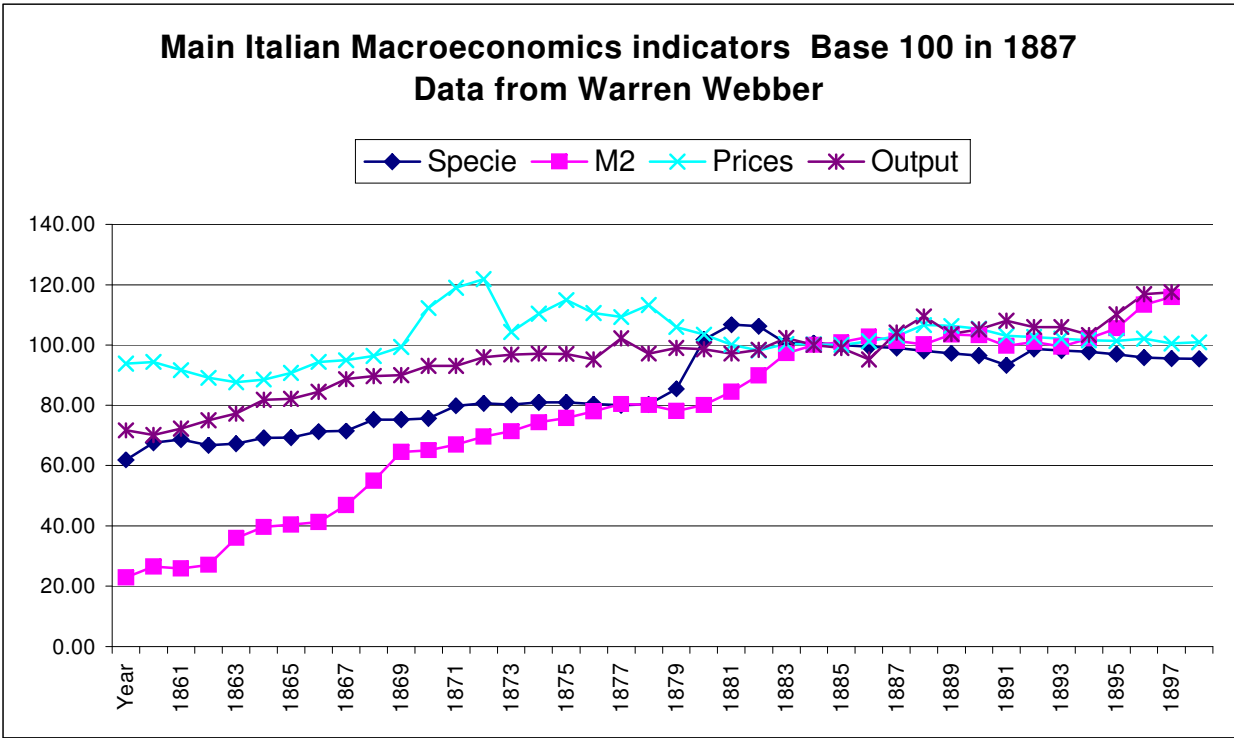
In 1881, full convertibility was resumed and the “consortium” was dismantled. Notes issued by the “consortium” were to be paid back by the government into gold or government bills. Despite the official return to convertibility, interbank settlements had been unofficially suspended. Indeed starting in 1885 the government put pressure on the BNI to suspend clearing settlements. The BNI was asked to spend the notes issued by other banks instead of asking for their redemption into metallic currency. This way the regional banks of issue could maintain their circulation and sustain the local activity and the financing of the government. It is important to recall that in 1887 Italy as a unified state experienced its first major economic crisis. Suspending interbank settlements was seen as a way for the regional banks of issue to support the local business and avoid a major bankruptcy of the system. Eventually it led to the 1893’s banking crisis. During this period the BNI accepted to restrict its own notes’ circulation since interbank settlements were virtually suspended and there it contributed to enhance the circulation of its competitors’ notes.

3. Evaluation of the monetary creation 1881-1893

3.1 Macroeconomics data of the Italian economy

There are several studies on the early monetary history of Italy. All these studies (Supino, Di Nardi, Fratianni and Spinelli) show that the period is characterized by a rapid growth of the money supply. We can summarize the monetary creation by analyzing the change in the statistics M2. M2 has been multiplied by 5 between 1862 et 1887. M2 has been multiplied by 2 between 1862 and 1868 and by 3 between 1862 and 1874. Between 1874 and 1887 M2 regularly increase except between 1881-1882. The small decrease at this time is due to the return to the Gold Standard.

Graph 3 Main Italian Macroeconomics Indicators



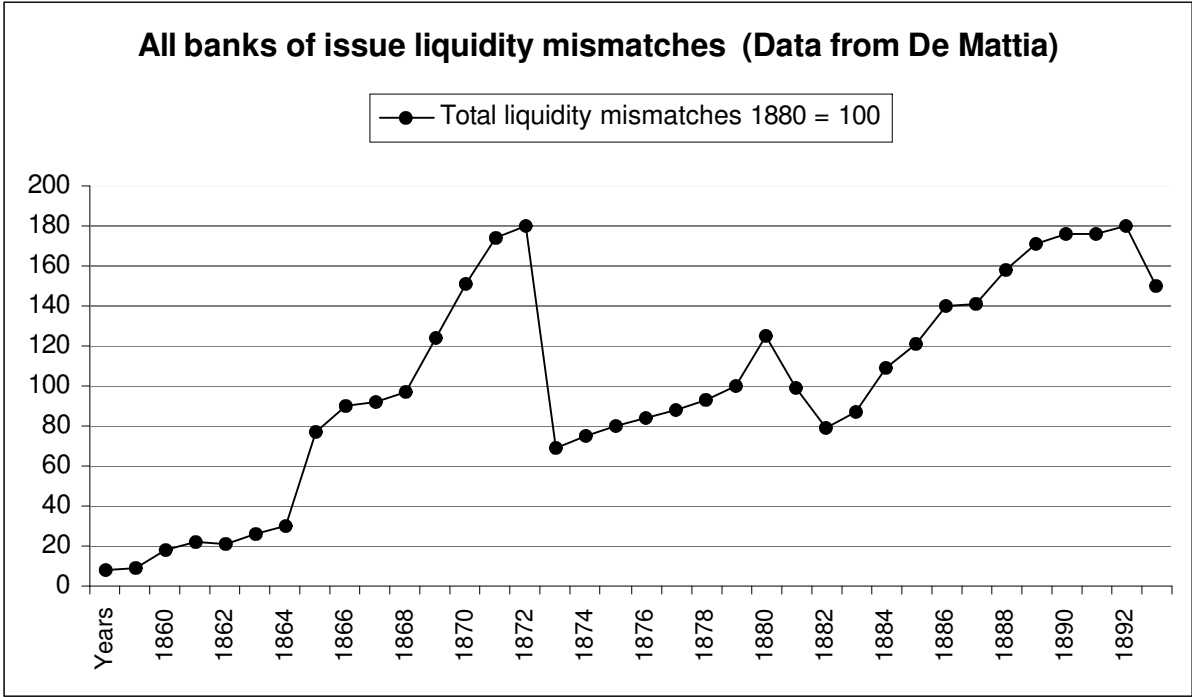
Changes in M2 are given by graph 3. This statistic confirm two main facts. The return to the GS has not durably changed the monetization policy of the Italian government. The output statistics shows :that Italian economy has known a period, of growth. This growth hides the effect of monetary creation on prices. Without an increase of the national wealth, the inflation would have been higher.

3.2 Evaluation of the money creation by the liquidity mismatch

The analysis of the liquidity mismatch is a usual method to evaluate the financial trajectory for a bank or a banking system. This simple indicator gives a crucial information on the way the bank is financed and especially on the relative part of credit financed by monetary creation. The liquidity mismatch measure the gap between liquidity (in our case mainly gold) hold by the bank and funds that the bank has to redeem on demand (notes and demand deposits). The main signification of this indicator is not given by its absolute level¹. The main information is given by the dynamic change of the indicator. If the liquidity gap widens, it means that the bank has financed its credit expansion by monetary creation.

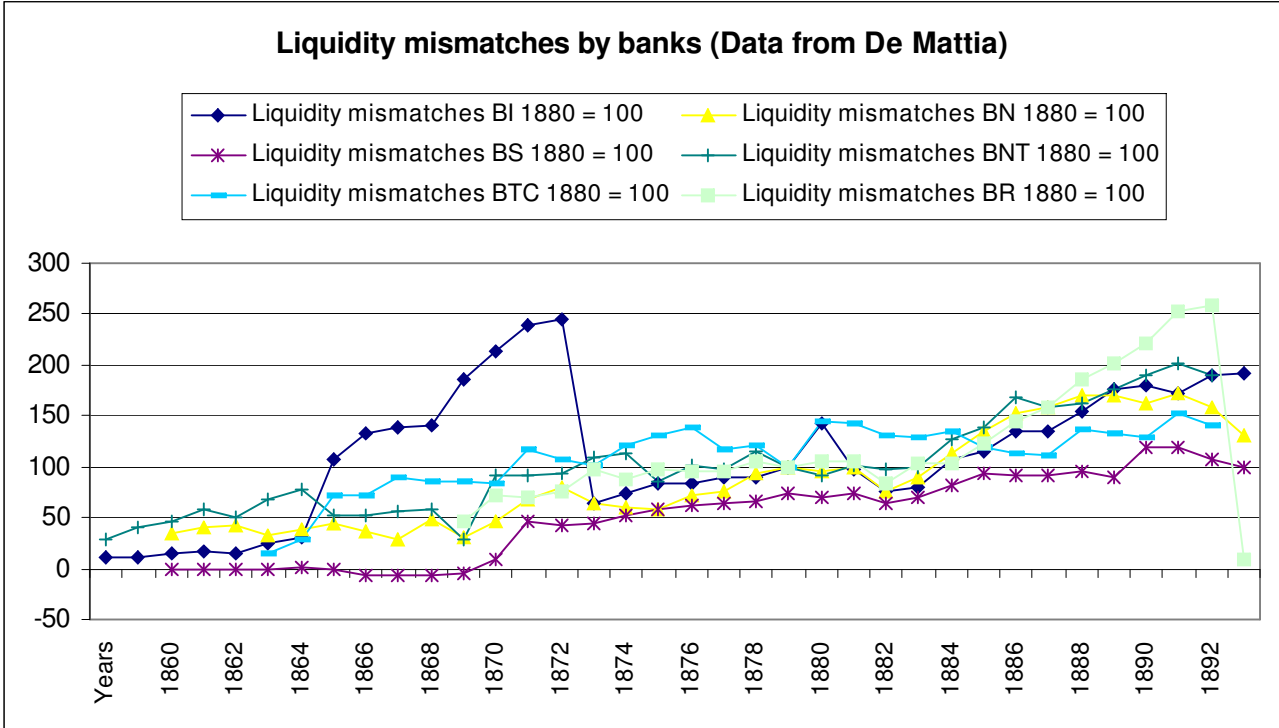
The analysis of the liquidity mismatch confirms the other facts on monetary creation. Each sub period (1866-1873; 1874-1881; 1882-1893) present a widening liquidity gap. The monetization of the national debt has been done by banks of issue. The graph shows that the period 1866-1873 and the period 1882-1893 had a very high increase in liquidity mismatches. There are some differences between the origins of the monetary creation. In the first period, the BNS is the only responsible for the increase of the liquidity gap. For the other periods, the increase of the liquidity mismatches is shared by all the bank of issue (except the BTC).

Graph 4 Systemic monetary creation



¹ Of course, a system with a larger liquidity mismatch has more liquidity risk than a system with a smaller one.

Graph 5 Monetary creation by banks of issue



3.3 Evaluation of the banks solvability

Liquidity mismatch shows that a large part of the credit was financed by monetary creation. Nevertheless, the distress of the Italian banks of issue during the 1893 crisis can also be explained by an analysis of their solvency. The classical ratio [(Net Equity Capital¹) / Total Credit] usually gives a good indication, but for these banks this ratio is not enough accurate to show why the banking system is in structural insolvency. In fact, the equity capital of the bank is used to finance public credit (especially by holding state bonds). The consequence of the immobilization of the equity capital in state bonds, is that the private credit is only backed by demanding funds (notes and private deposit). So we have calculated a real solvency ratio [(Net Equity Capital – Net Public Immobilizations²) / Total Credit]. This ratio shows a structural insolvency of the banking system, and it means that when the banks started to have losses³ they were on the verge of the bankruptcy. Theses ratios give the percentage of the equity capital financing the credit.

¹ Net from credit losses.
² Net Public Immobilization = Public Credit – Public Deposits
³ See section 4.

Table 1 Apparent Solvability Ratio

Apparent Solvability Ratio Net Equity Capital / Total Credit						
Years	BNI	BN	BS	BNT	BTC	BR
1880	27.9%	21.7%	14.9%	39.6%	42.3%	28.7%
1881	21.8%	22.9%	17.1%	42.1%	33.8%	27.9%
1882	30.9%	23.2%	17.2%	38.9%	33.6%	28.7%
1883	38.3%	30.2%	23.7%	40.0%	36.1%	33.7%
1884	35.6%	31.2%	26.3%	39.4%	36.6%	30.8%
1885	27.8%	25.9%	20.0%	34.2%	35.3%	31.8%
1886	26.1%	22.1%	19.6%	31.8%	38.7%	28.0%
1887	23.1%	19.2%	18.9%	26.7%	39.0%	25.3%
1888	22.4%	18.6%	18.6%	28.2%	40.0%	24.0%
1889	19.2%	20.1%	20.5%	28.6%	42.8%	20.2%
1890	19.0%	20.0%	19.2%	28.3%	36.1%	18.5%
1891	17.9%	22.2%	17.4%	26.4%	49.2%	16.0%
1892	18.4%	23.5%	20.9%	25.5%	50.6%	13.9%
1893	17.3%	21.6%	20.8%	26.4%	59.2%	-60.7%
1894	22.9%	24.0%	21.4%			-70.3%
1895	26.1%	25.1%	15.3%			-68.6%

Table 2 Real Solvability Ratio

Real Solvability Ratio (Net Equity Capital - Net Public Immobilisations) / Total credit						
Years	BNI	BN	BS	BNT	BTC	BR
1880	-5.1%	1.7%	4.6%	9.4%	38.4%	15.3%
1881	-5.8%	0.1%	11.3%	13.0%	27.3%	14.3%
1882	-2.8%	-3.6%	0.1%	9.8%	27.2%	16.1%
1883	-0.5%	11.5%	13.8%	12.9%	26.3%	23.2%
1884	4.4%	18.0%	13.2%	9.8%	32.7%	17.9%
1885	9.9%	12.3%	9.5%	15.8%	23.3%	25.1%
1886	12.5%	12.6%	14.7%	15.4%	25.5%	25.4%
1887	15.3%	8.7%	9.3%	14.3%	29.0%	22.2%
1888	11.9%	5.4%	6.0%	12.8%	29.8%	19.3%
1889	12.0%	9.1%	6.2%	17.0%	28.9%	20.4%
1890	8.6%	8.1%	1.4%	11.5%	25.3%	14.1%
1891	6.4%	2.1%	-2.7%	2.1%	30.2%	11.0%
1892	5.0%	3.1%	-3.8%	5.2%	19.5%	11.3%
1893	4.5%	1.0%	-0.9%	7.3%	15.6%	-61.6%
1894	8.8%	9.7%	2.2%			-71.0%
1895	17.0%	17.9%	-10.8%			-71.4%

Table 2 shows that Italian banks of issue operated with nearly no equity capital to guarantee their credit operations.

3.4 The return to GS: between old bad habits and new problems

The return to the GS has not changed the Italian fiscal policy. The same “solution” was used to cover governmental deficits. The return to the GS without the will to respect the GS rules has led the Italian economy to new difficulties.

First by joining the GS, Italy returned to fixed exchange rate system. But the monetization of the public deficits has led to an increase of domestic prices. Inflation in fixed exchange rate system means that Italian products lose their international competitiveness. Local producers known several difficulties to sell on the domestic market (imports were cheaper) and to export. The tariff of 1887 has been motivated by private interests but it is also an escape ahead for Italian producers. This remedy has led to long slowdown of the Italian economy and increased the poverty of the population¹. Moreover the causes of the disease were not treated.

Second the governmental intervention to hamper bank settlements in order to prevent a gold flee from Italy, has opened the gate to opportunist behavior from the smaller banks of issue. The clearing mechanism stopped, the banks had the possibility to finance more credit by monetary creation. This is the root of the banking crisis of 1893. The crisis will be detailed in the next section.

Third, the change in the relative price structure induced by inflation has modified the incentives for entrepreneurs. For entrepreneurs, investing in industries protected from foreign competition such as housing construction appeared more profitable than other activities. Entrepreneurs had incentives to enter in these industry and they also benefits from cheap credit. That explain the housing boom of the end of the decade 1880².

4. The stock exchange and the banking crisis

The 1893 crisis is mainly a banking crisis. The banks faced a large value decrease of their assets. The banks had accumulated suspended bills since 1887. This crisis stroke an economy crippled by protectionism but the disaster revealed by the parliamentary inquiry has been expected by the stock market. In fact, banks of issue could not pay dividends to shareholders since 1887. The banking sector suffered more during this crisis than other sectors.

¹ Pareto V., *Le Marché financier italien (1891-1899)* /Vilfredo Pareto ; textes réunis pour la première fois par Giovanni Busino, Droz, Genève, 1965, see the introduction.

² We have no much room to exposed this real aspect of the crisis. Nevertheless several works confirm the housing and construction boom in the second mid of the 1880s. See for instance Ciccarelli, Fenoaltea, and Proietti, (2008), Ciccarelli and Fenoaltea (2008), Ciccarelli and Fenoaltea (2007), Fenoaltea (2005).

4.1 1893 crisis

Table 3 shows the stock market evaluation of the banking sector health. Between 1882 and 1887 there is a small increase of the stock value (from 89.3 to 98.1) except for the railways stocks that nearly doubled their value (from 56.5 to 97.1). The banks stocks fluctuated between 93.2 and 99.9. From 1888 to 1896 the stock market capitalization shrank by half (from 98.1 to 44.4), bank capitalization was divided more than by three (from 99.9 to 28.7), railways and other stocks capitalization diminished by 15%. The fall of the stock market between 1888 and 1893 is due to the financial distress of the banking system. The information of the financial distress has been given by dividends policy. Since 1887, banks of issue could not distribute dividends (or very small). Therefore, the market value of the banks stock fall for two main reasons. The banks presented an increasing risk and there was no extra revenue to cover the risk.

Table 3 Index yearly average on Genoa stock exchange 1882-1896 (Da Pozzo y Felloni 1964)

Year	Gov. Bonds (RENTE 5%)	INDEX STOCKS	INDEX BANKS	INDEX RAILWAYS	INDEX OTHERS
01/1882	92,9	89,3	95,9	56,5	
01/1883	92,6	88,2	93,2	58,6	
01/1884	97,4	90,1	93,5	75,1	
01/1885	98,5	95,8	96,8	85	108,2
01/1886	102	97,2	99,8	92,8	93,2
01/1887	100,5	98,1	99,9	97,1	91,3
01/1888	99,6	96,9	95,5	100,3	98,8
01/1889	98,1	89,5	83,4	98,1	103,2
01/1890	97,8	79,5	72,6	94,3	90,4
01/1891	95,4	66,6	56,9	85,7	86,5
01/1892	96,6	66,8	56	86,7	90,1
01/1893	97	62,8	50,7	87,2	90,8
01/1894	94,2	44,8	31,7	79,9	76
01/1895	103,4	44,9	30,6	86,4	79,6
01/1896	103,4	44,4	28,7	86,1	87,5

The stock market evaluation has preceded the scandal created by the parliamentary inquiry of 1893. In 1892, the market value of the banks had already shrunk by half.

Table 4 Di Nardi evaluation on suspended bill¹ 10th January 1893, thousands of liras.

Institutions	Bill of exchange	Suspended Bill	Total	Total in % of equity capital
BNI	28473	20995.5	49468	26.1
BN	29629	19680.8	49309.8	69
BNT		4600	4600	19.7
BTC				
BR	2897.5	13050.7	16038.2	80
BS	10364.6	3609.5	13974.1	77.3
Total	71454.1	61936.5	133390.6	40.6

Table 4 shows the complete bankruptcy of the Italian banking system. Except the Banca Toscana di Credito all banks of issue are in financial distress. The Banca Romana failed in 1893. The new Banca d'Italia come from the merger between BNI, BTC, BNT and BR. The Italian north had a unique bank of issue in 1893. Despite their poor financial performance in 1893, the BS and the BN were saved, and had stayed in business till 1926.

Table 4 shows the results of the governmental intervention to hampered bank settlements. The banking system had no information on the money demand, because the clearinghouse mechanism was suspended. Normally, clearinghouse mechanism give banks a crucial information on their liquidity risk. A bank is limited in increasing its credit supply by monetary creation because monetary creation increase its liquidity risk. If the government prevent banks from clearinghouse mechanism, there is an open gate to bad loans accumulation in banks balance sheets. The longer the clearing mechanism² is suspended the worse the effect are, and this policy has last for nearly 6 years.

¹ Di Nardi (1953) p.417.

² Sometimes, during a liquidity crisis it could be useful to suspend banks settlement. But it cannot be a long period policy.

Table 5 Rates of suspended bills (from de Mattia 1967)

Years	% of suspended bills over total credit BNI	% of suspended bills over total credit BN	% of suspended bills over total credit BS	% of suspended bills over total credit BR	% of suspended bills over total credit Total
1880	1.69%	3.43%	8.26%	5.20%	2.67%
1881	1.71%	3.67%	8.00%	5.12%	2.78%
1882	1.68%	3.79%	8.46%	6.10%	2.81%
1883	1.93%	4.90%	5.20%	7.04%	3.09%
1884	1.40%	4.27%	4.34%	6.86%	2.50%
1885	0.65%	3.77%	3.42%	4.80%	1.62%
1886	0.80%	3.46%	2.71%	3.74%	1.61%
1887	1.32%	3.24%	3.87%	3.27%	1.90%
1888	2.13%	3.70%	6.01%	3.81%	2.63%
1889	2.32%	4.80%	6.22%	4.08%	2.95%
1890	2.08%	6.55%	8.33%	4.72%	3.23%
1891	2.06%	7.09%	6.86%	4.71%	3.16%
1892	2.66%	8.87%	6.69%	5.24%	3.82%
1893	4.10%	10.52%	12.38%	75.72%	11.90%
1894	3.20%	11.29%	12.08%	85.72%	12.27%
1895	0.00%	0.52%	11.92%	90.75%	7.99%
Years	% of suspended bills over total discounted bills BNI	% of suspended bills over total discounted bills BN	% of suspended bills over total discounted bills BS	% of suspended bills over total discounted bills BR	% of suspended bills over total discounted bills Total
1880	2.17%	7.31%	15.57%	6.65%	3.95%
1881	2.12%	6.68%	15.32%	6.66%	3.99%
1882	1.97%	7.41%	15.77%	8.02%	3.92%
1883	2.26%	11.03%	8.31%	9.50%	4.42%
1884	1.64%	7.72%	6.82%	9.62%	3.39%
1885	0.84%	6.41%	5.32%	6.44%	2.26%
1886	1.14%	5.89%	3.66%	5.58%	2.38%
1887	2.09%	5.50%	5.57%	5.17%	3.04%
1888	3.65%	6.74%	9.39%	6.48%	4.50%
1889	4.07%	8.66%	11.71%	7.95%	5.14%
1890	4.09%	11.73%	14.79%	9.40%	6.05%
1891	4.36%	12.58%	12.09%	8.56%	6.18%
1892	5.45%	16.85%	11.26%	8.66%	7.26%
1893	8.38%	19.03%	24.05%	344.06%	22.55%
1894	13.65%	23.72%	24.30%	715.00%	44.59%
1895	0.00%	2.10%	28.71%	1408.88%	37.22%

5. Concluding remarks

The return to the gold standard is not directly responsible of the banking crisis of 1893. Nevertheless, the return to the gold standard has created new constraint that led the Italian government to an escape ahead in order to satisfy its financial endless needs. All the desperate means used by the Italian government had perverse effects on the economy. Protectionism durably increased the poverty of Italians and the regulation towards banks of issue lead to a major banking crisis. Moreover, all these desperate means had no real effect on the cause of the problem. These policies just treated the symptoms and not the cause of the disease: the monetization of a public deficit through the banks of issue.

The BNS Banca Nazionale Degli Stati Sardi became BNI in 1867 Banca Nazionale nel regno d'Italia and BI Banca d'Italia in 1894.

BN Banca di Napoli

BS Banca di Sicilia

BR Banca Romana

BTC Banca Toscana di Credito

BNT Banca Nazionale Toscana

Bibliography:

Ciccarelli C. & Fenoaltea S. & Proietti T., "The Comovements of Construction in Italy's Regions, 1861-1913," *MPRA Paper 8870*, University Library of Munich, Germany, 2008.

Ciccarelli C. & Fenoaltea S., "Construction in Italy's regions, 1861-1913," *MPRA Paper 9714*, University Library of Munich, Germany, 2008.

Ciccarelli C. & Fenoaltea S., 2007. "Business Fluctuations in Italy, 1861-1913: The New Evidence," *Explorations in Economic History*, Elsevier, vol. 44(3), pages 432-451, July, 2007.

Da Pozzo and Felloni, *La Borsa Valori di Genova Nel Secolo XIX*, Industria Libreria Tipografica Editrice, Torino, 1964.

De Mattia, R. (éd.), *I bilanci degli istituti di emissione italiani - 1845-1936*, Banca d'Italia, 1967.

De Mattia, R., "I bilanci delle banche di emissione italiane dal 1861 al 1874", *Rivista di Politica Economica*, année XLVII - III série - Fasc. XI-XII, nov. déc. 1957.

Di Nardi, G., *Le banche di emissione in Italia nel secolo XIX*, Unione Tipografico - Editrice Torinese, 1953.

Fenoaltea S., "The growth of the Italian economy, 1861 1913: Preliminary second-generation estimates," *European Review of Economic History*, Cambridge University Press, vol. 9(03), pages 273-312, December 2005.

Ferrara, F., "Il corso forzato de biglietti di banca in Italia", G. Bottai et C. Arena éd., *Nuova Collana di Economisti*, vol. 2, *Economisti Italiani del Risorgimento*, sous la direction de A. Garino-Canino, Unione Tipografico-Editrice Torinese, Torino, 1933.

Ferrara, F., "L'abolizione del corso forzato", G. Bottai e C. Arena éd., *Nuova Collana di Economisti*, vol. 2, *Economisti Italiani del Risorgimento*, sous la direction de A. Garino-Canino, Unione Tipografico-Editrice Torinese, Torino, 1933.

Fratianni M., and Spinelli, F., *A Monetary History of Italy*, Cambridge University Press, Cambridge, 1997.

Fratianni M., and Spinelli, F., *Storia Monetaria d'Italia. L'evoluzione del sistema monetario e bancario*, Arnoldo Mondadori Editore, Milano, 1991.

Gianfreda G. *Institutions monétaires et stabilité de la monnaie*, chapter 2, PhD Thesis, Université Paris Dauphine, October 15 2004.

Gianfreda, G. and Janson N., "Le banche di emissione in Italia tra il 1861 e il 1893: un caso di concorrenza?", *Rivista di Politica Economica*, janvier 2001.

Goodhart C., *The Evolution of Central Banks*, MIT Press, Cambridge (Massachusetts) et Londres, 1988.

Guyot Y. et Raffalovitch A., *Dictionnaire du Commerce de l'Industrie et de la Banque*, Guillaumin, Paris, 1901. - Alphonse Lucas, « Banques étrangères », p. 438-440.

Kindleberger C., *Histoire mondiale de la spéculation financière*, Valor édition, Hendaye, 2004.

Pareto V., *Le Marché financier italien (1891-1899)* /Vilfredo Pareto ; textes réunis pour la première fois par Giovanni Busino, Droz, Genève, 1965.

Pareto, V., "L'intervention de l'état dans les banques d'émission en Italie", *Journal des économistes*, avril 1893, pp. 3-28.

Realfonzo, R. et Ricci, C., "Il dibattito sulla 'questione bancaria'. Unicità versus pluralità degli istituti di emissione (1886-1893)", *Il pensiero economico italiano*, III/1995/2, pp.97-132, 1995.

Ripa Di Meana, A., & Sarcinelli, M., "Unione Monetaria, competizione valutaria e controllo della moneta: è d'aiuto la storia italiana?", M. De Cecco (sous la direction de), *Monete in concorrenza. Prospettive per l'integrazione monetaria europea*, Il Mulino, pp. 81-138, 1992.

Sannucci, V., "The Establishment of a Central Bank: Italy in the 19th Century", in *A European Central Bank? Perspectives on Monetary Unification after Ten Years of the EMS*, sous la direction de M. De Cecco et de A. Giovannini, Cambridge University Press, New York 1989

Say L. et Chailley J., *Nouveau dictionnaire de l'économie politique*, Guillaumin, Paris, 1900. - Léon Smith, « Banque » section XII on Italian Banks p. 141-142.

Smith Vera, *The Rationale of Central Banking*, Liberty press, Indianapolis, [1936] 1990.

Supino C., *Storia della Circolazione Cartacea in Italia dal 1860 al 1928*, 2a ed., Società Editrice Libreria, Milano 1929.

Weber Warren E., Available at <http://research.mpls.frb.fed.us/research/economists/wewproj.html>, 1999

Zamagni V. "Il debito pubblico italiano 1861-1946:ricostruzione della serie storica" *Rivista Di Storia Economica*, a. XIV, n. 3, December 1998.