

LUISS Guido Carli
School of European Political Economy

**LIVING WITH HIGH PUBLIC DEBT:
ITALY 1861-2018**

Carlo Bastasin, Manuela Mischitelli and Gianni Toniolo

Working Paper

11/2019

LIVING WITH HIGH PUBLIC DEBT, ITALY 1861-2018

CARLO BASTASIN*, MANUELA MISCHITELLI** and GIANNI TONIOLO***

Paper prepared for presentation at the conference

High Public Debt: Theoretical and Historical Perspectives

Goethe University, Frankfurt

17 May 2019

FIRST DRAFT FOR COMMENTS ONLY

(Please do not quote without permission)

ABSTRACT

Since 1861, Italy's public debt has been both high and sustainable. The paper reviews the history of the Italian debt, highlighting the determinants of both accumulation and consolidation at various times in Italian history. Focusing on the last twenty-some years, the paper suggests that there may be substantive reasons to believe that the Great Recession of 2008-2011 produced a regime change that makes the policies that have ensured debt sustainability up to the present no longer suitable.

JEL: H63, E62, E63, E65, H12,H30, H50, N13, N14.

* Luiss School of European Political Economy (Rome) and Brookings Institution

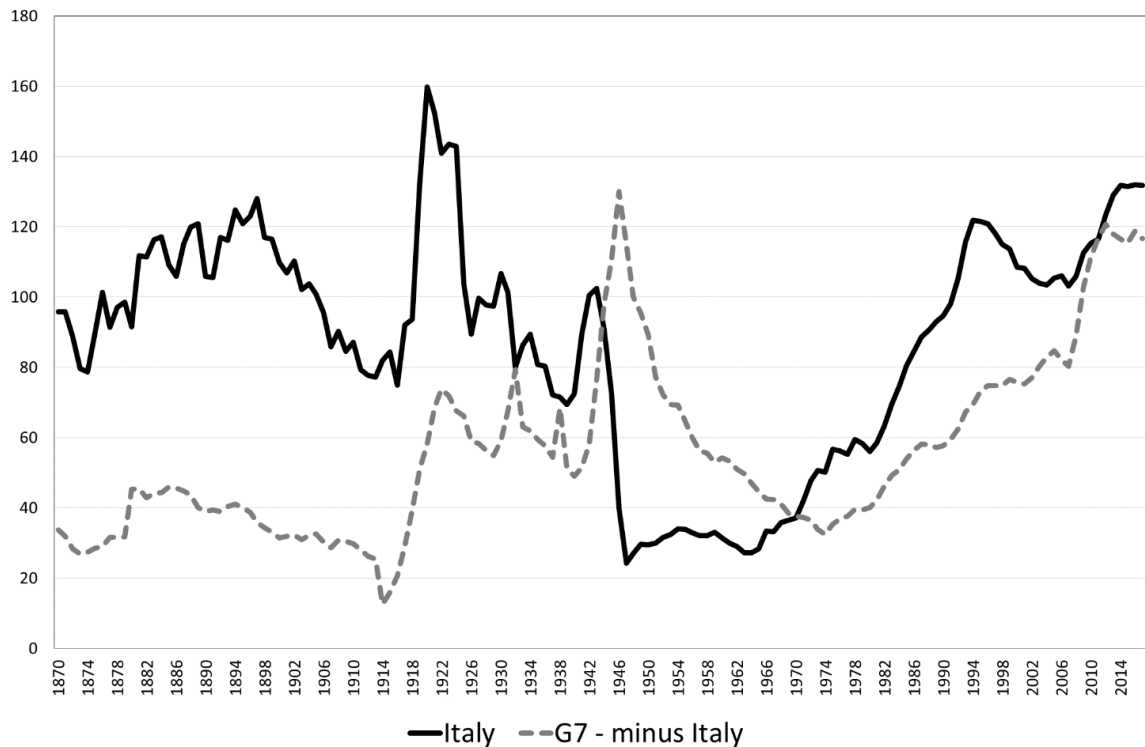
** Luiss School of European Political Economy (Rome)

*** Luiss School of European Political Economy (Rome) and CEPR (corresponding author: toniolo@economia.uniroma2.it)

1. Living with high public debt

Since unification in 1861, Italy's economic growth broadly followed the long-term swings of the international economy. This growth pattern is hardly surprising for a Western European medium-size economy, essentially an international price taker. Equally unsurprisingly, Italy also followed the international ebbs and flows of sovereign debts. For 127 out of the past 157 years, however, the level of Italy's debt relative to its GDP (D/Y) largely exceeded that of today's G-7 countries (excluding Italy) (Fig. 1). Throughout 1861-1934 and again after 1990 D/Y was always around or above 80% (Fig. 1).

Figure 1: Gross public debt, percent of GDP, (1870-2017)

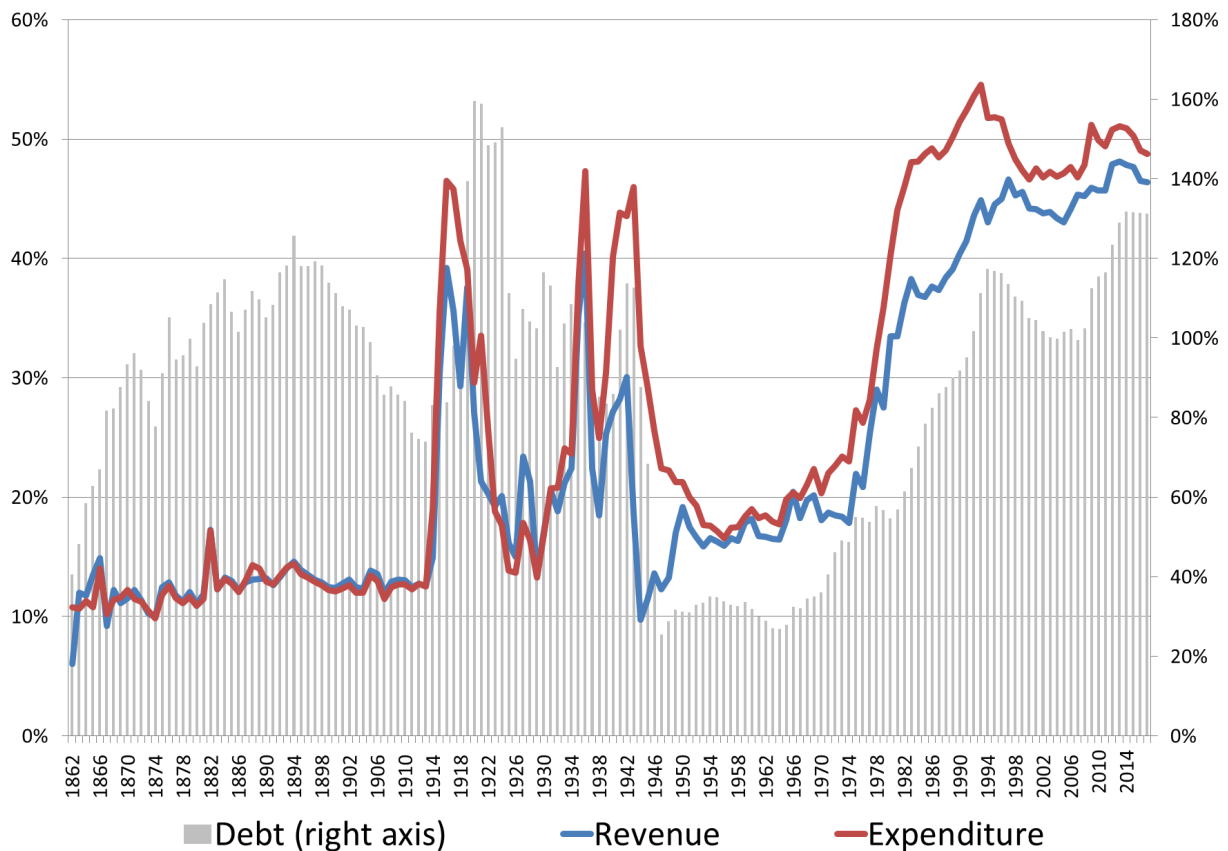


Source: IMF (2013), Maddison, (2018), IMF Database.

Data for G7 minus Italy are PPP-GDP weighted averages.

From the end of the Second World War to the present, public expenditure constantly exceeded revenue (Fig.2). Nonetheless, throughout its peacetime history Italy's high-level debt tended to converge to a sustainable path (figures 1.A and 2.A, see the Appendix for explanation, see also Bartolette et al. 2013 and Conte 2010). Running high public debt in a context of strong external constraints - price-taking status, catch-up growth conditioned by the international cycle, interest rates set in foreign markets – has been a *fil rouge* running along Italy's economic history.

Figure 2: General Government Gross debt, Revenue and Expenditure, percent of GDP, (1862-2017)



Source: Francese et al., (2008), Baffigi (2015), ISTAT (1958), ISTAT (1991), ISTAT (2011), RGS (2011), ISTAT Database, Bank of Italy Statistical Database.

Whenever, in the pursuit of GDP growth, D/Y drifted towards an unsustainable path, adjustment measures were taken to bring the debt back to sustainability. In this regard, the case of Italy is interesting in that, though being constantly a high debt country, it experienced only two partial defaults in the interwar years: the first (1926), a consolidation of short into long term bonds, with the encouragement of the international central banks fraternity, the second (1934) in the good company of Great Britain, France and other European countries.

As observed by Pedone (2012), everything changed in Italy since unification: demography, education attainments, electoral franchise, constitutional regimes, the political orientation of people and governments, international economic integration, taxation, composition of public expenditure. Only one of the original features of the country did not change, the almost-constant above-average level of its sovereign debt relative to GDP.

As we shall see, the various episodes differ in many respects from each other. It is therefore hard to pinpoint one or few persistent single factors explaining the peculiar high debt

feature of Italian economic history since unification. We may, however, underline one of Italy's most persistent peculiarities in the Western European context, namely the institutional weakness of a state created in mid-19th century out of several independent regional states, each with its own long-standing legal, social, cultural, even linguistic well-established traditions. This resulted in persistently weak social cohesion and trust both among social groups representing sectional interests and geographic areas. Among today's developed countries Italy has been the least able to reduce regional inequality. Public deficit spending has been the policy-makers' main consensus-building tool. We can assume that Italy's institutional weakness was the cause of either the excess of expenditure over revenues, or of her inability of coping with external constraints.

The way Italy's governments managed the challenge of "high debt" differed at various times in history. After the two World Wars, the accumulated debt was largely monetized and therefore did not increase relative to the nominal GDP, while the interwar experience was mixed: until 1926, debt reduction was followed by an upward rebound. These periods aside, there were two long episodes of debt accumulation (1861-1894 and 1974-1994) each followed by a period of debt reduction (1895- 1913 and 1995-2007). We shall try to list and outline similarities as well as differences for those two longer episodes of debt growth and debt consolidation that took place almost exactly one century apart in the attempt at finding analogies, if any, between the two.

The rest of the paper is organized as follows. Section 2 is devoted to the narrative of Italy's debt history from unification in 1861 to 2007. Section 3 compares 1861-1913 to 1970-2007. Section 4 is devoted to the post 2008 years asking the question whether or not they represent a regime change from all the previous history. Some concluding remarks feature in the last Section of the paper.

2. Italy's high public debt, a brief history (1861-2007)

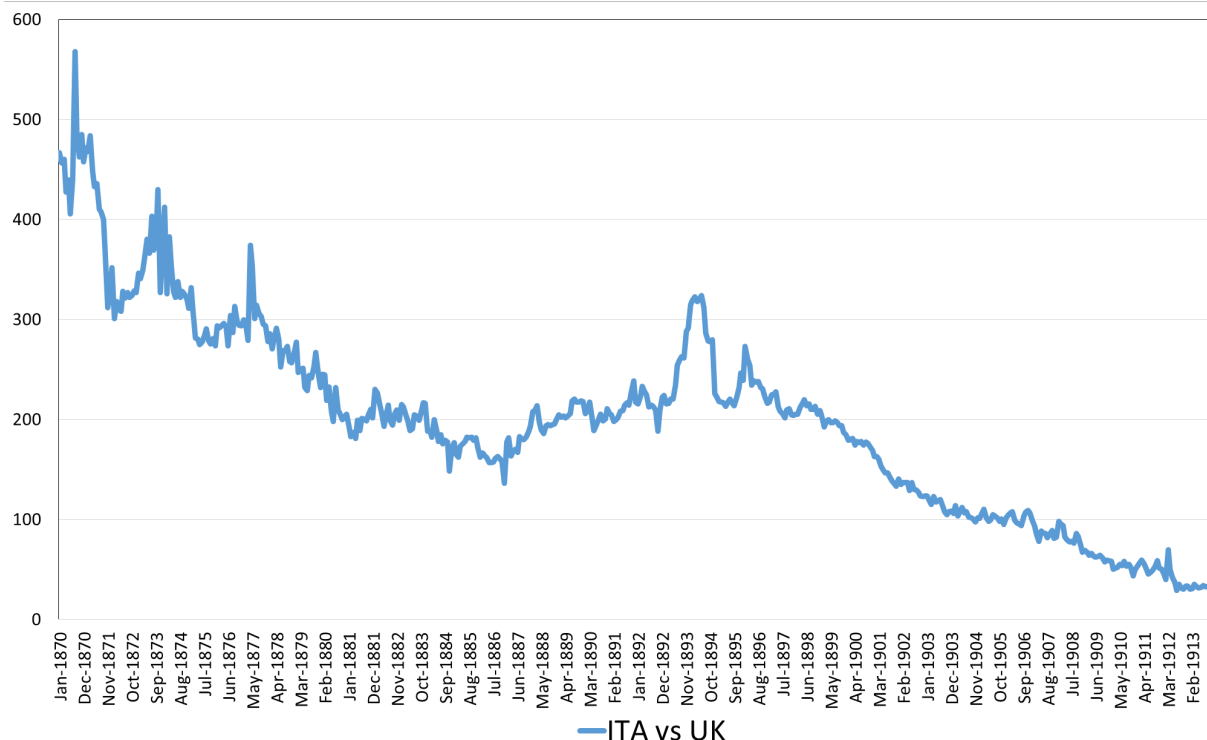
2.1 1861 -1894: debt accumulation

In 1861, the Italian Peninsula was unified into the Kingdom of Italy. A relatively underdeveloped area of the European periphery, the new country had a GDP per person about one half that of the United Kingdom. While its population size made it one of the top 10 largest world economies, the new kingdom was nevertheless a price-taking open economy, whose growth pattern would be largely influenced by the international business cycle.

One of the first decisions made by the new kingdom's government was to honor all the previous states' public debts, consolidating them into the "Great Book of National Debt". As the result, the latter stood at about 1.7 billion lire, or French francs (68 million pounds), equal to 40 per cent of the country's GDP. About a quarter of the national debt was probably held abroad, a substantial part of which in the hands of the Parisian Rothschild house, which in the previous decade had financed the (Piedmontese) Kingdom of Sardinia for both its substantial public works and the wars leading to the country's unification.

In 1894, at the head of one of the country's major banking, social and political crises, the Debt-GDP ratio reached 124 per cent, the highest peacetime level before the peaks in 1994 and the years after 2012. Over one half of the D/Y increase in the first thirty three years of Italy's existence as single country was accumulated in the seven turbulent years following unification, during which time the government debt rose from 1.7 to 4.0 billions, reaching 82 per cent of GDP. At the time of unification, public revenue covered only two thirds of expenditure, mainly as the result of the 1859-60 wars of independence. In the subsequent years, the new government faced formidable challenges: the organization of the state, the creation of infrastructure (railways, ports, roads, telegraph lines), unrest in the Southern provinces and, in 1866, a new war with Austria-Hungary coinciding with a banking crisis. All this against the backdrop of a meagre GDP growth and widespread uncertainty about the very survival of the Kingdom resulting in high-risk premia commanded by both domestic and international lenders. In January 1870, the first month for which we have comparable data, the interest rate spread between the British consol and the equivalent Italian non-redeemable bond (*Rendita Italiana*) stood at 467 basis points (Fig. 3). Once the Italian Kingdom annexed Rome and the state of the Church, in September 1871, uncertainty about the future survival of unified Italy began to abate, slowly reducing the risk premium on the Italian sovereign debt. In the 1870s, the governments of the so-called *Destra Storica*, a moderately right-wing liberal party, committed to financial orthodoxy, consistently pursued policies aimed at balancing the state budget running substantial primary surpluses. A balanced budget was somehow achieved in 1876. In the following years, the cabinets of the so-called *Sinistra Storica*, a moderate left-wing party, did not change the public-finance policy stance, so that the 1870s saw only a moderate increase in the outstanding debt. The Debt-GDP ratio remained rather stable at around 92 per cent. Fiscal prudence managed to keep the debt under control but not to reduce its weight on the economy mainly due to the latter's slow growth (1.1 per cent per annum) and to the high interest payments on the outstanding debt.

Figure 3: Bond Yield Spreads, (1870-1913)



Source: Klovland et al. (1994).

After the pause of the 1870s, public debt grew again in the 1880s, reaching 108 per cent of GDP in 1887. In anticipation of the resumption of gold convertibility of the lira (it had been suspended during the 1866 war) foreign capital inflow increased. The yield spread of the Italian rent to the British consol stabilized at around 200 basis points. Industrial growth accelerated, but its impact on GDP growth was modest, given the limited size of the sector.

The years 1888 - 1894 were defined by economic historian Gino Luzzatto as “the darkest in the economy of the new kingdom” (Luzzatto 1963: 251). The inflow of foreign capital, favored by the gold standard, resulted in an expansion of bank lending, particularly to the construction sector. Generous credit extension to ever-riskier borrowers led to bank failures, when falling housing prices resulted in debtors defaults. At the same time, the industrial expansion of 1880-87 faltered. Between 1890 and 1894 nominal GDP declined by about 9 per cent. The crisis was mitigated by credit from the banks of issue, in a framework of only nominal gold standard, while government spending was kept under control. Nevertheless, the debt-GDP ratio jumped from 105 per cent in 1890 to 125 per cent four years later, when the crisis came to a head, with the failure of the two largest commercial banks amid scandals and a major political crisis. The gold standard was suspended.

2.2 Consolidation (1894-1913)

In 1895 – 1896, the banking reforms hastily put in place in 1893-94 were fine-tuned and implemented. A crushing defeat in Ethiopia put an end to expensive colonial ambitions. The gold standard was not legally reintroduced, but credible time-consistent monetary and fiscal policies, aimed at boosting domestic and foreign investors' confidence, kept the exchange rate within the gold points of the legal gold parity (Toniolo, 1990). Between 1896 and 1906, nominal GDP increased on average by 3.1 per cent per annum and real GDP by 2.4 per cent. The amount of the outstanding sovereign debt declined from 96.5 to 81.4 billion lire (of which only 7 billion held abroad), reaching 91 per cent of GDP.

In 1906, the time was ripe for the Italian government to undertake a voluntary conversion of the Consolidated 5% (*Rendita Italiana 5%*) into a new Consolidated 3.75%, an operation similar to the British Goshen Conversion of 1888 and to the French *Conversion Rouvier* of 1902. In 1906, the Italian Rent traded above par and the yield spread over the UK consol had fallen to about 100 basis points. In spite of the perplexity of the French *Haute Banque*, which refused to underwrite the operation, the success of the conversion (only 0.7 per cent of the holders opting for reimbursement at par) witnessed to the market trust in the Italian Sovereign bonds. In the aftermath of the conversion, the new title traded at 102 in Paris, while the exchange rate of the lira remained within the gold points of the legal parity.

After the 1907 financial crisis, which was stopped on its tracks by the Bank of Italy with little government financial backing, real GDP growth slowed down (1.9 per cent p.a. in 1907-1913). But an increase in price inflation and a further decline in interest rates¹ more than offset the impact of slower growth on the dynamics of nominal Debt-GDP ratio which continued its descent to reach about 75 per cent of GDP in 1913. The share of the debt held abroad also declined to around 10 per cent of the total.

In the two decades before the Great War, the speed of the Italian sovereign debt reduction, both in absolute terms and in relation to GDP, was quite remarkable in the European context. Yet, in the last year of peace, Italy's debt-GDP ratio was still, with Spain's, the highest in Western Europe (Tab. 1). Nevertheless, judging from the interest rate spread of the Italian Rent relative to the British Consol, Italy's government securities were perceived as amongst the safest

¹ The most relevant novelty of this period is perhaps nominal GDP growth being constantly higher than interest rates.

in Europe. In June 1912, the market interest rate on the Italian Rent was only 29 basis points above British consols.²

Table 1: Debt-to-GDP (%), Various European Countries, 1894 - 1913

	Italy	Spain	France	Greece	Netherlands	Belgium	Germany	UK
1896	124	85	109	216	98	48	48	44
1913	76	76	66	65	65	43	38	28

Source: Jordà et al., 2017.

To sum up, in 1894, at the time of one of the most threatening crises of its entire history, the Kingdom of Italy's debt exceeded of 120 per cent its GDP, being the highest in Europe, bar Greece. For the first decade after unification, the explanations for deficit spending and debt increase are quite straightforward: the government was engaged in "completing" the unification process by both war and infrastructure building, while at the same time the very survival of the country was in doubt, from within³ and without. After 1871, the objective of public finance equilibrium was one of the top priorities of the successive governments and, more generally, of the economic, political, and academic élites. A budgetary equilibrium of some sort was attained in 1876. Nevertheless, the Debt-GDP ratio continued to climb during the two following decades. Throughout the period under consideration, *i-g* (Fig. 2.A) was constantly positive so that even quite consistent primary surpluses turned out to be unable to reduce *D/Y*. In spite the highest (with France) government expenditure to GDP ratio in Western Europe, after paying Italian and foreign *rentiers* (on average 40 per cent of government expenditure), satisfying the demands of the King and his generals, and paying for the general administration not much was left for meeting social needs and to accommodate sectional interests in trying to smooth political and social tensions. The rigidity of the budget and the parliamentary struggle for the control of portions of the limited "free" budgetary resources made it impossible to frame a time-consistent long-term strategy of debt reduction.

² The yield spread of the long-term German and US bonds relative to the consol was 50 and 47 basis points respectively.

³ The government kept an army of up to 300 thousand soldiers in the provinces of the former Kingdom of Naples in order to quench simmering discontent and open revolt.

The above-mentioned environment somehow changed with the 1893-95 reforms introduced as the result of the banking crisis and the military defeat in Ethiopia (1896) which paved the way to more growth-oriented and socially open governments. Higher growth and progressively lower interest rates allowed both for steady, if slow, debt-GDP reduction and more resources to be allocated to socially relevant expenses such as the nationalization of the inefficient private railways and the assumption by the central governments of the expenses for compulsory elementary education, hitherto the responsibility of poor and incompetent city councils.

2.3. War financing and postwar crisis 1915 – 1921

Wars are financed by a mix of taxes, debt (both domestic and foreign), and inflation. The share of these three components in total war finance depends, according to Kindleberger, on the country's social cohesion and the political consensus enjoyed by its political elite. Where consensus is shaky, governments minimize the unpopularity of tax hikes, resorting to borrowing and the printing press. In Italy, two thirds of war-related government expenditure (i.e. total outlays in excess of 1913 peacetime expenditure) were financed by domestic and foreign borrowing. The rest was equally divided between new taxes and money supply growth. In 1919, the government deficit equaled about 28 per cent of GDP (primary deficit being 20 per cent of GDP). In the same years the debt-GDP ratio jumped from 97 per cent (1918) to 160 per cent. However, the increase was entirely due to changes in the lira value of gold-denominated foreign debt. During the war, the domestic part of national debt did not increase relative to GDP, as it was largely monetized by high inflation in a context of binding wartime financial repression.

In 1914-19, Italy's pre-war current account surpluses turned into huge deficits, due to the fall in merchandise exports, tourism and emigrant remittances, while high imports of food and raw materials were essential to the war effort. The gap was met by borrowing first from London and, after 1917, from the United States. The same did the other belligerent of the Entente Alliance. Without dealing here with the contentious issue of inter-allied wartime debt and its eventual solution, it is enough here to say that, at least as far as the Continental countries were concerned, the foreign part of the debt was considered to be "political" rather than commercial and thus to be settled either by linking debt repayment to German reparations, which the United Kingdom and the United States refused to accept, or by an extremely favorable political settlement. In 1923-24 the UK's debt to the US was generously settled, as were the debts of France, Italy, Belgium and other minor debtors to both creditors. Generosity consisted in setting payment schedules over

several decades at low interest rates, thereby reducing the present value of the debt to a tiny fraction (in the case of Italy less than 20 per cent) of its original amount.

2.4 Currency stabilization, depression and a decade of wars (1922-1945)

In 1922-26, debt to GDP ratio fell from the all-time high of 160 per cent to about 90 per cent as the result of the settlement with the foreign sovereign creditors and of a reduction of domestic debt from about 78 per cent to about 55 per cent. A brief, but deep, post-war slump, marked by bank failures and bailouts, which required a new monetary expansion, was followed by a spurt of rapid growth fueled by pent-up consumption and investment demand. In the first years of Mussolini's rule, when he still led a coalition government, fiscal policy was aimed at balancing the budget, a goal attained in 1926, mainly by cutting public expenditure. Domestic debt was reduced from 80 to 60 per cent of GDP, foreign debt from 84 to 43 per cent. Much of the domestic debt reduction was due to expansionary monetary policy fueling a substantial price inflation.

In 1926-27, Italy followed the general European pattern in stabilizing the lira's external value and resuming gold convertibility. The necessary deflationary policy affected real and nominal GDP growth, putting an end to the decline of the domestic debt-GDP ratio, which by 1929 had risen to 61 per cent, while foreign debt decreased only marginally to 41 per cent, bringing the total sovereign debt again to over 100 per cent.

1926 and 1934 saw the only two episodes in the history of Italian public debt that may technically be labeled as defaults. The first one was the *compulsory* consolidation of about 15 billions of short- and medium-term government securities into a new 30-year, 3.5 per cent bond, the so-called *Littorio* Loan. The consolidation was part of the *monetary* policy measures pursued in anticipation of the 1927 return to gold convertibility and it was aimed at draining liquidity from the market. It was probably suggested, certainly approved of, by the Bank of England and the New York Fed, the leaders of the European currencies stabilization drive. Initially markets punished the *Littorio* bonds but, in the medium-term, investors appreciated the new issue (Toniolo, 1980). In 1934, Italy, together with other debtors including France, defaulted on the remaining installments of the British and American inter-allied debts (Astore and Fratianni, 2018).

After an initial (1930) tightening, the government fiscal stance during the Great Depression was moderately expansive, with deficit rising from almost zero in 1930 to about 3.2 per cent of GDP in 1933. A substantial fiscal expansion came only in 1934-35 to pay for the conquest of

Abyssinia. As the result, in 1934-39, average nominal GDP growth⁴ and financial repression (control of international capital movements) allowed the debt-GDP ratio to decline from 108 to 85 per cent.

In 1935 - 45, Mussolini's Italy was almost continuously at war, first in Africa, then in Spain and, from June 1940, in Europe as an ally of Nazi Germany. A system of war financing, called the "capital circuit", was devised whereby an initial monetary expansion would be absorbed by the public subscription of government bonds, the proceeds of which would be fueled into the war-related government procurement, creating additional income and new demand for government bonds and so on in a "circular" movement of funds intended to keep both price inflation and government debt under control. In order for the system to work it was essential for savers be allowed to invest in government securities only (Della Torre, 2000:1) and for consumption to be rationed to generate a high flow of savings. Scholars disagree as to the effectiveness of the system, some arguing that it lasted until 1942-43, others that it lost its grip as early as 1940. At any rate, between 1940 and 1943, with a price inflation (GDP deflator) of "only" about 31 per cent per annum, the debt-GDP ratio rose from 85 to 112 per cent "only". In the following years, when the government lost control both of the war operations and the economy, while Italy was divided into two parts, the inflation rate jumped to 80 per cent. As the result, at the end of the war, public debt stood at 68 per cent of GDP in spite of the latter's large reduction in real terms.

2.5 A golden age of growth and low sovereign debt (1946-1973)

In 1945, Italy's GDP was reduced to its 1908 level. If we define post-war "reconstruction" as the time it took to bring GDP back to the level of the best pre-war year (1939), Italian reconstruction took about four years, during which time real GDP grew at an average yearly rate of almost 16 per cent. The inflation rate (GDP price deflator) averaged 26 per cent. In 1945, government revenue was only 20 per cent of expenditure, it was 80 per cent in 1949. The debt-GDP ratio fell from 68 per cent in 1945 to 32 percent in 1949. The Republic of Italy (monarchy was ousted in 1946) was therefore born with an exceptionally low debt burden, in fact the lowest in post-unification Italy. This outcome was due to the combination of high real growth and high inflation in an environment of financial repression (tight control on international capital movements).

⁴ Real GDP grew on average by 3.5 per cent p.a. while the average inflation rate was 6 per cent.

In the first half of 1947, consumer price inflation jumped to an annual rate of about 60 per cent (ISTAT 2011:898). Luigi Einaudi, the new governor of the Bank of Italy, was a university professor of economics well known for his monetary orthodoxy. Did he let the lira slide precisely in order to reduce the burden of national debt? The question cannot be solved in the light of the available evidence. It is more likely that political conditions were not ripe for a monetary squeeze as long as large coalition governments ran the country. Only after the creation in 1947 of a politically more homogeneous government, of which Einaudi himself was a member, the Bank of Italy moved to sharply reduce money supply to change inflation expectations. Whatever Einaudi's true intentions, the brief postwar episode of high inflation allowed Italy to start its postwar history with an exceptionally low debt burden.

From 1951 to 1970, real GDP trebled, growing on average by 5.6 per cent per annum. Average price inflation was about 3.5 per cent. In a context of financial repression, with interest rates below the rate of growth of GDP, it is hardly surprising that the debt-GDP ratio grew only moderately (from 30 to 37 per cent), despite substantial public expenditure growth (from 24 to 33 per cent of GDP), driven by the creation of the Italian welfare state, and often quite large total and primary deficits (Artoni and Biancini 2003: 359-64).

2.6 Debt accumulation again, 1974 – 1994

In the 1970s, the growth rate of the economy slowed down while both unemployment and price inflation rose. In 1970-1979, however, real GDP still grew at the quite respectable average rate of 3.7 per cent, with an acceleration in the second part of the decade compensating for the slower growth of the earlier part. Propelled by the first "oil shock", consumer price inflation jumped from 5 to 10 per cent in 1973, climbing to 18% between 1974 and 1977, much higher than in neighboring countries. Slower growth and inflation coincided with substantial increases in social spending. In the same years, the political environment was made particularly critical by the spread of terrorism both right- and left-wing. A number of prominent citizens were killed while bomb attacks massacred dozens of people. In 1978, former Prime Minister Aldo Moro, then leader of the Christian Democratic Party, was kidnapped and killed after a long detention by the Red Brigades. Against this backdrop, unsurprisingly, the successive governments resorted to public expenditure, which rose from 33 to 42 per cent of GDP, to try and meet as many social demands as possible, without at the same time proportionally increasing taxation. The resulting fiscal deficits were

largely accommodated by the Treasury through the creation of monetary base. The fiscally induced monetary expansion produced foreign exchange crises in 1974 and 1976.

In early 1970s, the creation of monetary base was prevalent in covering the public sector borrowing requirement. After inflation reached its peak, monetary creation was reduced to 30% of public sector requirements. After 1975, the purchase of long-term government bonds was secured only through administrative measures committing banks to hold the government bonds in their portfolio. In 1981, only one third of the debt of the Public Administration was covered through long-term bonds. In an environment still plagued by “second round” inflationary consequences of oil shocks and by currency volatility, the public debt’s short maturity made it vulnerable to crises of confidence. Consequently, although inflation and the negative level of real interest rates maintained the public debt algebraically sustainable⁵, a regime change was required to overcome the intrinsic instability of Italy’s financial position.

In 1981, after a first major increase in the debt – GDP ratio, Italy implemented an institutional breakthrough, which relieved the Bank of Italy from the long-standing obligation of subscribing un-opted Treasury bonds (the so-called divorce). Once the central bank’s safety net was lifted, the placement of Treasury bonds on the market required a risk premium that increases the whole structure of interest rates, with consequences felt both on the cost of the debt and on the economy as a whole. Unlike the 1970s, when real interest rates were largely negative, after 1981 real interest rates turned persistently positive, with average short-term rates close to 4% and long-term above that level until 1990. In fact, the effect of the “divorce” coincided with the foregoing U-turn in US monetary policy that caused a worldwide increase in real interest rates⁶. Whether the “divorce”, or instead the Fed’s struggle with inflation, was responsible for the change in Italy’s differential between the interest-rate and the growth-rate remains unclear yet, as the

⁵ In 1979 the government deficit reached 10 per cent of GDP. Yet, in 1979, the debt-GDP ratio was “only” 58 per cent, up 20 percentage points from 1970, but surprisingly low given the cumulative size of the deficits. The reason for this outcome is that, from 1968 to 1983, “the growth rate of the GDP price deflator was always higher than the average cost of public debt” (Artoni and Biancini 2003: 366). In other words, the government could borrow at a negative real interest rate.

⁶ FederalReserveHistory.org: “Following a sharp rise in inflation between 1978 and 1979, President Jimmy Carter shuffled his economic policy team and nominated Volcker to become chairman of the Board of Governors. In his first term, Volcker focused on reducing inflation and conveying to the public that increased interest rates were the result of market pressures and not Board actions. He raised the discount rate by 0.5 percent shortly after taking office.”

two effects likely reinforced each other⁷. Between July 1977 and July 1982, the Federal Reserve raised the official discount rate from 5.5% to 12%. What we can assume, is that Germany's increase in interest rates around 1981 might provide a proxy of the US effect in institutional neutral conditions. Between December 1978 and July 1982 the German Bundesbank raised the discount rate from 3.5% to 9.0% (with a temporary increase to 9.5% in June 1980), replicating very closely the US increase. Italy's discount rate increased from 10.5% at the end of 1978 to 19% in 1981 (it will later decline to 11.50 in 1991). Much of the interest rate differential with Germany could be explained by the risk premium of expected devaluation within the new Exchange Rate Mechanism⁸ and in consideration of the dramatic currency swings in the former decade. Overall, the international interest rates cycle and the risk premium on the lira seem to have driven the domestic level more than the "divorce".

Ever since 1981, every single Budget Law has been built around dynamic adjustment scenarios for the reduction of public expenditure. The result, however, was less than spectacular. From the second oil shock to the late 1980s, the Italian public deficit hovered above 10% of GDP. In 1982 and 1983, the sum of the primary deficit, the service of the debt and the "adjustments" reached 17% of GDP. Governments met a strong demand for social spending and the completion of the Welfare State. Only the high, if slowing down, inflation rate and an increase of real growth, limited the explosive dynamic of public debt. However, high inflation, in a context of heated political confrontation, gave rise to labor strikes and social tensions that were met by a series of redistributive policies. Moreover, social guarantees made of Italy's labor market one of the most rigid and segmented. Consequently, the adjusted unemployment rate for Italy doubled between 1980 and 1989 from 4.7% to 9.5%, despite an average real GDP growth of 3.1 per cent p.a. in 1884-1990. Unemployment was confronted with more State intervention that bloated the public sector employment and the bureaucratic system. The decentralization of public expenditures through the new regional administrative system detached spending from the fiscal revenues that remained centralized and ultimately proved unable to keep pace with a systemic tax evasion. Finally, political instability, mirrored by the government's low duration, created a short-term

⁷ A distinction of the two monetary effects would permit to understand whether Italy's interest rates could remain dependent on the international cycle even returning to the lira and to an old-styled central banking. The question has grown more relevant today in the wake of new political actors claiming the superiority of a national monetary sovereignty.

⁸ The European Exchange Rate Mechanism was introduced in 1979 as part of the European Monetary System. Within that agreement, the Italian lira could fluctuate by plus or minus 6% of the bilateral rate with the ECU.

preference that de facto detached even more spending decisions from their long-term fiscal consequences. The lack of fiscal responsibility and the expansion of state expenditures were also conducive to widespread corruption phenomena.

Along the Eighties, the main institutional constraint to fiscal profligacy was given by the level of interest rates consistent with the stability of the currency within the European Monetary System. Financial instability, via devaluation, was politically costly in a context where households were counterbalancing a growing public debt by high private savings. Consequently, the stability of the exchange rate between the lira and the D-Mark assumed a political dimension. In 1990, Italy had a severe fiscal imbalance, with a public deficit of almost 10% of GDP and a public debt exceeding 90% of GDP. In 1991, the primary balance returned to surplus, though just above zero, for the first time since the mid-Sixties. Against this backdrop, the currency and financial crisis of 1992 and the disintegration of the European Monetary System need to be seen as one of the most dramatic period in Italy's political and economic history, which then led to a complex process of adjustment of the public finance disequilibrium.

2.7 1992 – 2007 Crisis and slow consolidation

In 1992, Italy experienced a unique convergence of three extraordinarily severe crises of different nature. The first was financial, with the dramatic breakdown of the European Monetary System, followed by a massive lira devaluation. The second was political, with the collapse of Italy's so-called "First Republic" under ominous and spectacular accusations of capillary corruption. The third was a derived crisis of civic confidence aggravated by the fiscal correction underway – the primary surplus had just turned positive for the first time in decades – making the corruption crisis even more offensive now that the tax revenues exceeded the services offered to the citizens by the State, while the level of public debt crossed the symbolic – but also critical in terms of the debt's growth dynamics - 100% debt-to-GDP threshold.

The fiscal corrections between 1992 and 1995 amounted to primary surpluses equivalent to 8% of GDP, and were implemented through higher taxes, major cuts to public spending, the end of the system of state-owned enterprises (*Partecipazioni Statali*) created in the wake of the Great Depression and the reform of the social security system. In 1992, expenditure on public pensions had reached 12.3% of GDP and was expected to turn unsustainable in the following decades. The 1993 budget represented a turning point in Italian fiscal policy. Expenditure cuts and revenue increases amounting to nearly 6 per cent of GDP were implemented. Structural measures were

also adopted to attenuate the expansionary trends in the major expenditure items. The social security reforms by the Amato and Dini governments steered a pension system mostly based on a pay-as-you-go scheme towards a contribution-based system, which began to bring pension spending under control. Adjustment of pensions to inflation was temporarily stopped. From 1992 onward, Italy's fiscal rebalancing was accompanied by higher taxation rates as well as by lower levels of interest rates, converging toward the European core levels in the perspective of monetary convergence and finally monetary union.

The striking and counterintuitive macroeconomic consequence of the three crises was not the expected collapse of private consumption – threatened by higher taxation, lower pensions, a 5 per cent reduction in the number of public employees (between 1992 and 1999), and lower real returns on private wealth – which actually remained stable, but an unprecedented collapse of investments only moderately reduced by the decline of interest rates in the perspective of monetary convergence towards the start of the European Monetary Union. What happened could be described as a “Ricardian disconnection” between households’ reaction, trying to keep consumption stable, while private and public investors were slashing down their capital investments. An asymmetry of information between the “elite” (investors) and the “people” (consumers) that will come to political fruition after the euro-crisis. The reaction of investors needs to be put in a context: on one hand, Italy's corruption “clean-up” was so sweeping that several top brasses in the largest corporations were either incriminated, imprisoned, or committed suicide. No large firm remained unscathed. On the other hand, for the first time, the Maastricht rules brought to the daylight that, within a strict monetary constraint as provided by the necessary convergence toward the Maastricht criteria, fiscal adjustment could not happen other than through higher taxation and/or lower public spending. Not through monetary interventions, devaluations or inflation. This critical awareness projected a reduction in investors’ net expected returns. Finally, fiscal restraint implied a reduced scope for state intervention in the economy, which had been highly beneficial for Italian capitalists and a cause of corruption. In this light, the European Monetary Union other than being primarily a “discipline device” for the economy as a whole, as it is commonly referred to, it was the cause of a dramatic disconnection between short-term fiscal restraint and a long term defection by domestic investors waiting for the fiscal restraint to produce a decline in debt sufficient enough to reduce the risk of being over-taxed in the future. From the point of view of the reduction of public debt, this disconnection had the potential of being self-defeating. If a significant fiscal restraint was accompanied by timid investments, low

growth would have limited the effects on public debt. Uncertainty about the success of fiscal restraint also had an impact on the quality of investment, whereby the technological transformation underway was largely missed by investors who had a mostly defensive vision of Italy's industrial perspectives and indeed concentrated on the provision of newly privatized services industry. The reduced inclination to invest in those industry – for instance, ICT – had an impact on Italy's distance from the technological frontiers that rippled throughout the whole economy. The ensuing slowdown in total factor productivity represents a major reason of low growth in the following years.

Closing in on 1998, the uncertainty about Italy's participation to the euro from its beginning waned with positive effects on interest rates and on investment. The consolidation process was given a final boost in 1997, with the aim of ensuring Italy's participation in the Monetary Union from the outset. A budget adjustment amounting to about 3 per cent of GDP was implemented, mainly in the form of revenue increases. Substantial use was made of temporary measures and one-off taxes.

Finally, at the end of 1998, Italy joined the European Monetary Union adopting the fiscal rules of the Stability and Growth Pact and closing a decennial process of financial stabilization that can be epitomized through the decline of the level of real interest rates paid on treasury bills from 6% in 1981, to 1.2% in 1999. Long-term real government bonds rates declined from 7.1% in 1991 to 2.8% at the end of 1999. Between 1980 and 1990, the interest burden as a share of GDP rose by 5.4 percentage points, to 10.5 per cent. In the years 1998-2001 interest expenditures fell to 6.3 per cent of GDP.

The overall balance remained nevertheless on a declining trend, as a result of the steady fall in interest payments. In the years before the global financial crisis, Italy's debt-to-GDP ratio declined by 27 points, between the peak of 127 percent in 1995 and 100 percent in 2007.

2.8 A simple counterfactual, the Great Recession and its aftermath

As mentioned, Italy's debt-to-GDP ratio declined by 27 points between the peak of 127 percent in 1995 and 2007, an average of slightly two points per year. However, that period needs to be dissected in two. Between 1995 and 2000, the Italian government succeeded in running an average primary surplus of 4.7 points of GDP. In the following six years, between 2001 and 2006, the average primary surplus was only 1.3% of GDP. On the one hand, a less ambitious fiscal stance was due to a presumed "fiscal fatigue", given that over the 1990s, fiscal corrective measures had

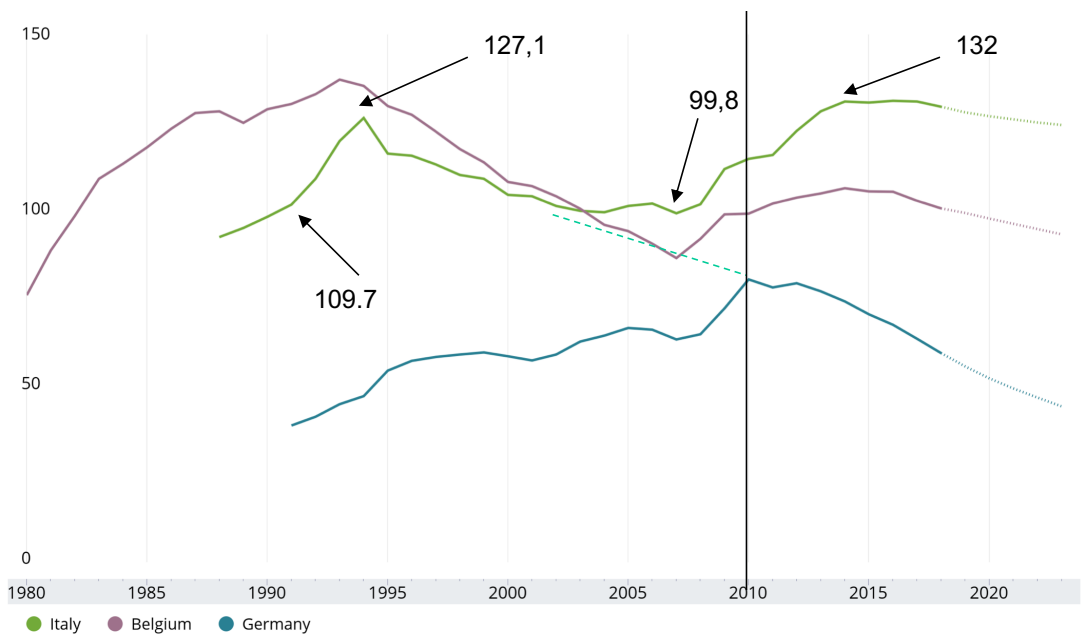
accounted for about 22 points of GDP. On the other hand, however, it was due to political sentiments turning against Europe, stoked by populist ideologies and parties. In the years 1998-2000, the center-left governments slightly relaxed the stance of fiscal policy: the primary surplus, which had peaked at 6.7 per cent of GDP in 1997, went down to 5.2 in 1998 and remained approximately constant in the following two years. A clearer change intervened with the following center-right government, led by Silvio Berlusconi, that was suffering Europe's limiting power constraining their will of using public money for consensus. After 2003, when Italy's EU Council presidency backed France and Germany's violation of the Stability and Growth Pact, fiscal discipline was de facto abandoned and Italy's primary surplus declined from 4.8% of GDP in 2000 to 0.3% in 2005 and 0.9% in 2006. Between 1999 and 2007, Italy's public debt still declined by 10 percentage points. This result, however, was not determined by investment or spending review policies. It was caused by other relevant factors, among which were revenues from privatizations and other stock-flow adjustments.

What would have happened, had Italy pursued the 1995-2000 fiscal stance in the following years? Obviously, we need some assumptions on the effects of fiscal restraint on growth and on the monetary stimulus provided by capital inflows from the rest of the euro-area as happened in all other "converging" countries. A net dampening effect on growth should probably be factored in. Overall, even under cautious assumptions, Italy's public debt would have ended in 2008 somewhere close to 85% of GDP⁹.

Had the level of the 1995-2000 primary surplus been preserved in the following six years, Italy would have met the beginning of the European crisis with a similar debt-to-GDP level as Germany, the same average growth rate in the previous decade as Germany, a less innovative and productive industrial system, but a more solid banking system than the German one. In these conditions, Italy would have been a safe haven throughout both the global and the European crises and it would have benefited from substantial capital inflows from more fragile countries, as happened in the German economy.

⁹ Considering only a constant primary surplus of 4.8% between 2001 and 2006, the debt reduction would have amounted to a decline of the debt-to-GDP of 21% higher than the one realized. The level of the debt-to-GDP ratio would have reached a level between 78% and 80%.

Figure 4: General Government Gross Debt (% of GDP): the missed opportunity



Source: IMF, WEO 2018

A posteriori, it can be said that missing the opportunity of reducing the public administration's indebtedness in the pre-crisis periods is the fundamental fault of Italy's recent budgetary policy because a sounder fiscal position would have allowed for more aggressive budgetary adjustments during the ensuing crisis.

Potential growth, and in general the expected growth rate, should have become the main concern of policymaking. In fact, in analyzing the data from the 2002-2007 period, it does not appear that the structural weakness of the Italian economy was the real concern when planning the objectives of economic and budgetary policy. On the contrary, what is evident after the year 2000 is that budgetary objectives were calibrated systematically towards growth objectives that in reality proved to be extremely unrealistic (Tab. 2). Missing the goal of balancing the budget was not what prevented the substantial reduction of the public debt. The real reason was a regular "error" in the estimate of the growth rate of the aggregate income¹⁰.

In none of the years considered did effective growth come anywhere close to the growth estimated by the government in its economic and financial documents.

In general, each draft budgetary plan estimated an increase in the real GDP for the following year of about 3% or 2%.

¹⁰ This is what results from the evaluation of the difference between the growth expected by the government at the moment the Economic and Financial Document (and thus the estimates of the public finance objectives) was defined and the actual results.

Table 2: Growth rates of the estimated and effective GDP (in real terms)

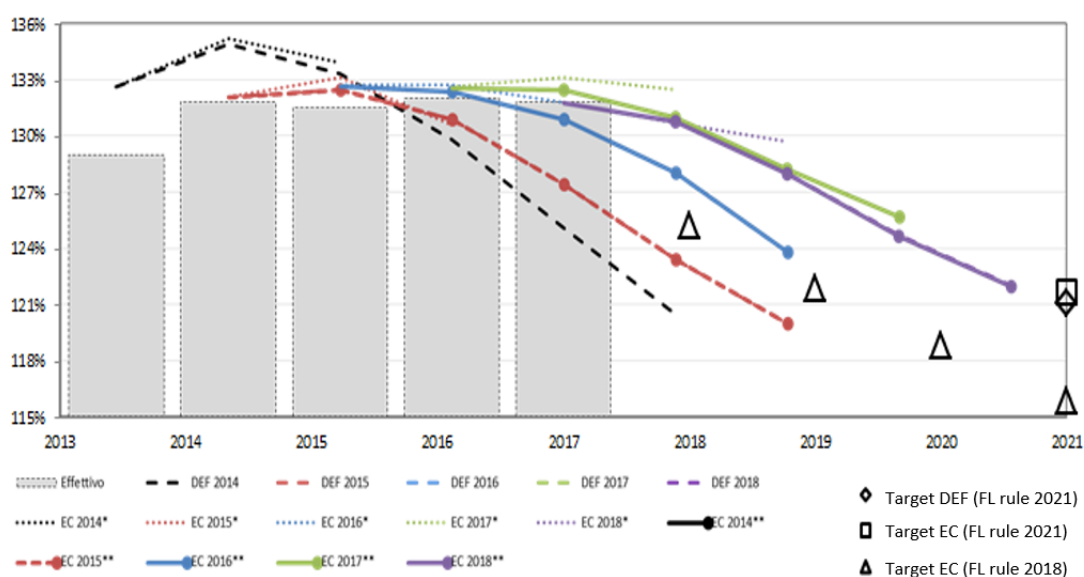
		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Estimates*	July 1998	2,7%									
	July 1999	1,3%	2,2%	2,6%	2,8%	2,9%					
	July 2000		2,8%	2,9%	3,1%	3,1%	3,1%				
	September 2000			2,3%							
	July 2001			2,4%	3,1%	3,2%	3,1%	3,1%			
	July 2002			1,8%	1,3%	2,9%	2,9%	3,0%	3,0%		
	September 2002				0,6%	2,3%	2,9%	3,0%	3,0%		
	July 2003					0,8%	2,0%	2,3%	2,5%	2,6%	
	September 2003				0,4%	0,5%	1,9%	2,2%	2,5%	2,6%	
	July 2004					0,3%	1,2%	1,9%	2,0%	2,1%	2,1%
	July 2005							0,0%	1,5%	1,5%	1,7%
	July 2006							0,0%	1,5%	1,5%	1,2%
	June 2007							0,1%	1,9%	2,0%	1,9%
Effective**	Istat (SEC 1995)	1,46%	3,69%	1,82%	0,45%	-0,02%	1,53%	0,66%	2,04%	1,48%	-1,32%
	Istat (SEC 2010)	1,56%	3,71%	1,77%	0,25%	0,15%	1,58%	0,95%	2,01%	1,47%	-1,05%

Source: ISTAT Database, Italian government Economic and Financial Documents.

*The name July and June refers to the data of the Economic and Financial Documents published in the months of June and July of year n; the name September n refers to the data of the Update Note of the Economic and Financial Documents in autumn of year n.

** With reference to data published by Istat, according to the European system of integrated economic accounts SEC 1995 and SEC 2010.

Figure 5: Fiscal target: projection and realisation, (2013-2021)



Source: DEF, EC Forecast.

Italy stands out for a lack of reliable estimates of expected growth that was reiterated year after year, releasing the governments from taking new political economy strategies. After 2008, the crisis mode justified a “buying-time” attitude, waiting for the worst to pass. The European Central Bank had already indicated certain deviations between the effective data and the objectives set by the single governments in the Stability Programs. The data concerning the budget balances with respect to the GDPs of Greece, Portugal and Italy present the greatest deviations from the estimates. Nevertheless, out of all the countries Italy has the largest negative deviation in the annual estimate of the GDP’s growth rate and it is second only to Portugal with respect to triennial estimates.

3. Two episodes of debt growth and consolidation, 1870-1913 vs. 1970-2007.

Several empirical works support the hypothesis of a negative correlation between the dynamics of the debt-to-GDP ratio and economic growth (e.g. Reinhart and Rogoff 2010). In the Italian case, Balassone, Francese and Pace (2013) find a “significant negative relationship between investment and debt, both in the levels and in the growth rate”, the likely Transmission channel operating by reduced investment. At the same time, their empirical analysis “does not provide the support for the hypothesis of a threshold (i.e. that the negative impact on growth is stronger above a certain level of D/Y). Two episodes in the history of Italy’s debt, the second exactly one hundred years after the first, as two local peaks in the debt-GDP ratio took place in 1894 and 1994. They offer an opportunity for comparative analysis both empirical, as in Balassone et al. (2013), and historical aimed at highlighting similarities and dissimilarities between the two episodes in order to try and understand some of the critical features of the second, more recent, episode.

At exactly one hundred years of distance, Italy’s public debt reached its peaks in 1894 and 1994. As described in the previous section, both local peaks of 1894 and 1994 were preceded by fast D/Y increase and followed by a decline that was markedly faster along the first period (declining by 51.8% between 1895 and 1913) than the second (the debt declined only by 18.3% between 1995 and 2007). The first period of debt accumulation (1870-1894)¹¹ was characterized by sluggish GDP growth whereas during the second (1975-1994) the GDP growth rate was quite

¹¹ We disregard 1861-70, a period of rapid D/Y growth which however seems to be dictated by uniquely idiosyncratic conditions: wars of unification/independence and institution building.

substantial. Conversely, real growth was more sustained during the first period of debt consolidation (1895-1913) than in the second (1994-2007), indicating that the impact of debt reductions on the rate of GDP growth is likely to depend on a host of political and institutional factors that interfere so deeply in the process that a detailed description of the system of incentives and constraints, either internal or external, is needed to describe the full complexity of the relation between debt variations and growth. In the present description we limit ourselves to list and compare some of the external constraints and some of the internal incentives presiding over domestic fiscal policy.

The two periods in case have in common several framework elements, which can be identified as follows:

a. At the time of highest D/Y level, political actors were confronted with a severe political discontinuity (a major political crisis in 1893-94 and the end of the “First Republic” in 1992) both requiring, and providing the incentives for, emergency institutional and fiscal action;

b. Both Governments had to cope with internal regional divides and connected problems of political dissent (in the Southern areas during the first period, with the Lega movement calling for a secession of the North in the second);

c. In both periods, financial conditions were mainly dictated by the supply side of investors, either internal or international. Monetary convertibility (or monetary stability) was held in high value by financial investors and the “aggio” (negative deviation from the gold parity of the currency) or the “spread” had an effect of political discipline.

d. In 1870 as in 1975, D/Y was high, if compared with other European countries, at the beginning of the second episode; however, debt was lower than it had been in the first.

e. Both in the 1890s and the 1990s, wiping off the public debt through inflation was not possible, however International financial conditions allowed the crises of the 1890s and the 1990s to be more easily overcome by a significant monetary accommodation, if different in nature and causes, although monetary conditions were more friendly in the second period.

The main differences between the two episodes seem to be the following:

a. The size of the government sector were significantly different. In the first period, government expenditure amounted to just above 10% of GDP, whereas it averaged

over 40% between 1980 and 2007. Moreover, starting from high levels of public deficit, the fiscal contraction imparted in the second period was larger and more sudden, with public debt declining from 11.4% in 1989 to 2.7% in 1997. On the contrary, in the first period the fiscal correction could benefit of a budget that had been kept close to balance for large periods in the preceding years (in particular between 1874 and 1884).

b. In the 1870s, Italy was a poor country: savings were relatively low as high taxation reduced the disposable income of the middle classes. In the 1870s, the right-wing government represented landed interests opposed to extraordinary taxation. Given the strong demographic dynamics, debt translation to future generations and governments was actually conceivable. During the 1980s, Italy was a relatively wealthy economy, but the dramatically divisive political context made taxation hugely unpopular. Left-wing governments, aware of high taxation on employees, were refrained from increasing direct and indirect taxes much as the rightwing governments did caring for the huge number of self-employed Italians“. Debt translation to future generations or governments was hardly possible because of a debt considered on the verge of unsustainability and constantly at risk of financial instability in a context of demographic decline and lower growth.

c. In the first period, some financial innovation was intended to keep the Italian savers committed to Italian assets; in the second period, the end of financial repression that characterized the previous decades boosted international financial diversification.

d. In the first period, fiscal budgets were adjusted around the mean of a balanced budget, the latter being dictated by the financial orthodoxy of the time. In the second period, fiscal surpluses become the rule only after 1991, although, as we have seen, a clear distinction occurred between two relatively protracted periods (1992-1999 vs 2000-2005) mainly depending on political preferences vis-à-vis a less binding balance between risk and reward of fiscal discipline.

e. In the first period, the political, economic and academic élites shared the belief that a balanced government budget and the gold standard were not only desirable but an almost “natural” state (it is possibly the limited franchise that explains consensus on fiscal policies among political élites otherwise divided on such issues as protection vs. free trade, workers’ rights, the desirability of colonies, the role of the state in the

economy etc). In the second period, political and trade unions leaders as well as the economics profession were divided as to the desirability of low deficits and debt.

f. Intergenerational policies were constructive in the first period when properties were highly concentrated in the hands of the taxpayer's families who were also bondholders. In the second period, intergenerational interests were not politically represented and there was no coincidence between taxpayers and bondholders.

g. The policy responses were very different. In the first period, public investments were boosted, while in the second period they underwent a dramatic contraction. In the first case, the political establishment took up the challenge of structural strengthening of the newborn heterogeneous kingdom, while in the second period there structural policies were more limited, the industrial policy was mainly being focused on the hardly achievable tax reduction objective. After 1994, securing financial stability was seen as a precondition to a second stage when lower taxation might provide the market with the correct incentives to steer the industrial system toward catching up with the global competition. On the other hand, once the debt began to decline at the beginning of the 20th century, PM Antonio Giolitti cut public spending while private investors were buoyant.

The similarities and differences between the two periods tell the following: the episodes of debt accumulation share a number of common features such as symptoms of political and financial fragility, political discontinuity, social consequences of territorial heterogeneity, high level of debt, high interest rates dictated by investors, either internal or international. On the other hand, the periods of debt reduction have fewer common features, as they differ by the size of fiscal corrections, the size of spending and taxation on GDP, and the expected growth in a context of entirely different demographic dynamics.

Given the description above, one might conclude that the size of fiscal correction in relation to expected growth could be the main determinant of the success or the failure of a debt reduction process. In fact, as noted above, for all the differences, debt reduction in the second period would have resulted in the same amount of debt-reduction as in the first period if only the political commitment of the 1994-1999 years would have lasted after year 2000.

The Giolitti vs Berlusconi different political determinations could be ascribed, among other factors, to the feverish political context of a modern democracy in which the media cycle can

determine a more volatile consensus among the wide electorate, tipping the balance between short-term and long-term policies. But the same feverish context was in place before the year 2000. In fact, at the beginning of the 21st century Italy had the most favorable conditions to adjust the debt in a benign international monetary and economic context. Italy's choice of giving up debt reduction between 2001 and 2005 was essentially a political one weighting short term partisan opportunism more than long term benefit for the country under less binding institutional (the Stability and Growth Pact was ill conceived and substantially harmless) and financial constraints (the spread was declining while monetary conditions were accommodating). The way the debt-reduction process was watered down after year 2000, through failures in the forecasts of GDP growth, is described in the former chapter. It opens a new way to describe the negative correlation between debt and growth, where it is not primarily fiscal policy, but rather expected growth that determines the sign of the correlation.

4. 2008 – 2018: A regime change?

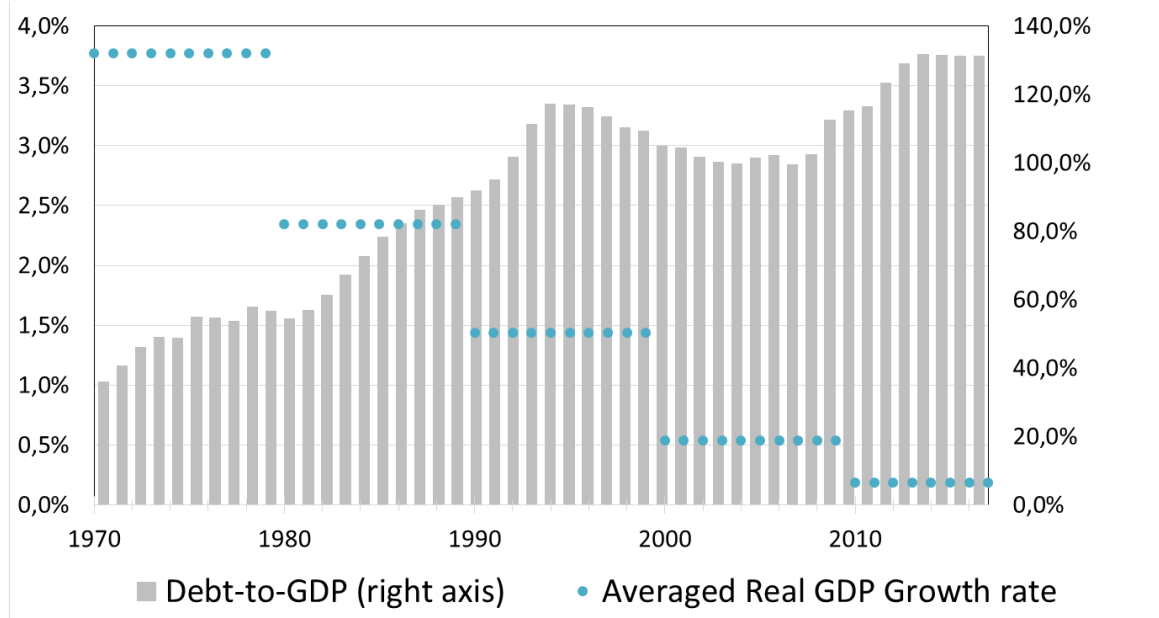
The European crisis has de-facto derailed Italy's previous efforts to reduce the debt ratio. The ensuing recession, the most severe in the history of united Italy, caused a major increase in the debt-to-GDP ratio. Currently, the debt level remains stubbornly above 130% of GDP and has recently returned an upward path.

What happened with the global and European crises is well known. The debt's initial high level made it difficult for Italy to contrast the recession of 2009, a result of the global financial crisis, and then to recapitalize the most exposed credit institutions. The economy's weakness and the closed circuit between sovereign debt and bank debt fed onto each other. In 2011-2012, the European crisis led to a high degree of uncertainty concerning the sustainability of the Italian debt. Only measures carried out by the European Central Bank removed the doubts about Italy's position in the euro area. After the crisis, the decline of Italy's potential growth is making anti-cyclical fiscal policy incompatible with debt reduction. Given all of the above, and in particular given the pro-cyclicality of significant measures for debt adjustments, Italy's governments have tended to buy time. Mostly reaffirming a generic commitment to debt reduction, but using forecasting stratagems to avoid harder fiscal corrections or structural reforms affecting potential growth.

Even at such unprecedented levels, the problem with Italy’s debt is not necessarily one of financial sustainability, traditionally defined as the possibility of funding or redeeming the debt, given certain combinations between the level of nominal interest rates and the rate of growth¹².

In fact, Italy’s debt problem may require to be framed in a different concept of sustainability, one defined through the effect of high debts on economic expectations and different from the classic crowding out. A protracted high debt-to-GDP ratio can have consequences on public spending rigidity, making it difficult to contain debt by trimming expenditure.

Figure 6: Debt- to-GDP and real GDP growth, (1970-2017)



Source: Francese et al., (2008), Baffigi (2015), ISTAT Database, Bank of Italy Statistical Database.

This feeds onto “Ricardian” expectations of high future taxation that undermine investment and depress the potential growth. After decades, the level of potential growth can sink below zero. The process might reach a political or financial breaking point even in a context of very low interest rates.

¹² In 2017, Blanchard and Zettelmeyer have considered less worrisome than commonly maintained a scenario in which euro area growth leads interest rates to a higher level than the one considered compatible with Italy’s low growth. “Even if a real borrowing cost of 3% is assumed – which would put nominal yields at close to 5%, not far from the “crisis yields” that Italy experienced during 2022-2012 – the fiscal adjustment needed to stabilize the debt-to-GDP ratio would be a manageable 1.5% of GDP”. The required adjustment does not appear beyond reach since Italy’s fiscal surplus has often been much higher.

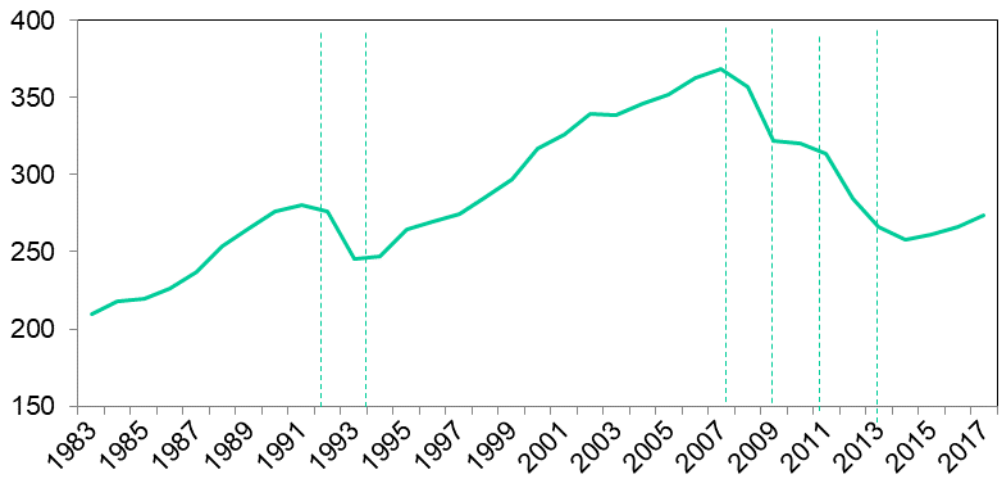
Our assumption is that the European Monetary Union might have introduced a major breakthrough in expected taxation. After joining the Euro area, traditional means for radical adjustments of public debt, like those used in the past (monetization; devaluation; fiscal repression) were no longer factored in. This has reduced risk premia and therefore interest rates, making it easier to reduce D/Y with a lower primary surplus that would not hamper economic expansion. However, the absence of monetary instruments used in the past to reduce the debt has also made it clear that the latter's level - given potential growth - could only be reduced through protracted fiscal surpluses. Should higher levels of public debt increase the rigidity of public expenditure (e.g. due to higher interest payments and/or unemployment benefits), then primary surplus could mostly be achieved via higher taxation rather than spending cuts. The mechanism is strongly pro-cyclical: higher expected taxation reduces expected returns from investment and lowers the level of potential growth.

In this perspective, the unsustainability of public debt would not require to be generated by a non-linear reaction of market interest rates in the wake of the crossing of certain debt tolerance limits or of "crisis yields", as during the 2011-2012 crisis. On the contrary, the process can be a linear progressive erosion of GDP growth and Italy seems to be a case in point.

Among other more general considerations, specific elements for this scenario are: (i) High negative investment elasticity to financial risks; (ii) Public spending rigidity preventing spending cuts and reforms while requiring tax increases; (iii) In the case of even a mild cyclical downturn, a combination of low potential growth and high public debt making anti-cyclical policies inconsistent with debt reduction.

Italy's economy and fiscal policy in the last decade showed a number of indications supporting this scenario. Since the last episodes of monetary corrections, mainly devaluations, of the early 1990s, financial instability seems to be internalized in the investment function. Figure 7 shows the major effect of financial crises on gross investments in Italy over a period of 35 years, likely indicating an effect of fiscal instability on growth. In 2011, Italy's public finance sustainability was questioned in consideration of the high level of debt and the volatile interest rates in the euro-area in the wake of the Greek crisis and of its management, producing bad equilibria and convertibility risks. After the restructuring of the Greek debt, in July 2011, the fragility of Italy's debt was internalized in a level of interest rates, which weighed in on the credit supply, crushed investment and depressed the level of activity. The decline of the savings rate contrasts with the persistency of consumption vis-à-vis the level of income.

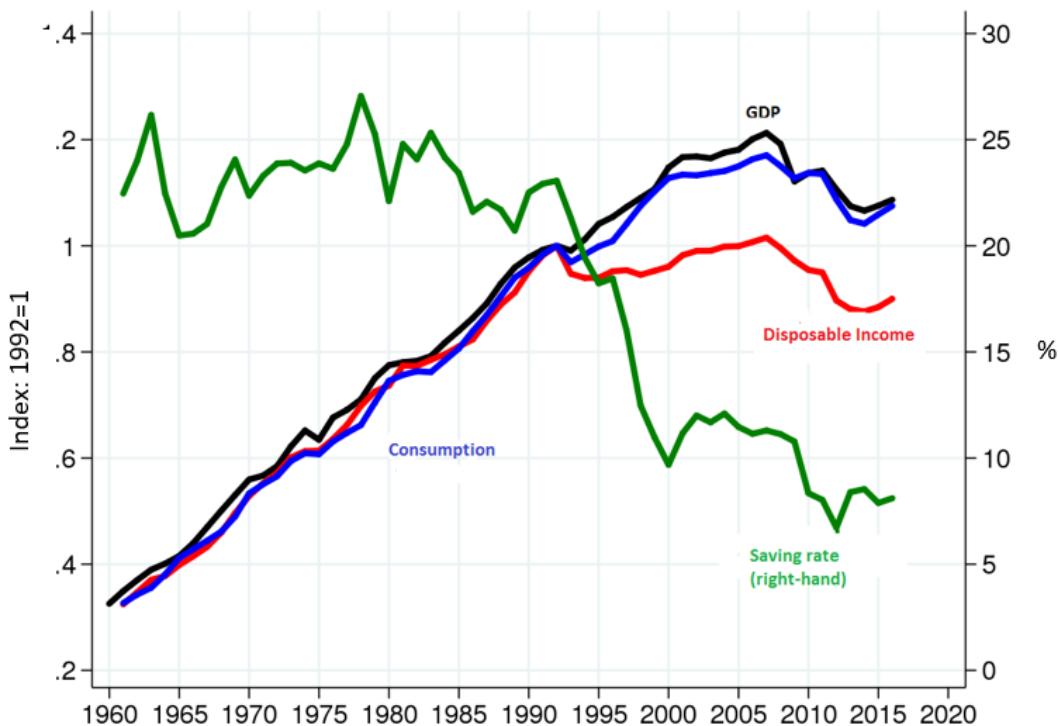
Figure 7: Total Investments, billion euro (1970-2017)



Source: ISTAT Database.

Note that the phases of financial instability are between dotted lines.

Figure 8: GDP, Consumption, Disposable Income and Saving rate (1960-2016)



Source: Brandolini.

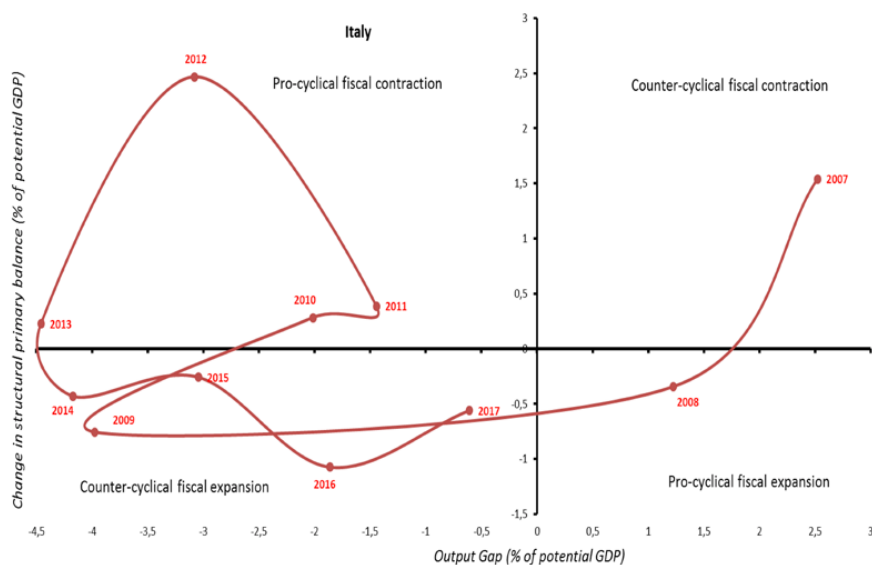
The high level of debt is conventionally associated with profligacy or wide discretionary margins in fiscal policies. In fact, once the necessity of reining in the debt is accepted by policy makers and the society at large, high public debt lowers discretionary margins and increases public expenditure rigidity. The main reason is rooted in political-economic considerations. Unstable

public finance has repercussions on political consensus (since 1994, no single government has ever been re-elected), thus cutting entitlements becomes more painful. Revealingly, demography dictates the consensus of the majority of the electorate. So, while after WWII, education was a very large item in public expenditure vis-à-vis a large young population, later it markedly declined and was replaced by pensions, mirroring the aging of the population. If compared with other OECD countries, the quantity of public expenditure is relatively high and determined by the servicing of the debt (interest rates) and by the pension system. The two items are rigid: the first because it is not endogenous, the second because it has been repeatedly reformed and is seen, in the long term, as more sustainable than in other countries. Consequently, given the high level of debt, the remaining budget is also rigid. Reforms on the remaining items need to be larger, affecting special interests while bringing little financial benefits. Moreover, being the cost of reforms higher in the short run – potentially pushing the debt higher - governments have been fretting about the risks of innovating and reforming the expenditure systems. The rigidity of public expenditure implies little leeway in increasing the fiscal multipliers. Finally, consensus problems push for decentralization due to diversified geographical economic structure; however, this lowers political accountability because expenditure functions at the regional level are separated by tax collection functions. The consequence is an ever increasing level of taxation, which is pro-cyclical and already high vis-à-vis other countries, draining stimulus for growth, and cumulating along the economic cycles.

As from Blanchard-Zettelmeyer (2017), even at levels above 110%, Italy's public debt is not financially unsustainable. However, it seems to face sustainability problems in our definition. At high levels of debt, given Italy's low potential growth, normal anti-cyclical fiscal policies are not consistent with a reduction of public debt (Fig. 9). Thus, any case of weak economic growth makes either the public debt grow or, absent any anticyclical policy, makes the economy even weaker as happened during the Great Recession, ultimately jeopardizing fiscal sustainability.

In graphical terms, the solution only rests in reaching a higher level of potential growth (a shift to the left of the Output Gap vertical axis), for instance by employing more people, this would also move the x axis (a balanced primary budget) higher. The consequence would be that some level of fiscal expansion would still be compatible with a reduction in the debt-to-GDP ratio. This brings us back to the feasibility of meaningful structural reforms in an unstable financial-political combination.

Figure 9: Fiscal policy stance and the output gap



Source: UPBilancio.

Note that The graph shows that anti-cyclical fiscal policies (in the lower-left panel), supporting the economy when growth was lower than at its potential level, have never coincided with a decline of the debt-to-GDP level.

In this framework, the critical threshold is not given by a certain level of debt-to-GDP, or of market interest rates, but rather on the consequences of high debt over time on the country's potential growth. The latter can decline up to a point where, on the one hand, the reduction of public debt is not compatible any longer with anti-cyclical policies, and on the other, reforms are politically difficult.

Since its unification, Italy, as most other advanced economies, has never been confronted with a perspective of structurally negative growth. Politically, this has remained the great untold story, so far systematically removed from public awareness.

5. Italy's debt sustainability, hints from a long history

In the past two decades, and particularly since the 2011 European debt crisis, the causes and effects of large sovereign debts have been the subject of an increasingly large number of scholarly works by economists, economic historians, sociologists and political scientists. The case of Italy has drawn particular attention from both scholars and international policy makers for its persistent high debt-GDP ratio. In this light, a number of papers have been written surveying the secular experience of the dynamics and management of Italy's public debt (Artoni e Biancini 2003, Francese and Pace 2008, Conti 2008, Pedone 2011, Balassone et al. 2013, Bartoletto et al. 2013,

Conti e Della Torre 2015). This paper builds on this literature from which it draws the recent state-of-the-art reconstruction of historical data (government budgets, debt, national accounts) as well as the empirical results about the debt sustainability (Conti 2008, Bartoletto et al 2013) and the negative impact on growth of high-level sovereign indebtedness (Balssone et al. 2013). Our contribution to this literature is twofold. On the one hand we produce a new short narrative of the phases of debt accumulation and consolidation since 1861, on the other hand we extend the analysis to the present asking the classical question: “Is this time different?”.

Our main research questions are two: Why, for most of its history, was Italy a high public debt country? How did Italy manage to sustain high levels of indebtedness for such long periods of time?

Part of the answer to the first question is arguably to be found in the persistent social, geographic, even cultural fragmentation of the country, which at some junctures could only be held together by high doses of deficit spending, while making tax coverage (and redistribution) inexpedient. During most of Italy’s catch-up growth that brought it “from periphery to core” (Zamagni 1994), policymakers were faced with two often conflicting goals: on the one hand, the need to sustain domestic demand for public investment and, later, for the creation and of the welfare state; on the other hand, the constraints of an open economy depending for its growth on imported raw materials and investment goods as well, at least initially, from foreign capitals. The tension between these two conflicting needs, often coupled with the political élites reluctance to increase taxation, may go a long way in explaining deficit spending being frequently brought to the limit of sustainability, after which corrective measures were taken in order to maintain market access, stabilize the exchange rate and keep interest rates at sustainable levels.

Italy went through two long periods of debt accumulation, 1861 to 1894 and 1975 to 1994. The first one was fueled by wars, uncertainty about the fate of the new state, social overhead capital formation. Interest rate payments took the largest share (up to 40%) of government expenditure. The latter being extremely rigid, taxation had to be increased, in order to reach and then maintain balanced budgets. Interest rates on the sovereign debt slowly declined but the price was low real GDP growth and simmering social discontent. The second long period of debt accumulation also took place at times of social and economic change, of very different origin from the 1860s and 70s. Both periods of high debt accumulation ended in the two economically and politically most severe crises in Italian history, prior to the recent Great Recession. In both cases, the crises were followed by policies leading to more or less substantial debt consolidation

only to be reversed by two major catastrophes: Italy's participation in World War I and the Double Dip Recession of 2008-11, both leading to huge increases in the debt-GDP ratio.

We argue, however, that, while the first period (1895-1913) of debt consolidation rested on solid bases of time consistent fiscal and monetary policies, the second (1994-2007) suffered from a time inconsistency with long-term consequences. In 1995-2000, in anticipation of the introduction of the euro, the successive governments managed to produce large primary surpluses. In a framework of decreasing interest rates and GDP growth close to 2 per cent, the debt was reduced from 121 to 108 per cent of GDP. In the following years, however, the virtuous fiscal stance was relaxed. Despite lower average interest payments on the outstanding debt and a business cycle rebound in 2005-07, on the eve of the Great Recession the debt-GDP ratio stood at about 100 per cent. We have argued that if policy time consistency had been maintained after 2000, as it had after 1900, Italy would have met the exogenous shock of 2008 with room for budgetary maneuver similar to Germany's and with much better chances of withstanding the storm. This counterfactual experiment illustrates that, under the right institutional circumstances, even a highly indebted country can return to a virtuous path of fiscal stability.

The Italian case is unique in that the 2008-2014 crisis turned out to be more severe than the Great Depression of the 1930s. The substantial and protracted GDP losses and the impact of the so-called automatic stabilizers pushed the debt GDP ratio to a level above 130 percent, which has not been reduced during the 2015-18 feeble recovery. Contrary to the 1930s, public and private investments fell much more sharply than private and government consumption, sustained by social transfers and a sharp reduction in household savings as percentage of disposable income, at the cost of large public investment reduction, with a likely depressing impact on future growth. Unlike previous peacetime crises, the last one did not, so far, produce an effort to take government debt back to a sustainable path.

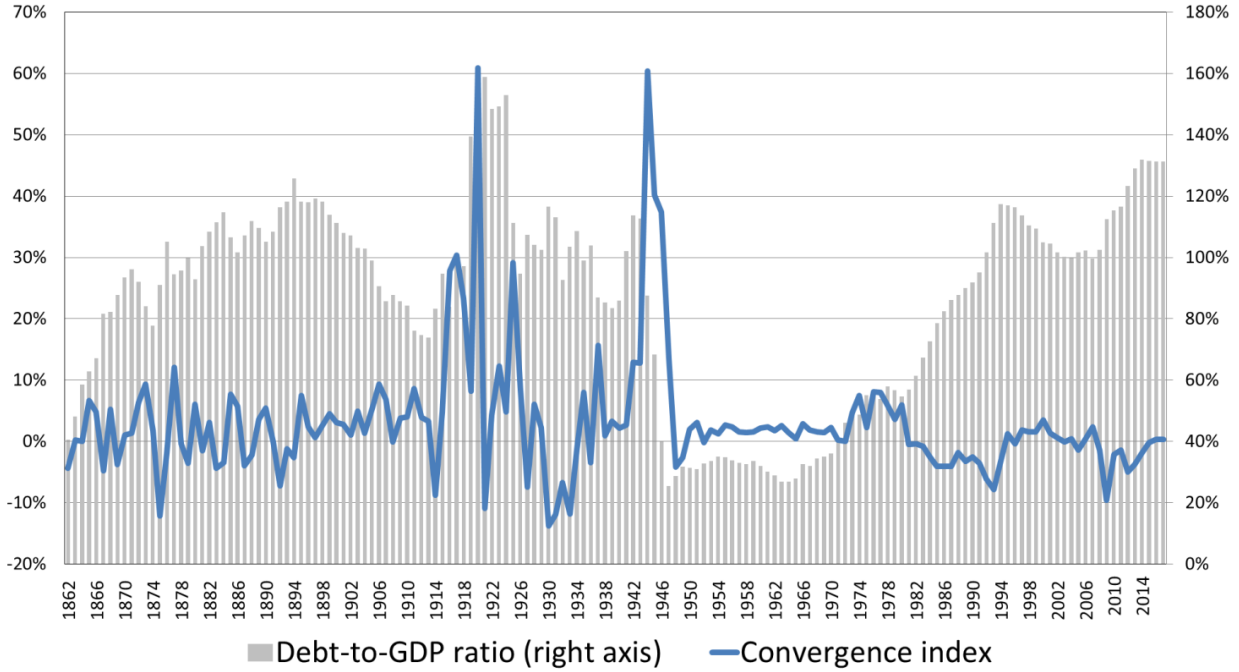
Our assumption is that "this time is indeed different". Monetary instruments being no longer available to rein in the debt, since the beginning of the Nineties Italy had to resort to fiscal tightening. We argue that high debt coupled with stalling investments is likely to impact on Italy's potential growth creating, for the first time in the country's history, a situation where the anti-cyclical fiscal policies may not be compatible with debt reduction, while structural reforms may not be politically feasible.

This is not, however, a foregone outcome. It may still be possible to increase the level of potential growth by simultaneously combining a well-calibrated investment-based fiscal expansion

with a few inexpensive structural reforms aimed at increasing competition in the service sector, reducing red tape, improving the *quality* of education. Such policies would result in higher potential growth, reversing the secular stagnation expectations that are currently mortifying quite a few of Italy's animal spirits.

APPENDIX

Figure 1.A: Debt-to-GDP ratio and Convergence index

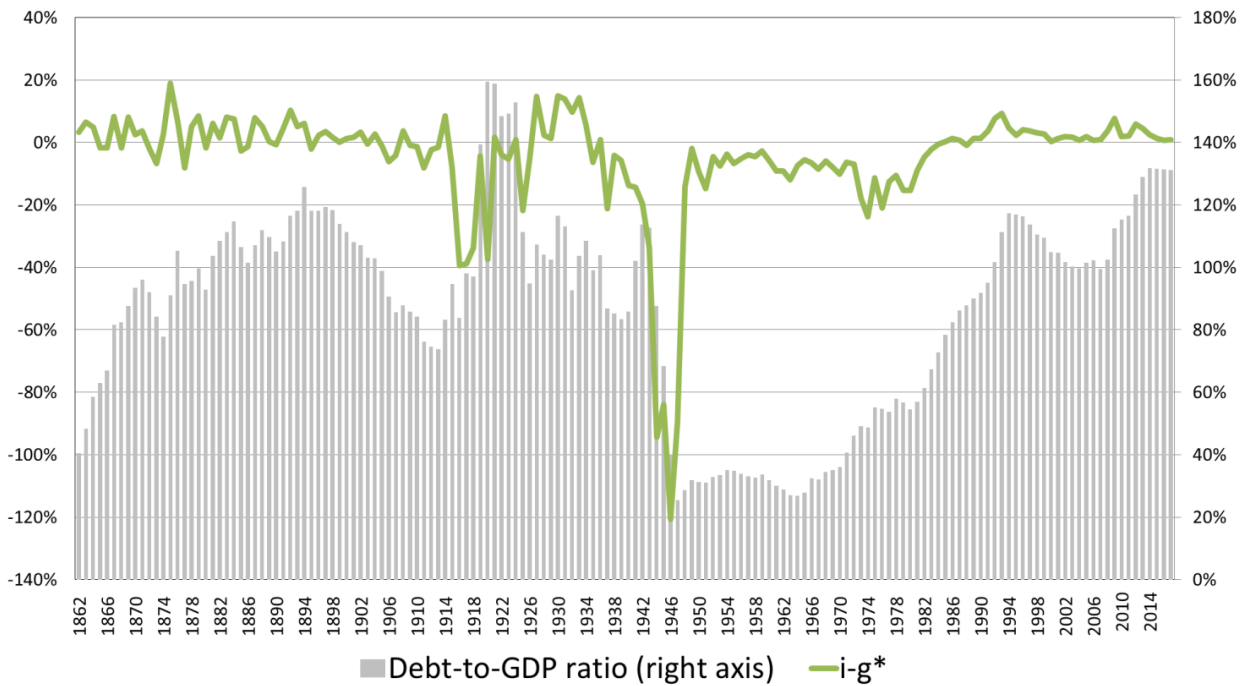


Source: Francese et al., (2008), Baffigi (2015), ISTAT (1958), ISTAT (1991), ISTAT (2011), RGS (2011), ISTAT Database, Bank of Italy Statistical Database and authors calculations.

$$\text{Convergence.index}_t = \frac{S_t}{Y_t} - (i_t - g_t) \frac{B_t}{Y_t}$$

where S_t , Y_t and B_t are, respectively the primary balance, nominal GDP and Debt at time t ; $i_t = \frac{I.exp_t}{B_{t-1}}$ is the ratio between public expenditure in interests at time t ($I.exp_t$) and debt stock at time $t-1$ (B_{t-1}); $g_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$ is the GDP growth rate. All variables are considered in nominal terms.

Figure 2.A: Debt-to-GDP ratio, GDP growth and the debt service

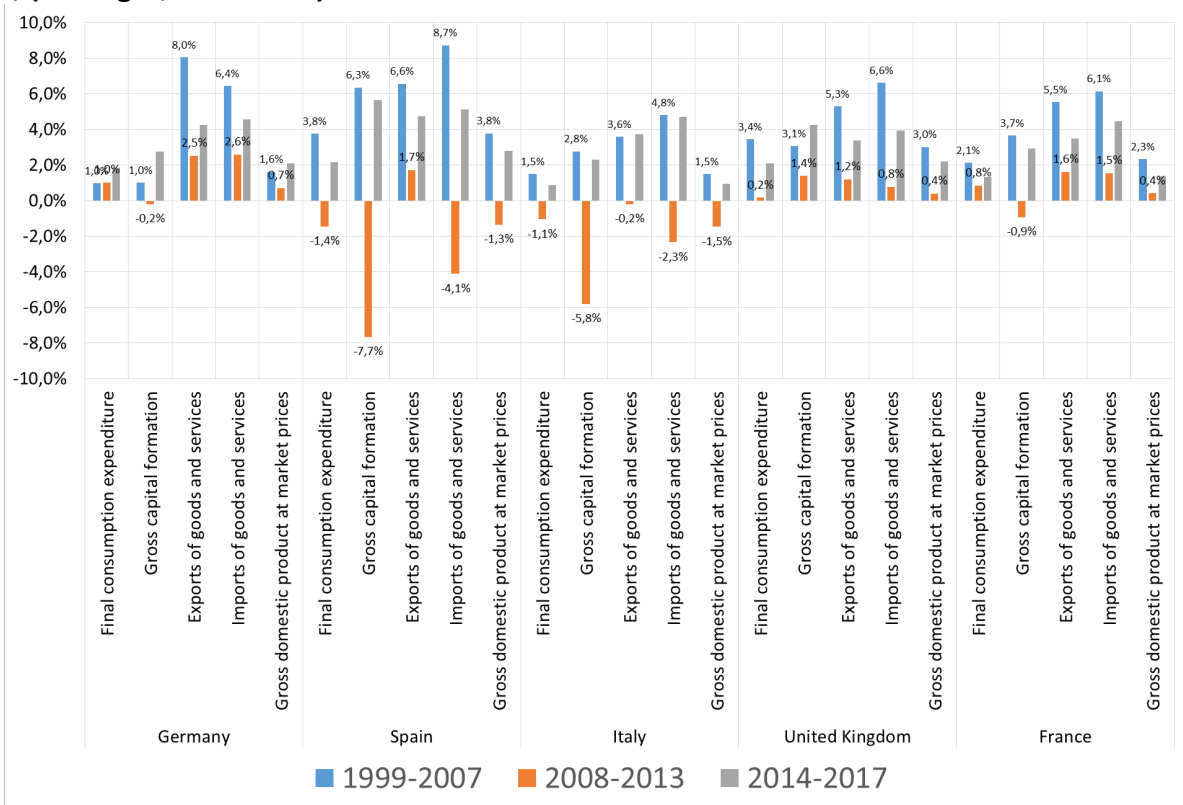


* $i_t = \frac{I.exp_t}{B_{t-1}}$ is the ratio between public expenditure in interests at time t ($I.exp_t$) and debt stock at time t-1 (B_{t-1}); $g_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$ is the GDP growth rate. All variables are considered in nominal terms.

		Convergence index	Debt-to-GDP ratio	$i-g^*$
Averaged values	1862 - 1894	0,7%	94,0%	3,4%
	1894 - 1914	3,1%	99,4%	0,3%
	1914 - 1920	20,9%	108,0%	-21,9%
	1920 - 1940	4,3%	112,7%	-2,1%
	1940 - 1945	21,8%	95,0%	-43,3%
	1945 - 1950	14,4%	37,6%	-53,3%
	1950 - 1974	2,0%	34,3%	-8,2%
	1974 - 1994	-0,2%	75,3%	-4,6%
	1994 - 2017	-0,6%	113,5%	2,5%

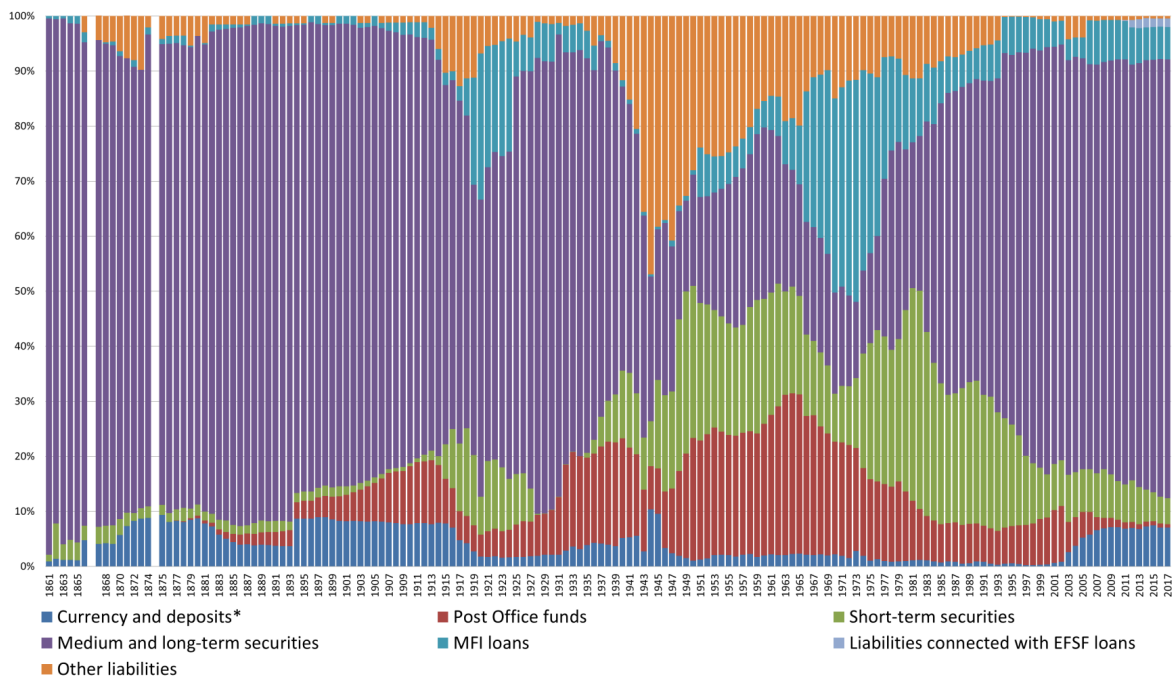
Source: Francese et al., (2008); Bank of Italy BDS, Baffigi (2015), ISTAT (1958), ISTAT (1991), ISTAT (2011), RGS (2011), ISTAT Database and authors calculations.

Figure 3.A: Annual growth rates of final consumption, investments, exports, imports and total GDP, (Averages, 1999-2017)



Source: Eurostat Dataset.

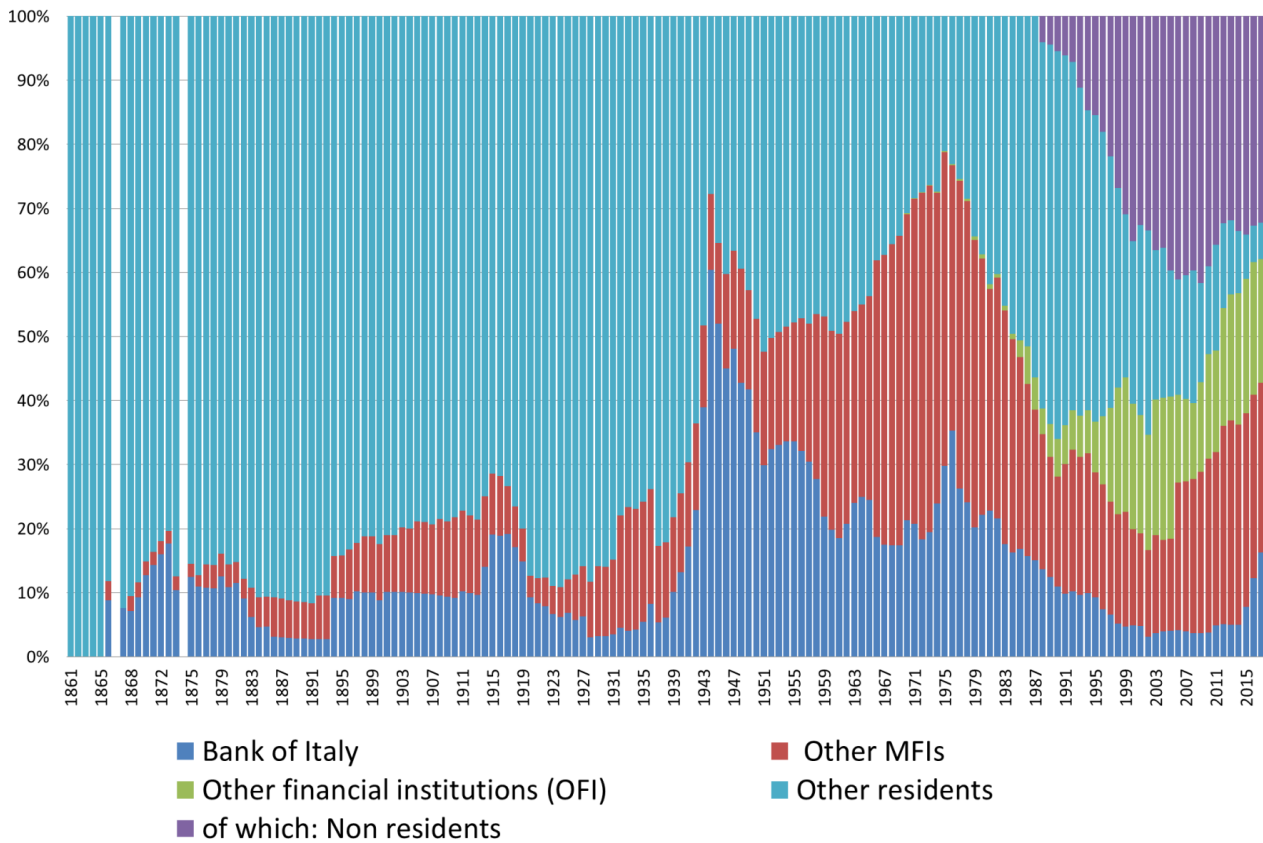
Figure 4.A General government debt by instrument, (% , 1861-2017)



*It does not include Post Office funds.

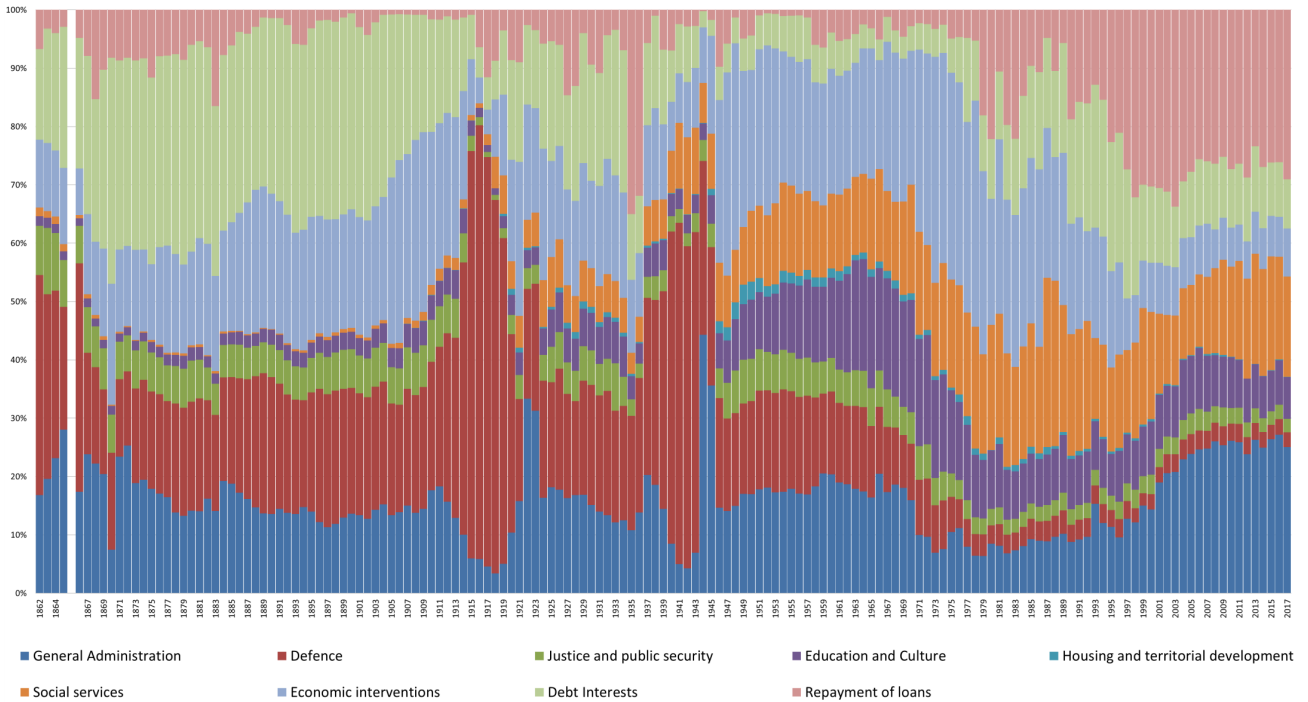
Source: Bank of Italy, Statistical Database.

Figure 5.A: General government debt by holding sector, (% ,1861-2017)



Source: Bank of Italy, Statistical Database.

Figure 6.A: Central Government Expenditure by function, (% , 1862 – 2017)



Source: RGS (2011), RGS Statistical Database.

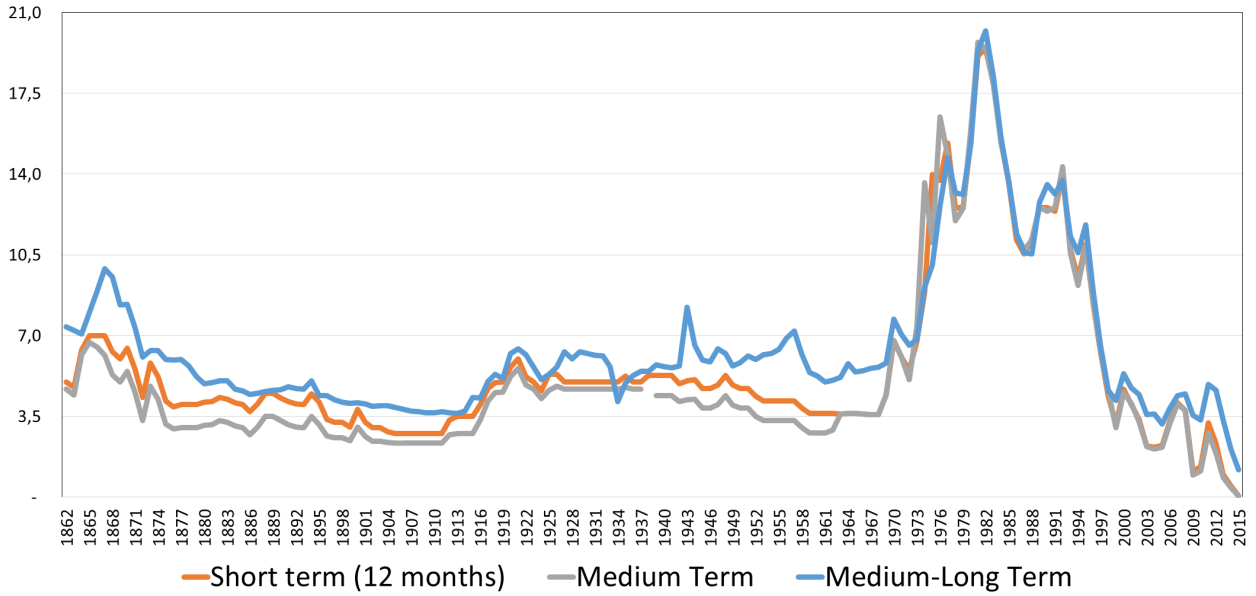
Table 1.A: General Government Expenditure by function, Annual growth rates		
	1996 -2008	2008-2017
General Administration	0,3%	0,4%
Defence	4,1%	2,1%
Justice and Public service	3,5%	0,7%
Economic affairs	3,2%	-0,7%
Environmental Protection	5,8%	2,4%
Housing and territorial development	35,2%	-0,4%
Health	6,3%	0,9%
Recreational, cultural and religious activities	4,8%	0,6%
Education	3,8%	-0,9%
Social protection	4,2%	2,5%
Total	3,3%	1,1%

Source: ISTAT Database.

Table 2.A: Italian National Accounts, in million euro									
	ESA95				ESA2010				
	1980	1985	1990	1995	2000	2005	2010	2015	2017
Central Government									
Current Expenditure	56.124	157.766	259.541	335.429	336.876	395.512	466.697	485.285	496.061
of which: interests paid to other public administrations	1,7%	1,5%	1,1%	1,1%	0%	0%	0%	0%	0%
of which: transfers to public institutions	41,0%	40,4%	35,7%	31,6%	33%	37%	43%	42%	42%
Capital Expenditure	5.480	17.369	26.805	31.834	32.971	40.248	43.073	43.713	49.101
of which: investment support and other transfers to public institutions	35,5%	48,9%	39,4%	27,5%	33%	24%	23%	12%	10%
Local Government									
Current Expenditure	19.959	48.000	82.908	101.995	171.141	226.308	252.689	240.626	239.379
of which: interests paid to other public administrations	0,0%	0,0%	0,0%	0,0%	1%	1%	0%	1%	1%
of which: transfers to public institutions	14,1%	1,3%	0,4%	0,4%	0%	0%	0%	2%	3%
Capital Expenditure	5573	11873	19504	18576	32768	42927	40325	31317	25783
of which: investment support and other transfers to public institutions	33,7%	44,0%	49,7%	48,2%	10%	10%	18%	12%	13%
Social security institutions									
Current Expenditure	32.502	74.277	119.603	157.762	200.647	246.308	305.620	327.616	335.185
of which: interests paid to other public administrations	0,0%	0,0%	0,0%	0,0%	0%	0%	0%	0%	0%
of which: transfers to public institutions	20,9%	26,0%	24,9%	17,8%	1%	1%	2%	1%	1%
Capital Expenditure	180	1298	1288	928	494	-431	308	2569	413
of which: investment support and other transfers to public institutions	0,0%	0,0%	0,0%	0,0%	0%	0%	0%	0%	0%

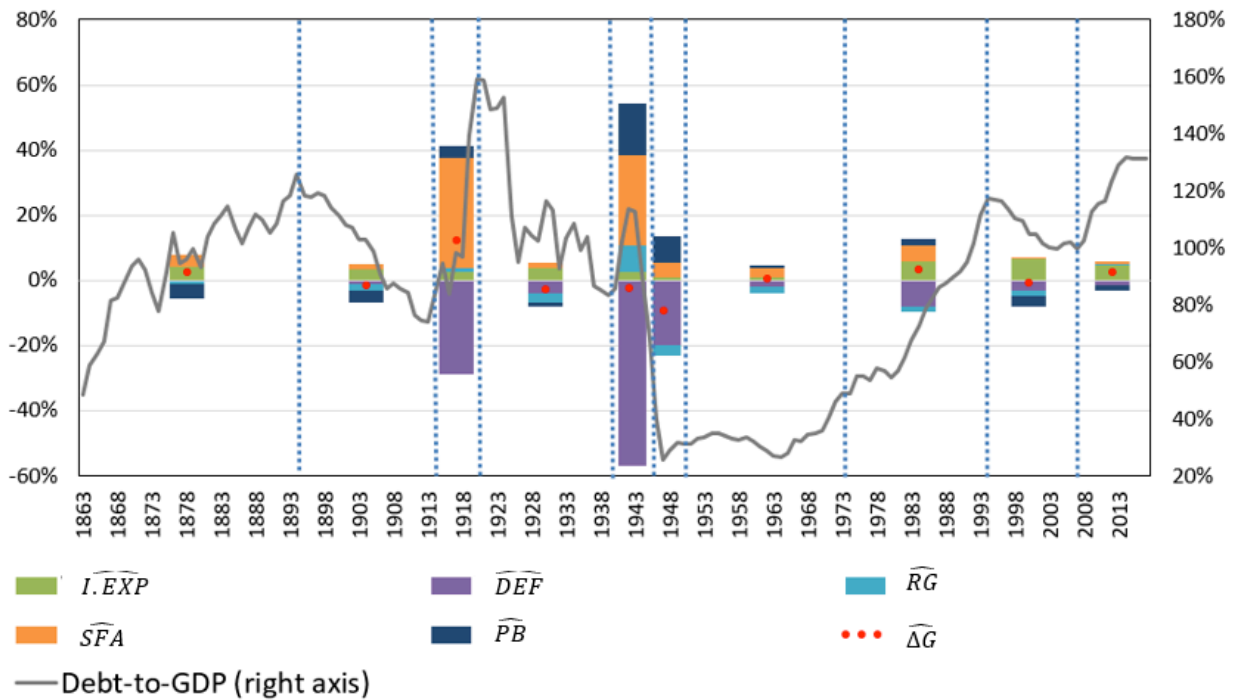
Source: ISTAT Database.

Figure 7.A: Government bond yields, (1862-2015)



Source: Bank of Italy

Figure 8.A: Decomposition of Debt, (1863-2017)



$$\underbrace{\frac{B_t}{Y_t} - \frac{B_{t-1}}{Y_t}}_{\widehat{\Delta B}_t} = \underbrace{\frac{i.EXP_t}{Y_t}}_{\widehat{I.EXP}_t} + \underbrace{\frac{PrimaryBalance_t}{Y_t}}_{\widehat{PB}_t} + \underbrace{\left(\frac{B_t}{Y_t} - \frac{B_t}{y_t * \frac{Y_{t-1}}{y_{t-1}}} \right)}_{\widehat{DEF}_t} + \underbrace{\left(\frac{B_t}{Y_t} - \frac{B_t}{y_{t-1} * \frac{Y_t}{y_t}} \right)}_{\widehat{RG}_t} + \underbrace{\frac{Other_t}{Y_t}}_{\widehat{SFA}_t}$$

Where B_t is nominal debt at time t , B_{t-1} is nominal debt at time $t - 1$, Y_t is the nominal GDP, y_t is the real GDP at time t , $i.EXP_t$ is the public interest expenditure at time t , PB_t is the nominal primary surplus, $Other_t$ collects the other unknown variables.

		$\widehat{\Delta B}$	$\widehat{I.EXP}$	\widehat{PB}	\widehat{DEF}	\widehat{RG}	\widehat{SFA}_t
Averaged values	1863 - 1894	2,7%	4,1%	-4,3%	0,2%	-1,1%	3,7%
	1894 - 1914	-1,7%	3,6%	-3,7%	-1,2%	-1,8%	1,4%
	1914 - 1920	12,2%	2,7%	3,4%	-29,0%	1,0%	34,2%
	1920 - 1940	-2,6%	3,8%	-1,4%	-3,9%	-2,8%	1,7%
	1940 - 1945	-2,5%	2,4%	15,9%	-57,0%	8,4%	27,7%
	1945 - 1950	-9,4%	0,9%	8,3%	-19,7%	-3,2%	4,4%
	1950 - 1974	0,7%	1,0%	0,9%	-1,9%	-2,1%	2,7%
	1974 - 1994	3,2%	6,0%	2,0%	-8,0%	-1,6%	4,9%
	1994 - 2007	-0,8%	6,7%	-3,0%	-3,1%	-1,8%	0,4%
	2007-2017	2,6%	4,5%	-1,4%	-1,6%	0,4%	0,8%

Source : Francese et al., (2008), Baffigi (2015), ISTAT (1958), ISTAT (1991), ISTAT (2011), ISTAT (2015), RGS (2011), ISTAT Database, Bank of Italy Statistical Database and authors calculations.

Statistical Sources

Our historical series reconstructions draw on different sources depending on the type of data and the period considered.

Debt-to-GDP ratio:

1. Historical international comparisons:
 - a) 1870 – 2008: IMF (2013);
 - b) 2009 – 2017: IMF Database;

Gross public debt at current prices:

1. Italian GDP:
 - a) 1861 – 2007: Francese et al. (2008);
 - b) 2008 -2017: Bank of Italy BDS;

Gross Domestic Product:

1. International GDP at current prices:
 - a) 1870 – 1990: Maddison (2018);
 - b) 1990 – 2017: IMF Database;
2. Italian GDP at current prices:
 - a) 1861 – 2013: Baffigi (2015);
 - b) 2014 – 2017: ISTAT Database;
3. Italian GDP at market prices (chained values; reference year = 2010):
 - a) 1861 – 2015: ISTAT (2015);
 - b) 2016 – 2017: ISTAT Database;

Public finance:

1. General Government revenue and expenditure:
 - a) 1861 – 1955: ISTAT (1958);
 - b) 1955 – 1985: ISTAT (1991);
 - c) 1986 – 1994: ISTAT (2011);
 - d) 1995 – 2017: ISTAT Database;
2. General Government interest expenditure:
 - a) 1862 – 1994: RGS (2011);
 - b) 1995 – 2017: ISTAT Database;
3. General Government expenditure by function:
 - a) 1995 – 2017: ISTAT Database;
4. Central Government expenditure by function:
 - a) 1862 – 1994: RGS (2011);
 - b) 1995 – 2017: RGS Database;

5. Central Government expenditure in debt interest:
a) 1862 – 2009: RGS (2011);
b) 2010 – 2017: ISTAT Database;

UK bond rates:

- a) 1870 – 1914: Klovland et al. (1994).

REFERENCES

ABBAS, S.M.ALI et al. (2011) “Historical Patterns of Public Debt – Evidence from a New Database”, mimeo, IMF Fiscal Affairs Department.

ABBAS, S.M.ALI et al. (2014) “Sovereign Debt Composition in Advanced Economies: A Historical Perspective” IMF Working Paper (WP/14/162).

ARTONI ROBERTO and SARA BIANCHINI (2003) “Il debito pubblico dall’unità a oggi”, In PIERLUIGI CIOCCA and GIANNI TONIOLO (eds.), *Storia Economica d’Italia*, Vol. 3, *Industrie Mercati, Istituzioni*, 2. *I Vincoli e le opportunità*, Roma-Bari: Laterza, pp. 267-380.

ASTORE MARIANNA and MICHELE FRATIANNI (2018) “*We can’t pay: How Italy cancelled war debts after Lausanne*”, Mimeo.

BAFFIGI ALBERTO. “*Il PIL per la storia d’Italia: istruzioni per l’uso*”. Venezia Marsilio, 2015.

BALASSONE FABRIZIO, MAURA FRANCESE and ANGELO PACE (2013), “Public debt and economic growth: Italy’s first 150 years” in TONIOLO (2013) pp.516-33.

BASTASIN CARLO and MISCHITELLI MANUELA (2019), “The Imaginary Growth. The hidden illness of Italian economic policy”, LUISS School of European Political Economy, Policy Brief.

BARTOLETTO Silvana et al. (2013), “Is the Italian Public Debt Really Unsustainable?” An Historical Comparison (1861-2010), *CESifo Working Paper* No. 4185.

BLANCHARD OLIVIER and JEROMYN ZETTELMEYER (2017), *Will rising interest rates lead to fiscal crises?* Peterson Institute for International Economics.

CASTLES FRANCIS G. 2006) “The Growth of Post-war Public Expenditure State: Long-term Trajectories and Recent Trends”, *Transtate Working Papers* no.35, University of Bremen.

CONTI GIUSEPPE (2008) “Italian Debt Sustainability in the Long Run, 1861-2000” pp. 209-24 in Fausto Piola Caselli (ed.) *Government Debts and Financial Markets in Europe*, London: Pickering and Chatto.

CONTI GIUSEPPE (2019), "Les sorties des dettes excessives depuis la formation de l'Etat italien (1861-2010), In Gerard Béau at Laure Quennouelle-Corre (eds.), *Les Crises de la dette publique*, Paris, Collection du Comité pour l'histoire économique et financière de la France.

CONTI GIUSEPPE e GIUSEPPE DELLA TORRE (2015) "Crisi di sostenibilità e forme istituzionali del debito pubblico nell'Italia Unita", in Carlos Barciela, Nicola Ostuni, Francisco Comin, Daniela Manetti, *La evolución de la hacienda pública en Italia y España* (siglos XVIII-XXI).

DELLA TORRE GIUSEPPE (2000) "La finanza di guerra e il circuito dei capitali in Italia 1935-1945" *Quaderni del dipartimento di Economia dell'Università di Siena* n. 301.

EICHENGREEN BARRY ET AL. (2019) "Public Debt Through Ages" *NBER Working Paper* 25494.

FRANCESE MAURA and ANGELO PACE (2008) "Il debito pubblico italiano dall'Unità a oggi. Una ricostruzione della serie storica", Banca d'Italia, *Questioni di Economia e Finanza (Occasional papers)*, n. 31.

IMF (2013), Historical Public Dataset.

ISTAT (1958), *Sommario di statistiche storiche dell'Italia 1861-1956*.

ISTAT (1991), *Sommario di statistiche storiche dell'Italia 1861-1985*.

ISTAT (2011), *L'Italia in 150 anni*, Roma: Istat.

ISTAT (2011), *Sommario di statistiche storiche dell'Italia 1861-2010*.

ISTAT (2015), Serie storiche, 1861-2015.

KLOVLAND, JAN TORE(1994) Pitfalls in the Estimation of the Yield on British Consols, 1850–1914. *The Journal of Economic History*, 164-187.

LUZZATTO Gino (1963), *L'economia italiana dal 1861 al 1914*, Milano: Banca Commerciale Italiana.

MADDISON, ANGUS (2018), "Maddison Project Database, version 2010." Jutta, B., Inklaar, R., de Jong, H. and van Zanden, JL.

MINISTERO DEL TESORO (1988) "Il debito pubblico in Italia, 1861 – 1987, Relazione del Direttore Generale alla Commissione Parlamentare di Vigilanza", Roma.

OECD (2018), *Economic Outlook* No 104 - November 2018, Paris.

ÒSCAR JORDÀ, MORITZ SCHULARICK, AND ALAN M. TAYLOR (2017), "Macrofinancial History and the New Business Cycle Facts." in *NBER Macroeconomics Annual 2016*, volume 31, edited by Martin Eichenbaum and Jonathan A. Parker. Chicago: University of Chicago Press."

PASINETTI, LUIGI (1998). The myth (or folly) of the 3% deficit/GDP Maastricht 'parameter'. *Cambridge Journal of Economics*, 22(1), 103-116.

PEDONE, ANTONIO (2011), *Every time is different, but in the end the problem is always the same*, ECSPS Conference, Unpublished Mimeo.

REINHARD, CARMEN and KENNETH ROGOFF (2009), *This Time is Different. Eight Centuries of Financial Folly*, Princeton: PUP.

REINHARD, CARMEN and KENNETH ROGOFF (2010), "Growth in a Time of Debt", *American Economic Review*, 573-78.

RGS (2011), *La spesa dello Stato dall'Unità d'Italia*, Ragioneria generale dello Stato, Ministero dell'economia e delle Finanze.

SYLOS LABINI, PAOLO (1998), Sviluppo economico, interesse e debito pubblico, in *Atti della Accademia Nazionale dei Lincei - Classe di scienze morali, storiche e filologiche - Rendiconti*, CCCXCV, n. IX, fasc. 3, pp. 533-544.

TEDOLDI LEONIDA (2015), *Il conto degli errori. Stato e debito pubblico in Italia dagli anni*, Roma-Bari: Laterza.

TONIOLO GIANNI (1980), *L'economia dell'Italia fascista*, Roma-Bari, Laterza.

TONIOLO GIANNI (1990), *An Economic History of Liberal Italy*, London – New York, Routledge.

TONIOLO GIANNI, ed. (2013), *The Oxford Handbook of the Italian economy since unification*, Oxford: OUP.

ZAMAGNI, VERA (1994), *Dalla periferia al centro*, Bologna: Mulino.