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REM Working Paper 0430-2026

September 2026

REM – Research in Economics and Mathematics

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ISSN 2184-108X

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Latent fiscal dominance: monetary accommodation and the Bank of Italy–Treasury divorce, 1962–1998

Francesco Leghissa¹

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Abstract

Italian monetary policy remained subordinated to public financing between the 1960s and the euro, deficits being routinely accommodated through monetary base creation. This paper asks whether that configuration amounted to a non-Ricardian regime in the sense of the Fiscal Theory of the Price Level. Bivariate VARs, a structural-cyclical decomposition of the primary balance addressing the observational equivalence critique, and a three-variable variance decomposition all yield Ricardian-like dynamics. Yet the structural primary balance behaved as a near-autonomous process, satisfying the definition of active fiscal policy. I characterise this as a hybrid regime, latent fiscal dominance within a Ricardian outcome, sustained by the central bank's dual role as fiscal accommodator and market coordinator. The 1981 divorce dismantled that architecture progressively rather than triggering a regime switch: fiscal contributions to monetary base variance fell from 93 to at most 48 per cent, a transition the Annual Reports show was completed only under Maastricht.

JEL CODES: E52, E62, E63, H63, N14

KEYWORDS: fiscal theory of the price level; fiscal dominance; Bank of Italy–Treasury divorce; monetary-fiscal interaction; VAR.

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1. Introduction

The process that led the Bank of Italy to become an independent and autonomous economic policy centre was arduous. The decades preceding the establishment of the European Central Bank, which marked the end of the Bank of Italy's direct responsibility for national monetary policy, represented a long struggle for autonomy from the Treasury. The cornerstone of this transition was the so-called Bank of Italy–Treasury «divorce» of 1981, which eliminated the obligation for the Bank to purchase unsold government bonds at auction, a practice that had been in place since 1975. Nevertheless, a second channel for direct financing, the overdraft facility, remained operational until 1993, the Maastricht Treaty having prohibited any form of direct public debt financing by central banks with effect from 1994. Although the overdraft facility was subject to limits (equal to 14% of government budget expenditures), it provided the Treasury with direct and automatic access to central bank liquidity.

The Italian case, given the significant economic and institutional changes that occurred in the period, is therefore optimal for exploring the complex relationships between monetary policy and fiscal policy. This paper exploits these features to address two related questions. First, was the Italian economy operating under a non-Ricardian (fiscally dominant) regime during the lira era, as defined by the Fiscal Theory of the Price Level (FTPL)? In such a regime, the government's intertemporal budget constraint is satisfied not through endogenous fiscal adjustment but through price-level movements that reconcile the real value of debt with the expected path of primary surpluses (Leeper 1991; Woodford 1998; Cochrane 2023). Second, did the 1981 divorce, and the sequence of institutional reforms it initiated, trigger or contribute to a regime shift, even if partial, in the underlying fiscal-monetary dynamics? Given the historical significance of the divorce as the beginning of a paradigm change in Italian monetary policy, assessing whether this institutional landmark corresponds to a detectable shift in the nature of the fiscal-monetary regime is of considerable interest for both economic history and the broader understanding of central bank independence.

These questions are motivated by a persistent tension in the existing literature. Studies focused on the monetary transmission mechanism — Fratianni and Spinelli (2001), Tullio and Ronci (1997), Favero and Spinelli (1999) — have documented strong evidence of fiscal influence over monetary policy in the 1970s, with causal links running from budget deficits to monetary base creation. By contrast, studies that have tested the FTPL hypothesis directly — Canzoneri, Cumby and Diba (2001,

CCD hereafter), Creel and Le Bihan (2006), Favero (2002), Afonso (2005) — have generally found evidence consistent with Ricardian regimes in United States and European countries, including Italy, over comparable sample periods. More recently, Bouabdallah, Jacquinot and Patella (2023), using a Markov-switching DSGE model, have identified a pre-late-1980s Passive Monetary / Active Fiscal phase for Italy, followed by an Active Monetary / Passive Fiscal configuration during the EMU convergence. The Italian case thus appears to sit at the intersection of these findings, with institutional features suggestive of fiscal dominance coexisting with aggregate dynamics that do not straightforwardly conform to a non-Ricardian equilibrium.

The present study contributes to this debate in three ways. First, it applies the CCD methodology (bivariate VAR models with impulse response analysis) specifically to the Italian case over the period 1962–1998, with explicit sub-sample analysis for the pre-divorce era (1962–1980), thereby isolating the institutional configuration that prevailed before the central bank gained operational autonomy. Second, it addresses the observational equivalence critique raised by Cochrane (1998) by incorporating author-derived estimates of the structural and cyclical components of the primary balance into the VAR framework, following the approach of Creel and Le Bihan (2006). Cochrane's key insight is that, if the innovations of the cyclical and structural components are negatively correlated, either contemporaneously or through lagged dynamic interactions, a non-Ricardian regime can produce IRFs that mimic Ricardian behaviour, rendering the baseline test inconclusive. To assess whether this mechanism is operative in the Italian data, I estimate bivariate VARs for the cyclical and structural components and examine both the cross-coefficients and the contemporaneous correlation of innovations. Third, the study extends the analysis beyond regime identification to regime characterisation through a three-variable VAR specification (primary balance, privately-held debt, Treasury monetary base) whose variance decomposition quantifies the intensity of the monetary-fiscal nexus and documents its transformation across the two sample periods. The use of privately-held debt, the component of central government debt absorbed outside the consolidated public sector, isolates the measure most directly relevant for the FTPL framework and reveals the Bank of Italy's role as both fiscal accommodator and coordinator of the private bond market.

The main findings can be summarised as follows. The impulse response analysis, combined with surplus autocorrelation patterns, consistently produces Ricardian-like dynamics in both the pre-divorce and full-sample periods: positive surplus shocks reduce government liabilities, and surpluses exhibit positive autocorrelation. The decomposition of the primary balance into cyclical and

structural components reveals that the specific mechanism envisioned by Cochrane, namely the creation of dynamic interactions between the two components through pro-cyclical discretionary responses, is not empirically operative in the Italian data. The impulse response functions documented in the surplus-debt VARs can therefore be interpreted as genuine evidence of Ricardian fiscal behaviour.

The remainder of the paper is organised as follows. Section 2 provides the historical and institutional context of Italy's monetary-fiscal evolution from 1960 to 1998. Section 3 reviews the empirical literature on fiscal dominance in Italy and the FTPL framework that has shaped its testing. Section 4 describes the empirical methodology and the data. Section 5 presents the cointegration analysis and the baseline bivariate VAR results, extending them to privately-held debt, the component of government liabilities absorbed outside the consolidated public sector, and assesses Cochrane's observational equivalence critique. Section 6 turns to the financing architecture through three-variable VARs and their variance decomposition and characterises the pre-divorce regime. Section 7 concludes.

2. Monetary and fiscal regimes in Italy, 1960–1998

The 1960s began under the auspices of the “Economic Miracle” (1953-1968), characterised by relative monetary and fiscal stability. In 1962, the debt-to-GDP ratio stood at 30%, with a deficit contained at 0.9%. During this phase, monetary autonomy was minimal: the Treasury set interest rates by decree, and the Bank of Italy functioned as a residual buyer of government securities, ensuring the monetisation of the deficit. However, as early as 1963, public spending began to move independently of revenues, prompting Governor Guido Carli to intervene in 1963-64 with a drastic credit crunch to curb inflation, which had risen to 8%.

The 1970s marked the end of the “Golden Age” due to the collapse of Bretton Woods and the oil shocks. Italy addressed these external shocks with markedly pro-cyclical fiscal policies: instead of adopting restrictive measures to counter inflation, the government expanded public spending to mitigate severe labour market and social tensions. Between 1970 and 1975, public expenditure jumped from 33% to 39% of GDP, while the primary deficit reached 7.7% of GDP in 1975. In this scenario of monetary policy subordinated to the financing needs of the Treasury, the Bank of Italy adopted Total Domestic Credit (TDC) as an intermediate target in 1974, following the stand-by arrangement with the IMF. This framework operated through direct rationing: tools such as “lending ceilings” and “portfolio constraints” physically limited credit availability (Gaiotti 1992), while negative real interest rates acted as an “inflation tax” effectively eroding the real value of private

savings to reduce the Treasury's debt-servicing costs. The intensity of this monetary accommodation and its subsequent gradual dismantling are documented quantitatively in Table 5 (Section 6.2), which reports the share of central government borrowing requirements financed by the Bank of Italy and the Ufficio Italiano dei Cambi (UIC, the Italian Foreign Exchange Office) from 1970 to 1993 on the basis of the Bank of Italy's Annual Reports.

The marriage between the Treasury and the Bank of Italy found a fundamental moment in the deliberation of the CICR (Comitato interministeriale per il credito e il risparmio – Interministerial Committee for Credit and Savings) of 21 March 1975². It introduced the following criteria, in line with the process of autonomy undertaken by the Bank: the participation of the Bank of Italy in the BOT auction in competition with credit institutions and other subjects, and the imposition of its role of residual buyer, since the bid price would be the one the Bank ultimately offered. The equal treatment guaranteed by the first criterion was in fact revoked by the second: the party required to purchase what the others have rejected does not compete with them but is instead subject to their decisions. Hence its role of residual purchaser of short-term debt. The shift with respect to 1969 is decisive: what had previously been framed as an option to purchase unsold securities became an obligation in 1975. At the same time, the pool of those eligible to participate in the auction was enlarged: the number of applicants rose from an average of forty-two in the first quarter to one hundred and seventy in the second part of the year, and the requests increased from forty-three to over two hundred and fifty³. From the Treasury's perspective, the two criteria served a single purpose: to expand demand and ensure a successful outcome in any event. The outcome of this deliberation complied with the Treasury's goal, but it also had an unexpected side effect: the development of a primary and secondary BOT market offered an alternative source for covering the borrowing requirement, without which the removal of the residual buyer role would have been unthinkable.

A pivotal turning point occurred in 1979 with Italy's entry into the European Monetary System (EMS). This introduced an “external constraint” (*vincolo esterno*), defined as any rule that those subject to it cannot modify through a unilateral act using their ordinary powers, within a semi-fixed exchange rate regime, forcing a gradual realignment of domestic policies. Consequently, the transmission

² Minutes of the 201st meeting of the Interministerial Committee for Credit and Savings, 21 March 1975, in ASBI, Carte Baffi, Governatore Onorario, prat. 136, fasc. 8.

³ Banca d'Italia, Annual Report for 1975, Rome, 1976, pp. 260-261. The Report attributes the favourable reception partly to the abundant bank liquidity of those months, and the figures should be read accordingly.

mechanism shifted from “quantitative-direct” to “market-indirect”, with the monetary impulse flowing through the channel of interest rates.

The cornerstone of this transition was the so-called Bank of Italy–Treasury «divorce» of 1981, which eliminated the obligation for the Bank to purchase unsold government bonds at auction. However, decisive though it was, this reform marked only a partial step along the Bank’s path to operational autonomy (Gaiotti and Rossi 2004). The only provision the divorce modified concerned the Bank of Italy’s presence at the auction; the current account overdraft mechanism remained entirely unaltered. Furthermore, the Treasury retained the task of setting the base price, while the Bank’s discretionary intervention at the auction continued until the early 1990s⁴.

Throughout the 1980s, the Bank of Italy increasingly used the interest rate as a key intermediate target to manage banking liquidity and defend the exchange rate. This process culminated in 1989–1990 with the transition to the narrow fluctuation band of the EMS and the full liberalisation of capital movements. To support this new market-oriented framework, operational tools were modernised (Padoa-Schioppa 1987), including the introduction of competitive auctions for BOTs and the establishment of the screen-based market for government securities (*Mercato Telematico dei Titoli di Stato*, MTS).

The final phase was dominated by the convergence towards the Monetary Union. During the 1992 crisis, under the leadership of Treasury Minister Guido Carli (Carli 1993), the Bank of Italy finally obtained the exclusive power to set official discount rates, marking a definitive step in its institutional autonomy (Passacantando 1996). The Amato Government (1992–1993) managed the emergency with an unprecedented fiscal package (6% of GDP; Gaiotti and Salvemini 1993), while the subsequent Ciampi Government (1993–1994) oversaw the definitive prohibition of direct monetary financing via the Treasury’s overdraft facility. These interventions allowed Italy to qualify for the Eurozone in 1998 with a primary surplus over 4%, completing the transition to a model based on monetary stability and institutional independence.

3. Fiscal dominance and the FTPL: the debate

Fратиanni and Spinelli (2001) suggest that most of the monetary base growth for at least the 1970s is attributable to the Treasury, exacerbated by high budget deficits and administrative controls designed to keep the cost of borrowing down. However, more political motivations have also

⁴ Andreatta (1991). Andreatta argues that the time was not ripe, and that the Bank of Italy preferred to confine itself to amending the rules governing participation in the auctions, even though Ciampi’s letter of 6 March had clearly stated the intention to modify the entire mechanism of central bank financing of the borrowing requirement, including the Treasury overdraft facility.

emerged, where, while acknowledging the correlation between monetary base creation and deficits, monetary accommodation has primarily been a reflex of the attention of monetary authorities to the real economy in a period of strong social tensions (Toniolo 1999)⁵.

The empirical evidence to assess whether, in the Italy of the lira, there was a regime of fiscal dominance, defined as the regime where the duty to satisfy the government's intertemporal budget constraint falls on monetary policy rather than on fiscal policy (Masciandaro and Tabellini 1988), has not provided unequivocal answers⁶.

Signs of structural break around the year 1975 were found by Favero and Spinelli (1999) through a structural model analysis which tests the overall transmission of shocks to the budget deficit on the growth of the money supply M2. The results of their research suggested that a positive link existed from 1875 to 1975 between the dynamic of budget deficit and money supply and the relationship disappears when the sample is restricted to 1975-1994. The authors attributed these findings to the appointment of Paolo Baffi as Governor in 1975, which marked the beginning of a reform process towards central bank independence.

Evidence of a structural break around mid-70s was confirmed by Tullio and Ronci (1997). Estimating a general version of the reaction function of the Bank of Italy on quarterly data over the sample 1970-1992, they found strong support for the fiscal dominance hypothesis only until the end of 1977. In their view too, the decrease in the effect of the lagged values of deficit on money growth was due to the appointment of Baffi as governor of the bank.

While literature identifies 1981 as a pivotal turning point in the financing of the deficit, the persistence of high public debt levels throughout the 1980s suggests that institutional independence alone may not have been sufficient to transform the underlying fiscal regime. This paradox (where the Bank of Italy gained autonomy while debt continued to accumulate) raises questions that a simple analysis of money-deficit causality cannot answer. This methodological limitation necessitates a shift towards the Fiscal Theory of the Price Level (FTPL) framework, which moves the focus from debt financing to the broader question of how the intertemporal budget constraint is satisfied. This shift aligns with a broader academic movement that re-examined the fiscal-monetary policy mix at the end of the 20th century.

⁵ Under the Bank of Italy's framework, the Treasury's contribution to the monetary base consists of the central bank's net purchases of government securities at issuance and the drawdowns from the Treasury's overdraft facility. Prior to 1990, the definition also included open market operations such as REPO and reverse REPO agreements.

⁶ For an in-depth overview of the econometric evidence relating to Italy see Gaiotti and Secchi (2012).

John Cochrane (1998, 2001), Christopher Sims (1994), and Michael Woodford (1998, 2001) have emphasised the pivotal role of fiscal policy in price determination. They argue that the way in which the government's present-value budget constraint is satisfied determines the price level, offering an alternative framework known as the Fiscal Theory of the Price Level (FTPL hereafter)⁷. In this setup, the price level adjusts to ensure that the real value of government debt equals the present value of expected future primary surpluses. The FTPL proposes a determination of the price level with a strong emphasis on the link between fiscal and monetary policy (Leeper 1991), demonstrating how inflation can emerge as a joint monetary-fiscal phenomenon rather than a purely monetary one, particularly in environments where fiscal authorities do not adjust surpluses to stabilise debt⁸.

The key insight behind the FTPL is that if current and future fiscal policies are set independently of debt sustainability, the price level must adjust endogenously to satisfy the intertemporal budget constraint (non-Ricardian regime). Conversely, if primary surpluses automatically adjust to guarantee fiscal solvency regardless of the price level's path, prices are determined in a conventional manner through money demand and supply (Ricardian regime).

One of the most significant attempts to empirically test this theory can be traced back to Canzoneri, Cumby and Diba (2001, CCD hereafter), who use a VAR approach to assess the FTPL. They consider that, under a FTPL regime, shocks to primary surplus should raise the government liabilities to GDP ratio. The government liabilities include both the public debt and the monetary base. The findings of their work, on US data from 1951 to 1995, however, show that positive shocks to the primary surplus provoke a fall in the public debt to GDP ratio, which they interpret as a rejection of the FTPL. The methodology was criticised by Cochrane (1998) because, he argued, their results may be fully consistent with a «non-Ricardian regime». Basing upon the distinction between the cyclical and structural component of the primary surplus, Cochrane provides a theoretical setup in which impulse response functions given in CCD rise, even though the FTPL prevails⁹.

A response to these remarks is proposed by Creel and Le Bihan (2006), through an extension of CCD's model, incorporating structural balance data in the analysis to overcome Cochrane's critique. They investigate whether, assuming a FTPL regime, the joint structural and cyclical deficit processes can produce impulse response functions that would lead to «apparent rejection» of the FTPL. Firstly, they use the research strategy of CCD, with a bivariate VAR model with primary budget surplus and

⁷ For a comprehensive treatment of the FTPL framework see Cochrane (2023).

⁸ See also Leeper and Leith (2016).

⁹ The deficit consists of a structural component set by fiscal policy and a cyclical component beyond the control of fiscal authorities. Indeed, in the theoretical setup provided by Cochrane (1998), the structural component represents the purely discretionary fiscal stance.

public debt, both to GDP ratio, as variables, then they incorporate structural balance data in the analysis to account for Cochrane's insights. Findings on European (Germany, France, UK, Italy) and US yearly data from 1963 to 2001 show a rejection of the FTPL regime both under CCD's approach and including structural fiscal data.

Bouabdallah, Jacquinot, and Patella (2023) examine the French and Italian policy mix using a Markov-switching DSGE model based on Leeper's (1991) taxonomy. They identify three distinct regimes: (i) a pre-late 1980s non-Ricardian phase characterised by a 'Passive Monetary-Active Fiscal' (PM/AF) configuration, where inflation stabilised debt. In this regime, restrictive monetary shocks could paradoxically increase inflation by raising the real debt burden (the 'stepping on a rake' mechanism; Sims 2011); (ii) a Ricardian EMU transition defined by an 'Active Monetary-Passive Fiscal' (AM/PF) regime oriented towards disinflation; and (iii) a post-2009 phase where the Effective Lower Bound (ELB) constrained monetary policy, leading to an 'Active Fiscal' (AF) behaviour to avoid deflationary traps. The study emphasises that the efficacy of these regimes depends on agents' expectations regarding the credibility and future path of fiscal-monetary interactions.

4. Data and empirical strategy

The empirical approach I followed to test the plausibility of Ricardian and non-Ricardian regimes in Italy has two steps: first I follow CCD's method estimating a bivariate VAR model and analysing the dynamic between government debt and primary balance. Second, to cope with Cochrane's critique of CCD's findings, I introduce structural balance data, as suggested by Cochrane (1998) himself and applied to European data by Creel and Le Bihan (2006).

I thus follow the approach proposed by CCD, which focuses on IRFs of a bivariate, unrestricted VAR-in-levels, for primary government surplus and debt expressed as percentage of GDP.

Following the empirical framework of CCD, in the case of an observed negative response of the future debt level to a positive surplus innovation, I analyse the autocorrelation coefficients between current and future balances. This step is crucial to resolve the identification ambiguity between the two regimes, although a negative correlation alone does not uniquely identify the non-Ricardian case.

For the purpose of this analysis, annual data for government debt covering the 1962–1998 period were sourced from the Bank of Italy Statistical Database, specifically the 'Central Government Gross

Debt' series. Primary balance data for the same period were obtained from the OECD Data Explorer¹⁰.

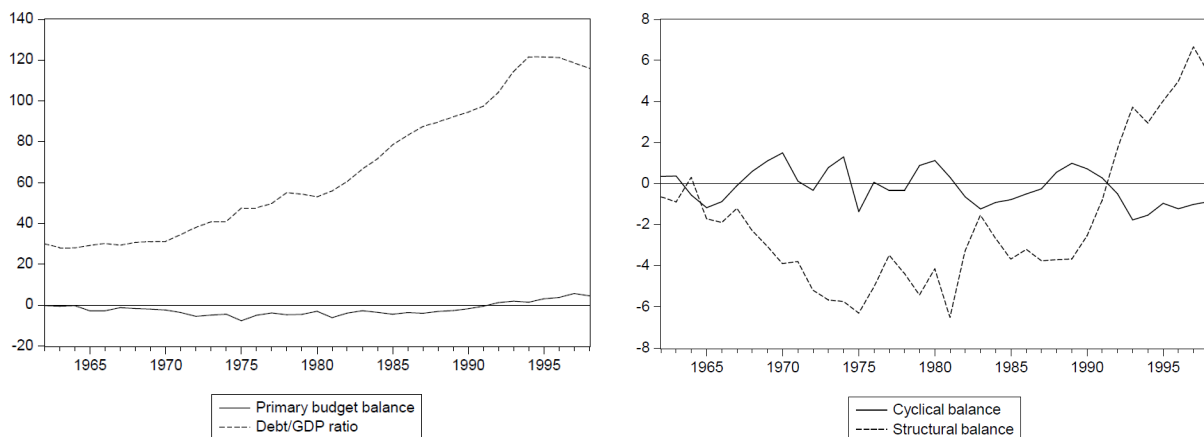
Debt is scaled by nominal GDP from Baffigi (2011), Table 3, current prices (2011 release). The OECD balance carries its own denominator; rescaling it on Baffigi shifts it by at most 0.3 points of GDP.

Table 1. *Summary statistics*

	Sample mean	Standard deviation	Min	Max	ADF t-statistic	KPSS
1962-1998						
Primary budget balance	- 2.07	3.06	-7.67	5.65	-0.64	0.329
Debt_GDP ratio	65.50	32.77	28.02	121.59	-0.34	0.693
Debt_private_GDP ratio	55.67	31.99	23.69	112.74	0.18	0.663
Treasury_BM_GDP ratio	9.83	4.81	0.32	21.06	-1.84	0.280
Structural balance	-1.90	3.45	-6.51	6.66	-0.23	0.346
Cyclical balance	-0.17	0.88	-1.76	1.50	-3.02	0.311
1962-1980						
Primary budget balance	-3.22	1.98	-7.67	-0.25	-1.95	0.449
Debt_GDP ratio	38.35	9.86	28.02	55.02	0.50	0.540
Debt_private_GDP ratio	29.34	5.57	23.69	41.92	-0.21	0.451
Treasury_BM_GDP ratio	9.01	6.39	0.32	21.06	-1.22	0.481
Structural balance	-3.39	1.97	-6.30	0.31	-1.61	0.472
Cyclical balance	0.16	0.84	-1.37	1.50	-2.90	0.150

Source: Bank of Italy, OECD, author-derived estimates.

Figure 1. *Debt, primary budget balance and its cyclical and structural components*



Source: Bank of Italy, OECD, author-derived estimates. Data as a share of GDP.

The empirical analysis is conducted on two overlapping samples: the pre-divorce sub-period 1962–1980, which isolates the institutional configuration that prevailed before the Bank of Italy gained

¹⁰ The structural and cyclical balances are author-derived estimates, no official output gap series covering the whole sample being available for Italy. The gap was estimated on annual real GDP in logarithms (chained values; Baffigi 2011, updated version covering 1861–2017) with a Hodrick-Prescott filter ($\lambda = 100$). Official OECD estimates are available only from 1985; over 1985–1998 the two series correlate at 0.92. I therefore use the OECD series where available and the filter-based estimates for 1962–1984. The cyclical balance applies a fiscal semi-elasticity of 0.45, below modern estimates for Italy (Price, Dang and Botchev 2015) to reflect the smaller government, the lower income-tax progressivity before the 1974 reform and the less generous unemployment benefits of the earlier decades. The structural component is the residual. The qualitative conclusions are unaffected by the choice of semi-elasticity: re-estimating the cyclical-structural VAR with values of 0.31 and 0.50 leaves the cross-coefficients statistically insignificant and the structural component near-unit-root in both samples.

operational autonomy, and the full sample 1962–1998. A separate post-divorce sub-sample (1981–1998) is not estimated. The comparison between pre-divorce and full-sample results serves as the identification device employed throughout the analysis: if the 1981 divorce and the subsequent institutional reforms produced a structural transformation, the full-sample estimates, which pool pre- and post-divorce observations, should differ substantially from the pre-divorce baseline, as the post-1981 data pull the aggregate statistics away from their pre-1981 values. Conversely, if the divorce had no structural impact, the two sets of estimates would closely resemble each other. This approach maximises the number of observations available for the full-sample estimation (37 versus only 18 for an isolated post-divorce sub-sample), improving the reliability of the VAR estimates at the cost of yielding full-sample statistics that represent a weighted average of pre- and post-divorce dynamics and may therefore understate the magnitude of any transformation concentrated in the later period.

A substantive reason reinforces this choice. The pre-divorce sub-period, despite its limited size, constitutes a homogeneous institutional regime: as the cointegration analysis in Section 5 will confirm, a stable long-run relationship between surplus and debt persisted throughout the period, sustained by the Bank of Italy's systematic accommodation. The post-divorce period, by contrast, does not constitute a comparable regime. As the administrative data presented in Section 6.2 will document, the Bank of Italy's financing share exhibited sharp oscillations in the early 1980s, collapsing to 1.4% in 1983 and rebounding to 22.4% in 1985, before stabilising towards zero only in the second half of the decade, in conjunction with the credible EMS commitment and the reform of government securities markets. Estimating a separate 1981–1998 VAR would conflate a still-transitional early phase with the structurally distinct convergence period, yielding parameter estimates that represent neither regime. The asymmetry in the identification strategy, specifically direct estimation of the pre-divorce regime and indirect inference of the post-divorce transformation, therefore, reflects an asymmetry in the underlying data, not an arbitrary methodological choice.

This gradualism finds direct econometric support in a robustness exercise on alternative sample cut-offs. The bivariate surplus-debt VAR was estimated on the 1962–1991 and 1962–1992 periods, under both one- and two-lag specifications. None of the four satisfies the stability condition: the largest characteristic root ranges between 1.002 and 1.043, and the debt persistence coefficient stays consistently above unity, between 1.043 and 1.380. The robustness of the instability across

alternative cut-offs and lag structures rules out small-sample artefacts and single-year outliers as competing explanations.

A general caveat nonetheless applies to all estimates based on the pre-divorce sub-period. With $T = 19$ annual observations, the asymptotic properties on which VAR inference, Johansen cointegration tests, and Cholesky-based variance decompositions rely are only approximately satisfied. This constraint reflects the annual frequency of the available data: to the author's knowledge, no consistent higher-frequency series exist for the full set of variables employed over the 1962–1980 period. The analysis addresses this limitation in three ways: by adopting parsimonious one-lag specifications to preserve degrees of freedom, by verifying that results are robust to alternative lag structures, and by requiring that conclusions rest on the convergence of multiple, independently estimated indicators — impulse responses, autocorrelation patterns, cointegration properties, residual correlations, and variance decompositions — rather than on any single test. Where individual estimates may be imprecise due to sample size, the consistency of the evidence across different specifications and methods provides the basis for the interpretive conclusions drawn in this study.

5. Surplus and debt: cointegration and VAR evidence

Unit root tests (Table 1) suggest that both primary surplus and debt ratios exhibit $I(1)$ behaviour over the full sample. To investigate the long-run relationship between these variables, I conduct Johansen cointegration tests separately for the pre-divorce period 1962–1980 and the full sample 1962–1998. For the pre-divorce period¹¹ (Table 2), both the trace test and the maximum eigenvalue test strongly reject the null hypothesis of no cointegration, identifying one cointegrating relationship between surplus and debt. This long-run equilibrium reflects the institutional framework prevailing until 1981: the Bank of Italy's systematic willingness to accommodate Treasury financing needs through government bond purchases created a mechanical link between fiscal deficits and debt accumulation. When the Treasury ran deficits, the central bank automatically monetised the shortfall, ensuring that debt dynamics remained tightly bound to the primary balance through a stable, predictable channel.

In stark contrast, for the full sample 1962–1998, the Johansen tests fail to detect any cointegrating relationship. The disappearance of cointegration after incorporating the post-divorce years indicates

¹¹ While the pre-divorce subsample contains only 19 observations, at the lower bound for reliable cointegration testing, the strong rejection of the null ($p < 0.02$ in both tests) and the substantial test statistics suggests genuine cointegration rather than a spurious result. Moreover, the contrast with the full-sample result (where adding post-divorce observations eliminates cointegration) reinforces the interpretation of a structural break rather than a statistical artifact.

that the 1981 institutional reform fundamentally severed the long-run equilibrium between surplus and debt. Once the Bank of Italy was relieved of its obligation to finance the Treasury, debt dynamics became subject to market forces (interest rate fluctuations, credibility effects, and investor sentiment) that prevented the emergence of a stable long-run relationship.

Given the presence of cointegration in the pre-divorce period, VAR-in-levels specification is fully justified for that sub-sample. For the full sample, the absence of cointegration reflects the regime shift itself and does not invalidate the levels specification, as the focus is on short- to medium-run dynamics rather than long-run equilibria. Moreover, the FTPL testing framework explicitly relies on transitory adjustment mechanisms, whether through price-level jumps (non-Ricardian) or endogenous surplus responses (Ricardian), that are fully captured in a VAR in levels regardless of cointegration (CCD 2001)¹².

Table 2. *Johansen Cointegration Tests: Primary budget balance and Debt*

	1962-1980	1962-1998
Trace test		
$H_0: r = 0$	18.28 (0.018)	11.92 (0.161)
$H_0: r \leq 1$	1.01 (0.315)	3.87 (0.049)
Max Eigenvalue test		
$H_0: r = 0$	17.27 (0.016)	8.06 (0.373)
$H_0: r = 1$	1.01 (0.315)	3.87 (0.049)
Conclusion	1 cointegration relationship	No cointegration
Observations	19	37

P-values in parentheses. Debt is expressed as a share of GDP (debt_gdp ratio). The presence of cointegration in the pre-divorce period, and its disappearance in the full sample, provides direct evidence of the structural break induced by the 1981 institutional reform.

5.1 Surplus and total debt

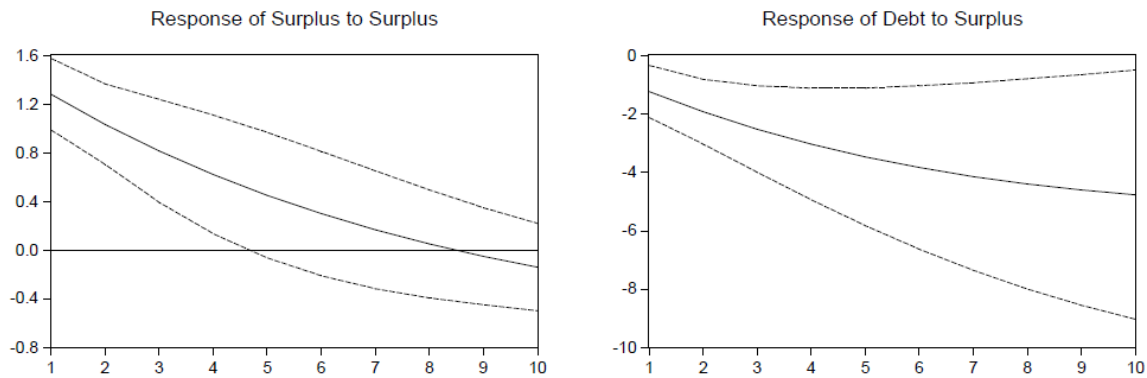
The bivariate primary surplus-debt VAR model has been estimated over the period 1962-1998 with one lag¹³. IRFs are reported in Figure 2. The surplus is ordered first on the grounds that discretionary fiscal decisions precede within-period debt adjustments: fiscal authorities respond to unexpected changes in debt with a lag, consistent with institutional and political inertia in fiscal decision-making. Given the moderate negative correlation between VAR residuals ($\rho = -0.42$), the Cholesky decomposition is relatively robust to this ordering, and the identification [Surplus, Debt] allows for contemporaneous transmission from fiscal policy to debt through the government budget constraint¹⁴.

¹² On inference in levels with unit roots see Sims, Stock and Watson (1990); on cointegration under regime shifts, Gregory and Hansen (1996).

¹³ The lag-selection criteria do not agree; one lag was retained as the most parsimonious specification consistent with the available degrees of freedom (Ivanov and Kilian 2005); with two lags the responses keep their sign and shape, with wider bands.

¹⁴ VAR estimated with reversed ordering yields qualitatively similar results, confirming that the moderate residual correlation does not drive the main conclusions (results available upon request).

Figure 2. *Impulse response functions to a surplus shock (1962-1998)*



Dashed lines represent ± 2 standard error confidence bands.

Figure 3. *Autocorrelation of surpluses (1962-1998)*

Autocorrelation		Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.672	0.672	10.019	0.002	
		2	0.460	0.015	14.995	0.001	
		3	0.410	0.172	19.179	0.000	
		4	0.265	-0.141	21.052	0.000	
		5	0.095	-0.129	21.310	0.001	
		6	0.036	0.004	21.351	0.002	
		7	-0.079	-0.161	21.559	0.003	
		8	-0.284	-0.262	24.475	0.002	
		9	-0.317	0.011	28.486	0.001	
		10	-0.313	-0.047	32.841	0.000	
		11	-0.382	-0.089	40.105	0.000	
		12	-0.339	0.058	46.663	0.000	

The response of debt-to-GDP ratio to a surplus innovation is negative and statistically significant for all periods, based on two-standard-error confidence bands. This pattern would arise naturally in a Ricardian regime where primary surpluses are projected to respond to debt in a way that assures fiscal solvency. A positive shock to the surplus reduces the debt.

As noted in Section 4, however, observing a negative debt response to a surplus shock does not uniquely identify a Ricardian regime. Under specific conditions, a non-Ricardian regime can produce the same pattern. Specifically, if a positive surplus innovation today signals lower expected surpluses in the future (negative autocorrelation), the resulting decline in the present value of future fiscal resources would trigger inflationary adjustment under the FTPL, causing debt to fall even in a non-Ricardian framework.

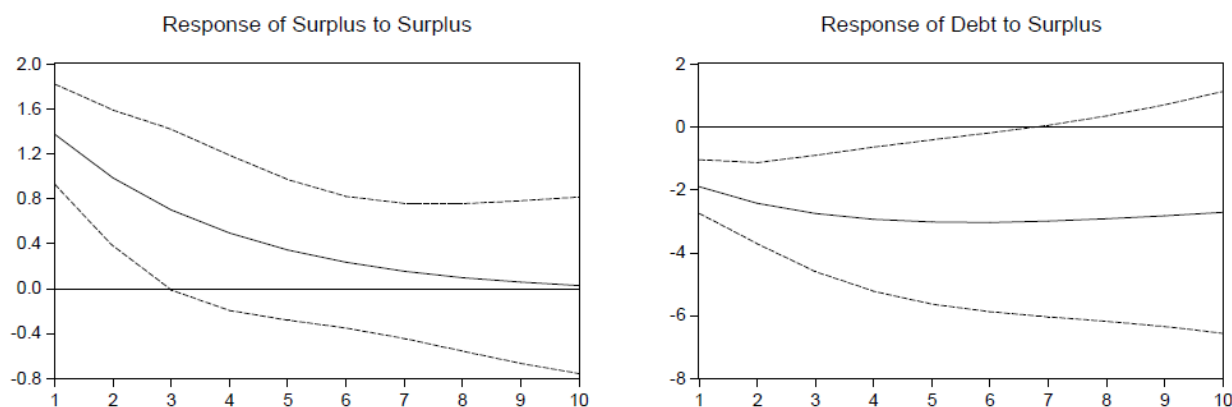
To rule out this alternative interpretation, I examine the autocorrelation structure of the primary balance. The data reveal positive autocorrelation up to lag 7 (Figure 3), indicating that surplus innovations tend to persist rather than reverse. This pattern is inconsistent with the conditions required for a non-Ricardian interpretation of the observed IRF. Under a non-Ricardian regime with

positive autocorrelation, a surplus shock would increase the present value of future surpluses, triggering deflation and thereby raising the real value of debt, the opposite of what I observe. The combination of a negative debt response and positive surplus autocorrelation therefore uniquely identifies a Ricardian regime for the full sample 1962-1998.

The investigation now moves to the pre-divorce period, to assess whether the FTPL could be operative in the preceding decades. A new bivariate primary surplus-debt VAR model has been estimated over the period 1962-1980 and one lag was again retained, on the same lag-selection criteria. IRFs are reported in Figure 4. As in the previous analysed VAR, surplus has been ordered first, and the autocorrelation of the primary budget surplus remains positive (Figure 5).

In the pre-1981 period, despite the presence of cointegration (Table 2), which confirms a stable institutional link between surplus and debt, the IRFs exhibit Ricardian-like behaviour: positive surplus shocks reduce debt. The bivariate surplus-debt specification, however, is not designed to distinguish between two competing interpretations of this pattern: the debt reduction may reflect deliberate fiscal solvency management, or it may capture a more mechanical relationship in which an improvement in the primary balance reduces the Treasury's immediate financing requirement and, with it, its recourse to central bank accommodation. Discriminating between these two mechanisms would require explicitly modelling the monetary accommodation channel, a task beyond the scope of the present bivariate framework. The institutional context documented in Section 2 suggests the latter interpretation is more plausible for the pre-divorce period, but this remains an inference external to the model rather than a conclusion the econometric evidence can directly support.

Figure 4. *Impulse response functions to a surplus shock (1962-1980)*



Dashed lines represent ± 2 standard error confidence bands

Figure 5. Autocorrelation of surpluses (1962-1980)

Autocorrelation		Partial Correlation		AC	PAC	Q-Stat	Prob	
	█		█	1	0.672	0.672	10.019	0.002
	█			2	0.460	0.015	14.995	0.001
	█		█	3	0.410	0.172	19.179	0.000
	█		█	4	0.265	-0.141	21.052	0.000
	█		█	5	0.095	-0.129	21.310	0.001
	█			6	0.036	0.004	21.351	0.002
	█		█	7	-0.079	-0.161	21.559	0.003
	█		█	8	-0.284	-0.262	24.475	0.002
	█			9	-0.317	0.011	28.486	0.001
	█		█	10	-0.313	-0.047	32.841	0.000
	█		█	11	-0.382	-0.089	40.105	0.000
	█		█	12	-0.339	0.058	46.663	0.000

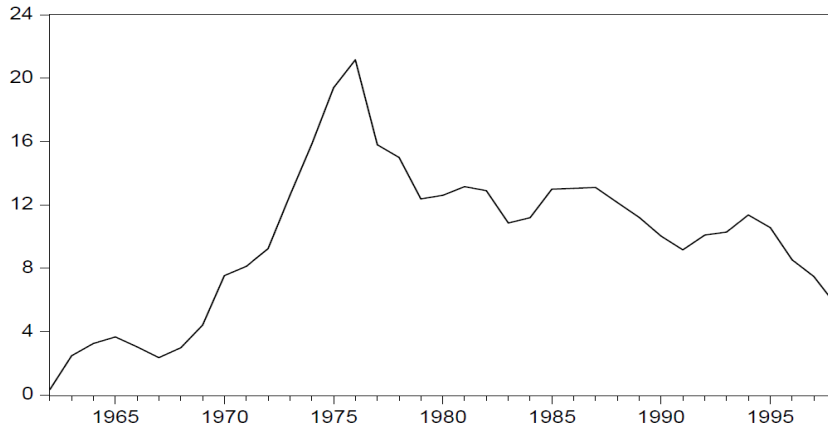
5.2 Debt held outside the central bank

The bivariate analysis of Section 5.1 examined the dynamic relationship between primary balance and total central government debt, finding Ricardian-like dynamics in both sample periods. The total debt measure, however, includes the portion held by the Bank of Italy, comprising direct securities holdings acquired through residual buyer activity and the outstanding balance of the Treasury overdraft facility. From the perspective of the Fiscal Theory of the Price Level, the theoretically relevant measure is debt held outside the consolidated public sector: it is this component that must be reconciled with the present value of future primary surpluses, whether through fiscal adjustment under a Ricardian regime or through price-level revaluation under a non-Ricardian regime. The central bank's holdings, by contrast, represent intra-governmental claims that do not impose the same equilibrium requirement (CCD 2001).

To examine this narrower measure, I construct the variable *Debt_private* as the difference between total central government gross debt and the financing provided by the Bank of Italy, where the latter combines the value of government securities held at issuance by the central bank (excluding repurchase agreements) and the outstanding balance of the Treasury overdraft facility. Both series

are sourced from the Bank of Italy Statistical Database for the entire 1962–1998 period. By construction, Debt_private measures the portion of central government debt absorbed by private investors: banks, households, institutional investors, and non-residents.

Figure 6. Monetary base created by Treasury as a GDP ratio



Source: Bank of Italy.

The decomposition is institutionally meaningful for the Italian case. As documented in Section 2 and quantified in Figure 6, Bank of Italy financing accounted for a substantial share of government liabilities throughout the period: from approximately 3% of GDP in the early 1960s, the share rose to a peak of 21% in 1976, before declining gradually thereafter. Isolating the privately-absorbed component therefore removes a quantitatively significant element of the debt aggregate and allows examination of whether the dynamics documented in Section 5.1 hold once intra-governmental holdings are excluded.

Before estimating the VAR models, I verify whether excluding the monetary base alters the cointegration properties documented above. Table 3 reports Johansen cointegration tests for the [Primary Surplus, Debt_private] system over the two sample periods.

Table 3. Johansen Cointegration Tests: Primary budget balance and Debt_private

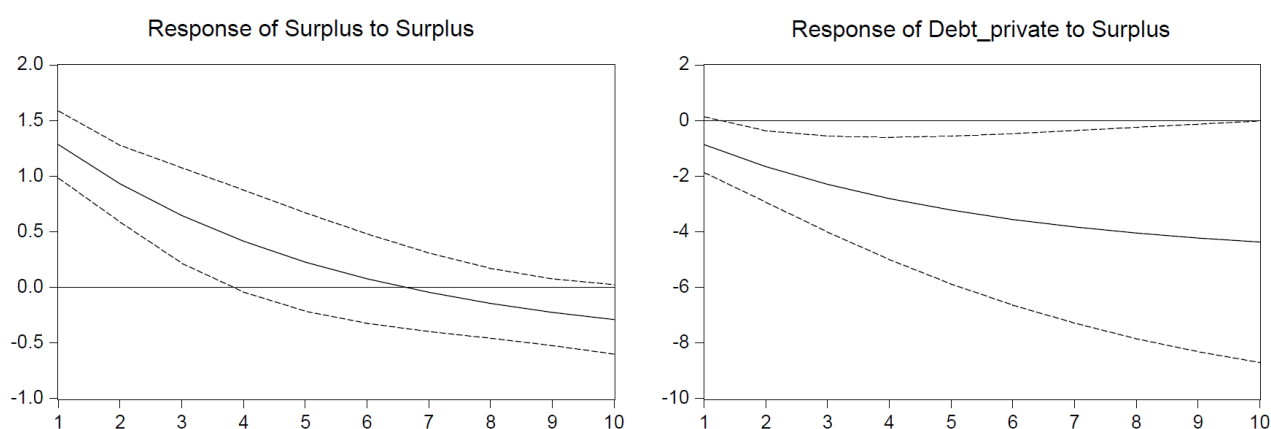
	1962-1980	1962-1998
Trace test		
$H_0 : r = 0$	7.93 (0.473)	12.11 (0.152)
$H_0 : r \leq 1$	3.22 (0.073)	2.97 (0.085)
Max Eigenvalue test		
$H_0 : r = 0$	4.71 (0.779)	9.15 (0.274)
$H_0 : r = 1$	3.22 (0.073)	2.97 (0.085)
Conclusion	No cointegration	No cointegration
Observations	19	37

P-values in parentheses.

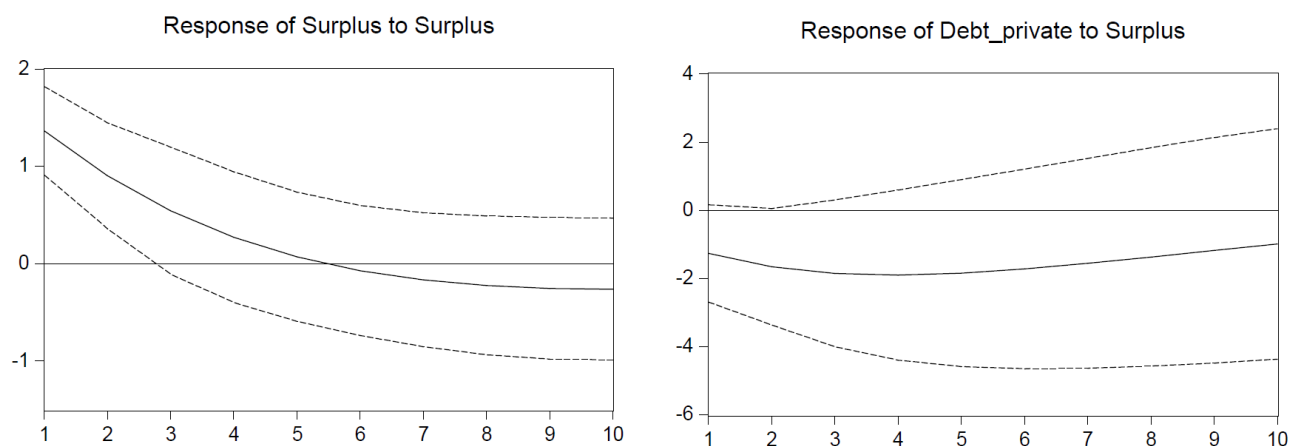
In contrast to the results obtained above, both the trace test and the maximum eigenvalue test fail to reject the null of no cointegration in both periods. The absence of a stable long-run relationship between surplus and privately-held debt is consistent with the institutional framework of the Italian case. Unlike the Bank of Italy, which supported the Treasury first through a long-standing monetary policy commitment in the 1960s and later through a formal residual buyer obligation, private investors were under no such constraint to absorb government deficits. Private market behaviour was governed by portfolio decisions, regulatory requirements (notably the bank portfolio requirements and credit ceilings in force throughout the 1970s and into the 1980s), and market conditions. These factors, in contrast to the central bank's accommodating role, did not generate a mechanical equilibrium relationship with the primary balance.

New bivariate Primary surplus-Debt_private VAR models have been estimated for both the period 1962-1998 and the period 1962-1980. In both cases, one lag was retained on the same criteria. Figure 7 displays the corresponding IRFs. As in the previous analysed VARs, surplus has been ordered first. The autocorrelation values of the primary budget surplus remain positive.

Figure 7. Impulse response functions to a surplus shock



Sample period 1962-1998; dashed lines represent ± 2 standard error confidence bands.



For the full sample, the coefficient on lagged surplus in the debt equation is -0.570 , statistically significant at conventional levels and somewhat larger in absolute value than the -0.470 estimated with Debt in Section 5.1. The impulse response of Debt_private to a surplus shock (Figure 7, top panel) is negative throughout, statistically significant from the second year onwards, and broadly comparable to the corresponding response of Debt. The autocorrelation of the primary balance remains positive. Combined, these features uniquely identify a Ricardian regime in the sense of Canzoneri, Cumby and Diba (2001).

For the pre-divorce period, the coefficient is -0.365 , not statistically significant. The corresponding figure in Section 5.1 with Debt was -0.450 , similarly imprecise but somewhat larger in absolute value. The impulse response (Figure 7, bottom panel) is negative on average but its confidence band includes zero across all horizons. This contrasts with the corresponding result of Section 5.1, where the response of Debt to a surplus shock was significant for several years.

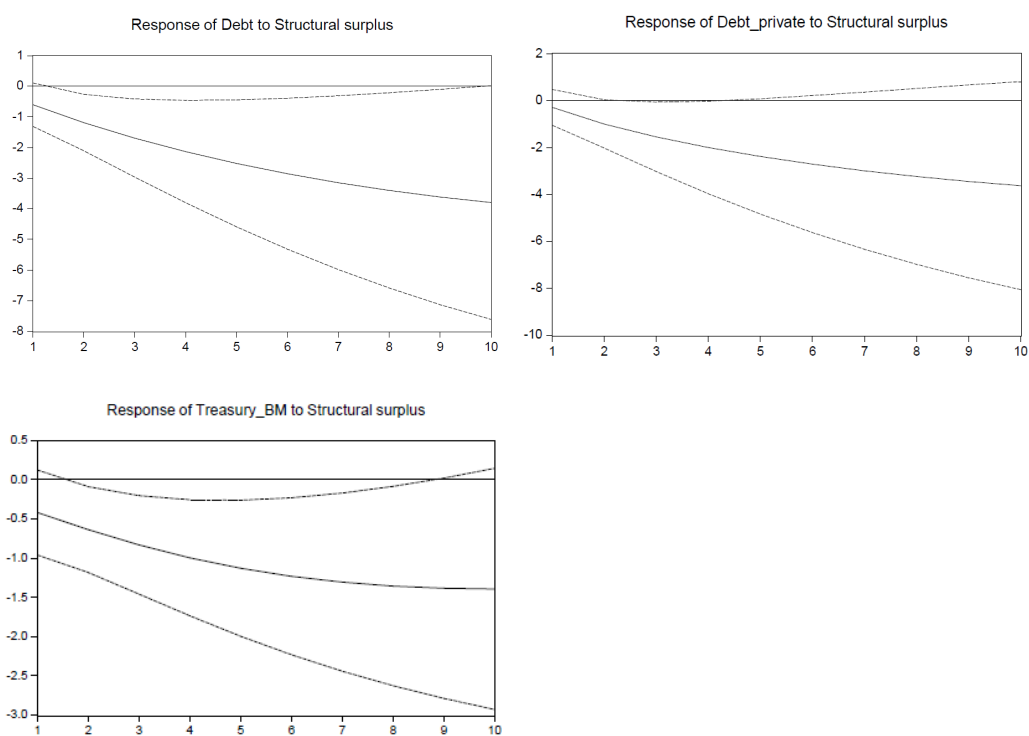
To assess whether Cochrane's critique could find justification in the Italian data, bivariate VAR models including the cyclical and structural components of the primary surplus were estimated over both sample periods, in each case with a single lag and the cyclical component ordered first. The cross-coefficients are statistically insignificant in both specifications: the lagged values of one component do not enter the equation of the other in any meaningful way. The contemporaneous correlation of the innovations is -0.24 over the full sample and -0.02 in the pre-divorce sub-period. The analysis of the cyclical and structural components of the primary balance leads to a clear conclusion regarding Cochrane's critique. In both sample periods, the two components behave as essentially independent processes: cross-coefficients are statistically insignificant, and the contemporaneous correlation of innovations is moderate in the full sample and virtually zero in the pre-divorce period. The specific mechanism envisioned by Cochrane, whereby pro-cyclical discretionary responses create dynamic interactions that allow a non-Ricardian regime to mimic Ricardian impulse responses, is not empirically operative in the Italian data. The impulse response functions documented in Section 5.1, which show debt declining after a positive surplus shock, can therefore be interpreted as genuine evidence of Ricardian fiscal behaviour without the ambiguity that Cochrane's critique would otherwise introduce.

6. The financing architecture of the divorce

6.1 Impulse responses of debt and the monetary base

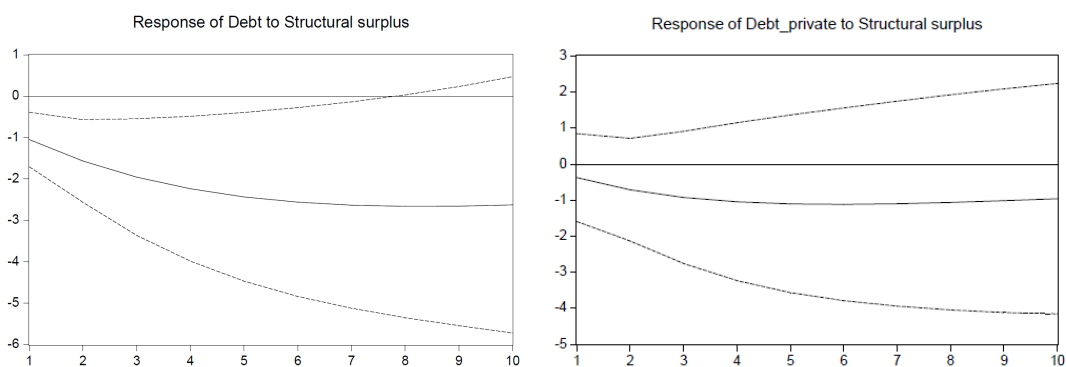
To conclude the analysis, I examine the dynamic properties of debt and the monetary base following a shock to the primary structural surplus. Three unrestricted VAR models were estimated to investigate these dynamics, both for the full period 1962–1998 and the pre-divorce sub-period 1962–1980. The models include: (i) a three-variable VAR with cyclical surplus, structural surplus, and total debt (Debt); (ii) a version substituting total debt with privately-held debt (Debt_private), as defined in Section 5; and (iii) a variant including both surplus components and the central bank financing of the Treasury (BM_TES) as a ratio of GDP. Consistent with the previous identification strategy, the cyclical surplus is ordered first, followed by the structural component.

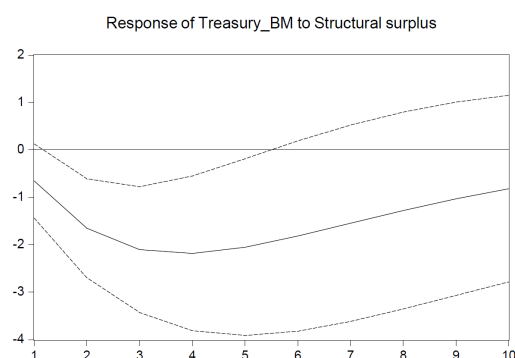
Figure 8. Three-variable VAR IRFs on period 1962-1998



Dashed lines represent ± 2 standard error confidence bands.

Figure 9. Three-variable VAR IRFs on period 1962-1980





Dashed lines represent ± 2 standard error confidence bands.

The IRFs demonstrate that across all periods and debt specifications, a positive shock to the structural surplus leads to a decline in government liabilities, a pattern consistent with a Ricardian adjustment mechanism.

The reaction of the Treasury monetary base is more complex and reveals an asymmetry between the two sample periods. In the full sample (Figure 8), a positive shock to the structural surplus is associated with a persistent reduction in monetary base creation, statistically significant from the second to the eighth year, without reverting towards zero within the ten-year horizon. This pattern is consistent with a post-divorce environment in which the Bank of Italy retained some discretionary latitude to respond to fiscal improvement by reducing accommodation but was no longer bound by any automatic transmission mechanism. In the pre-divorce sub-period (Figure 9), by contrast, the response of the monetary base is larger and faster, statistically significant up to lag 5, after which it reverts towards zero, reflecting the tighter institutional coupling between discretionary fiscal policy and monetary financing that characterised the period before 1981. The progressive loosening of this coupling is precisely what the quantitative analysis below seeks to measure.

In conclusion, the evidence provided by the IRFs aligns more closely with a Ricardian framework than with a FTPL model. Consequently, under the assumptions of this study, the hypothesis of a Fiscal Dominance regime in Italy can be rejected for both sample periods.

6.2 *The sources of monetary base fluctuations*

The bivariate VAR analyses in Section 5 focused on the relationship between primary balance and government liabilities, demonstrating that surplus shocks lead to debt reduction in a manner consistent with Ricardian dynamics. However, these specifications do not allow me to distinguish between the financing composition of government liabilities: specifically, what share is financed through conventional bonds versus monetary base creation by the Bank of Italy.

To address this question, I extend the analysis to a three-variable VAR system with Primary Budget Balance, privately-held debt (Debt_private), and Monetary Base created by the Bank of Italy on behalf of the Treasury through bond purchases and overdraft facility (BM_TES), all expressed as GDP ratios. Identification relies on a recursive Cholesky scheme, detailed below, which orthogonalises the structural shocks under the maintained ordering.

The variance decomposition employs the Cholesky orthogonalisation with the ordering [Primary Balance, Debt_private, BM_TES]. This ordering reflects the differential speed of adjustment across fiscal and monetary variables, consistent with the institutional framework described in Section 2.

Table 4. Variance Decomposition of Treasury monetary base (BM_TES) at selected horizons

A. Pre-Divorce Period (1962-1980)

	Baseline [S,D_priv,BM]				Alternative [D_priv,BM,S]			
Horizon	Surplus	Debt_priv	BM_own	Total Fiscal	Debt_priv	BM_own	Surplus	Total Fiscal
1	23	56	21	79	40	60	0	40
5	51	41	8	92	23	67	9	32
10	49	44	7	93	26	60	14	40

B. Full Sample (1962-1998)

	Baseline [S,D,BM]				Alternative [D,BM,S]			
Horizon	Surplus	Debt_priv	BM_own	Total Fiscal	Debt_priv	BM_own	Surplus	Total Fiscal
1	11	15	74	26	8	92	0	8
5	28	13	58	41	5	89	6	11
10	30	18	52	48	9	84	8	17

C. Change (Full sample minus Pre-Divorce, percentage points)

	Baseline Ordering				Alternative Ordering			
Horizon	Surplus	Debt_priv	BM_own	Total Fiscal	Debt_priv	BM_own	Surplus	Total Fiscal
10	-19	-26	+45	-45	-17	+24	-6	-23

Shares are rounded.

Given the substantial residual correlation between fiscal and debt innovations documented in Sections 5.1 and 5.2, the variance decomposition is sensitive to the chosen ordering. To assess the robustness of my conclusions, Table 4 presents the variance decomposition of the Treasury Monetary base under both the baseline ordering [Primary_Balance, Debt_private, BM_TES] and an alternative ordering [Debt_private, BM_TES, Primary_Balance].

The pre-divorce variance decomposition quantifies the institutional constraint documented in Section 2. At horizon 10, fiscal sources account for 93% of the forecast error variance in Treasury monetary base: surplus shocks alone contribute 49%, while private debt shocks, representing unexpected changes in market absorption, add a further 44%. The residual 7% reflects own-shock dynamics, capturing the limited but non-negligible scope for autonomous monetary operations that coexisted with the accommodation regime. This figure is consistent with the sterilisation operations documented by Gaiotti and Secchi (2012): from 1975 onwards, the Bank of Italy systematically offset monetary base creation through secondary market interventions in an attempt to retain control over money supply despite its institutional commitment to accommodate Treasury financing needs. The 7% own-shock contribution is therefore consistent with this discretionary sterilisation capacity: real and operationally significant, but insufficient to sever the dominant fiscal channel that drove 93% of monetary base variance.

This statistical portrait finds direct corroboration in administrative data from the Bank of Italy's Annual Reports (Table 5). Between 1970 and 1976, the central bank financed on average approximately 56% of government borrowing requirements. The correspondence is not an identity: the variance decomposition measures the share of forecast error variance attributable to fiscal shocks, not the average level of monetisation. Yet the convergence between the two metrics, one statistical, the other administrative, strengthens the interpretation that fiscal needs were the dominant driver of monetary base fluctuations in this period. Equally informative is the volatility of the monetisation share: it ranged from 85.0% in 1970 to -17.8% in 1977, when the Bank of Italy conducted net sterilisation operations. This extreme dispersion is precisely what generates the high fiscal contribution in the variance decomposition: it is the amplitude of the fiscal-monetary co-movement, not the average level of monetisation, that the forecast error variance captures.

Table 5. Central government borrowing requirements and central bank financing (1970-1993)

Years	Government borrowing requirements (Billion lire)	BI-UIC financing (Billion lire)	BI-UIC financing as % of government borrowing requirements	Treasury c/c %
1970	3,226	2,742	85.00	52.80
1971	4,758	1,040	21.90	-4.50
1972	5,763	1,551	26.90	11.80
1973	7,965	5,016	63.00	10.70
1974	8,973	6,498	72.40	0.60
1975	16,468	8,829	53.60	3.40
1976	14,866	9,938	66.90	11.40
1977	22,566	-4,008	-17.80	-1.90
1978	34,305	5,024	14.60	5.60
1979	30,371	343	1.10	11.40
1980	37,017	9,930	26.80	24.20
1981	53,296	13,692	25.70	11.60
1982	72,799	12,589	17.30	9.10
1983	88,260	1,259	1.40	-9.80
1984	95,695	13,726	14.30	19.40
1985	122,613	27,479	22.40	5.20
1986	110,159	10,980	10.00	4.10
1987	114,250	7,020	6.10	8.10
1988	125,643	2,645	2.10	3.40
1989	133,854	6,906	5.20	1.40
1990	145,262	920	0.60	2.00
1991	152,322	19,069	12.50	1.30
1992	163,134	n.a	n.a	4.70
1993	160,535	n.a	n.a	-2.80

Source: Bank of Italy, Annual Reports, statistical appendix (Reports for 1971, 1972, 1974, 1984 and 1991); last column: Bank of Italy Statistical Database. BI-UIC financing: net acquisitions of government securities and other claims on the Treasury, including the overdraft account; not reported separately from banks after 1991.

The full-sample variance decomposition documents a structural reorientation of comparable magnitude to the institutional change that produced it. At horizon 10, the Treasury monetary base's own shocks now account for 52% of its variance, a 45-percentage-point increase from the pre-divorce 7%, while fiscal sources collectively decline from 93% to 48%. Surplus shocks fall from 49% to 30%, and private debt shocks decline sharply from 44% to 18%.

The administrative record confirms that the post-divorce transformation was gradual, non-monotonic, and incomplete until the Maastricht constraints. The Bank of Italy financing share oscillated between 1.4% and 25.7% during 1981–1985, declined steadily through the late 1980s to 0.6% in 1990, but then rose again to 12.5% in 1991, when foreign-exchange outflows led the Bank of Italy to purchase government securities. The overdraft account, the only component traceable beyond 1991, was drawn again during the 1992 EMS crisis (4.7% of the borrowing requirement) and repaid in 1993 (–2.8%), before its abolition from 1994 under the Maastricht Treaty (Table 5). The

48% of monetary base variance that the full-sample decomposition attributes to fiscal sources is therefore not a residue of the pre-divorce years. It measures a channel that remained operationally available, and occasionally active, throughout the 1980s and into the early 1990s. The definitive institutional closure was provided not by the 1981 divorce but by the European Treaty obligations, a finding consistent with the broader literature on the *vincolo esterno* as the binding constraint on Italian monetary-fiscal interaction¹⁵.

Table 6. Variance Decomposition of Debt_private at selected horizons

A. Pre-Divorce Period (1962-1980)

	Baseline [S,D_priv,BM]				Alternative [D_priv,BM,S]			
Horizon	Surplus	Debt_priv	BM_own	Total Fiscal	Debt_priv	BM_own	Surplus	Total Fiscal
1	4	96	0	100	100	0	0	100
5	11	68	21	79	68	17	15	83
10	41	40	19	81	32	60	8	40

B. Full Sample (1962-1998)

	Baseline [S,D_priv,BM]				Alternative [D_priv,BM,S]			
Horizon	Surplus	Debt_priv	BM_own	Total Fiscal	Debt_priv	BM_own	Surplus	Total Fiscal
1	6	94	0	100	100	0	0	100
5	21	74	6	95	87	11	2	89
10	36	49	15	85	66	29	5	71

C. Change (Full sample minus Pre-Divorce, percentage points)

	Baseline Ordering				Alternative Ordering			
Horizon	Surplus	Debt_priv	BM_own	Total Fiscal	Debt_priv	BM_own	Surplus	Total Fiscal
10	-5	+9	-4	+4	+34	-31	-3	+31

Shares are rounded.

¹⁵ The concept of «vincolo esterno», the use of external commitments to impose domestic policy discipline, has a long tradition in the Italian political economy literature. For references, see Carli (1993) who explicitly theorised Italy's adhesion to the EMS and subsequently to the Maastricht criteria as a deliberate strategy to enforce fiscal restraint; Giavazzi and Pagano (1988); Giavazzi and Spaventa (1989); Dyson and Featherstone (1996); Quaglia (2004).

The variance decomposition of privately-held debt reveals the mirror image of this transformation. Under the baseline ordering at horizon 10, BM_TES shocks now account for 15% of Debt_private variance, down from 19% pre-divorce. Under the alternative ordering, the decline is far more pronounced: from 60% to 29%. The contraction of the BM_TES → Debt_private channel is therefore robust across both orderings, with magnitudes ranging from 4 to 31 percentage points. Fiscal sources correspondingly increase their share, rising from 81% to 85% under baseline and from 40% to 71% under alternative. As the Bank of Italy withdraws from its residual buyer role, central bank decisions exert less influence on privately-held debt dynamics, which become increasingly driven by their own intrinsic market dynamics (interest rate movements, portfolio reallocations, valuation effects, and rollover pressures) rather than by central bank accommodation.

Comparing the two samples yields four convergent shifts that together characterise the post-1981 transformation (Tables 4 and 6):

- BM_TES autonomy: from 7% to 52% (+45 pp)
- Fiscal influence on BM_TES: from 93% to 48% (−45 pp)
- Debt_private fiscal-origins share: from 81% to 85% (+4 pp)
- BM_TES contribution to Debt_private: from 19% to 15% (−4 pp)

This bidirectional nexus, fiscal deficits driving monetary base creation (93% of BM variance under baseline) while central bank accommodation simultaneously shaped private debt dynamics, quantifies the tight institutional integration documented qualitatively in the historical record. Importantly, it coexisted with the Ricardian-like IRFs of Section 5: surplus shocks reduced debt, and surpluses exhibited positive autocorrelation. The financing architecture was thus fiscally driven and centrally coordinated, while the debt dynamics themselves remained Ricardian. This is the quantitative expression of the hybrid character identified in the next section: institutional mechanisms associated with fiscal dominance operating within a Ricardian equilibrium outcome.

6.3 A hybrid regime: latent fiscal dominance within a Ricardian outcome

The decomposition of the primary balance presented at the end of Section 5 was designed to assess Cochrane's observational equivalence critique, and its conclusion is that the mechanism he envisions does not operate in the Italian data. The same VAR coefficients, however, carry a separate implication for how the Italian fiscal regime should be characterised.

In both sample periods the structural component of the primary balance behaves as a near-autonomous process. It does not respond to lagged cyclical conditions, and its dynamics are driven almost entirely by its own persistence. The autonomy is virtually complete before the divorce, where

the cross-coefficients are insignificant and the residual correlation is zero. In Leeper's (1991) terms, a fiscal authority that sets its discretionary stance independently of economic conditions, responding neither to the cycle nor to the need to stabilise debt, satisfies the definition of active fiscal policy: the precondition for a non-Ricardian regime.

The impulse response functions of Section 5, meanwhile, show unambiguously Ricardian behaviour: positive surplus shocks reduce debt, and surpluses are positively autocorrelated. The pre-divorce configuration therefore holds together two things that ordinarily do not coexist. The fiscal process and the institutional framework exhibit the preconditions for a non-Ricardian regime, while the aggregate outcome is consistently Ricardian. This is what I mean by latent fiscal dominance within a Ricardian outcome.

A conceptual tension also deserves acknowledgment. The Ricardian/non-Ricardian taxonomy presupposes that a stable surplus-debt relationship reflects endogenous fiscal adjustment. In the pre-divorce period, that relationship rested instead on the monetary authority's systematic accommodation. The system produced Ricardian outcomes through an institutional channel that was itself non-Ricardian, while the discretionary fiscal process displayed the features Leeper associates with active fiscal policy.

What the divorce changed was therefore the financing architecture rather than the fiscal regime itself. The Ricardian-like IRF patterns predate 1981. The Bank of Italy emancipated itself progressively from a dual role as fiscal accommodator and coordinator of the private debt market: monetisation of deficits gave way to bond issuance, automatic accommodation of the Treasury was replaced by debt accumulation, and the central bank recovered enough operational autonomy to conduct interest rate policy independently of Treasury financing needs. The variance decompositions quantify a decisive change in the institutional channel through which fiscal imbalances propagated into the economy, leaving the underlying fiscal regime intact.

The Bank of Italy's accommodation of fiscal needs is what held the two together. This paper has examined it along two dimensions: the absorption of fiscal innovations through monetary base creation, quantified in Section 6.2, and the role of residual buyer of government securities, whose effects on privately-held debt were documented in Section 5. After 1981 these features were dismantled slowly and with reversals, and not completely until the Maastricht obligations took effect.

7. Conclusion

This paper has tested whether the Italian economy operated under a non-Ricardian regime over the period 1962–1998, in the sense defined by the Fiscal Theory of the Price Level. The 1981 Bank of Italy–Treasury divorce serves as the institutional break around which the analysis is organised. I apply the bivariate VAR methodology of Canzoneri, Cumby and Diba (2001), extending it in two respects: privately-held debt is isolated as the measure of government liabilities that the FTPL framework actually requires, and structural balance data are incorporated along the lines of Creel and Le Bihan (2006) in order to address Cochrane's observational equivalence critique.

The impulse response analysis produces Ricardian-like dynamics in both sample periods. Cochrane's preconditions, moreover, are not satisfied in the Italian data. The rejection of the non-Ricardian hypothesis survives several checks: it holds for total government debt and for the privately-held subset alone; it survives the incorporation of structural balance data; and it survives the alternative Cholesky ordering employed in the variance decomposition.

The same VAR analysis, however, exposes a tension in the pre-divorce configuration. The structural component of the primary balance followed a near-autonomous trajectory. Leeper's (1991) definition of active fiscal policy, the precondition for a non-Ricardian regime, fits a fiscal authority behaving in this way. Yet the aggregate outcome was Ricardian throughout. Latent fiscal dominance within a Ricardian outcome is the paper's central interpretive proposal, and it is this tension that the term is meant to capture. What resolved the tension institutionally was the Bank of Italy's systematic accommodation of Treasury needs.

The variance decomposition of the three-variable system quantifies what the divorce changed. Ricardian-like impulse response patterns were already in place before 1981; the transformation was functional, affecting the architecture through which fiscal imbalances reached the economy. The Bank of Italy progressively emancipated itself from a dual role, as accommodator of the Treasury and as coordinator of the private bond market. Fiscal sources' contribution to monetary base variance fell from 93% to 48%, and autonomous monetary policy rose correspondingly from 7% to 52% under the baseline ordering. On the other side of the nexus, central bank decisions came to exert less influence over privately-held debt, allowing the bond market to operate more independently of monetary accommodation. Section 6.2 documents the magnitude and direction of this reorientation, together with its robustness to alternative identification strategies.

The macroeconomic consequence followed immediately. Dismantling the monetisation channel without inducing fiscal consolidation substituted nominal debt accumulation for the inflationary erosion of real debt, and this substitution lies behind the rapid increase in the debt ratio during the

1980s. Its scale was remarkable: debt rose from 53% of GDP in 1980 to 121% by 1994, with consequences that still condition Italian fiscal policy today.

These findings speak to a long-standing debate on Italian monetary-fiscal interaction. They confirm Favero (2002) and Favero and Monacelli (2003) in identifying a Ricardian regime, while remaining compatible with Fratianni and Spinelli (2001) and Tullio and Ronci (1997) on the de facto subordination of monetary policy to fiscal needs before the divorce. The hybrid characterisation offered here reconciles these apparently contradictory results: the two literatures were observing different dimensions of one phenomenon; the financing architecture in one case, the underlying fiscal regime in the other. The evidence also sits comfortably with Bouabdallah, Jacquinet and Patella (2023), who identify a transitory regime in the Italian policy mix, although the present analysis reaches that conclusion through a reduced-form VAR rather than a structural Markov-switching framework.

The Italian experience between the 1960s and the adoption of the euro carries a wider lesson for institutional design. Moving from automatic monetisation to central bank independence, in the absence of fiscal consolidation, did not eliminate the underlying imbalance; it redirected the consequences from the price level to the stock of public debt. Institutional reforms that grant monetary independence are therefore necessary for macroeconomic stability without being sufficient. Absent a complementary commitment to fiscal discipline, the adjustment burden simply moves across policy domains.

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