



# ITALY

## SELECTED ISSUES

July 2024

This paper on Italy was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 3, 2024.

Copies of this report are available to the public from

International Monetary Fund • Publication Services  
PO Box 92780 • Washington, D.C. 20090  
Telephone: (202) 623-7430 • Fax: (202) 623-7201  
E-mail: [publications@imf.org](mailto:publications@imf.org) Web: <http://www.imf.org>

**International Monetary Fund**  
**Washington, D.C.**



# ITALY

## SELECTED ISSUES

July 3, 2024

Approved By  
European Department

Prepared By Aidyn Bibolov, Yan Chen, and Gee Hee Hong  
(all EUR).

## CONTENTS

### THE PARADOX OF ITALY'S LOW FERTILITY AND LOW FEMALE LABOR FORCE

**PARTICIPATION** \_\_\_\_\_ **3**

#### FIGURES

1. Fertility Rate and Female Labor Force Participation: 1980 vs. 2000	3
2. Fertility Rate and the Number of Births	6
3. Time Use for Working Couples	8
4. Regional Distribution of Childcare Centers: Before and After NRRP	9
5. Availability of Full-Time Classes and Net Childcare Costs	10
6. Simulation Results	12
7. Simulation Results: Jointly Boosting Fertility	13

References \_\_\_\_\_ 15

### WILL THIS TIME BE DIFFERENT? ITALY'S RESILIENCE IN THE AFTERMATH OF THE RECENT SEQUENTIAL CRISES

A. The Global Financial Crisis and the Sovereign Debt Crisis	18
B. The Pandemic and Energy Price Shock	23
C. Conclusions	27

#### FIGURES

1. Financial Conditions Index and Bank Credit to Non-Financial Corporations	17
2. Bond Yields and Bank Credit to Non-Financial Corporations	19
3. Monetary and Fiscal Policy During the First Sequential Crises	20
4. Firm Profitability, Unemployment, and Household Income	20
5. Firms and Households During the First Sequential Crises	21
6. Legacies of the First Sequential Crises	21

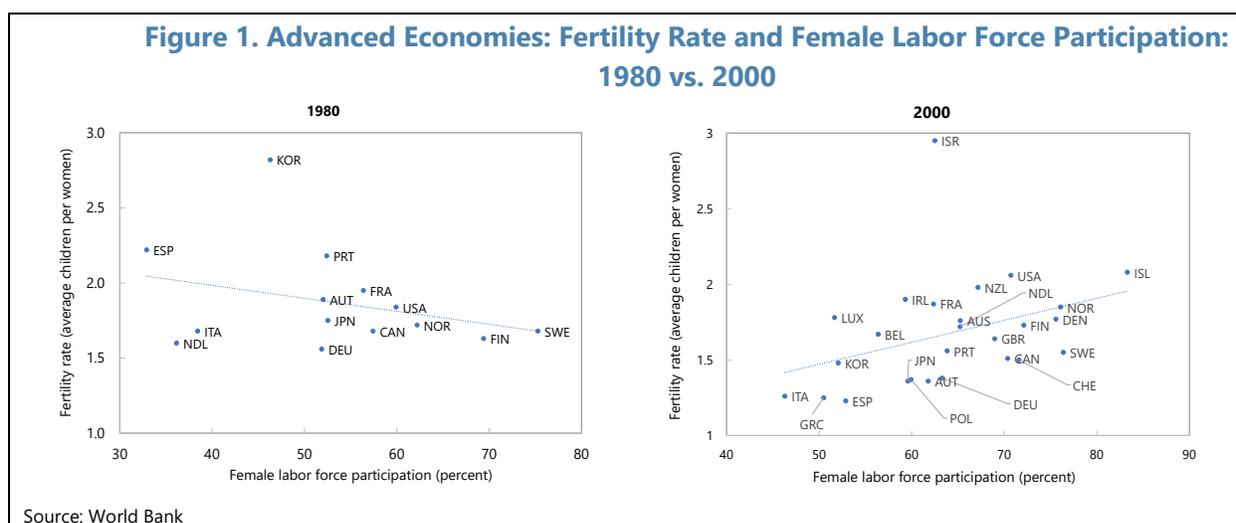
7. NPL Disposals and Stock of NPEs _____	23
8. Fiscal and Monetary Policies During the Second Sequential Crises _____	24
9. Firms and Households during the Second Sequential Crises _____	25
10. Households' and Firms' Financial Flows _____	25
11. Firms' Profitability and Debt Servicing Cost _____	26
12. Evolution of Italian Firms _____	27
13. Stock of Debt and Guarantees _____	28
References _____	29

# THE PARADOX OF ITALY'S LOW FERTILITY AND LOW FEMALE LABOR FORCE PARTICIPATION<sup>1</sup>

*In Italy, both fertility and female labor force participation lag behind peer countries. The number of births has fallen by a third over the last fifteen years, while female labor force participation remains very low. This uncommon combination points to the need to improve the compatibility of work and family life. Moreover, a large divide exists between Northern and Southern regions, with much lower female labor force participation but a similar fertility rate in the South, suggesting the presence of structural impediments, such as labor market rigidities and scarcity of childcare facilities.*

## Overview

**1. The relationship between female labor force participation and fertility has undergone significant shifts in recent decades.** Fertility rates have declined almost universally in recent decades.<sup>2</sup> In advanced economies, as women obtained more education, female labor force participation (FLFP) increased, and the fertility rate declined. This development is consistent with Becker and Lewis (1973), who predict that as the time cost and financial expenditure parents require to invest in a child increases, the “quality” of children will come to dominate the quantity, leading to lower fertility. However, this negative tradeoff between FLFP and fertility—which was evident until around 1980—had weakened and even reversed by 2000, with advanced economies with higher FLFP also displaying higher fertility than those with lower participation (Anh and Mira, 2002; Doepke et al., 2022).

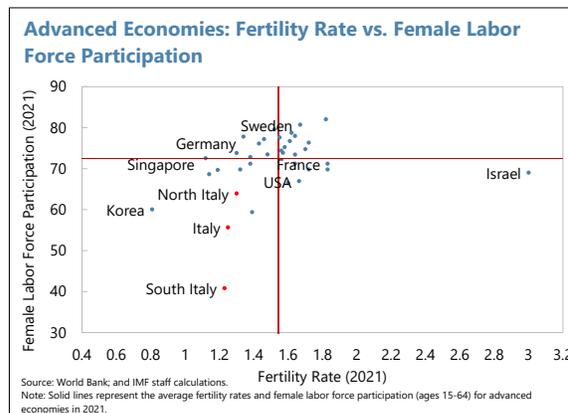


<sup>1</sup> Prepared by Gee Hee Hong. The author would like to thank Enrico Di Gregorio (IMF) and the Italian authorities for helpful inputs, comments and suggestions.

<sup>2</sup> The total fertility rate (fertility rate) is a measure of the number of children that the average woman has over her reproductive lifetime. The fertility replacement rate that maintains a constant population is 2.1. In contrast, the birth rate measures the number of births in a given year per woman of reproductive age. Hence the birth rate is a faster moving metric than the fertility rate.

## 2. Italy underperforms its peers in terms of both FLFP and fertility.

In 2023, Italy's fertility rate stood at 1.2 births per woman, well-below the advanced-economy average of 1.6. FLFP for Italian women aged 15 to 64 years was 56 percent, about 10 percentage points lower than the advanced-economy average and 20 percentage points below the participation rate of Italian men (a larger gender gap than in other countries). This co-existence of low fertility and low participation is difficult to reconcile with standard economic



theory which posits that women's labor supply is negatively correlated with child-rearing (see e.g., Becker, 1981; Hotz et al., 1997; Del Boca, 2002). It is also at odds with recent patterns in other advanced economies, where the positive relationship between fertility and FLFP is driven by increases across both dimensions, thanks in part to the introduction of various policies that encourage mothers to work.

## 3. Two different equilibria for women's work-family balance appear to co-exist in Italy, with significant differences between North and South.

In the North, both fertility and FLFP are comparable to other advanced economies, albeit somewhat below the advanced economy-average on both. In the South, differences vis-à-vis other countries are much more substantial, especially for FLFP, which is about 30 percentage points lower than the advanced-economy average. While in principle labor force participation statistics include informal work, these indicators may, nonetheless, understate women's "true" labor market activity, especially in the South, which is characterized by a high degree of informality.

## 4. The seemingly paradoxical co-existence of low fertility and low FLFP appears to result from numerous constraints related to motherhood.

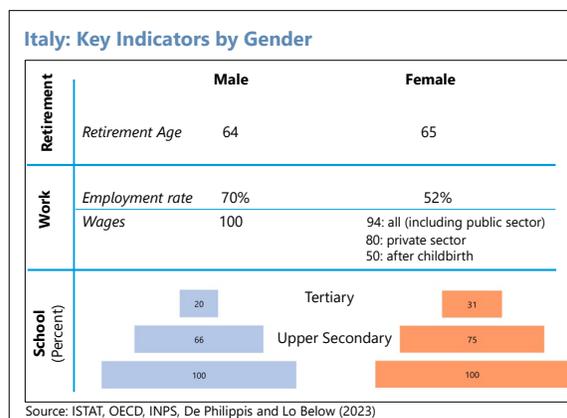
In contrast to what these "outcome" statistics suggest, recent surveys find that Italian women would prefer to have more children and to work more hours. Among female respondents, the ideal number of children was two on average, broadly unchanged from earlier cohorts, with more than 20 percent of respondents preferring to have three or more children.<sup>3</sup> Women also prefer to work more, but childbirth and motherhood were cited as key reasons why women take part-time jobs or leave the workplace.<sup>4</sup> These responses are consistent with Italy's much higher share of involuntary part-time female workers compared to other OECD countries (around 17 percent for Italy and 4 percent for the OECD average in 2022). The large gaps between aspirations and actual choices underscore the presence of barriers that hamper the realization of work and family aspirations.

<sup>3</sup> ISTAT, 2023. "Indagine Bambini e Ragazzi" <https://www.istat.it/it/files//2024/05/Bambini-e-ragazzi-2023.pdf>. For the survey on the ideal number of children conducted for adults, see OECD, 2016. "Ideal and Actual Number of Children." [https://www.oecd.org/els/family/SF\\_2\\_2-Ideal-actual-number-children.pdf](https://www.oecd.org/els/family/SF_2_2-Ideal-actual-number-children.pdf)

<sup>4</sup> Istituto Nazionale Per L'Analisi Delle Politiche Pubbliche, 2023. "Indagine Plus: Presentato Il Nuovo Rapporto." [https://www.inapp.gov.it/wp-content/uploads/Non-organizzati/INAPPNews\\_3\\_23.pdf](https://www.inapp.gov.it/wp-content/uploads/Non-organizzati/INAPPNews_3_23.pdf)

## 5. The so-called “motherhood penalty” is sizable in Italy.

Women receive lower wages and are less likely to have a full-time job than men. Gender gaps are smaller in earlier stages of life.<sup>5</sup> If anything, female students perform better than males and are more likely to receive a tertiary or higher education. A key bottleneck to pursuing a career is associated with motherhood. The “motherhood penalty” in Italy manifests in lower earnings and fewer labor market opportunities. Studies show that mothers’ annual earnings with respect to non-mothers declined by 50 percent relative to the pre-birth period, mainly due to reduced working hours (Casarico and Lattanzio, 2023). Returning to the workplace after childbirth is challenging because job opportunities for mothers are scarcer, despite the decline over time in the probability of exiting the labor market after childbirth (De Philippis and Lo Bello, 2023). Motherhood also affects the number of years in work before retirement. Because the pension system requires a minimum number of contribution years in order to receive benefits, women who left the workforce after childbirth must work till later in their lives before retiring in order to qualify for a pension. As a result, the effective retirement age of women exceeds that of men (65 versus 64 years in 2023) according to INPS.



Studies show that mothers’ annual earnings with respect to non-mothers declined by 50 percent relative to the pre-birth period, mainly due to reduced working hours (Casarico and Lattanzio, 2023). Returning to the workplace after childbirth is challenging because job opportunities for mothers are scarcer, despite the decline over time in the probability of exiting the labor market after childbirth (De Philippis and Lo Bello, 2023). Motherhood also affects the number of years in work before retirement. Because the pension system requires a minimum number of contribution years in order to receive benefits, women who left the workforce after childbirth must work till later in their lives before retiring in order to qualify for a pension. As a result, the effective retirement age of women exceeds that of men (65 versus 64 years in 2023) according to INPS.

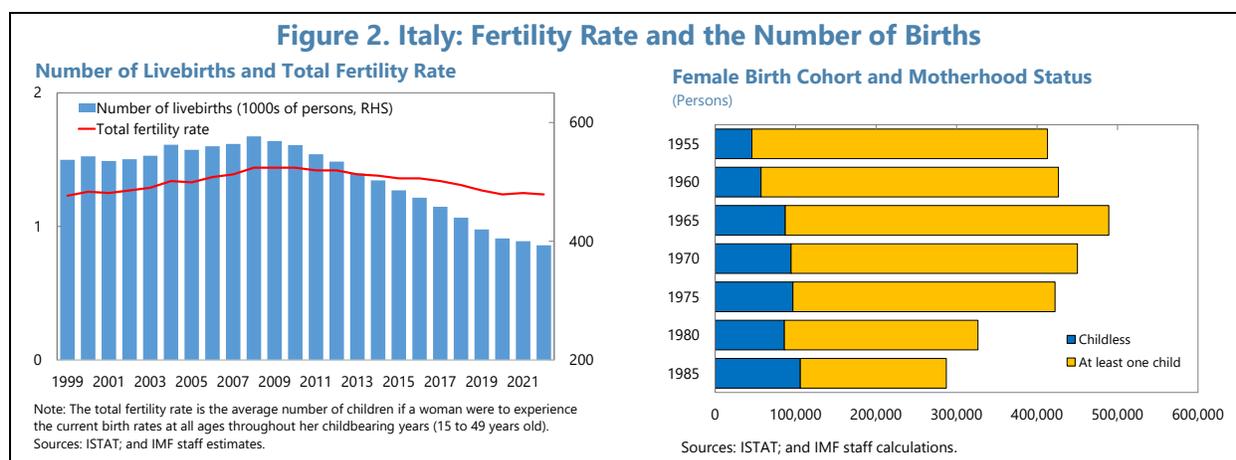
## 6. In parallel, the number of births in Italy has fallen precipitously, despite the natality boost from foreign-born mothers.

The number of births has shrunk by a third in the last fifteen years, from 600,000 in 2008 to 400,000 in 2022, even including births from foreign-born mothers who generally have a higher birth rate than Italian-born mothers.<sup>6,7</sup> The steep decline in births is apparent at both relevant margins: the increasing share of women in successive cohorts without children (*extensive margin*), and for those with children, a decline in the number of children per woman (*intensive margin*). These declines are consistent with the longer-term global trend that can be accounted for by the increased opportunity cost of women’s time due to their higher education levels and earnings potential, which theory predicts leads to choosing “quality over quantity” of children. What stands out in Italy is the accelerated decline along the extensive margin in recent years. The share of Italian women born in the early-mid 1980s (and therefore approaching the end of their reproductive lives) without children has doubled compared to the share of women born in 1955. Moreover, owing to declines in the number of births in past decades, the number of women in each successive cohort has also fallen sharply, accentuating the drop in the number of births at the intensive and extensive margins.

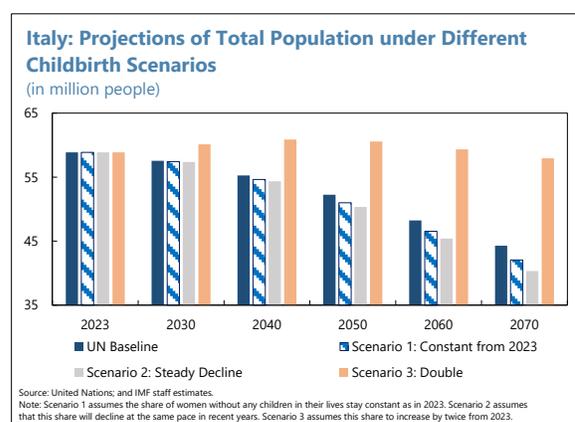
<sup>5</sup> Carta et al. (2023) documents barriers that exist for women, translating their academic performance to the labor market.

<sup>6</sup> A shift in the trend of gradually rising births to rapidly declining births occurred around 2007-08, coinciding with the global financial crisis. This point is discussed below.

<sup>7</sup> The fertility rates of foreign-born mothers and Italian-born mothers are 1.9 versus 1.2 in 2021 (ISTAT).



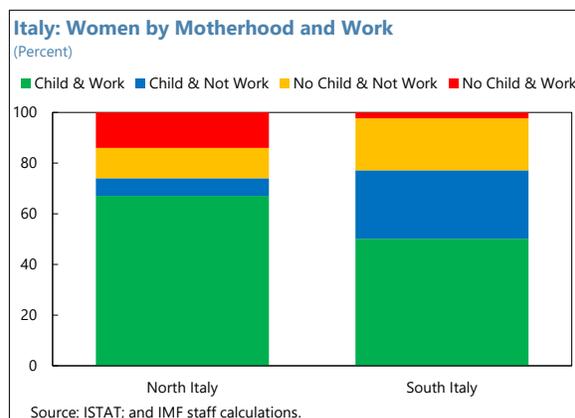
**7. The decline in birth rates will accelerate future population decline, further dragging on Italy’s weak potential growth.** According to the UN’s baseline population projection, Italy faces an adverse demographic trend, with its population projected to decline by 15 million (equivalent to a quarter of its current population) by 2070. This is a serious threat to potential growth in the absence of a strong increase in productivity.<sup>8</sup> However, this baseline population projection can be considered optimistic. Assuming the share of women without children stabilizes at the 2023 ratio, and with all else constant including migration flows (Scenario 1), by 2070, the population would have decreased by a further 4 million. However, if the recent downward trend at the extensive margin were to continue (Scenario 2), the drop in population relative to the baseline would be an additional 7 million (around 12 percent of the current population). To illustrate the enormity of the challenge, maintaining the current population size (Scenario 3) would require a doubling of the average number of births per women, from the current 1.2 to 2.4—a level very few advanced countries currently achieve.



<sup>8</sup> Selected Issues Paper, 2023, “Population Aging in Italy: Economic Challenges and Options for Overcoming the Demographic Drag,” IMF.

## 8. Substantial differences exist between Northern and Southern regions in terms of work-family outcomes.

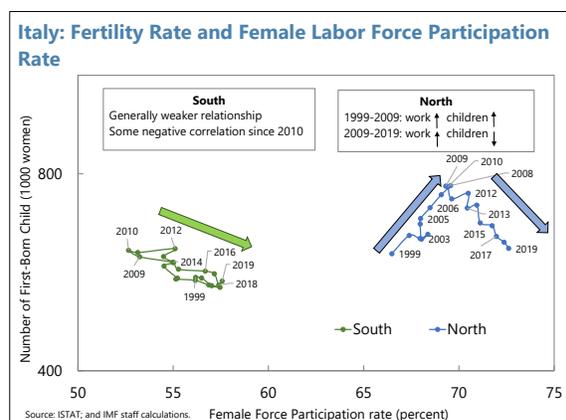
In both regions, 70 percent of women of childbearing age have at least one child. The compatibility between family and work, however, appears more favorable in the North, where a larger share of women combine work (both full and part time) with motherhood (65 percent) against 45 percent in the South. Labor market activity is more elevated in the North regardless of motherhood status.



Nearly 80 percent of women in the North participate in some form of formal labor market activity, while only half of women participate in the South. These formal labor market indicators may, however, understate the “true” labor market activity, especially in the South given the higher prevalence of informality. In addition, more limited job opportunities and greater skill mismatches for women (and men) may also dampen FLFP in the South (Andreotti et al., 2013).

## 9. The work-family relationship in Italy has been dynamic over past decades, with negative correlations more apparent recently.

In the North, the number of first-child births per 1000 women and FLFP during the last thirty years has followed an inverted U shape. Prior to the Global Financial Crisis (GFC), the correlation was strongly positive, whereby increasing FLFP was accompanied by rising first-births. Around 2008, however, the correlation turned negative, as FLFP continued to rise while first births declined.<sup>9</sup> In



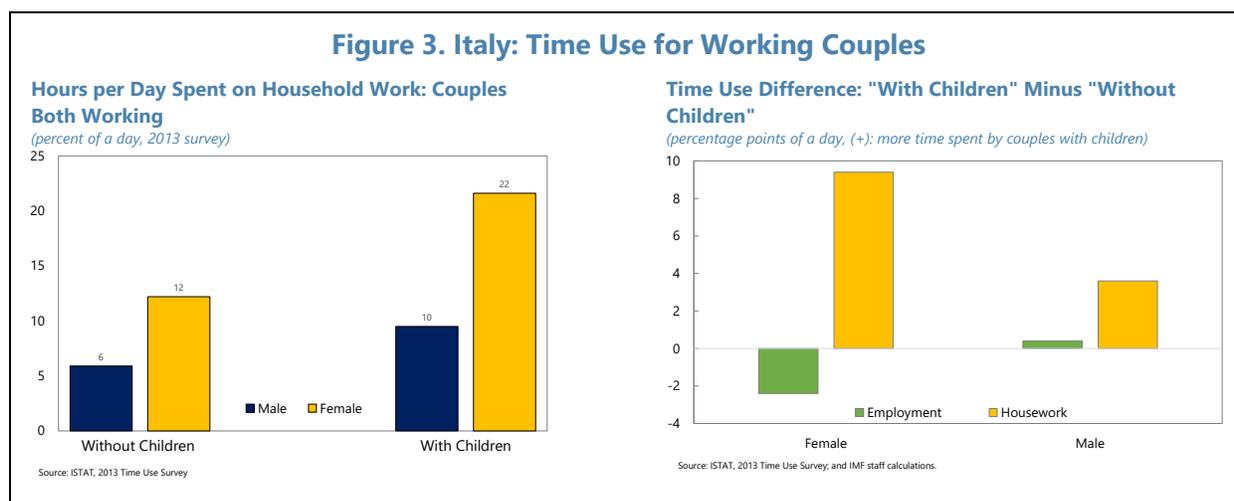
contrast, in the South, correlations have tended to be consistently negative, but the direction of travel has reversed. Before 2010, a modest increase in first births was accompanied by a small decline in FLFP. Since 2010, the correlation remains negative, but is now driven by an increase in the FLFP and a decrease in first births. An implication of these findings is that, notwithstanding a popular argument that family choice are shaped by “unalterable” social and cultural norms, decisions on family size have changed within a relatively short period of time. Moreover, the changing patterns are suggestive of a procyclicality of fertility, whereby changes in economic circumstances are an important driver of natality decisions.

<sup>9</sup> This pattern is consistent with the broader literature that finds that fertility is procyclical, with economic recessions being a major driver of lower fertility rates. Sommer (2016) shows the decline in fertility rates following the GFC. A common explanation for the procyclicality of fertility rates relates to the increased income volatility during economic downturns, deterring couples from making an “irreversible investment” in a (child).

## Understanding the Constraints on Work-Family Balance for Italian Families

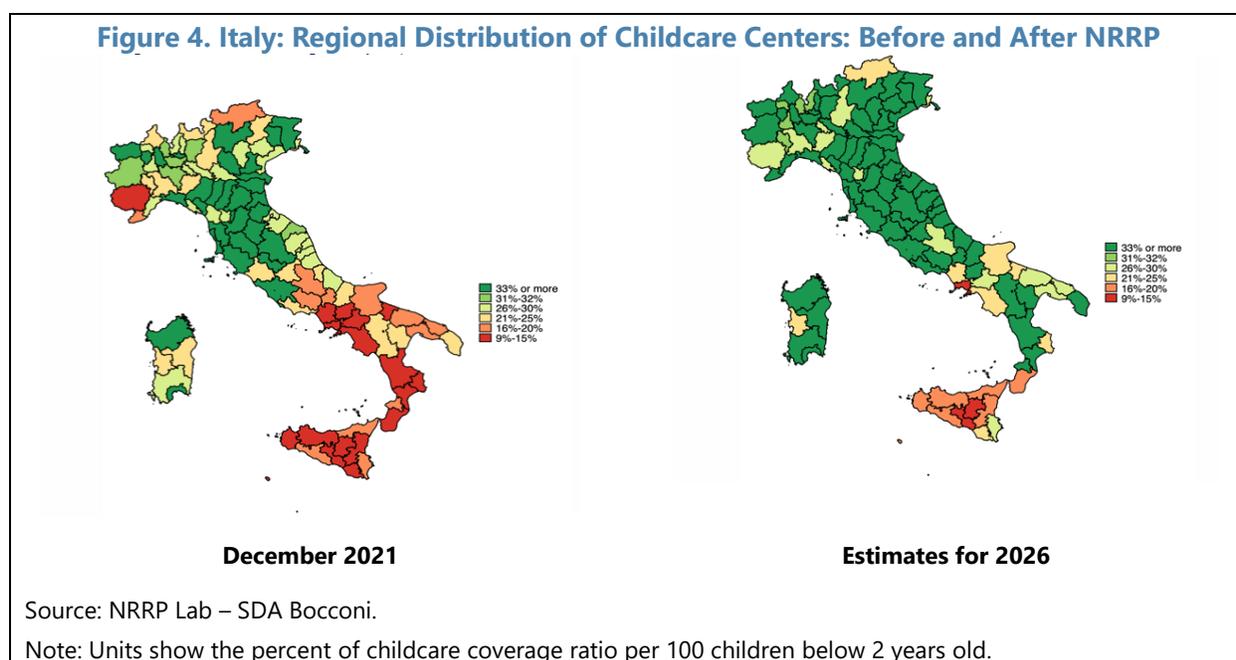
**10. Various constraints are present in Italy that reduce the compatibility of work and family.** Factors commonly identified as influencing this compatibility include: (i) flexibility of housework reallocation within the household; (ii) availability of external childcare services during parents' working hours, whether provided by the market, the public sector or the extended family; and (iii) the financial cost of child-rearing, such as for education, the motherhood penalty, and additional housing. Depending on which of these constraints is binding, having a child can either be a substitute or a complement to the mother's labor supply. There is considerable scope to improve these work-family compatibility factors in Italy, as discussed below.

**11. Within-household allocation of housework tends to be relatively specialized in Italy, and with more limited burden-sharing in households with children.** Italy ranks second highest, after Japan, in terms of the gender imbalance of within-household time allocation (OECD). ISTAT's 2013 Time Use Survey shows that for Italian couples where both partners work, for those without a child, women tend to spend twice as much time on housework as their male partners (3 hours against 1½ hours by males). For working couples with at least one child, time spent on housework increases for both men and women, but more so for women: women spend 5 hours per day on housework compared to 2½ hours for men. Moreover, women with children spend fewer hours working than their childless counterparts, at the cost of increased time devoted to housework. This pattern is not observed for men, as men with children spend more time in the workplace than do men without children.<sup>10</sup> This is consistent with the relatively low take-up of paternity leave, with only a third of Italian fathers taking the leave, despite it being a compulsory leave of 10 days (INPS, 2022).

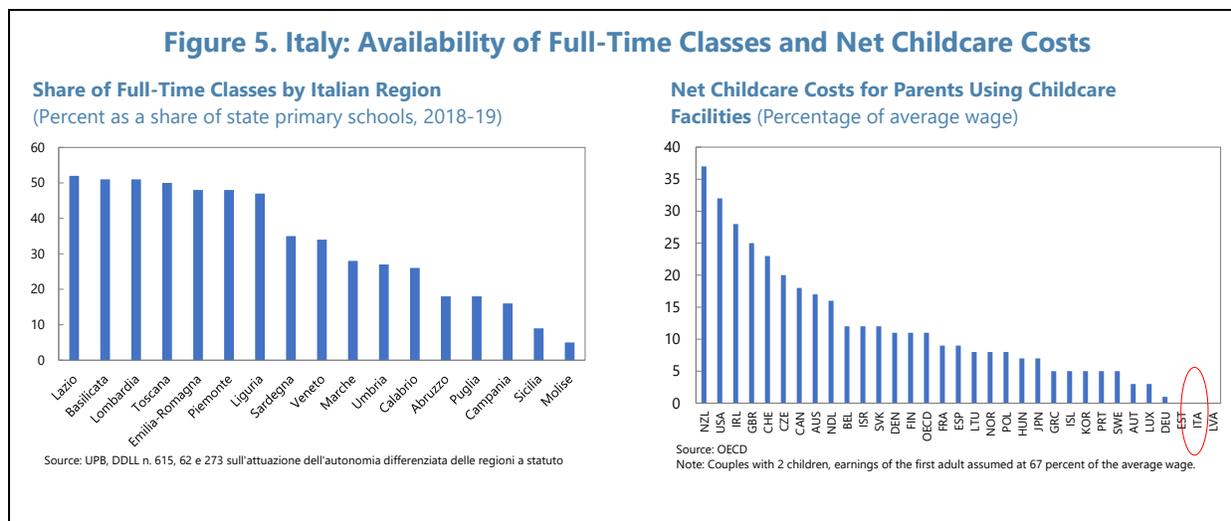


<sup>10</sup> This greater specialization of Italian women into housework is often attributed to cultural norms. However, it may well reflect the decision to maximize family income given that men's wages per hour worked are typically higher than those for women.

**12. Shortages of early childcare facilities and limited opening hours for pre- and school-age educational facilities pose significant challenges for full-time working parents.** Recent studies show that increased access to subsidized childcare for young children raised female labor force participation (Carta and Rizzica, 2018). However, the availability of childcare services for very young children (below the age of 3) in Italy is around 26 percent, below the 33 percent minimum recommended by the European Commission.<sup>11</sup> In the context of the National Recovery and Resilience Plan (NRRP), also aided by national resources, some 150,000 additional childcare places are to be built by 2026 in order to meet this recommended minimum at the national level. However, a significant regional disparity exists. In many Northeastern and Central regions, the density of childcare centers already exceeds the 33 percent minimum. This contrasts with the South, where no province currently meets this recommendation. In addition, opening hours of childcare facilities are shorter in the South (see Paragraphs 14 and 15 for a further discussion on the regional disparity). These shortages of childcare positions in the South are expected to persist even after the NRRP is completed. Substantial regional differences also exist in terms of providing full-time classes for primary schools. As a share of the total number of state primary schools, more than half of those in Lazio have full-time classes (54 percent). This share is markedly lower for Southern regions, even below 10 percent in Sicily and Molise.

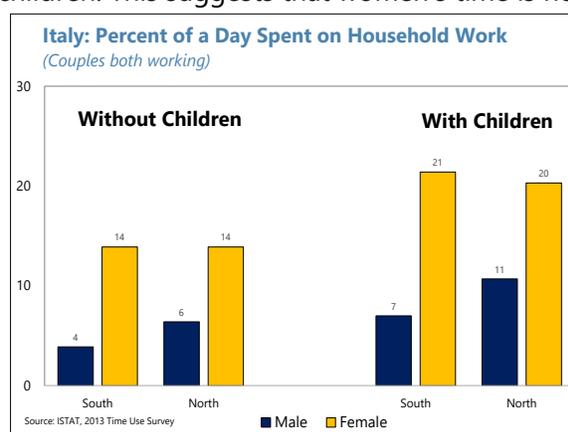


<sup>11</sup> The Barcelona target requires the EU Member States to provide childcare places for at least 33 percent of children under 3 years of age ([https://ec.europa.eu/invest-in-research/pdf/download\\_en/barcelona\\_european\\_council.pdf](https://ec.europa.eu/invest-in-research/pdf/download_en/barcelona_european_council.pdf)). Recently, the target has been revised up, requiring Member States to provide high-quality early childhood education and care (ECEC) for at least 50 percent of children below the age of 3 and at least 96 percent of children between the age of 3 and the starting age of compulsory primary education (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=COM:2022:442:FIN>).



**13. Generous government transfers and financial assistance cushion the financial burden of childcare costs, but the large motherhood penalty drags down household income.** The government provides generous subsidies and transfers (about 1 percent of GDP annually) to support families with children. This includes universal child allowances (*assegno unico e univeresale per i figli a carico*), kindergarten vouchers and parental leave, as well as full exemption from social security contributions for mothers with at least two children (“Mother’s Bonus”).<sup>12</sup> As a result, the net cost of raising a child is relatively low in Italy compared to OECD peers. However, household income tends to suffer heavily when previously full-time working women shift to part-time jobs or leave the labor force after childbirth. This motherhood income penalty tends to be persistent, leading to a decline in annual earnings even more than 10 years after childbirth (Casarico and Lattanzio, 2023).

**14. Feedback among constraints is likely more pronounced in the South.** Time spent by women on housework is the same in the North and South when couples do not have children, and marginally higher in the South when they do have children. This suggests that women’s time is no more constrained in the South than in the North, although the gender imbalance on time allocation is wider in the South. However, under-provision of public childcare and after-school care is markedly more pronounced in the South (Paragraph 12). The observed shortages may be due to supply factors, owing to the lack of fiscal resources for local governments in the South to provide sufficient public infrastructure and services. Demand-side factors may be at play too. For instance, affordability could be an issue



<sup>12</sup> The universal child allowance is provided to nearly 6 million households, and more than 85 percent of children born since 2005 (with the coverage rising to 95 percent for children born since 2020). The average monthly allowance is about 160 euros per child (compared to the monthly daycare charge of 300-400 euros), with the amount increasing to more than 200 euros for the lowest-income households (annual income below 16,215 euros).

for many households in the South, with generally lower household incomes than in the North. Importantly, these supply and demand factors can reinforce each other to create unfavorable equilibria: the lack of childcare facilities forces mothers to reduce working hours, leading to lower household incomes that, in turn, reduces demand for childcare services.

**15. Depressed FLFP in the South may be partly due to informality, reinforcing childcare scarcity and weak formal sector participation.** The underground economy in Italy is sizable (about 10 percent of GDP) and is estimated to be more prevalent in the South, given its economic concentrations in agriculture and tourism sectors (ISTAT). Informality is directly linked to the under-provision of public childcare services in the South for two reasons. First, informality lowers tax revenue due to under-reporting of income and associated tax evasion. Second, the supply of childcare services is decided by local governments at the municipal level in Italy. Taken together, municipalities where the informal sector is a larger share of the local economy will be less able to afford to provide public childcare services. Furthermore, informality may set off a vicious cycle wherein informality-driven lower tax revenues ushers in lower provision of public childcare, forcing women to cut their working hours and accept lower-paid part time jobs, locking them into the underground economy to avoid taxes in order to raise take-home income.

**16. Tax-and-benefit-induced disincentives to female employment in the formal sector may also be more relevant in the South, leading to welfare traps.** Labor force participation of married women in lower-income households is particularly depressed. Unlike in other European countries, participation of married women from lower-income households is positively correlated with their husbands' income.<sup>13</sup> This could be attributed to tax credits and allowances that are higher for lower-income families and increase with a dependent (i.e., non-earning) spouse, creating a work disincentive for that spouse (often the female partner).<sup>14</sup> As a result, for low-income households, it may be financially advantageous if the second earner does not work. These mechanisms—and associated welfare traps—are likely to be more powerful in the South, given the higher share of lower-income families.

**17. Weaker earnings prospects of younger cohorts could be contributing to the ongoing decline in the birth rate.** The substantial increase in fixed-term and part-time employment among younger cohorts has raised earnings inequality and volatility (Hoffmann et al. 2021). In addition, longer working lives of older cohorts may have slowed career-advancement opportunities for younger cohorts, flattening lifetime income ladders around the age that people typically start a family (Bianchi and Paradisi, 2024).

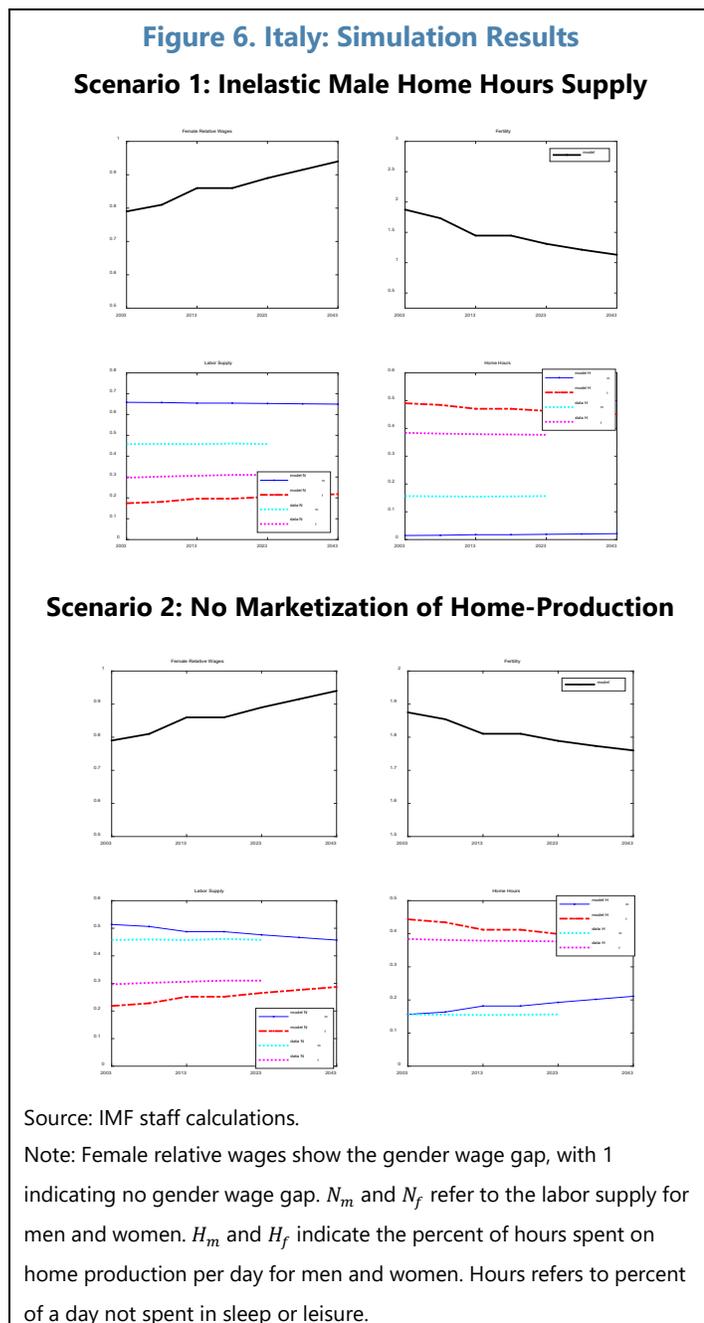
<sup>13</sup> Colonna and Marcassa (2015) uses the 2007-11 EU-SILC data to show that the labor force participation rate of married women increases from 55 percent for those whose husband's income is below €20,000 to 70 percent for those whose husbands' income is €30,000. This positive correlation disappears when a husband's income exceeds €30,000, and the labor force participation of married women is unaffected by the level of the husband's income.

<sup>14</sup> If instead the second partner chooses to work, household take-home pay can even be lower due to: (i) lower tax credits and allowances as household income rises; and (ii) the elimination of tax credits and allowances conferred on dependent spouses.

## Jointly Boosting Female Labor Force Participation and Fertility

**18. To explore the quantitative implications of the above-mentioned constraints on fertility and female labor supply, a stylized model is calibrated to Italy.** Siegel (2017) provides a model of household time use and fertility choice where the fertility-work decision depends on both a substitution effect (i.e., the opportunity cost of not working outside the home in order to increase work within the home) and an income effect (i.e., the increased opportunity set that derives from additional work outside the home).<sup>15</sup> The model includes: (i) flexibility of within-household allocation of housework; and (ii) potential to marketize “home production,” including childcare as well as other forms of parental labor-saving services (e.g., cleaning services).<sup>16</sup> To illustrate how the model works, highly-restrictive scenarios are initially simulated.

**19. In a scenario where reallocation of housework within the family is not possible or home production cannot be marketized, female labor supply and fertility are negatively related.** The effect of narrowing the gender wage gap is explored under two extreme scenarios: (i) men do not contribute to home production, modeled as inelastic supply



<sup>15</sup> The original paper by Siegel (2017) analyzes a joint increase in the fertility rate and female labor supply in the US since 1960s. The model is calibrated for Italy. Key parameters are the time use of men and women at home and in market production (this data is available from the Time Use Surveys from ISTAT), gender wage gap (Arellano-Bover et al. 2023), and fertility rate (ISTAT).

<sup>16</sup> Several factors that shape the fertility dynamics in Italy are not captured in the model. The role of foreign mothers, various household characteristics such as income and education levels, and the availability of help from other family members are some examples excluded from the model.

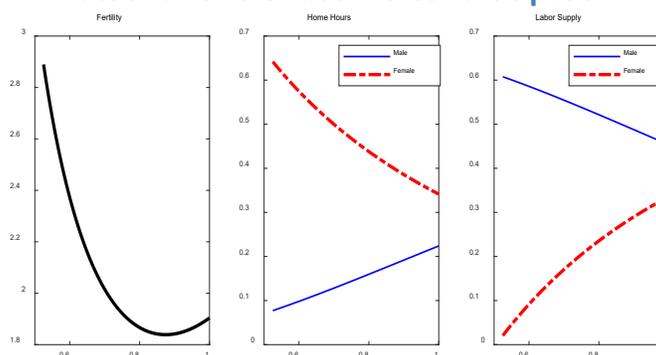
of time in the home by men; and (ii) market provided home labor-saving services are not available. In this second scenario, men can adjust their time input into home production. Under the first scenario, increasing women's relative wage causes fertility to decline. This is because higher earned income induces women to increase time spent working outside the home (substitution effect). However, because women now have less time to devote to home production and men do not contribute, the fertility rate decreases, resulting in a negative relationship between women's outside work and fertility. Under the second scenario, gradually closing the gender wage gap leads to a more pronounced increase in female labor supply outside the home as men respond by increasing their supply of labor to home production. This reallocation of home duties is, however, insufficient to raise fertility as the joint parental supply of labor to home production is too low to support an increase in child-rearing responsibilities. As a result, fertility and women's labor supply outside the home are again negatively related.

**20. Flexible adjustment of men's time devoted to home production and the availability of home-labor saving services can jointly boost fertility and women's labor force participation.** In

contrast to the previous extreme scenarios, both female labor supply and fertility increase as the gender wage gap closes in a scenario where men can adjust their time inputs to home production and where home services are marketized. As a result, home production increases due to the larger contribution of men and external-to-the-household service providers, which more than compensates for women's reduced contribution, thereby allowing extra time for child rearing, while also freeing up some of women's time to increase work outside the home. The additional household income is used to pay for the market-provided external services. While much smaller, even in this scenario the gender

imbalance in terms of time spent on home production persists when the wage gap has been eliminated. This reflects the value of the parameters used to replicate the current situation in Italy (i.e., men's current substantially lower contribution to home production in Italy than in the US), which could well change if the price of home labor-saving services were to fall sufficiently such that women can reduce their home contribution.

**Figure 7. Italy: Simulation Results: Jointly Boosting Fertility Rate and Female Labor Force Participation**



Source: IMF staff calculations.

Note: The simulation results allow for a flexible without-household reallocation of housework and the use of marketized services. X-axis refers to the gender wage gap, with 1 being no wage gap. Hours refers to percent of a day not spent in sleep or leisure.

## Conclusions

**21. Italy's low-and-falling birth rate and low female labor force participation are the result of frictions that reduce the compatibility of work and family.** Various interlocking constraints reinforce the current poor equilibrium. For instance, given insufficient childcare services and low take-up of parental leave, women are more likely to leave their job or cut back their working hours after having a child. As a result, employers may be less inclined to hire even childless women or invest in training their female employees, which would tend to keep the gender pay gap wide, perpetuate the motherhood penalty, and reduce income available to support enlargement of the family unit.

**22. Alleviating these constraints can yield better outcomes.** Social and cultural norms are frequently cited as one of the main reasons for Italy's large time-use gender gaps. With ingrained norms, changing behaviors might be seen as very challenging. Yet Italy's work-family outcomes have undergone significant shifts within a relatively short time span, most likely in response to large structural changes in the nature of employment contracts and the macroeconomic environment. In fact, a simple economic model that incorporates constraints on time, income and availability of marketized home services can account for the current low female work and fertility outcomes, while relaxing these constraints can generate superior equilibria. By necessity, however, the simple model excludes important relevant factors, including differences across regions, household-specific characteristics, the macroeconomic environment, and determinants of the gender wage gap. The model also ignores potential adverse feedback loops, such as implications of elevated informality on the availability of childcare services. However, even with more complex models, the constraints considered in this paper are likely to play a pivotal role in delivering a better work-family balance in Italy.

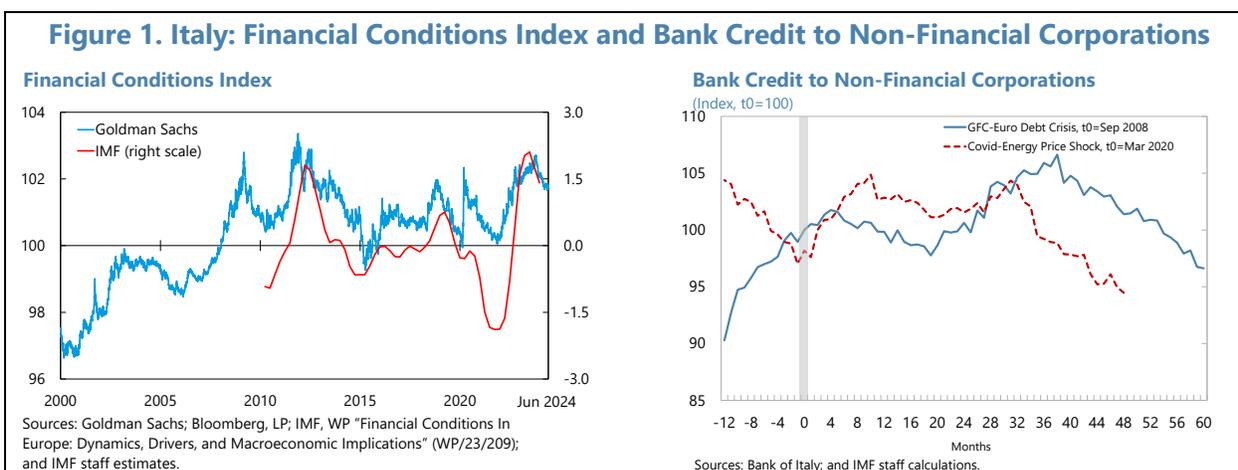
## References

- Aaronson, D., F. Lange, and B. Mazumder, 2014. "Fertility Transitions Along the Extensive and Intensive Margins," *The American Economic Review*, 104(11), 3701-3724.
- Andreotti, A., E. Mingione, and J. Pratschke, 2013. "Female Employment and the Economic Crisis: Social Change in Northern and Southern Italy," *European Societies*, 15(4), 617-635.
- Anh, N., and P. Mira, 2002. "A Note on the Changing Relationship between Fertility and Female Employment Rates in Developed Countries." *Journal of Population Economics*, 15(4), 667-682.
- Anxo, Dominique, 2007. "Time Allocation between Work and Family over the Life-Cycle: A Comparative Gender Analysis for Italy, France, Sweden and the United States," IZA Discussion Papers, No. 3193, Institute for the Study of Labor (IZA), Bonn.
- Arellano-Bover, J., N. Bianchi, S. Lattanzio, and M. Paradisi, 2024. "One Cohort at a Time: A New Perspective on the Declining Gender Pay Gap," Mimeo.
- Becker, G., and H. Lewis, 1973. "On the Interaction between the Quantity and Quality of Children," *Journal of Political Economy*, 81 (2), 279-288.
- Becker, Gary, 1981. "A Treatise on the Family." Harvard University Press, Cambridge, MA.
- Bianchi, N. and M. Paradisi, 2024. "Countries for Old Men: An Analysis of the Age Pay Gap," NBER Working Paper 32340.
- Bovini, G., M. De Philippis, and L. Rizzica, 2023. "The Original of Gender Wage Gaps: the Role of School to Work Transition," *Temi di Discussione*, forthcoming, Bank of Italy.
- Bridgman, Benjamin, 2023. "A Disaggregated View of Household Production Trends," *AEA Papers and Proceedings*, 113, 619-22.
- Casarico, A., and S. Lattanzio, 2023. "Behind the Child Penalty: Understanding What Contributes to the Labour Market Costs of Motherhood," *Journal of Population Economics*, 36 (3), 1489-1511.
- Coehlo, M., A. Davis, A. Klemm, C. Osorio-Buitron, 2022. "Gendered Taxes: The Interaction of Tax Policy with Gender Equality," IMF Working Paper WP/22/26. Washington DC.
- Colonna, F., and S. Marcassa, 2015. "Taxation and Female Labor Supply in Italy," *IZA Journal of Labor Policy*, 4, 1-29.

- De Philippis, M. 2023. "STEM Graduates and Secondary School Curriculum: Does Early Exposure to Science Matter?" *Journal of Human Resources*, 58(6), 2153-2186.
- De Philippis, M. and S. Lo Bello, 2023. "The Ins and Outs of the Gender Employment Gap: Assessing the Role of Fertility." *Temi di Discussione*, forthcoming, Bank of Italy.
- Del Boca, Daniela, 2002. "The Effect of Child Care and Part Time Opportunities on Participation and Fertility Decisions in Italy," *Journal of Population Economics*, 15, 549-573.
- Del Boca, Daniela, 2022. "Low Fertility and Labor Force Participation of Italian Women: Evidence and Interpretations," *OECD Labour Market and Social Policy Occasional Papers No. 61*.
- Doeke, M., A. Hannusch, F. Kindermann, and M. Tertilt, 2022. "The Economics of Fertility: A New Era," *NBER Working Paper Series 29948*.
- Hoffmann, E., D. Malacrino, and L. Pistaferri, 2022. "Earnings Dynamics and Labor Market Reforms: The Italian Case," *Quantitative Economics*, 13, 1637-1667.
- Hotz, J., J. Klerman, and R. Willis, 1997. "The Economics of Fertility in Developed Countries." Chapter 7 of *Handbook of Population and Family Economics*, edited by M.R. Rosenzweig and O. Stark, Volume 1A, 275-347. Elsevier.
- Kleven, H., C. Landais, J. Posch, A. Steinhauer, and J. Zweimüller, 2022. "Do Family Policies Reduce Gender Inequality? Evidence from 60 Years of Policy Experimentation," *NBER Working Paper Series 28082*.
- INPS, 2022. *Conoscere il paese per costruire il futuro. XXI Rapporto annuale. Technical Report*, Istituto Nazionale di Previdenza Sociale.
- Naldini, M. E. Pavolini, C. Solera, 2016. "Female Employment and Elderly Care: the Role of Care Policies and Cultures in 21 European Countries," *Work, Employment and Society*, 30(4).
- Siegel, Christian, 2017. "Female Relative Wages, Household Specialization and Fertility," *Review of Economic Dynamics*, 24 (2017), 152-174.
- Sommer, Kamila, 2016. "Fertility Choice in a Life Cycle Model with Idiosyncratic Uninsurable Earnings Risk," *Journal of Monetary Economics*, 83, 27-38.

# WILL THIS TIME BE DIFFERENT? ITALY'S RESILIENCE IN THE AFTERMATH OF THE RECENT SEQUENTIAL CRISES<sup>1</sup>

Italy has faced two sequential crises over the past two decades. The first—the global financial crisis and sovereign debt crisis—occurred during 2008-12 and was followed by the pandemic and energy price shock with its accompanying inflationary spike during 2020-23. This paper explores how these two sequential crises played out, what were the policy responses and what have been their legacies. It also considers whether the Italian economy will be more resilient to the recent sequential crisis than to the previous one that began more than 15 years ago; that is: “will this time be different?” While the outcome from the recent sequential crises has been much better than from the previous one so far, the unwinding of generous support measures could reveal vulnerabilities with a delay, firms are facing critical transitions amid weak productivity, and public debt has risen by almost twice as much as the reduction by the private sector.

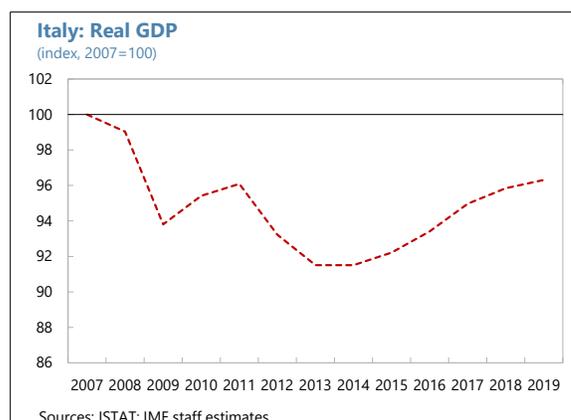


**1. Italy has faced two sets of sequential crises over the past 15 years, and while they arose from different sources, they share notable similarities.** The global financial crisis (GFC) and the sovereign debt crisis originated from financial shocks, while the Covid pandemic and the energy price surge were real supply shocks. Despite these different triggers, there are important commonalities. First, Italy’s financial conditions deteriorated in 2020 and then again in 2023 to levels similar to those in 2009 and 2012 (Figure 1). Second, the stock of bank credit to nonfinancial corporates has declined by around 10 percent since the start of the monetary tightening cycle in mid-2022, a larger and more rapid reduction than during the first sequential crisis, where credit to nonfinancial corporates (NFCs) decreased by 6 percent over the same length of time. Therefore, what recently started as supply-driven shocks has had sizable financial implications.

<sup>1</sup> Prepared by Aidyn Bibolov and Yan Chen.

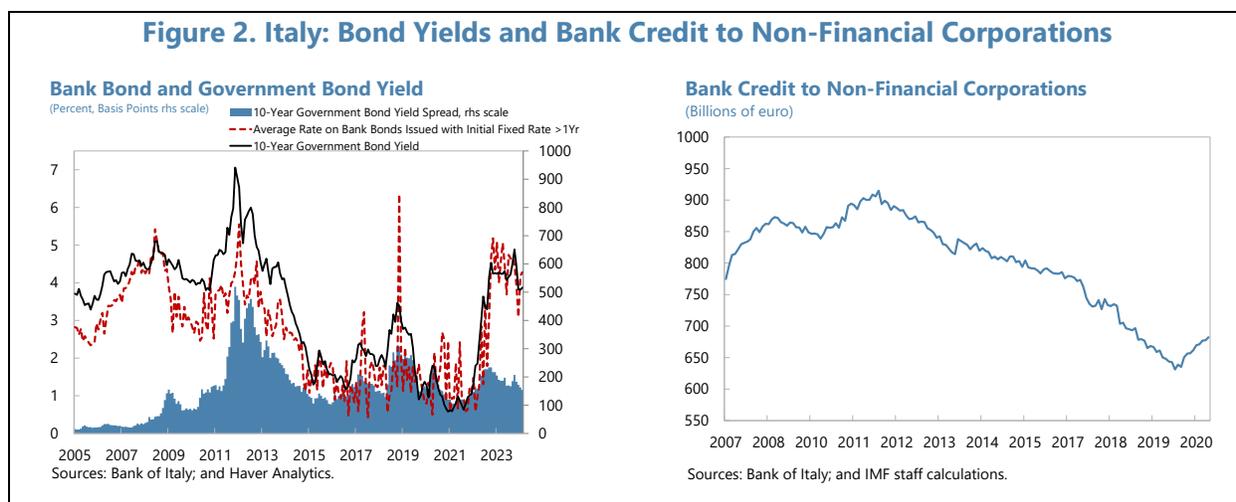
## A. The Global Financial Crisis and the Sovereign Debt Crisis

**2. The first sequential crisis left deep and persistent scars on the Italian economy.** Italy's economic and financial conditions before the GFC were generally benign. Unemployment was at a record low of 6¼ percent and the banking sector appeared healthy, with a rate of new nonperforming loan (NPL) formation of 2 percent. However, conditions deteriorated over the next few years as the crises unfolded. GDP suffered a double-dip recession, contracting by 6 percent in 2008-09, partially recovering during the next two years, and then falling again by almost 5 percent in 2012-13. All told, GDP declined by 8 percent during 2007-13. Subsequent growth was weak, and GDP did not recover to its pre-GFC level by the time of the pandemic shock, remaining 3¾ percentage points below. In all, it has taken 16 years for output to return to the level of 2007.



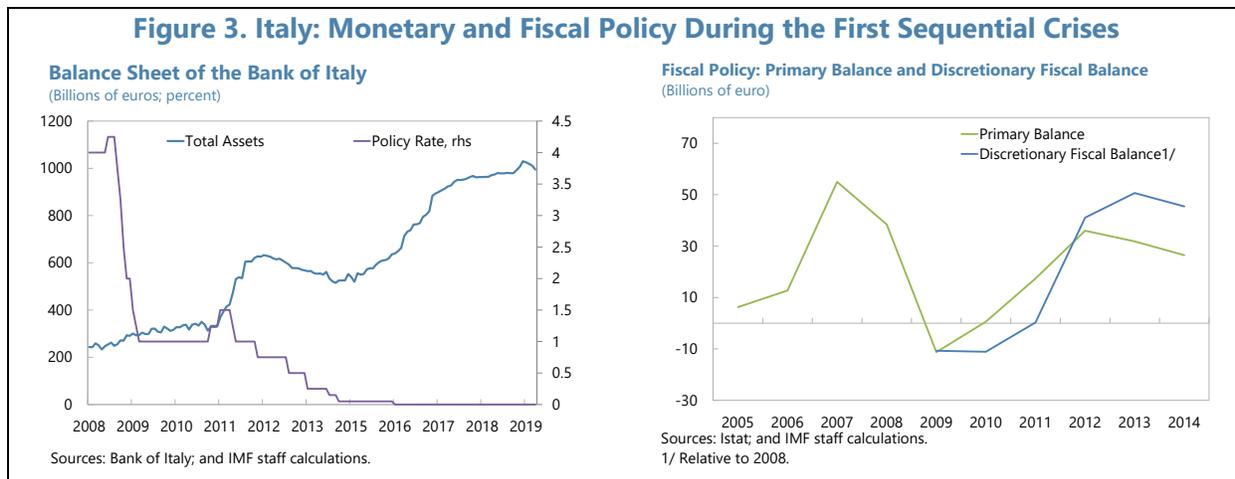
**3. Financial shocks and escalating sovereign bond spreads hit banks' funding and lending.** The initial shock, triggered by events in the US financial sector, quickly spilled over to European banks due to their significant offshore exposure. Before the GFC, sovereign bond spreads among euro area countries were very low reflecting the perception of minimal differences in risk. However, the GFC triggered a reassessment of that view, and euro area countries with weaker fiscal and macroeconomic performance were more heavily affected.<sup>2</sup> The spread on Italy's 10-year sovereign bond relative to the German bund opened to around 150 basis points in 2009, and widened sharply in November 2011 to about 500 bps (Figure 2). The rising spreads transmitted to other parts of the financial markets, including equities and money markets, significantly worsening banks' funding conditions. As a result, banks sharply tightened their lending standards, particularly for extending credit to firms, which fell by 4 percent during July 2008 and April 2010. While credit subsequently picked up, the downward trend resumed with the onset of the sovereign debt crisis in November 2011. In all, credit to firms fell by 30 percent since November 2011, with no recovery until the first quarter of 2020.

<sup>2</sup> International Monetary Fund, 2023, "[Italy's Sovereign Bond Spreads: Evolution and Drivers](#)," Selected Issues, IMF Country Report No. 23/274.

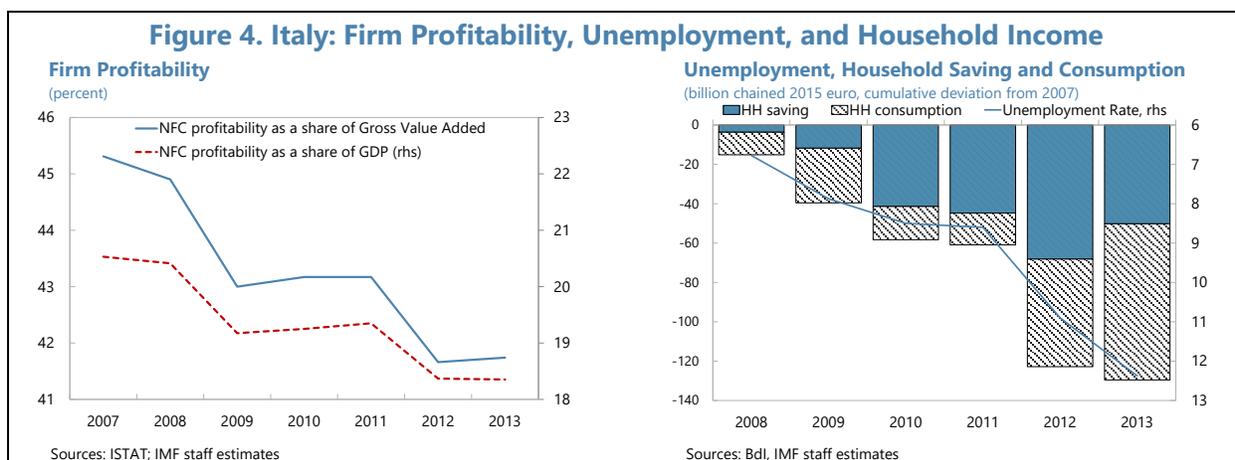


**4. Monetary policy responses were accommodative, but fiscal support was constrained.** In response to tightening financial conditions across the euro area, the European Central Bank (ECB) loosened monetary policy sharply in order to avert a credit crunch. The main refinancing rate was cut by 325 bps from the onset of the GFC (September 2008) to May 2009; new instruments, including longer-term refinancing operations (LTROs), were introduced; and the scope of eligible collateral was expanded. Further exceptional measures were introduced during the sovereign debt crisis, including the Securities Markets Program (SMP). The balance sheet of the Bank of Italy—part of the Eurosystem of central banks—expanded 2½ times by the end of 2012 relative to its pre-GFC level. The balance sheet expanded further under quantitative easing, which began in March 2015 (Figure 3). On the other hand, Italy's fiscal policy was largely procyclical, owing to constraints from high financing costs given investors' concerns about the impact of falling GDP on the fiscal and public debt paths. Spending cuts and tax increases were adopted in order to deliver consolidation to restore market confidence. The primary balance weakened during the GFC on modest discretionary fiscal expansion, but strengthened sharply during the sovereign debt crisis on considerably stronger discretionary tightening.<sup>3</sup>

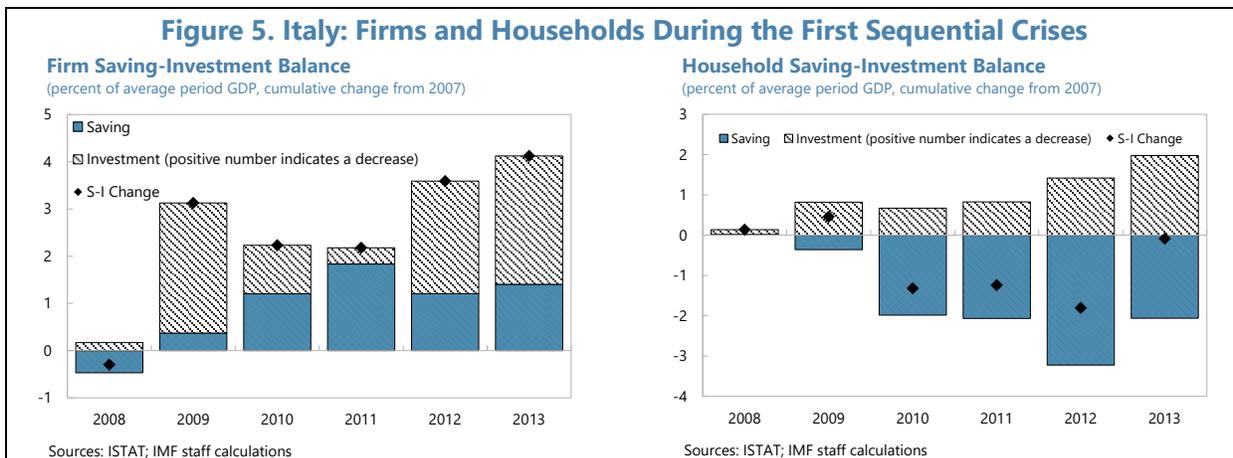
<sup>3</sup> The discretionary primary balance is defined as the difference between the actual primary balance and a counterfactual that assumes an unchanged ratio of primary revenue to GDP and constant real expenditure, with 2008 as the base year. A positive value indicates tightening.



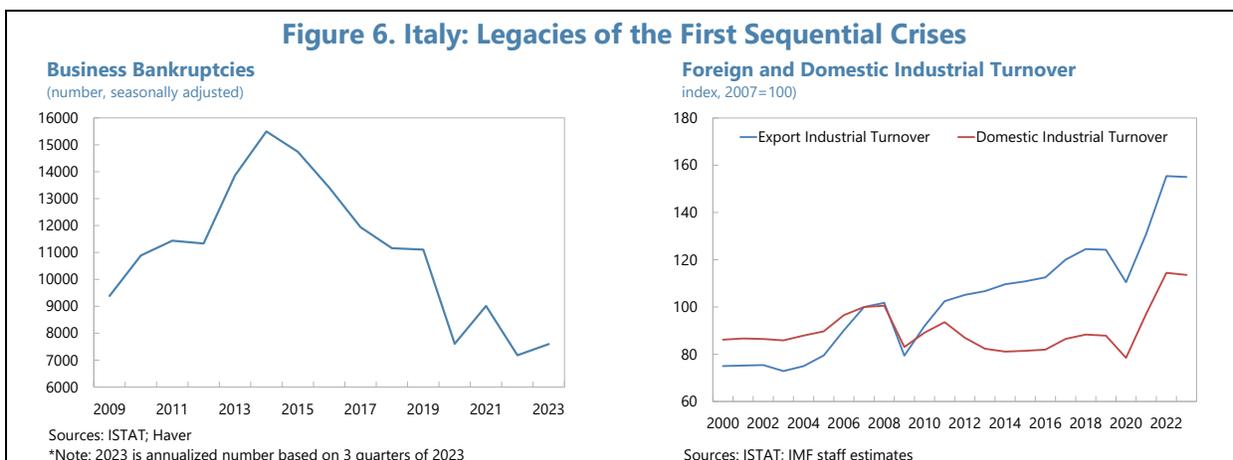
**5. The ensuing deep recession reduced firms’ profits, raised unemployment, and lowered living standards.** With demand falling, firms’ revenue and profits fell (Figure 4). Workers were laid off and the unemployment rate doubled to 12½ percent by 2013. As a consequence, real gross household disposable income fell by 10½ percent in real terms between 2007 and 2013. Households adjusted to the severe drop in income by cutting both saving and consumption.



**6. Adjustments by the private sector were sizable and prolonged.** From a national accounts’ perspective, firms adjusted in two ways. They raised saving through cost cutting measures—reducing staff and other current expenditures—to lower current spending by more than the decrease in their current revenue. The adjustment was considerably larger on the investment side, with firms curtailing investment by almost 3 percentage points of GDP. Households, on their side, cut saving to increase room for consumption and also lowered investment. Initially, households’ net saving position deteriorated, with current and investment spending exceeding income, but by 2013 the pre-GFC net position had returned—albeit with a higher consumption share offset by lower investment (Figure 5).

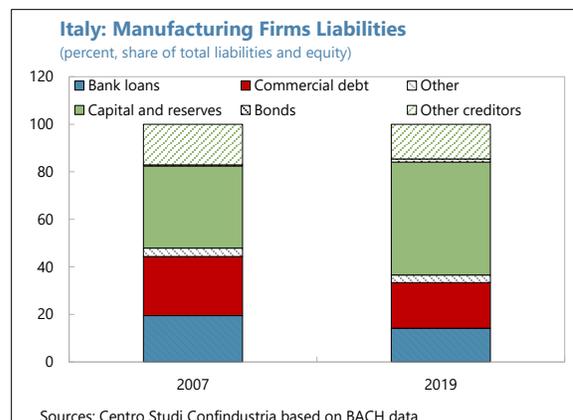


**7. The first sequential crisis led to a winnowing out of weaker corporates and a shift toward foreign markets.** Some firms implemented cost-containment measures and improved efficiency by streamlining operations and production processes. However, many companies were unable to adjust sufficiently and exited the market, leading to a pronounced increase in the number of corporate insolvencies. The full impact was not immediate, with the number of bankruptcies continuing to rise until the peak in 2014. Bankruptcies remained on a generally downward path until the pandemic and rose modestly in 2023 (Figure 6). Italian firms adjusted their market strategies, with some shifting toward foreign markets as domestic demand remained weak. This strategic change is reflected in the widening gap between industrial turnover for the export and domestic markets, which continued in the subsequent years and recently accelerated.



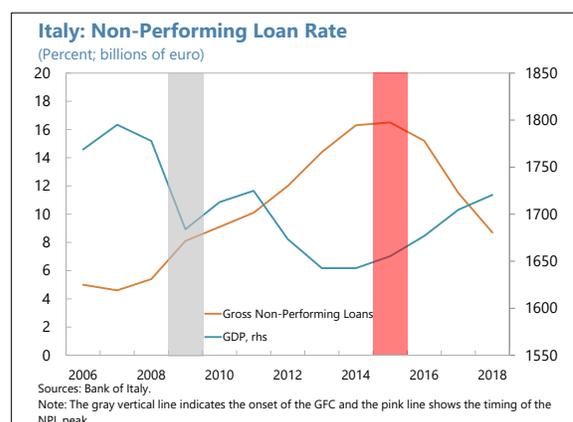
## 8. Corporate sector balance sheets became less leveraged and more resilient.

The exit of over-indebted, unprofitable firms resulted in a large shift in the composition of financing away from bank and commercial debt and toward internal funding. According to data from Confindustria, the share of own funding in total liabilities of manufacturing firms increased from 35 percent in 2007 to 48 percent in 2019. The increase in own capital likely reflects both higher retained earnings and new equity injections, also facilitated by the introduction of the Allowance for Corporate Equity in 2011.<sup>4</sup> By decreasing leverage, companies have reduced their exposure to financing risks and enhanced their resilience to future shocks.



## 9. Alongside large adjustments in the nonfinancial corporate sector, Italy's banks also endured a prolonged and costly clean up, but avoided a widespread crisis.

The gross nonperforming loan (NPL) rate was stable at around 5 percent pre-GFC, but rose steadily as the economy contracted. NPLs peaked in 2015—six years after the initial GDP shock and about a year later than the trough in output—at 16½ percent of total loans. Many banks became undercapitalized, and there were numerous fiscally costly initiatives to support or bail out banks. The tendency for slow

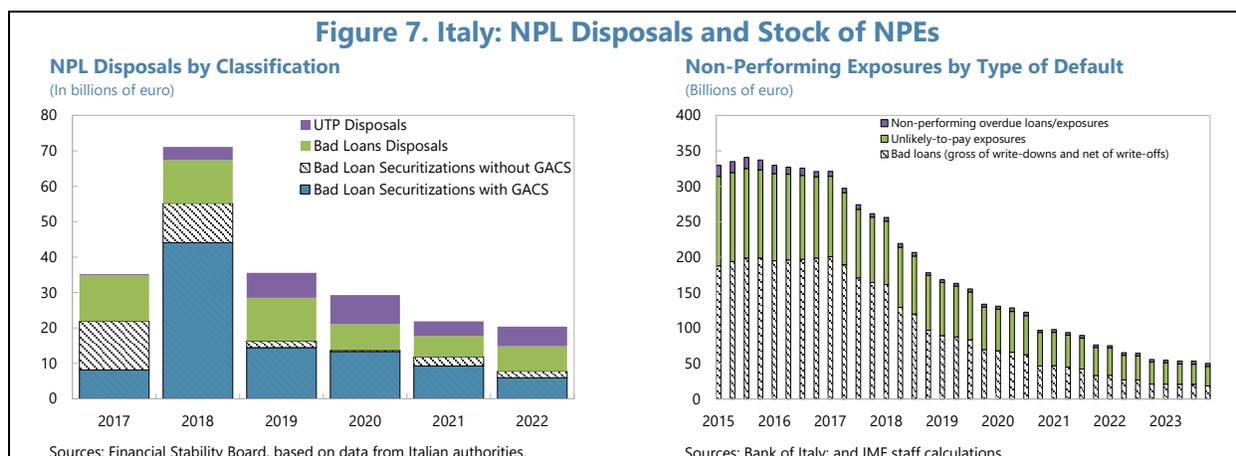


recognition of deteriorating loan quality was eventually reversed as financial sector policies at the EU and national levels were significantly strengthened. This included the introduction of calendar provisioning, tight limits on bailing out financial institutions with public resources, and—more recently—the introduction of a forward-looking system of loan classification. Supervision was also strengthened, including through the formation of the ECB's Single Supervisory Mechanism (SSM), which is responsible—jointly with the relevant national authorities—for the supervision of large euro area banks.

**10. De-risking of banks' balance sheets left them considerably more resilient.** Removal of NPLs occurred mainly through large sales in the secondary market, rather than through loan workouts by originating banks as most NPLs had already become bad loans. The GACS scheme for securitizing NPLs with a government guarantee on the upper credit tranche—which began in 2017—spurred the development of the secondary market. The peak year for disposals was 2018, with the GACS helping to remove around €44 billion of the total €70 billion of NPLs that were removed in

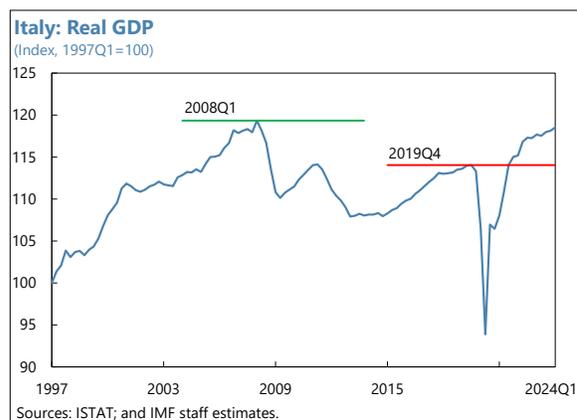
<sup>4</sup> Under the Allowance for Corporate Equity, equity is treated for corporate tax purposes the same as debt by allowing a notional interest deduction.

that year alone. In all, gross NPLs were reduced by €300 billion, with the gross NPL rate dropping from 16½ percent to 6¾ percent in 2019 (Figure 7), and the coverage ratio on remaining NPLs has risen. Significant consolidation of the banking sector also took place, including through the merger of credit cooperatives into two large banking groups. The common equity tier 1 (CET1) capital ratio increased from 7 percent in 2008 to 14 percent in 2019.



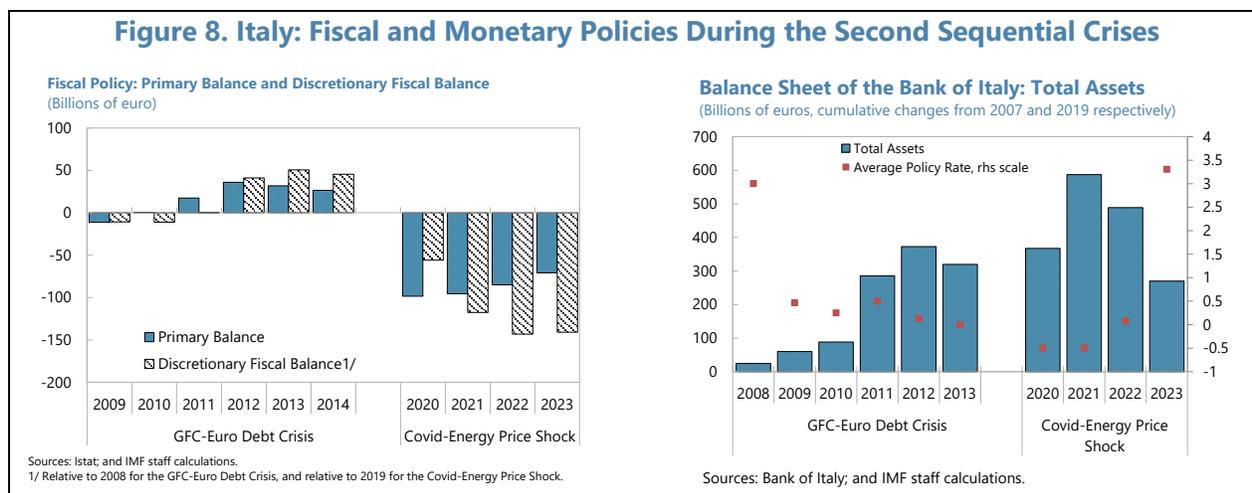
## B. The Pandemic and Energy Price Shock

**11. Output recovered swiftly from the recent sequential crises, in contrast to the protracted double-dip recession that followed previous back-to-back crises.** Real GDP fell in 2020 owing to pandemic shut-downs, social distancing and the global supply chain disruptions this created, but rebounded already from the following year as the constraints were relaxed. Despite the spike in energy prices in 2022 and subsequent very high inflation, real GDP continued to expand. With this strong recovery, real GDP marginally exceeded its pre-GFC level by early 2024.

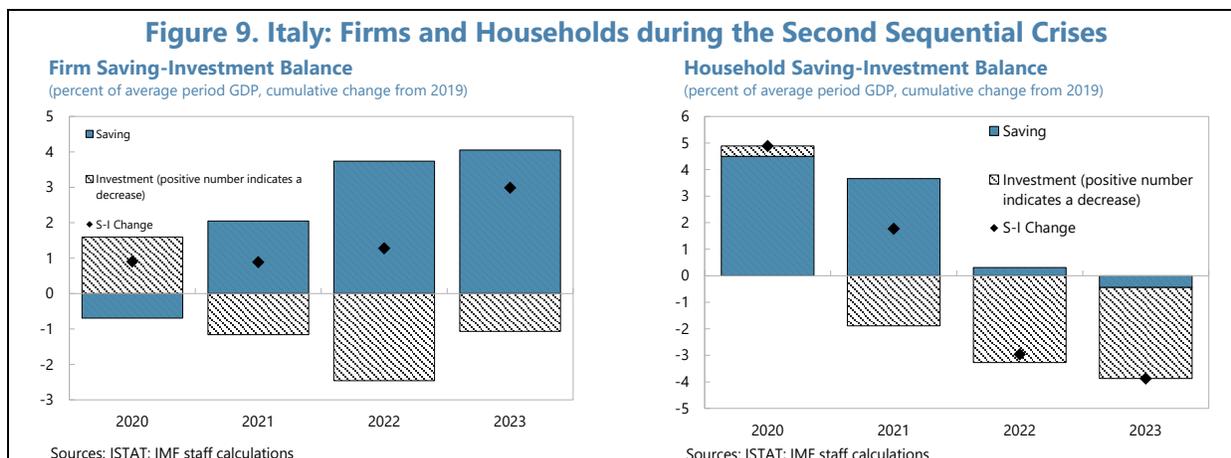


**12. Highly accommodative macro-financial policies contributed to the recovery, and despite their subsequent partial unwinding, the supportive effects continue.** Fiscal, monetary, and financial policies were loosened significantly in the face of the covid shock. In contrast to the previous sequential crisis, the discretionary fiscal response was very large and initially strongly countercyclical (Figure 8). Regarding monetary policy, the Bdl's balance sheet expanded further, peaking nearly €600 billion higher than pre-COVID in 2021 owing to new asset purchase programs (PEPP and TLTROs). In addition, liquidity support was provided to the nonfinancial sector through temporary loan moratoria and publicly guaranteed loans on generous terms. These measures were complemented with the NextGenerationEU fund for countries heavily affected by the pandemic crisis and the addition to the ECB's toolkit of the Transmission Protection Instrument (TPI) to counter

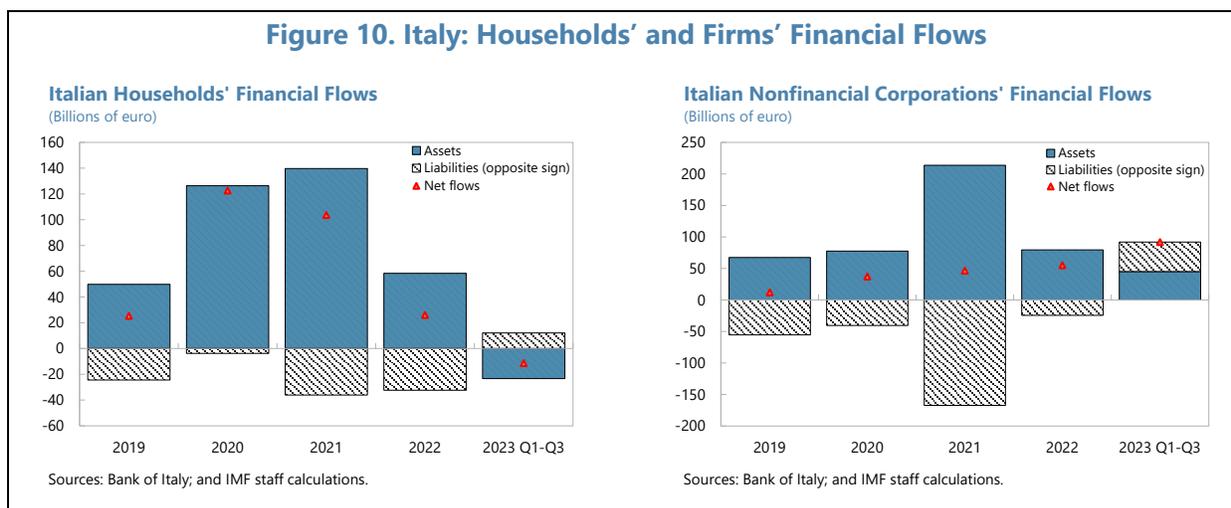
unwarranted, disorderly market dynamics. With inflation escalating after the energy price shock, monetary policy accommodation began to reverse gears in mid-2022, and the policy interest rate was raised to its highest level since the start of the euro by late-2023. In addition, the Bdl's balance sheet began to contract and by end-2023 half of the COVID-era expansion had been withdrawn. Nonetheless, the Bdl's balance sheet remained nearly €1 trillion larger than at the previous peak in 2012. With the economy recovering, ongoing large discretionary relaxation turned fiscal policy procyclical. Therefore, while some policies are being tightened, their supportive effects may still linger, and other policies remain expansionary.



**13. Firms and households benefitted from the extensive support measures.** At the onset of covid, firms adjusted mainly by curtailing investment. Thereafter, as fiscal policy remained expansionary and the recovery strengthened, corporate profits increased strongly, leading to a higher saving rate. An increase in investment—possibly related to inventory accumulated in response to the energy price shock and broader global supply chain disruptions—tempered the increase in net saving, which nonetheless rose by 3 percent of GDP relative to 2019 (Figure 9). This contrasts with the first sequential crisis, where the improvement in firms' net saving derived primarily from cutting investment. Also for households, the adjustment was very different than previously. Aided by pandemic-era fiscal transfers that boosted disposable income and mobility restrictions that limited consumption activity, households increased their saving rate very strongly during 2020-21. As activity restrictions were lifted, consumption increased at the expense of saving, which declined marginally below the pre-pandemic level in 2023. Investment by households increased strongly beginning in 2021, likely related to the generous Superbonus program, with the household net saving rate falling by 3 percent of GDP below the pre-covid rate.

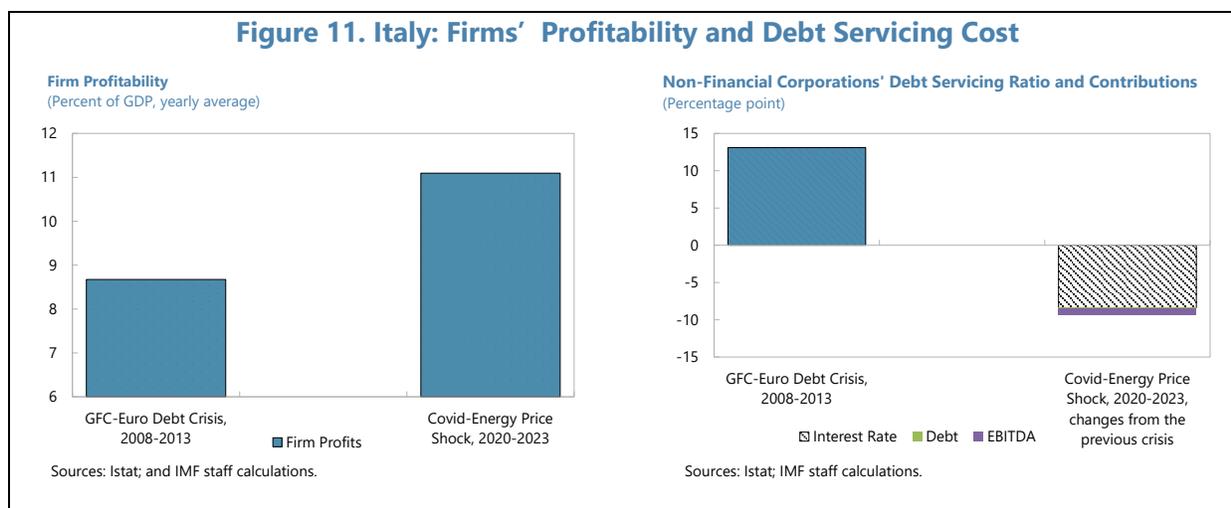


**14. The support measures also bolstered the financial positions of households and firms.** Generous fiscal transfers likely contributed to inflows into households’ financial assets during 2020-22, which saw a cumulative net increase of around 12 percent of GDP, significantly offsetting the modest outflow in 2023. Firms also saw large net financial inflows during 2020-23, but gross flows were also sizable (Figure 10). Specifically, in 2021 firms borrowed heavily under the covid-era guarantee scheme to build up their liquidity buffers. Following the rise in interest rates, in 2023 firms repaid part of their debt given the higher cost of maintaining cash reserves. These improvements in firms’ and households’ financial positions have helped keep new NPL formation at a low level.

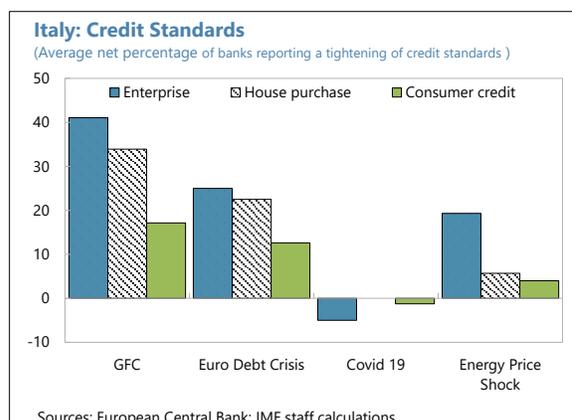


**15. Strong profits and past deleveraging boosted firms’ debt service capacity out of current earnings.** Firms have enjoyed high profitability due to strong pricing power, robust demand, and government support for firms’ labor costs. During the first sequential crisis, interest payments absorbed 13 percent of corporate earnings (before interest, taxes, depreciation and amortization; EBITDA) (Figure 11). During the current crises, this ratio has since fallen by 9 percentage points to 4 percent mainly on lower effective interest rates—even though the majority of bank credit to NFCs is at variable rates—in addition to higher operating surpluses and lower indebtedness.

**Figure 11. Italy: Firms’ Profitability and Debt Servicing Cost**



**16. The improved financial health of borrowers and banks contributed to less restrictive credit standards than during the previous sequential crises.** Borrowers’ improved balance sheets and liquidity buffers together with banks’ stronger capital positions likely contributed to the more-muted tightening of banks’ credit standards compared with the first sequential crisis. Based on the ECB’s Bank Lending Survey, credit standards have been less restrictive for all major types of credit, including credit to firms, mortgage loans, and consumer credit. Lending standards even loosened during COVID. Policies intended to encourage banks to lend (credit guarantees, TLTROs, PEPP) also likely contributed to banks' reduced risk aversion.



**17. Despite progress in strengthening corporate finances, a sizable share of firms remains vulnerable to shocks.** The 2024 ISTAT Report on Competitiveness of the Production Sectors categorizes firms into four groups, ranging from healthy to high-risk based on individual firms’ profitability, solvency, and liquidity.<sup>5</sup> They find a gradual improvement in the financial health of Italian companies since 2011, reflecting a steady increase in the share of healthy firms to more than 37 percent of the total in 2022, while the combined share of at-risk and highly at-risk firms had declined to 20 percent over the same period (Figure 12). However, the largest single share of firms—42 percent—remains in the fragile category. These are companies that are marginally profitable but have weaker solvency or liquidity profiles. An ISTAT simulation finds that up to 24 percent of the firms that in 2022 were in the healthy or fragile categories—amounting to 20 percent of all firms—were at risk of being downgraded to the bottom two categories in 2023 as a result of the increase in

<sup>5</sup> [Rapporto sulla competitività dei settori produttivi - Edizione 2024 \(istat.it\)](https://www.istat.it/it/files/2024/04/Rapporto_sulla_competitivita_dei_settori_produttivi_-_Edizione_2024).

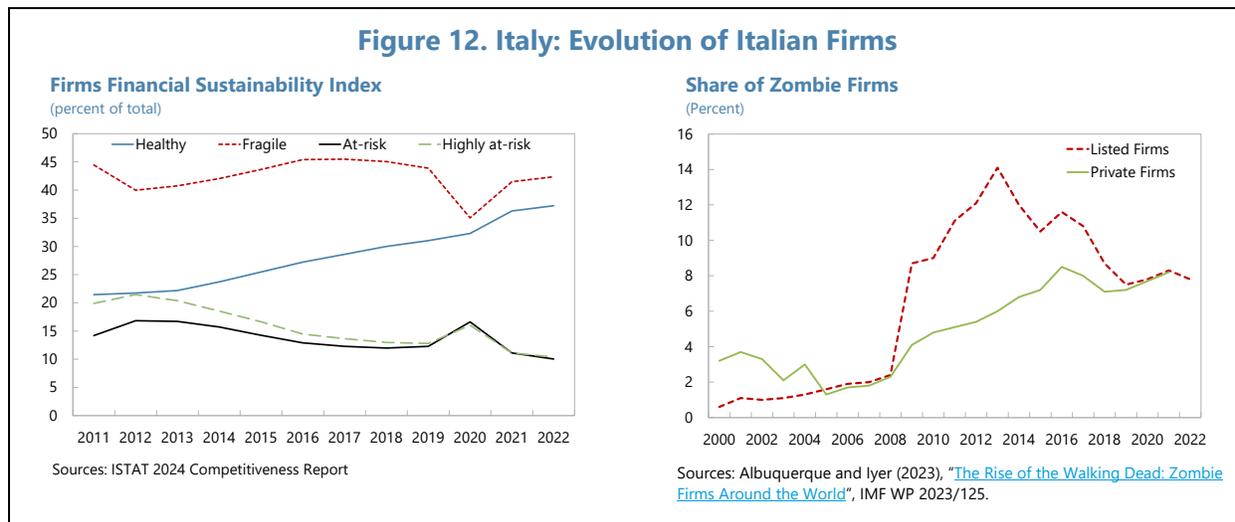
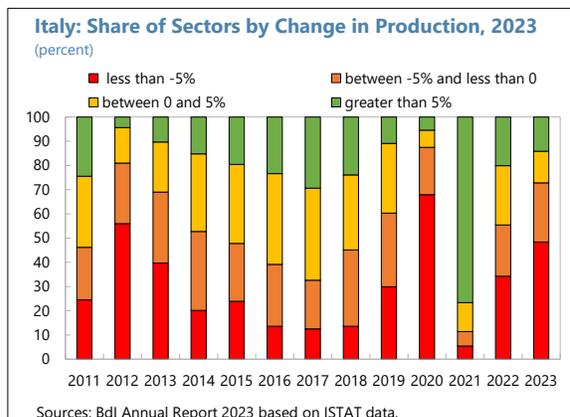
interest rates. This elevated downgrade risk under the scenario of unchanged profits reflects that the rise in interest rates absorbs a larger share of earnings. While this estimate does not account for the strong evolution of profits in 2023, and hence companies that could have been upgraded despite the increase in interest rates, it is nonetheless informative of how sensitive is firms' financial resilience to the level of interest rates. Recent IMF research finds that the share of zombie firms in Italy remains much higher than the pre-GFC level.<sup>6</sup>

### C. Conclusions

**18. The two sequential crises that Italy endured over the past 15 years evolved very differently, with a much better outcome to date from the recent crises.**

Banks, firms, and households came through the recent back-to-back crises in much better financial health owing to past deleveraging and the exit of weak firms, improved external competitiveness, as well as deployment of extensive countercyclical policies. Nonetheless, a sizable share of firms could face difficulties if policy interest rates were to remain elevated on a

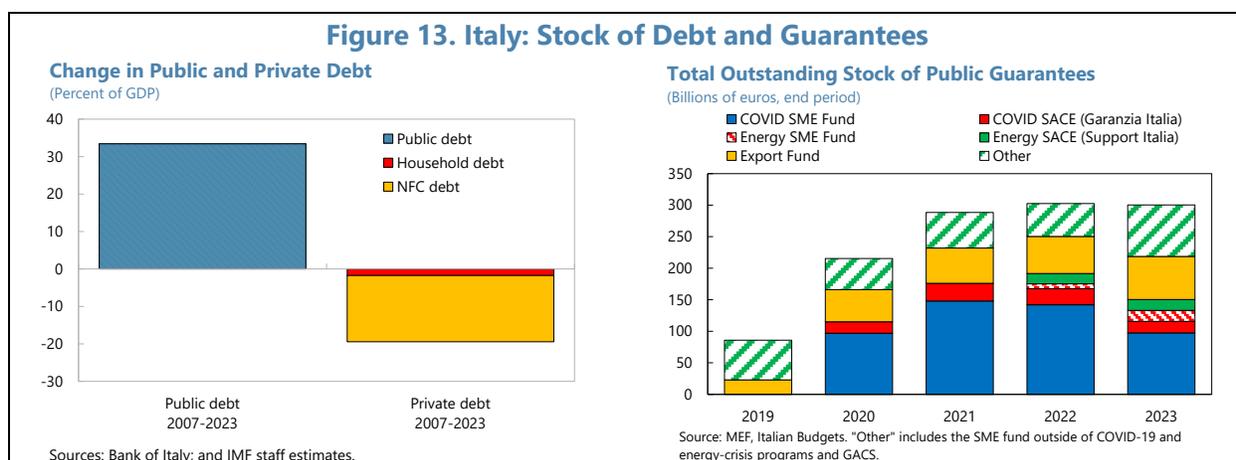
sustained basis. The unwinding of generous support measures could also reveal vulnerabilities with a delay as firms' and households' liquidity buffers are depleted and remaining guaranteed loans mature. Moreover, large structural changes are underway, with Italy facing critical transitions amid weak productivity, including achieving energy security and decarbonization, digitalization and population aging. These changes are apparent at the sectoral level. According to Bdl calculations



<sup>6</sup> Albuquerque and Iyer (2023) "The Rise of the Walking Dead: Zombie Firms Around the World", IMF Working Paper No. 2023/125. Zombie firms are those whose net operating income barely covers the cost of interest on debt.

based on ISTAT data,<sup>7</sup> production contracted by more than 5 percent in 2023 in nearly half of all industrial sectors (excluding construction)—a similar share as during the sovereign debt crisis in 2012 and during the pandemic in 2020. Successfully delivering these transitions requires dynamic and financially strong private and public sectors.

**19. De-leveraging and de-risking by the private sector have been accompanied by an even larger increase in public sector indebtedness.** While firms and households have strengthened their balance sheets since before the first sequential crises, there has been an even greater increase in debt of—and transfer of risk to—the public sector. The combined debt of firms and households has fallen by more than 19 percentage points of GDP from its pre-GFC level, while over the same period public debt has risen by almost double that amount (33 percent of GDP; Figure 13). In addition, the stock of public guarantees has increased significantly since the onset of the pandemic.<sup>8</sup> Continuing to reinforce the private sector at the expense of public finances is not sustainable.



<sup>7</sup> Bank of Italy (2024), [Annual Report, 2023](#).

<sup>8</sup> The default rate on COVID-era credit guarantees has risen but remains in the low single digits.

## References

- Albertazzi, U., Ropele, T., Sene, G., & Signoretti, F. M. (2014). The impact of the sovereign debt crisis on the activity of Italian banks. *Journal of Banking & Finance*, 46, 387-402.
- Albuquerque, B., & Iyer, R. (2023). The Rise of the Walking Dead: Zombie Firms Around the World. IMF Working Paper No. 2023/125.
- Bank of Italy, Annual Report, 2024.
- Famfollet, J., & Sankotová, E. (2020). Italian bank crisis: flexible application of BRRD rules, or a bailout in disguise? *Review of Economic Perspectives*, 20(2), 109-135.
- ISTAT, Annual Report, 2024. Available at: <https://www.istat.it/it/archivio/296796>
- ISTAT, Report on Competitiveness of the Production Sectors, 2024. Available at: <https://www.istat.it/it/archivio/295252>
- Neri, S. (2013). The impact of the sovereign debt crisis on bank lending rates in the euro area. Bank of Italy occasional paper, (170).
- Neri, S., & Ropele, T. (2015). The macroeconomic effects of the sovereign debt crisis in the euro area. Bank of Italy Temi di Discussione (Working Paper) No, 1007.