

# Independent Central Banks and the Interplay between Monetary and Fiscal Policy\*

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Monetary policy has fiscal implications that are especially pronounced at the zero lower bound. Independent central banks in advanced economies have considerable leeway to ease fiscal pressures faced by governments without compromising price stability. They also have the power to create unnecessary fiscal problems. A fiscal squeeze can serve as an incentive against a “misbehaving” government that appears reluctant to adopt the structural reforms that, in the central bank’s view, may be in the long-term interest of a country. Validating default fears and high risk premiums on government debt can be a potent tool to discourage what the central bank perceives as “moral hazard.” At times, independent central banks may be tempted to step outside their mandate and use their considerable discretionary authority to achieve what they perceive as better economic outcomes. How should this authority be used? Are the limits of democratic legitimacy respected? Comparing the recent policy records of the Bank of Japan and the European Central Bank suggests that independent central banks have not always managed to balance the inevitable tensions satisfactorily.

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## 1. Introduction

The challenging environment in which central banks have been operating since the global financial crisis has highlighted the inexorable

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links between monetary policy and fiscal policy. This is an opportune time to study the interplay of these policies. Given the rise of debt levels in most advanced economies and the intense episode of debt tensions in the euro area, it is critical to ask how central banks use their fiscal powers and delineate their proper role vis-à-vis the fiscal authorities of the economies they serve.

The contributions at this conference cover a lot a ground, looking at fiscal-monetary links from numerous angles. One insight of the Rigon and Zanetti (this issue) contribution is to examine the role of the central bank when the government's fiscal space is limited. A lesson is that the central bank should take into account the pertinent intricacies when formulating policy. Has this been taken on board by major central banks since the crisis erupted? A key lesson from the Kim and Kim (this issue) contribution is that figuring out the correct policy is more challenging when cooperation among fiscal authorities of different countries is necessary to deliver good outcomes. The desired cooperative equilibrium may be very different from the non-cooperative Nash outcome that is more likely to prevail in practice. In the euro area, where non-cooperative behavior by the governments of member states has been the norm, examining fiscal-monetary interactions sharpens the role of the central bank when fiscal and monetary interactions matter most. Have central bank actions promoted or hindered the process of desired cooperation?

Overall, have central banks used the fiscal power of their balance sheets effectively since the crisis erupted? Reflecting on the interplay between monetary and fiscal policy in the current context, answers to the questions prompted by the Rigon/Zanetti and Kim/Kim analysis are not uniformly flattering for central banks. To place the discussion in a broader context, I revisit the historical underpinnings of the fiscal role of central banks and the evolution of the mandate of independent central banks. Then, I briefly examine alternative ways to think about the relation of the central bank and the government (or, in the case of the euro area, the governments) that the central bank is meant to serve. Lastly, I highlight some of the practical manifestations of the tensions suggested by theory by looking at actual central bank experience in recent years. Studying the Bank of Japan and the European Central Bank, in particular, proves quite informative for highlighting the fiscal power

of the balance sheet and the economic consequences of alternative policies.

## 2. The Fiscal Role of Central Banks

At present, most central banks around the world enjoy some degree of independence, have a price stability mandate, and operate with the presumption that fiscal interactions are secondary to defending price stability over time. Fiscal interactions tend to be downplayed by independent central banks for good reason. Stressing the fiscal powers of central banks could become a political minefield, ripe for exploitation by unscrupulous politicians. When the level of political discourse is low, a frank and open discussion about fiscal matters could compromise the independence of the central bank. But the uneasy equilibrium we observe today has not been a constant feature of central banking history. In his historical overview of the role of central banks, Charles Goodhart (2010) reminds us that both the role of central banks and their relations with governments have been changing over time and could well change again.

To place the discussion in historical context, a brief comment on the current norms of independence and price stability is useful. First, central banks were not always independent institutions. Second, price stability has not always been at the center of central bank operations. To the contrary, ensuring the smooth financing of the state was perhaps the single most important early reason for the founding of central banks. There are numerous examples: The Bank of England was granted monopoly on note issuance in 1694 to provide financing to King William III. Napoleon Bonaparte founded Banque de France in 1800 to facilitate inexpensive financing for his government and war efforts. Banco de España was granted monopoly on the issuance of Spanish bank notes in 1874 to finance the government. Interestingly, while the Federal Reserve Board was founded in response to a financial crisis, its most important task during the first few years of its operations following its founding in 1913 was to facilitate the financing of World War I.<sup>1</sup>

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<sup>1</sup>The remarkable recent revelation regarding the Bank of England's involvement in ensuring the success of U.K. government bond issuance in 1914 suggests that the Bank of England served a similar role at that time (Anson et al.

Controlling the issuance and use of currency has long been recognized as a powerful tool that can be used to extract resources from the economy. As Stanley Fischer noted in commenting on the study by Goodhart mentioned above, “Almost every action the central bank undertakes has fiscal consequences” (Fischer 2010, p. 18). At the time, Fischer was the Governor of the Bank of Israel, which is notable because many central bankers would rather not emphasize the obvious fiscal dimensions of their decisions. The reason for this reluctance is understandable: Highlighting the tremendous fiscal consequences of what may at times be purely discretionary monetary policy decisions could raise questions as to whether it is appropriate for unelected central bank officials to yield such powers. In democratic societies, fiscal matters are recognized as the responsibility of elected governments. But the fiscal dimension should not be downplayed. In emergencies, such as war or financial crisis, the fiscal dimension may be the dominant consideration of central bank decisions. Outside emergencies, the fiscal dimension is more pronounced with balance sheet policies, such as have been utilized by many major central banks that found themselves constrained by the zero lower bound (ZLB) in recent years.

A tension arises from the simple fact that the power to issue money to facilitate government finance invites its abuse. On numerous historical episodes, the temptation to over-issue paper money ended in tears—high inflation and economic crisis. The modern consensus regarding central bank institutional arrangements can be understood as the result of such experiences. The solution was recognized as early as Ricardo (1824): To avoid abuse of the issuance of money, Ricardo suggested that this task should be entrusted to an independent central bank with the power and responsibility to defend price stability over time. Delegation of money issuance to an authority with a longer horizon than that of short-sighted politicians provides a solution to the dynamic inconsistency problem associated with the power to create more spending resources at the present, at the expense of higher inflation in the future.

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2017). The main difference is that while the Federal Reserve openly acknowledged its war-financing activities, the Bank of England hid its related operations from public view.

While price stability should be the primary goal of the central bank, it remains critical to acknowledge the immense fiscal powers of the central bank balance sheets. Without compromising price stability, central banks have considerable leeway in promoting better economic outcomes by properly internalizing the fiscal consequences of their actions. Independence with a price stability mandate was meant to offer the promise of price stability most of the time, with the ability to respond to unusual situations that may give rise to unusual fiscal strains, such as war and financial crisis. If central banks were to ignore the fiscal consequences of their actions, they would be shirking their responsibilities to the people and the governments they were created to serve.

### **3. The Boundaries of Power and Relations with Governments**

What is the role of central banks vis-à-vis the fiscal authorities of the governments/states they serve? In theoretical models, a common question is, what constitutes “optimal” monetary policy? The central bank is endowed with a social welfare function and asked to take the actions that achieve the optimum outcome, as if it is the supreme decision-making institution in the economy. This framework effectively assumes that the central bank is “the only game in town” and has the powers and disposition of a benevolent king (or dictator). Is treating the central bank in this manner the right way to think about its role in a democratic society?

In practice, economies have multiple policymakers with possibly conflicting objectives, and the central bank is certainly not the supreme decision-making institution. Central banks may be given a mandate, such as to maintain price stability, and discretionary powers meant to be used to achieve it. But the attainment of these goals may not always be “optimal” in the sense of maximizing social welfare.<sup>2</sup> This raises some tricky questions: Independent central banks are given discretionary powers to attain their goals but have

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<sup>2</sup>Davig and Gürkaynak (2015) present a model that explores the tensions for the central bank that arise in an economy with multiple inefficiencies and multiple policymaking authorities.

some leeway in interpreting their mandates and the boundaries of their discretionary authority. How should this residual discretionary power be used? Is it legitimate for independent central banks to use their power beyond their narrow mandates, aiming to advance what they believe is best for social welfare?

In democratic societies, situations may arise when other decisionmakers make decisions that may not be considered ideal by the central bank. For example, it may be broadly recognized by the central bank (and other analysts) that a particular set of structural reforms would raise productivity and social welfare in the long run. But these reforms may be unpopular and politically infeasible to implement by a democratically elected government. Should the central bank use its discretionary authority to discipline the “misbehaving” government? Should the central bank use its discretionary authority to create a fiscal squeeze for the government as an incentive for the government to adopt what the central bank believes are better policies? Should the central bank take steps to minimize “moral hazard” when, in the central bank’s judgment, this might be beneficial to the economy in the long run?

A common thread in the questions above is the democratic legitimacy and accountability of the central bank. A reasonable-sounding justification—to advance social welfare, in the view of “experts”—may serve as the rationale for expanding the scope and use of discretionary authority well beyond what it was meant to be used for. The intentions of people exercising the discretionary powers of the central bankers may be honorable. Is this enough?

As appointed technocrats, central bankers must be mindful not to overstep the boundaries of their legitimacy by overstepping their responsibilities and misusing their discretionary authority. In a democracy, it is improper for the central banks to deviate from their narrow goals by invoking “moral hazard” or the need to “discipline” the governments/states that they have been created to serve. Doing so would degrade democracy and defeat the purpose of central banks as independent institutions.

Examples from central bank practice in the era of “independence” raise questions about how universal the acceptance of limits of legitimacy of central bank actions may be. Since the crisis, observers have noted that central banks may have become too

powerful and unaccountable, pointing to the need to rethink constraining their powers.<sup>3</sup>

To focus on monetary-fiscal interactions in a high-debt environment, it is useful to look at government debt dynamics and fiscal sustainability. Recall the equation governing the evolution of debt dynamics for a government that finances its primary deficit through the issuance of nominal bonds in local currency:

$$\Delta b = (r - g)b_{-1} + d.$$

The equation above shows how the change of the debt-to-GDP ratio from one year to the next,  $\Delta b$ , depends on the previous year's debt-to-GDP ratio,  $b_{-1}$ , the primary-deficit-to-GDP ratio,  $d$ , the real interest rate,  $r$ , and the real growth rate,  $g$ . Fiscal troubles for any government typically start from the accumulation of primary deficits,  $d$ , over time. However, for a given level of debt, the key determinant of debt sustainability is the interest-rate-growth differential,  $r - g$ . Central bank policies have a crucial role in determining whether this differential is favorable or not, and considerable leeway is available to influence this differential without compromising price stability over time (Orphanides 2017a). Suppose, for example, that over a multi-year period central bank policies keep nominal growth much lower than it needs to be, e.g., by allowing persistent mild deflation in the economy. Or suppose that in the face of market tensions the central bank fails to take the actions that could ensure smooth continuation of debt refinancing operations, which would materially reduce the financing cost of the government without compromising price stability. Such central bank policies can create a debt problem for the government even if a problem could not be justified based on the underlying economic fundamentals of the economy and even if the government maintained a primary surplus.

Red flags should be raised whenever a central bank is tempted to make decisions meant to create incentives for the government to pursue "better" policies. Consider, for example, a situation where the

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<sup>3</sup>See Buitert (2014) and Goodfriend (2014) for related forceful expositions. To contain the risk of compromising their independence, Tucker (2017) urges central bankers to limit tendencies to become too powerful. A recent report by Transparency International EU (Braun 2017) presents a critical examination of the independence and accountability of the European Central Bank.

central bank favors structural reforms that, in the central bank's view, would raise long-run real growth in the economy and improve welfare. The central bank might argue that more expansionary monetary policy would be detrimental in the long run because it would impede structural reforms that the government should pursue. The central bank could even claim that, despite mild deflation, nominal growth would be higher and debt dynamics more favorable in the long run if the government had the incentive to adopt growth-friendly structural reforms.

However noble the intentions of policymakers may be, such behavior by the central bank is objectionable in democratic societies. The central bank could be wrong in its assessment of the ideal policy mix. But even if the central bank is right about what might be best, from a social welfare perspective, it lacks the democratic legitimacy necessary to justify attempts to impose its views on the fiscal authority.

Unfortunately, actual practice suggests that the boundaries of democratic legitimacy may not always be respected by independent central banks.

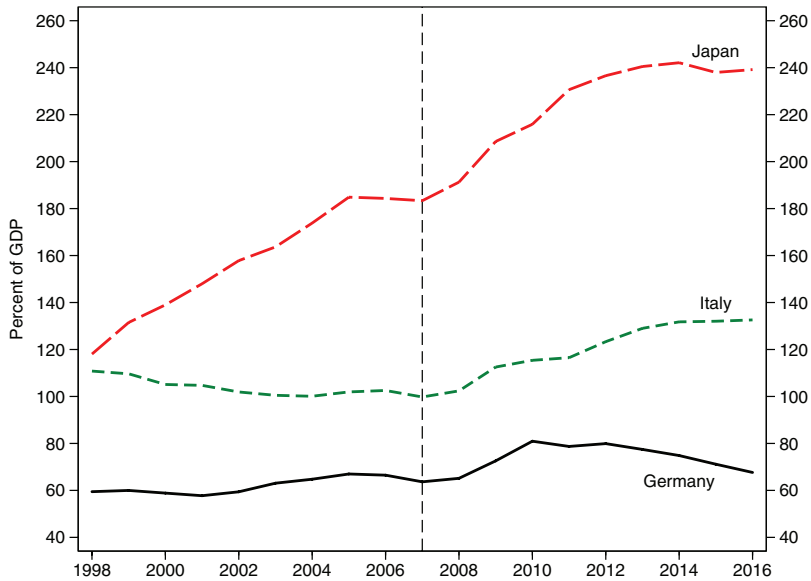
#### **4. Fiscal Stress in the Era of Central Bank Independence**

The Bank of Japan (BoJ) was founded in 1882 but was only granted operational independence in 1998. From that point on, and until 2013, the BoJ's monetary policy record left much to be desired. Following an economic downturn that pushed short-term interest rates to the zero lower bound at the turn of the century, the BoJ faced the unusual (at the time) situation of having to pursue balance sheet policies to provide additional monetary accommodation to the economy. The policy prescription under these circumstances is straightforward: Engage in decisive purchases of government debt to ease monetary conditions by reducing interest rates at longer than overnight maturities.<sup>4</sup> Had the BoJ pursued such policies, inflation would have risen, in line with price stability, nominal income growth

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<sup>4</sup>Numerous observers had urged the BoJ to adopt decisive expansionary policies at the time; see, e.g., Orphanides and Wieland (2000), Posen (2002), and references therein. Bernanke (2000) described the BoJ's predicament as a "case of self-induced paralysis."



**Figure 1. Government Debt**

**Note:** Gross government debt as a percent of GDP.

would have been higher, and the cost of refinancing government debt would have been lower. However, the BoJ decided instead to pursue relatively tight monetary policy and, even though it engaged in some balance sheet policies, it avoided decisive quantitative easing. Short-term nominal rates were zero, but by avoiding decisive QE the BoJ kept longer-term nominal rates higher than they could be and real interest rates higher than they needed to be. As a result of these policies, mild deflation persisted and Japan's debt ratio increased dramatically even before the financial crisis of 2008. Coupled with budget deficits, this raised persistent questions about debt sustainability. (Japan's debt ratio is shown in figure 1, together with those of Germany and Italy, which are discussed below.)

At the time, BoJ officials argued that their tight policies were appropriate because, in their view, the problem in the Japanese economy was structural and could only be solved if the government adopted the appropriate structural reforms. Easier monetary policy

was seen as a disincentive to such reforms.<sup>5</sup> Another consideration was concern that engaging in QE would imply enlarged risks on the central bank balance sheet. If the expansion of the balance sheet was overly successful in raising inflation, the BoJ might have to endure accounting losses on its holdings of government debt and possibly be left with negative capital. This was perceived as a risk for an independent central bank, arguing against taking the actions necessary to support the Japanese economy.

In effect, the independence of the central bank, coupled with the institution's reluctance to embrace the fiscal dimension of monetary policy decisions, contributed to the deterioration of the fiscal position of the Japanese government and substandard performance of the Japanese economy since the turn of the century. As will be discussed below, in 2013 the BoJ adopted a dramatic change in its policies for the better. But its policies at the turn of the century were more reminiscent of the tragic policy mishandling by the Federal Reserve during the Great Depression (Orphanides 2004).

Similar considerations have arisen regarding the overly tight monetary policy pursued by the European Central Bank (ECB) in the aftermath of the global financial crisis. The ECB started its operations in 1998 as the most independent and least accountable central bank ever created. During the first years of its operations the ECB appeared to be successful, despite the incomplete framework governing economic policy in the euro area. However, problems appeared after the global financial crisis that morphed into what became the euro-area crisis—an existential threat to the European project (Orphanides 2014). Faced with the zero lower bound after the global financial crisis, the ECB resisted adopting quantitative easing policies, very much along the lines of the BoJ a decade earlier. The ECB reluctantly started a version of quantitative easing in 2015. Interestingly, some of the arguments used against the monetary expansion that was needed in the euro area in the past few

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<sup>5</sup>Characteristically, according to the *Japan Times* (2001), “[BoJ Governor] Hayami reportedly ruled out the implementation of additional monetary-easing measures as the BOJ wants to see how economic structural reforms progress under the administration of Prime Minister Junichiro Koizumi.” The BoJ's view could be summed up with the following quote: “Further easing would not contribute to economic recovery, but would rather delay the progress of structural reform that is a prerequisite for sustainable economic growth” (Shirakawa 2001).

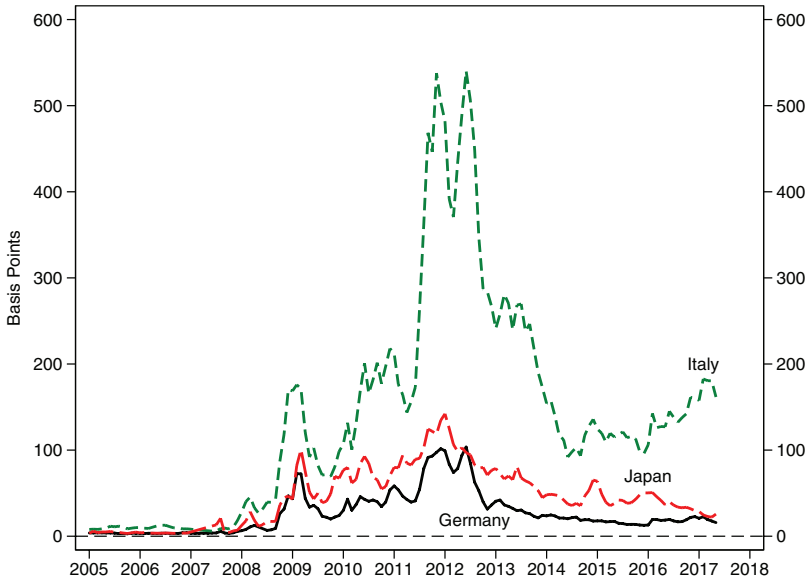
years echo the arguments made in Japan a decade earlier. Some arguments related to the reluctance to take risk on the balance sheet of the central bank. Other arguments related to providing the “proper” incentives to governments. For example, in December 2014, Carrel, O’Donnell, and Martin (2014) reported that a member of the ECB Governing Council argued against QE by noting: “Extremely low interest rates caused countries’ willingness to implement structural reforms to tail off.”

It should be stressed that the question is not whether structural reforms are good or bad for the economy. It may well be the case that, if successfully implemented, structural reforms would raise social welfare in the long run. The question is whether it is legitimate for the central bank to deviate from the policies required to meet its mandate and to adopt policies meant to encourage or force democratically elected governments to adopt structural reforms.

The mentality and ideas of central bankers and the application of their discretionary authority may become the driving factors in episodes of fiscal stress in advanced economies. A comparison of the ECB and BoJ in the last few years is illustrative. Figure 1 compares the debt ratios of Japan, Germany, and Italy. This shows the rapid rise of debt in Japan since the turn of the century, which has already been discussed, and puts in perspective the debt of Italy, a country that is currently experiencing some fiscal stress. Consider the sovereign default risk reflected in five-year credit default swap (CDS) spreads in figure 2. Recall that Germany and Italy share the ECB as their common central bank. From the figure, it is evident that Japan and Germany are currently seen as facing virtually no default risk, while Italy is seen as facing a substantial risk. Does this difference accurately reflect the underlying fiscal fundamentals, or is it driven primarily by the behavior of the central banks of these countries?

A comparison of their debt levels certainly does not support the perceived riskiness of Italy relative to Japan. One might wish to compare primary deficits, a more direct summary indicator of fiscal policy decisions. This is shown in figure 3. As can be seen, the fiscal data plainly do not suggest that the Italian government has been profligate relative to Japan. Japan has been the champion among the three countries both in having the highest debt and in having the largest and most persistent primary deficit in the past several years. In contrast, Italy has been running the largest primary surplus

**Figure 2. Credit Default Swap Spreads on Government Debt**

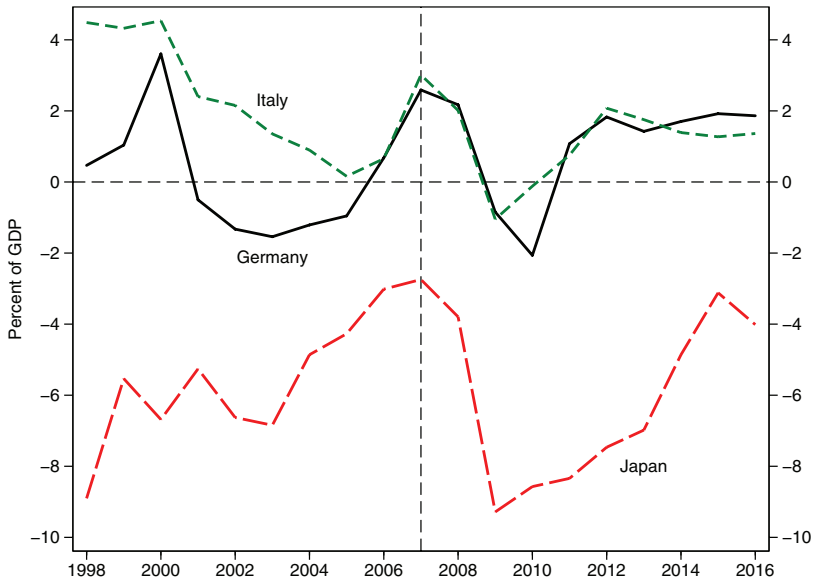


**Notes:** Monthly averages of daily data. Five-year horizon.

among the three countries, and consistently so, both before and since the crisis.

What then explains the difference? Could the main difference simply be in the behavior of their respective central banks? A dramatic policy change by the BoJ in 2013 has supported a notable improvement in the interest-rate-growth differential governing debt dynamics in Japan. To the contrary, since the euro crisis erupted, the ECB has adopted decisions that have unnecessarily worsened the interest-rate-growth differential in Italy, while improving the corresponding conditions in Germany.

What exactly can independent central banks do that can generate or allay fears of default of the government debt? Can the power of the balance sheet be so immense as to overturn the role of fiscal fundamentals in determining market perceptions of sovereign risk? A closer look into recent BoJ and ECB discretionary policies provides informative guidance to these questions.

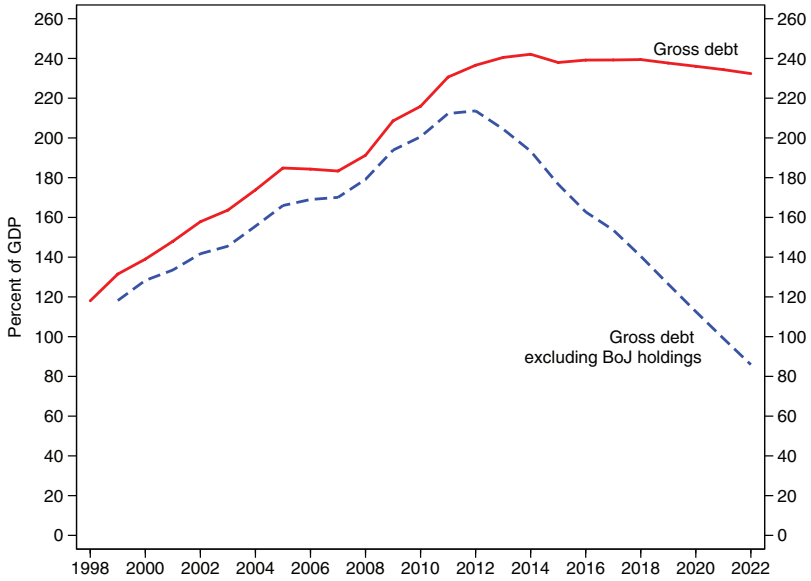
**Figure 3. Government Primary Balance**

**Notes:** General government primary lending/borrowing as a percent of GDP. Negative values denote a primary deficit.

## 5. The Bank of Japan since 2013

Since the appointment of Governor Kuroda in 2013, the BoJ has implemented a dramatic reorientation of its policies. In contrast to its earlier approach, since 2013 the BoJ has adopted decisive QE policies aiming to raise inflation in line with the BoJ price stability objective. This policy has had a critical stabilizing effect on Japanese debt dynamics. Without compromising price stability, the BoJ has boosted nominal growth and lowered the refinancing cost of the Japanese government.

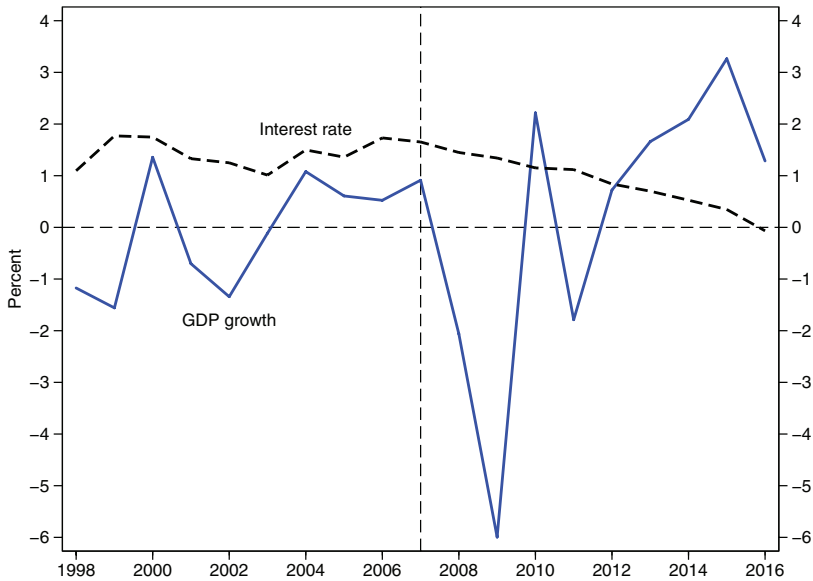
The BoJ proceeded in three steps. The original decisive QE program started in April 2013 and involved significant purchases of long-term government debt while short-term nominal rates were kept at zero. Although impressive, the original program proved less potent than contemplated. To its credit, the BoJ responded appropriately, showing its determination to achieve the desired increase in inflation.

**Figure 4. Japan's Debt and Bank of Japan's Holdings**

**Notes:** Gross debt ratio. Based on IMF projection, IMF WEO, April 2017. Actual BoJ holdings until June 2017, subsequently projected assuming annual purchases of 80 trillion yen.

In January 2016, the BoJ cut short-term interest rates to below zero and has since maintained negative short-term interest rates. Subsequently, in September 2016, the BoJ adopted a policy of maintaining very low longer-term interest rates as well. The BoJ has committed to keep ten-year government bond yields close to zero and shorter rates negative as long as needed and until inflation rises to be reliably in line with the BoJ's price stability goal.

To implement this policy, the BoJ has been purchasing significant quantities of government debt and has committed to continue to do so as long as needed. As a result, government debt not held by the central bank has been declining rapidly, contributing to the reduction of the perceived riskiness of government debt. A comparison of the overall level of debt with that not held by the central bank is shown in figure 4. The figure presents actual data until 2016 supplemented with a projection, under current policy, ending in

**Figure 5. The Snowball Effect: Japan**

2022.<sup>6</sup> Comparing the recent data and projection with the first decade of the century confirms the timidity of BoJ QE policy prior to 2013. Since then, it is noteworthy that even though the total-debt-to-GDP ratio has remained high, the ratio of debt not held by the central bank to GDP has declined notably and is projected to further decline rapidly in coming years.

By pursuing aggressive QE since 2013, the BoJ has effectively stabilized Japan's debt dynamics. This has been achieved mainly by restoring a favorable snowball effect—pushing nominal income growth to exceed the nominal yield on government debt (figure 5). On its own, the central bank cannot ensure fiscal stability forever while also preserving price stability. The long-term stability of Japanese debt dynamics demands an adjustment of the primary deficit by the government. Nonetheless, by focusing on its proper

<sup>6</sup>The comparison in the figure uses historical debt data and projections from the International Monetary Fund's World Economic Outlook, April 2017. The ratio excluding BoJ holdings uses actual data on BoJ holdings of government debt until June 2017 and a projection based on the assumption that the BoJ will continue its current pace of purchases until 2022.

objective and continuing its expansionary policy as long as needed to raise inflation to 2 percent, the BoJ is clearly easing the burden on the Japanese government, a salutary change relative to its policies before 2013.

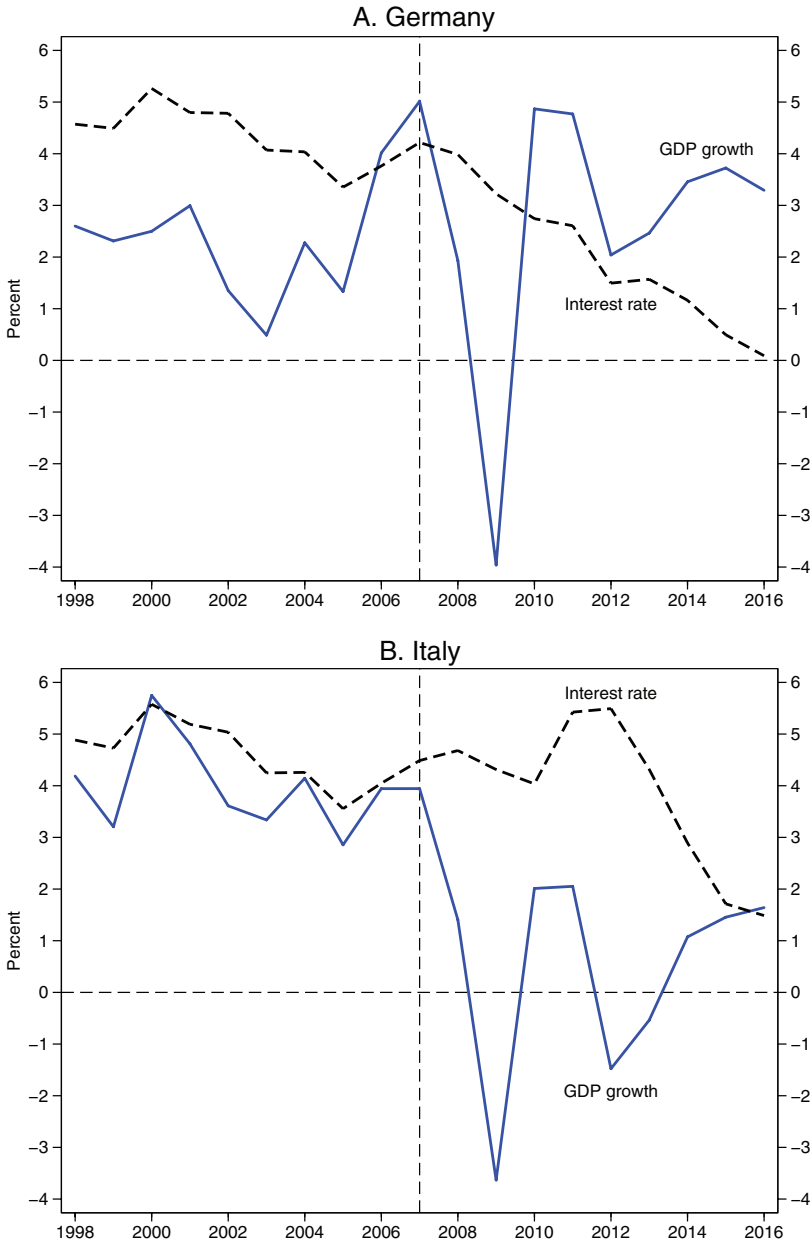
## 6. The European Central Bank

The ECB is not only the most independent central bank ever created, it is also the central bank facing the most complex and challenging political landscape. While the ECB is meant to serve the euro area as a whole, the euro area does not have a functioning overall government and, as a result, the ECB does not have a single fiscal counterpart. As has been demonstrated during the crisis, key political decisions are made by governments of member states in a non-cooperative manner. Each government focuses on its own interests, and some governments are more effective in promoting their narrow interests than others (Orphanides 2014). The result is an unusual situation where the fiscal implications of ECB discretionary decisions may at times involve indirect fiscal transfers from one member state to another. Overall, since the crisis erupted, discretionary monetary policy decisions appear to have contributed to a divergence in the welfare implications of monetary policy among states. The zero lower bound and the need to adopt balance sheet policies to ease monetary policy for the euro area as a whole have presented additional challenges which the ECB has not been able to tackle entirely successfully (Orphanides 2017c).

A comparison of Germany and Italy offers a summary of the significant divergence of the fiscal implications of monetary policy in the euro area. Figure 6 presents the interest-rate-growth differential for Germany (top panel) and Italy (bottom panel), comparable to figure 5 for Japan. As can be seen, while ECB policies have ensured a very favorable snowball effect for Germany, the same cannot be said for Italy. To be sure, not all the difference is due to monetary factors. For example, some of the difference in growth can be accounted for by trend productivity, which has been higher in Germany. However, even some of the non-monetary factors contributing to the difference between Italy and Germany, such as fiscal policy, as well as the relative weakness in aggregate demand, relate to discretionary ECB decisions.



**Figure 6. The Snowball Effect: Germany and Italy**



The ECB predicament has been indirectly acknowledged in speeches by ECB President Mario Draghi. Consider the December 2015 remarks quoted by Rigon and Zanetti (this issue). In those remarks, President Draghi suggested that more expansionary fiscal policy would have improved the effectiveness of monetary policy and resulted in better economic outcomes in the euro area:

It is clear that there are other economic policy instruments which could improve the effectiveness of monetary policy in closing the output gap. In the past, the limited space for the deployment of fiscal policy has increased the burden on monetary policy.

However, in earlier remarks, delivered in August 2014, President Draghi had effectively admitted that the ECB was in fact largely responsible for the conditions that constrained fiscal policy from being more expansionary:

Turning to fiscal policy, since 2010 the euro area has suffered from fiscal policy being less available and effective, especially compared with other large advanced economies. This is not so much a consequence of high initial debt ratios—public debt is in aggregate not higher in the euro area than in the U.S. or Japan. It reflects the fact that the central bank in those countries could act and has acted as a backstop for government funding. This is an important reason why markets spared their fiscal authorities the loss of confidence that constrained many euro area governments' market access.

By making discretionary decisions that unnecessarily raised the cost of funding for most euro-area governments, the ECB effectively constrained fiscal policy to be less expansionary than desirable, especially in member states where the expansion was needed most.

The ECB predicament can be traced to a sequence of discretionary decisions, some made well before the crisis, which compromised the safe asset status of government debt during the crisis (Orphanides 2017c). The question relates to the valuation of sovereign debt. Since government bond markets may be characterized by multiple expectational equilibriums, it is critical for the central bank

to use its powers to eliminate adverse self-fulfilling outcomes.<sup>7</sup> This requires the willingness of the central bank to maintain the collateral eligibility of government debt for monetary policy operations even in the presence of market fears of default. Government debt dynamics may be deemed unsustainable if evaluated with interest rates that include an unwarranted risk premium, while they are sustainable when evaluated at a “safe” rate, with identical fiscal fundamentals. A central bank serving as a backstop to governments with sound fundamentals can ensure that adverse equilibriums do not materialize. This is a function associated with proper central banks throughout central banking history. However, during the crisis, the ECB decided not to serve as a backstop to the government debt of all euro-area member states with sound fundamentals. With its discretionary policy decisions, the ECB effectively created an implicit subsidy on member states perceived to be relatively stronger (such as Germany) and an implicit tax on member states perceived to be relatively weaker (such as Italy).

One problem could be traced to 2005 when the ECB decided to explicitly link collateral eligibility of sovereign debt to a minimum credit rating threshold by private credit rating agencies. The ECB effectively decided that if private rating agencies downgraded a country like Italy below some threshold, then the ECB would no longer consider that country’s debt as eligible collateral for monetary policy operations, even if the country’s fiscal fundamentals were sound.<sup>8</sup>

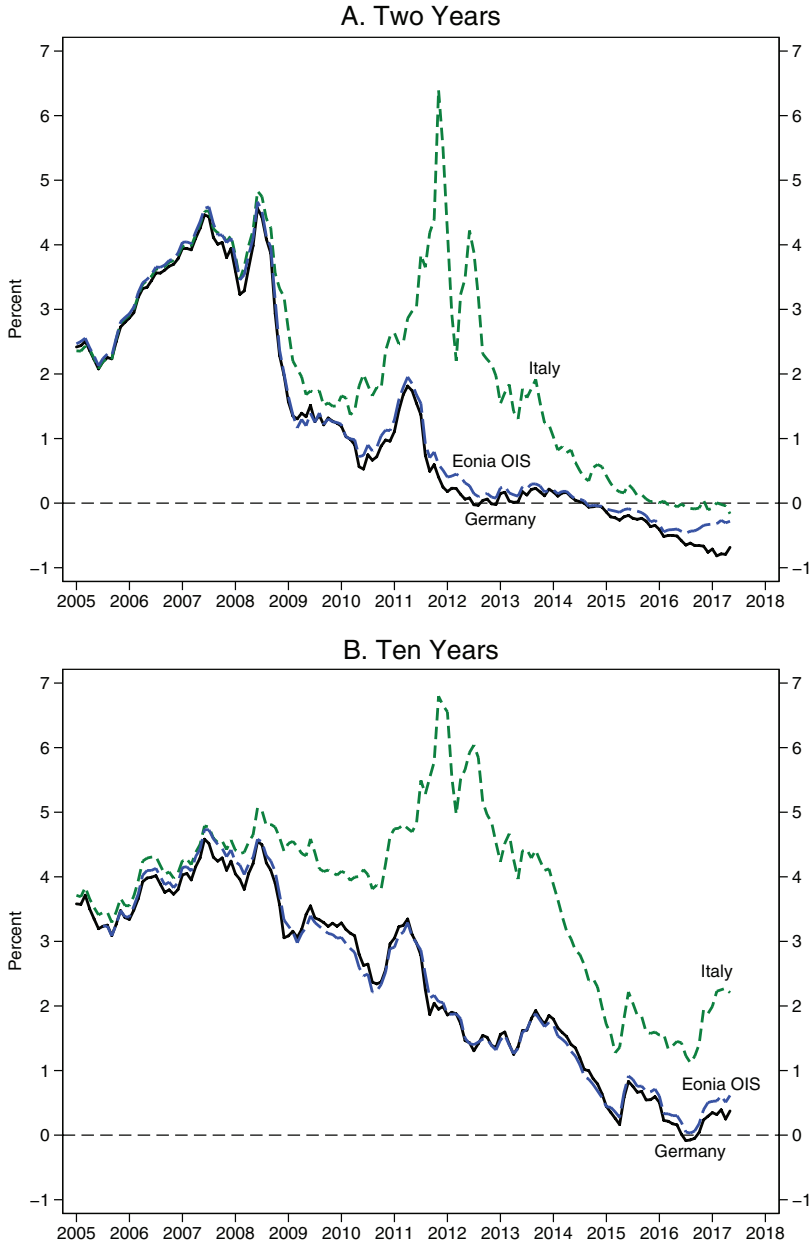
The decision to adopt rating-based thresholds for the eligibility of government debt created a “cliff” effect that proved highly destabilizing during the crisis. Fears of downgrades and potential default become self-fulfilling as investors project that the ECB may refuse to accept government debt as collateral, even for sovereigns with sound fundamentals. Since government bond markets are vulnerable to multiple equilibriums, it is critical for the central bank to eliminate adverse self-fulfilling outcomes. Instead, the reliance on credit ratings unintentionally guides markets to the adverse expectational equilibrium for weaker sovereigns in the euro area. During the crisis,

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<sup>7</sup>See, e.g., Calvo (1988), De Grauwe (2011), and Corsetti and Dedola (2016).

<sup>8</sup>See Orphanides (2017b) for background analysis relating this issue to flaws in the design of euro-area governance.

Figure 7. Government Yields vs. OIS Rates



this dynamic led to a shift in relative demands for euro-denominated government debt away from “weak” governments to “strong” governments, inducing an indirect fiscal transfer in the form of a risk premium for “weak” sovereigns and a safe-haven subsidy for “strong” sovereigns.

The consequences for the relative cost of financing of government debt between Germany and Italy can be seen by comparing euro-denominated government bond yields to comparable maturity euro overnight index swap (OIS) rates. Figure 7 shows the corresponding data for the two- and ten-year maturities. As can be seen, since the crisis erupted, Italy has been taxed with a significant premium over OIS, while Germany enjoys a safe-haven premium.

Using its discretionary authority to restrict the collateral eligibility of government debt in this manner offers the ECB a potent device to discipline governments. Does the ECB consider it within its mandate to yield this power as a means to compel governments to adopt the structural reforms it deems appropriate? Could “moral hazard” be the justification for the pertinent discretionary decisions? This would be consistent with the use of “moral hazard” as the main justification for other ECB discretionary decisions, such as the deviation from the norm of profit/loss sharing in implementing QE (Orphanides 2017c).

## 7. Concluding Remarks

How should independent central banks use their fiscal powers?

During challenging times, independent central banks in advanced economies have considerable leeway to ease fiscal pressures without compromising price stability. During periods of financial stress, central bank discretionary actions and/or inaction may also create unnecessary fiscal problems for governments with sound fundamentals. Monetary policy always has fiscal implications, and at the zero lower bound in particular, monetary policy is also effectively fiscal policy.

A fiscal squeeze created by the central bank can serve as an incentive against a “misbehaving” government that appears reluctant to adopt the structural reforms that, in the central bank’s view, may be in the long-term interest of a country. Pursuing tight policies, even when these are projected to deliver inflation too low and inconsistent

with the central bank's primary mandate to defend price stability, could have similar incentive effects.

Encouraging or tolerating high risk premiums on government debt, reflecting unnecessary default fears, can be a potent tool that an independent central bank might use to discourage what the central bank perceives as "moral hazard."

Independent central banks have considerable discretionary authority and at times may be tempted to step outside their mandate to achieve what they perceive as "better" outcomes. How should this authority be used in challenging times? Are the limits of democratic legitimacy respected?

In the aftermath of the global financial crisis, have independent central banks managed to balance the inevitable tensions satisfactorily?

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