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COVID-19 debt relief in the EU

Leonardo Becchetti*, Pasquale Scaramozzino**

Abstract

The COVID-19 pandemic has been a global shock with dramatic consequences on debts of the governments which were called to alleviate the economic and social impact of the crisis on firms and households. We explore conditions for the feasibility of (COVID-19 generated) government debt relief concerning bonds held by the ECB, which can be justified by the exogenous characteristics of the shock. We outline several technically and economically feasible ways (involving debt “freezing”, debt rescheduling or outright debt cancellation) for achieving this goal and discuss their consequences on moral hazard and on the European Central Bank balance sheets. We also examine their potential impact on ECB’s independence, reputation and, ultimately, on inflation and exchange rates. We further discuss the distributive concerns which arise for a CB operating in a Union with several sovereign member states as in the Eurozone.

Keywords: debt relief, COVID-19, European Central Bank

Abstract

La pandemia di COVID-19 è stata uno shock globale con conseguenze drammatiche sui debiti dei governi chiamati ad alleviare l'impatto economico e sociale della crisi su imprese e famiglie. Esploriamo le condizioni per la fattibilità di un alleggerimento del debito pubblico (generato dal COVID-19) relativo alle obbligazioni detenute dalla BCE, che può essere giustificato dalle caratteristiche esogene dello shock. Descriviamo diversi modi tecnicamente ed economicamente fattibili (che comportano il "congelamento" del debito, la rinegoziazione del debito o la cancellazione totale del debito) per raggiungere questo obiettivo e discutiamo le loro conseguenze sull'azzardo morale e sui bilanci della Banca centrale europea. Esaminiamo anche il loro potenziale impatto sull'indipendenza, sulla reputazione della BCE e, in definitiva, sull'inflazione e sui tassi di cambio. Discutiamo ulteriormente le preoccupazioni distributive che sorgono per una BC operante in un'Unione con diversi Stati membri sovrani come nell'Eurozona.

Parole chiave: riduzione del debito, COVID-19, Banca Centrale Europea

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1. Introduction

The COVID-19 pandemic is an ongoing global shock that caused over 235 million confirmed cases and about 4.8 million deaths worldwide as of 5 October 2021. The slowdown of economic activities induced by the restrictions which were put in place to reduce the spread of contagion had dramatic effects on employment, economic growth, and global financial conditions. Central Banks (CBs) and governments implemented a wide range of measures to alleviate their consequences on households and on the productive sector. The effects of these on deficits and on the stocks of debt have been huge. According to preliminary estimates, the pandemic has caused an increase between 15 and 30 percentage points of the debt/GDP ratio at EU level for different member countries (Wyplosz, 2020). The Institute of International Finance estimates that the aggregate public and private debt has grown during the pandemic from 320% to 365% of global GDP in the first nine months of 2020, around 63% of this new debt having been purchased on the market by CBs.

The extraordinary events we are experiencing, and the exogenous and symmetric nature of the shock affecting government debt, justify on ethical grounds that this debt (and specifically the sovereign debt in the hands of CBs) should be frozen, rescheduled or even cancelled outright. In this paper we examine whether COVID-19 debt relief is technically and economically feasible and/or politically viable.

The debt relief literature shows that episodes of debt restructuring eventually leading to debt cancellation are not so infrequent. Reinhart and Trebesch (2016) analyse 48 episodes which occurred over two different periods in the 20th century, and which involved two separate groups of countries: i) high income countries during the interwar period, and ii) developing countries in the post- World War II period. Countries that benefited from some forms of debt relief during the 1920s and the 1930s included Austria, Belgium, France, Germany, Greece, Hungary, Italy, New Zealand, Portugal, and Romania. The United Kingdom itself agreed to restructure its war debt with the United States in 1923, and in 1934 it notified the US of its decision to defer war payments. On average debt reliefs after World War I were substantial, amounting to about 21% of GDP in the 1930s.

By using difference-in-differences approaches and controlling for endogeneity, Reinhart and Trebesch show that debt relief generated positive effects on economic activity, debt service, and even the financial ratings of the countries involved, the effects being stronger and more significant in cases of debt cancellation *vis à vis* softer forms of debt relief. In a similar vein Forni *et al.* (2016) show that debt restructurings with external private creditors during the period 1970-2010 have been associated with an enhanced growth performance.

From a theoretical point of view, the effects of forgiving sovereign debt have been widely discussed in the literature. Krugman (1988) argued that debt forgiveness can be preferable to debt financing because a large public debt distorts economic incentives in the debtor country by increasing the “tax on success” of producers and weakening their production incentives, whilst the benefits from a positive economic performance are mostly appropriated by the creditors. Krugman argues that debt cancellation should be made contingent on states of nature that the country cannot affect: the current pandemic squarely falls into this category. Hatchondo *et al.* (2014) further demonstrate that, under some conditions, debt reduction could improve country risk rating and could be *ex post* Pareto efficient.

Empirically, Broner *et al.* (2014) find that the increases in public debt in the aftermath of the 2007 financial crisis led to a reallocation of credit away from the private sector and towards the public sector, with consequent reduction in private investment and negative effects on growth. Lo and Rogoff (2015) confirm that public and external debt overhang was an important reason for the sluggish economic growth experienced after the financial crisis.

The above-mentioned theoretical and empirical studies show that debt overhang has been a common characteristic of many periods of economic history for several countries. The present experience is however different. In all of the debt relief episodes of the last century analysed by Reinhart and Trebesch (2016) and the rest of the literature, the creditor was a sovereign country; by contrast, in our case the government debt whose relief we are dealing with is held by Central banks.

Proposals of central bank intervention in sovereign debt restructuring have been put forward in the recent past. Pâris and Wyplosz (2014) set out the

PADRE (Politically Acceptable Debt Restructuring in the Eurozone) plan, where government debt of EU members in excess of the 60% debt/GDP threshold is purchased and converted into non-redeemable zero-interest perpetual debt. The authors are aware that the operation would create a negative net asset position in the ECB balance sheet, but argue that this position would be progressively covered by seigniorage revenues accruing to each member country. In order to make the proposal “politically acceptable”, each country would pay its excess debt converted into ECB irredeemable perpetual bonds with its seigniorage revenues, thereby avoiding redistributive effects across EU members.

In this paper we argue that there are at least seven ways in which relief of the government debt created by EU member states and held by the ECB during the COVID-19 pandemic is economically feasible.

1. The first strategy consists of transforming from voluntary and reversible to irreversible the present choice by the ECB of rolling over a target share of EU government bonds plus returning interest payments to issuing countries. In this way, the commitment to roll over and the reversal of interest payments would correspond to a debt cancellation and the portion of debt involved in the operation could be written off the debt/GDP ratios.
2. The second strategy is conversion of outstanding bonds held by the ECB into irredeemable zero-interest bonds. According to this second strategy, ECB current government bond holdings can be considered as the first step of the PADRE plan, and what needs to be done to complete the operation is the second step of transforming them into irredeemable bonds at zero interest rates. The only difference would be the amount of debt transformed (which would be lower than under the more ambitious PADRE plan, which involved all debt in excess of the 60% debt/GDP ratio).
3. The third strategy is an outright write-off of a given portion of public bonds held by the ECB, a decision that would have the consequence of creating a net negative asset position in the ECB balance sheet.

4. The fourth strategy is the issue of perpetual bonds from member countries by the amount corresponding to the debt created during the pandemic, coupled with a commitment by the ECB to buy them on the secondary market and hold them to maturity. In this way the newly issued perpetual bonds would become part of the ECB quantitative easing programme.
5. The fifth strategy is the combination of outright cancellation of part of the debt (strategy (3)) together with the ECB commitment to a progressive reintegration of the stock of government bonds over time in its balance sheet until the current share of debt held by the ECB is again reached. In this sense the ECB decision would produce a double positive effect on EU member states government debt service, by reducing twice the share of debt-to-GDP held by non-ECB investors. The double move would eventually shift the problem from the ECB asset/liability side to the profit/loss dimension.
6. The sixth strategy is a commitment progressively to increase the stock of member states government bonds, through sticking to a voluntary and revocable policy of rolling over the debt and returning interest payments to bond issuers.
7. A seventh strategy was set forth by Micossi (2020) and prescribes that the government debt held by the ECB should be purchased by the European Stability Mechanism (ESM) using its own capital as collateral and that the operation be financed with ESM bond issues.

In our paper we analyse the potential effects of each one of these different debt relief choices on moral hazard, ECB balance sheet, Central Bank independence and reputation, and its implications for inflation and the exchange rate: Table 1 summarizes the proposals and our discussion. We conclude that, given the commonalities among the main CBs, debt relief could also be the outcome of a coordinated choice among them which would reduce the potentially negative side effects of the decision of a single CB move on its reputation and on the exchange rate.

The structure of this paper is as follows. Section 2 illustrates the effects of the seven measures on the balance sheet of the ECB. Section 3 examines the

potential moral hazard issues associated with debt relief. The possible effects of the proposed measures on inflation are considered in Section 4. Section 5 further analyses the effects of the measures on ECB accounts in the light of recent developments of the latter. The importance of maintaining ECB independence is discussed in Section 6. Section 7 considers some possible distributional consequences of the proposed measures and Section 8 presents an informal stress test of the various options. Section 9 discusses the political feasibility of the proposals. Section 10 concludes.

2. Effects of the seven measures on the ECB balance sheet and their legal consequences

EU GDP amounted to 18.8 trillion in 2019; the EU debt generated by the COVID-19 pandemic can be conventionally estimated between 15 and 30% across the different member countries (Wyplosz, 2020). The ECB balance sheet has on the asset side 2.87 trillion of EU member long term bonds and 0.6 trillion for REPO and short-term monetary policy. The 2.87 trillion stock of EU member government bonds was progressively created during the last years through quantitative easing. It was zero at the start of the ECB, when the euro was formally introduced on January the 1st 1999. On the liability side, the two main items are 1.2 trillion banknotes and 1.8 trillion bank reserves. ECB profits in 2019 rose from to 2.36 from 1.57 billion euros due to an increase in net interest income and profits from financial operations.

The first scenario (freezing of the current situation with transformation from voluntary to perpetual irrevocable commitment to roll over and return the interest payments) would freeze the current profits and losses position of the ECB. The same would occur under the second hypothesis (conversion of outstanding long-term bonds into irredeemable bonds yielding zero interest rates), because the ECB does not earn from interest rates on its long-term bond assets. Under these first two hypotheses the concerns about ECB balance sheet effects and reputation would be minimized.

The third hypothetical scenario (debt write-off) would create a loss on ECB assets compensated by the present value of current and future expected seigniorage revenues (as in the Pâris and Wyplosz 2014 PADRE proposal).

The effects of such a loss on the euro exchange rates and on ECB reputation need to be taken into account. The ECB can accompany this measure by a change in its seigniorage policy which would take the form of reducing the share of seigniorage paid to sovereign countries. Sovereign countries would thus partially participate in the cost of the intervention and their benefits will be reduced. Alternatively, the ECB could maintain its actual seigniorage policy thereby not reducing the time needed to cover the loss on its balance sheet. It could be argued that this third approach to debt relief could weaken the ECB ability to implement anti-inflationary policies. However (as we discuss in detail in sections 4 and 6 below) given the amount of government bonds on the ECB asset side and, given the wide range of instruments at its disposal to conduct monetary policy, the ECB will maintain intact its capacity to counter inflationary pressures.

According to the fourth hypothesis, EU member states would issue perpetual bonds up to the amount corresponding to the defined target COVID-19 debt/GDP ratio, and the ECB would voluntarily choose to include them into its Pandemic Emergency Purchase Programme (PEPP) strategy. This hypothesis, differently from the previous ones, implies a further monetary expansion and therefore its use should be assessed with caution.

The fifth hypothesis combines debt relief with monetary expansion through the additional purchase of government bonds. Over time the overall effect on the asset/liability side would be nil since the write-off would be progressively offset by the purchase of the new bonds.

The sixth hypothesis is just an incremental variation of the current voluntary and revocable policy that would correspond to a monetary expansion but nonetheless would correspond to an increase in the ECB commitment to cope with the problem of COVID-19 government debt.

The seventh hypothesis consists of transferring sovereign bonds purchased by the ECB to the European Stability Mechanism (ESM), which could roll over these securities thereby making them equivalent to irredeemable bonds (Micossi, 2020). The purchase of bonds would be funded by securities issued by the ESM. These securities would be guaranteed by the ESM's own capital and by the existing member states.

The feasibility of the seven proposals should also be evaluated in legal terms. None of the seven proposals discussed above would violate art. 123 of the Lisbon Treaty in the sense that none of the proposals recommends the purchase of EU member government bonds on the primary market (even though some doubts could be raised for the fourth hypothesis). A related legal issue is whether the proposals could breach the principle of separation between monetary and fiscal policy, and whether such a breach would represent by itself a violation of EU treaties. What we would argue is that the PEPP is intended to counter the risk of monetary transmission mechanism but is *de facto* helping governments to maintain low interest rates on government bonds. As such, it is an explicit help to their fiscal policies. It is however a temporary program, while our proposals are meant to have permanent effects on the portion of debt held by the ECB.

3. The moral hazard problem

One of the main critiques to a debt relief proposal is that it may foster moral hazard. A lack of fiscal discipline could offset the effects of debt cancellation. Two forms of moral hazard are possible: *interim* and *ex post*. In the interim, the discussion of the possibility of debt relief before the end of the pandemic could lead EU member countries to increase their deficits, in the expectation that the additional debt would be cancelled. *Ex post*, a successful episode of debt relief could generate expectations of possible debt cancellations in the future, thereby undermining an *ex ante* incentive to maintain fiscal discipline.

Easterly (2002) forcefully pointed out the risk that debt relief could be used to fund unproductive activities or even patronage. Under some circumstances, there could even be an incentive for lenders to keep lending to indebted countries, thus creating the conditions for further high indebtedness. Benjamin and Wright (2008) and Pitchford and Wright (2012) demonstrate that the inability of sovereign borrowers and lenders to commit could lead to protracted debt renegotiations and losses to both parties.

Moral hazard problems, and the potential build-up of further debt, can be solved by imposing enforceable and credible conditionality rules. The Next Generation EU is itself an example where an increase in EU resources for

public investment is accompanied by rules that block the supply of subsequent tranches if the intermediate project goals are not achieved. Protracted renegotiations can be avoided by timely and unilateral actions by the ECB and by EU institutions which would not require lengthy deliberations, and which could be promptly communicated and implemented.

Interim moral hazard can be avoided by careful monitoring of the public finances of the member states during the crisis. *Ex post* moral hazard problems can be ruled out by credibility of ECB stance and by the very extraordinary nature of the current pandemic. If COVID-19 debt cancellation/relief is declared and accepted as being a unique decision linked to a unique event, the expectations of future debt cancellation should be under control.

Moral hazard issues could also be addressed if the ECB could announce and commit that it will condition its debt relief policies to a commitment from Treasuries on how the resources released by debt relief would be used along the lines of the Next Generation EU. This would not violate the separation principle stating that the ECB can only purchase government bonds on the secondary market (a direct purchase from the Treasuries would constitute a violation of art. 123 of the Lisbon Treaty).

It is also important that the measures that are implemented are perceived as decisive, in order to rule out the possibility that further future debt relief may become necessary in the future. The restructuring or cancellation of debt should therefore be of an order of magnitude sufficient to exclude additional interventions.

Moral hazard issues could be further reduced by a coordinated action by the main central banks, including not just the ECB but also possibly the Federal Reserve and the Bank of Japan. This would lend credibility to the debt relief operation, make it more extraordinary thereby reducing the expectation that such an intervention could be repeated in the future.

The moral hazard is a serious problem, but it can be tackled by proper credible announcement and action on conditionality rules.

4. Inflation and inflation forecasts: the “porcupine curse”

The main Central Bank default risk is to be unable to tackle a sudden inflationary pressure. From the opposite perspective the power of CBs grows when inflation risk gets lower. We argue in this section that structural factors create a deflationary scenario which can be exploited by the ECB. In the old pre-globalisation system and before the internet era, the pace of innovation was slower and labour unions had strong bargaining power over wages since corporations had no outside option of delocalisation. Hence higher money supply easily translated into higher prices in non-competitive markets, where price setters could increase their profits by rising prices and unions had higher probability of success in their wage claims. In the current global competition system and after the web revolution the circulation of knowledge has accelerated sharply, and companies can more easily choose the production location that minimises their labour, environmental and tax costs in order to maximise their profits.

The production cost race-to-the-bottom dominates the current era, forcing national and regional institutions to a Bertrand competition which could eventually lead to an equilibrium of “nations without wealth and wealth without nations”. Competition on quality and non-delocalizable competitive factors can obviously counteract this pressure which however remains fierce. As a consequence, we now have two relevant factors of deflationary pressure: technological innovation which reduces production costs, and the erosion of the bargaining power of workers under both the delocalisation threat and the pressure of competitors producing in other areas of the world where wages are lower.

The stylised facts of this new era are consequently a stronger pace of innovation, increasing skill wage differentials (Dögüs, 2019) and within-country inequalities (workers bargaining power depend on their skills and not on trade unions and those who are at the bottom of the talent ladder suffer more in this competitive race), a declining labour share (Karabarbounis and Neiman, 2014), and deflationary pressures that lead to repeated upward biased inflation forecasts (the well-known porcupine effect) if forecasters continue to model expectations under the old pre globalisation approach. Ciccarelli and Osbat

(2017) show that inflation has indeed been systematically below forecasts in the last years, with the bias falling when the time distance with inflation release date got closer.

A further deflationary structural factor contributing to deflationary pressures is demographics. Ciccarelli and Osbat (2017) find a positive and significant relationship between inflation and the growth of the working age population, thereby showing that ageing in EU countries can be a key explanatory factor for deflation.

The pace of technological innovation is even producing more deflationary pressure than what we see in official data since, as is well known, inflation indexes do not fully adjust for product quality (Nordhaus, 1998). Imagine for a moment an inflation index created on a bundle composed of food, services, technology and a significant share of goods that decades ago we had to buy (travel agency services, tutorials, photos, CD records, information) and today are mostly free on the web. If we now consider the level of this aggregated price index we realize that inflation has been much lower than what recorded in official statistics due to a survivorship bias effect, since the latter do not incorporate -100% inflation rates of goods and services which are now being offered for free. Furthermore, programmes installed on our mobile phones are automatically updated and improved in quality after our purchase. Hence the price per quality of the product continues to fall after our purchase.

In addition to this, the recent logistic revolution operated by global players like Amazon can procure whatever raw or intermediate product from the other side of the world, thereby reducing production costs. If the first phase of the internet era accelerated the circulation of knowledge and weightless data, the application of this revolution to logistics is also accelerating the circulation of material goods thereby creating a further factor of deflationary pressure through a fall in production costs. The combination of these factors not only makes realized official inflation always inferior to what had been forecast but, as well, quite higher than the effective rate of inflation.

Based on this evidence our final claim is that the new globalisation scenario has a cost in terms of low wage and dignity of labour for the low skilled, but also – quite apart from the acceleration of the flow of knowledge and

technological innovation – a benefit in the form of the opportunity of more audacious monetary policies given the lower inflation risk, which ought to be exploited to offset that cost.

Of course, the additional money created by expansionary monetary policies has to find an allocation if it does not inflate prices of real goods and services. The liquidity earned by banks selling bonds to the ECB can be left under the form of reserves in the same ECB, it can be lent to firms or households or invested in financial assets. Financial asset inflation (together with an increase in money balances and bank reserves) is the most likely outcome and its effects need to be taken into account in the presence of expansionary monetary policies, especially in times, such as ours, where regulatory requirements are made more stringent to avoid bank crises. We however have two remarks to make on this point. First, many of our debt relief proposals (if we exclude (4)-(6)) are not inflationary. Second, following a slow and largely ineffectual response to the 2008 global financial crisis (especially during the Trichet Presidency till October 2011 with its overly restrictive monetary policy before the Draghi Presidency), the ECB has later developed a strategy to decisively address financial crises and prevent them from destroying monetary base and increasing liquidity risk. The main solution to these crises consists of the same CB activity of money creation coupled with adequate provision of liquidity services.

5. Further reflections on ECB accounts

As discussed in section 2, one of the most hotly debated issues when discussing the possibility of debt relief by a Central Bank to a sovereign creditor concerns its effects on the CB balance sheet. As is well known, the ECB balance sheet has changed dramatically during the last decade due to the adoption of unconventional monetary policies and notably the quantitative easing launched to tackle the Euro government spread crisis.

A relevant objection to debt relief by the ECB is that it could make ECB net assets negative thereby undermining its activity. The issue of whether a CB can operate with negative net assets has been discussed among others by Pâris and Wyplosz (2014), De Grauwe (2013), and even dealt with by the ECB itself

in a discussion paper (Bunea *et al.*, 2016). In the latter it is argued that a central bank cannot default since “*central banks are protected from insolvency due to their ability to create money and can therefore operate with negative equity*” (p. 14). Some Central Banks, such as the Bank of Israel, are even formally allowed to operate with negative equity. According to Pâris and Wyplosz (2014), the negative equity position – a consequence of the application of the PADRE plan – is just a problem of accounting conventions and reputation, since the present value of seigniorage revenues should compensate for such loss. Cecchetti and Schoenholtz (1985) calculate that for the US the net present value of seigniorage revenues is equal to about 30% of GDP.

The inherited accounting standard of CBs is that circulating currency is registered on the liability side. This choice made perfect sense at the time of the gold standard when liquidity holdings corresponded to claims toward the CB, while it makes less sense today. A liability is such when it implies a costly obligation on behalf of the debtor (restitution of the principal and/or interest payments). In our case, however, the holder of currency issued by the ECB is not entitled to any claim toward it. A hint that this accounting convention is an inheritance of the past is that foreign dollar holdings are still considered a liability on the FED balance sheet. This was obviously the case until De Gaulle kept asking for gold in exchange for his dollar holdings and forced Richard Nixon and the Fed in 1971 to terminate the dollar-gold convertibility era. Since then, dollars held by foreigners are *de facto* no more a liability for the FED.

To sum up, currency is today an irredeemable zero-interest liability and therefore is not an effective liability. Even according to legal scholars, an appropriate characterization of Central Bank Money is indeed as a form of ‘social equity’, since it confers rights of participation in the economy’s payment system and thereby in its economy (Kumhof *et al.*, 2020). The only possible way to argue for the currency as a liability would be to assume that there exists a one-to-one correspondence between Euro currency holdings in the economy and the amount of money that the ECB needs to withdraw when facing inflationary pressures with open market operations. In this case a proper stock of bonds to be sold for the occasion should be in the ECB balance sheet. Hence

the amount of currency holdings in the economy should find a correspondence in a proportional amount of ECB bonds on the asset side.

To address this point we must consider the evolution of the ECB balance sheet. Before 2000 there were no long-term EU member government bond holdings on the asset side, while today their stock in the ECB balance sheet amounts to almost 3 trillion euros. Before the introduction of the Euro on 1st January 1999, the ECB used for its open market operations its buffer of short-term stocks which is today larger than before that date. If it is indisputable that the currency circulating in the economy is much more than 20 years ago, but it is also true that in the presence of global competition it has gone to inflate financial asset prices with minimal effects on inflation so that CB's inflationary expectations have been systematically upward biased in the last years. It is therefore reasonable to conclude that, even in presence of a decision of freezing or outright writing off of the portion of government debts created during the pandemic, the ECB will still have sufficient ammunition to face the challenge of future inflationary pressures.

The points discussed in this section however matter in case of a strong shock on the ECB balance sheet comparable to that of the original PADRE plan. In our seven proposals the impact is much more modest and, in some cases, negligible, with the exception of the third (debt write-off) hypothesis.

6. Effects on ECB independence and “whatever it takes” options

Another important issue is whether COVID-19 debt relief could represent a threat to ECB independence. The importance of the independence of central banks is now widely accepted as being crucial to avoid time inconsistency issues in the conduct of monetary policy. In his seminal contribution, Walsh (1985) discussed the design of incentives which would commit central bankers to a rigorous pursuit of policies to control inflation. Central bank independence has indeed been shown to be associated with lower inflation in developed countries (Cukierman, 1992). On the other hand, an appropriate institutional design for central banks should allow for a flexible response to unforeseen contingency (Lohmann, 1992). Cowen *et al.* (2000) show that, in a second best world, a regime which contemplates the possibility of temporary discretion may

be superior to a regime which never allows for a deviation from rules, and could indeed lead to greater institutional credibility.

Debelle and Fischer (1994) introduced an important distinction between “goal independence” and “instrument independence” of the central bank. Whilst the former refers to the central bank’s ability to set the goals of policy without direct influence of the fiscal authority, the latter pertains to its capability to adapt its policy tools to the pursuit of its goals, depending on the specific circumstances that it faces (see also Walsh, 2008). The ECB has arguably given proof of instrument independence in its response to the financial crisis (Draghi, 2018). Indeed, it could be maintained that it was its very ability to adopt the most appropriate instruments in response to the changed financial and macroeconomic circumstances which made it possible for the ECB to fulfil the mandate prescribed by its charter.

In a scenario of excessively high debt a further extension of the CBs non-conventional policies in the direction of a COVID-19 debt relief, far from being a violation of ECB mandate, could actually be the most appropriate strategy to pursue its statutory goal of ensuring the proper transmission of monetary policy (thereby respecting goal independence) through instrument independence enriched by new options that appear convenient and desirable after the pandemic shock.

Insofar as the choice is an exceptional and voluntary decision by the ECB related to the specificity of the COVID-19 pandemic, the fear that its credibility and independence would be called into question is likely to be exaggerated. The ECB decision in presence of an extraordinary event would not imply that governments can pressurize it to repeat such a decision in ordinary times. If we offer advice to a friend or a relative they may decide to take it or not, but it would be unusual of them to object that this is an attempt to violate their independence.

ECB independence includes the possibility of using “whatever it takes” options in presence of negative reactions to its COVID-19 debt relief policies. These are not only limited to the creation of money supply (which is always limited by the risk of inflation) but also to the possibility of creating new financial instruments or of changing the monetary rules of the system, in the face of

changed circumstances outside its control. Indeed, it is this very flexibility in adapting its instruments to changed conditions which confers credibility to the Central Bank and which validates its reputation.

7. Distributive concerns

Distributive concerns seemed to be an insurmountable barrier to developments of EU fiscal and monetary policy some years ago. The Pâris and Wyplosz's PADRE plan was accurately carved in order to avoid distributional problems across EU member states. The characteristics of the Next Generation EU, where the share of contributions is proportional to the COVID-19 impact on the economies of EU member states and not to their ECB's capital shares, have shown that this taboo has been overcome. Even though we are talking about fiscal policies and ECB shares concerning monetary issues, the expected use of EU bond issues to finance Next Generation EU and its distributional consequences are a clear indication that resources are raised and allocated in proportion to needs and not to capital or debt proportions.

An important aspect of the COVID shock is that it was symmetrical in the sense that it affected all the EU member states. It is therefore easier for EU institutions to agree on a common policy response. This does not mean that distributional issues do not require to be dealt with care. A debt relief operation is much easier to manage for central banks of single or federal states than for a central bank running monetary policy for several independent EU member states, each of them having their own fiscal policies with high degree of autonomy.

A related issue is the relationship between Eurozone and non-Eurozone EU member states, since the ECB only holds government bonds of the first group. A possible solution here would be the purchase of a proportional amount of government bonds of non-Eurozone EU members and their subsequent freezing, rescheduling or cancellation or, alternatively, the ECB support to similar plans implemented by independent CBs of non-Eurozone EU member states. The latter would however be free to participate or not to the COVID-19 debt relief operation.

An additional potential issue is the effect on private holders of EU government bonds, who may enjoy a capital gain if the market value of their bonds increases due to reduced default risk.

8 An informal stress test of the effect of COVID-19 debt relief on ECB

As is well known Central Banks are powerful but not almighty since they face an exchange rate risk, an interest rate risk, and a “default” risk related to the failure of achieving their goal of preserving the real value of money in presence of hyperinflation.

In this section we examine the potential implications of COVID-19 debt relief in terms of an informal stress test focusing on its impact on the above three forms of risk.

Most exchange risk is run by central banks when they try to maintain a fixed exchange rate or a peg. This is not the case of the ECB. The likely impact of COVID-19 debt relief is likely to be negligible (especially if we exclude case three), at most leading to moderate currency depreciation with effects on real economy depending on pass through and Marshall-Lerner conditions. The status of the euro as a reserve currency should also temper this risk.

Interest rate risk is related to both sides of the ECB balance sheet. Changes in profits and losses should at least partially match when interest rates change since interest payments are profits on the bond side and outflows on the liability side where the ECB remunerates bank reserves. As it happens, the extremely expansionary monetary policy in times of the COVID-19 pandemic leads the ECB to gain from both sides of the balance sheet because of a reduction in losses due to the negative interest rates on bank reserves, and an increase in total profits also arising from net interest payments.

The most likely risk that we should therefore consider in our “stress test” is a sudden need to counteract inflationary pressures to avoid “default” risk and hyperinflation. In section 4 we explain why we believe that this risk is not severe. Another argument to consider is that the COVID-19 debt relief reduces from this point of view ammunitions of the ECB in terms of open market operations. The amount of long-term government bonds remaining after

COVID-19 debt cancellation would however easily remain large enough for this policy instrument to be effective. One should also not forget that CBs have plenty of instruments to perform their main goal including changes in policy rates, interest rates on excess reserves, and volume reserve requirements including bank regulatory policies that crucially affect their lending policies and therefore the creation of high-powered money. Before the implementation of quantitative easing, anti-inflationary policies were effectively pursued with a much smaller stock of bonds and almost entirely with short-term government bonds (hence without the 2.87 trillion stock of long-term government bonds that will be in part interested by the debt relief proposals). In the extremely unlikely event of a very strong inflationary pressure, the ECB could even decide to issue their own bonds to reduce market liquidity. If it is true that the amount of liquidity circulating is much larger today than in the pre-quantitative easing period, but the existing instruments are more than sufficient to perform anti-inflationary policies.

To sum up, the most serious risk in CB action is inflation. We however explained in the paper that COVID-19 debt relief does not increase this risk for three reasons: i) several of the proposed forms of debt relief discussed in the paper are inflation neutral (see Table 1); ii) inflation has been systematically overestimated by institutional and private forecasters and is overestimated in inflation indexes currently in use (see section 4); iii) the COVID-19 debt relief proposals do not significantly reduce the range of CB's anti-inflationary tools that could be used to counter inflationary pressures.

9. Political feasibility of the seven proposals

The technical feasibility of a proposal does not mean that it can or it will actually be enforced. Also based on the considerations developed in the rest of our paper, the knowledge and understanding of the political positions of member states and their domestic public opinions on EU fiscal and monetary policies should give us some guidance in evaluating the political feasibility of our seven proposals.

The first two ranked policy options - (6) and (1) – are more easily politically acceptable. Option (6) is the most politically feasible as it represents a

continuation of what the ECB has already been effectively doing in the last months and, in a sense, it is the automatic consequence of the PEP policy announced on 10th December 2020 (see footnote 4). It is not a case that the average share of government debt of EU members held by the ECB arrived at 40 percent of their GDP. The irreversibility option proposed in strategy (1) is a little more compelling and it may be politically harder to achieve.

The creation of irredeemable zero-interest bonds proposed in strategy (2) would come immediately after since it is an asset transformation proposal that should be properly designed and approved by the ECB board and, indirectly, by EU member countries.

Strategies (4) and (7) are quite difficult to classify and rank but they both imply in principle a higher degree of complexity since in (4) each member country is demanded to issue zero-interest perpetual bonds and in (7) a transformation of the role of the ESM is considered requiring against approval of all member states.

The outright debt write-off proposed by strategies (5) and (3) is definitely less politically feasible than the previously mentioned five strategies. Strategy (5) is in practice strategy (3) plus an additional commitment of the ECB to restore progressively over time their share held of the remaining debt of EU member states. It has therefore a double advantage for member states (reduction of debt stock and future commitment of the ECB to hold a share of the remaining member states debt) but it affects the ECB balance sheet more and can therefore be less politically feasible from the point of view of countries against ECB intervention.

10. Conclusions

The unexpected world shock of the COVID-19 pandemic has led to a significant growth of debt/GDP ratios in most countries. Such increase in debt is largely due to factors outside of the responsibility of the governments and is justified by the need to alleviate the effects of the pandemic on firms and households. The economic literature shows that episodes of debt relief in the 20th century have not been uncommon, that they were not limited to developing countries, and

that they proved quite successful in terms of their effects on debtors' post-intervention economic and financial recovery. The debt relief proposals discussed in this paper are however different from these historical episodes, since our proposals are strictly limited to the debt held by a creditor that is not a sovereign state but the central bank which holds bonds of those sovereign states and which operates their monetary policy.

We outline seven ways in which softer or stronger ways of COVID-19 debt relief could be implemented and evaluate their effects on ECB balance sheet, reputation and independence, on debtors' moral hazard and on inflation and exchange rate.

Our conclusions are that COVID-19 debt relief measures are technically feasible with limited side effects and without harm to the ECB's power of adopting anti-inflationary policies. In the recent debate on the fiscal paradigm shift, Furman and Summers (2020) argue that what really matters in debt sustainability is not the usual stock/flow debt/GDP ratio, but the flow/flow ratio between real interest payments and GDP. Empirical evidence shows that, in spite of the large growth of the first ratio, the active policies pursued by CBs (quantitative easing plus restitution of interest payments) have dramatically reduced the second ratio. In the case of Italy, for instance, the year 2000 saw a 105.1 debt/GDP ratio and 6.3% interest payment/GDP ratio, compared with expected 159% debt/GDP ratio and 3.4 interest payment/GDP ratio in 2020. The conclusion is that the debt problem seems to be much less dramatic if we use a flow/flow instead of a stock/flow approach. This is however in large part due to the discretionary active role of central banks which on the one side bought around 63% of the new debt created after the pandemic and, on the other side, allows government issuers to cash back interest payments. The much better flow/flow picture however, if not combined with the stock/flow data, hides an interest rate upside risk that needs to be managed and would remain high in presence of high debt/GDP ratios and non-irrevocable ECB commitment to the actual policy.

Writing well before the onset of the pandemic, Blanchard and Summers (2017) forcefully argued that a critical lesson from the Great Financial Crisis is the need for more aggressive and ambitious fiscal policies. More recently, Paul

Krugman (2020) joined the call for a paradigm shift in fiscal policy. Our analysis on the seven debt relief proposals aims to achieve a permanent and non-temporary improvement of the debt/GDP ratio in order to increase debt sustainability and release additional resources from reduced debt service for investment and economic prosperity. The considerations developed in our position paper on effects on inflation, exchange rate, ECB independence, ECB balance sheet and different sources of ECB risk suggest that there is enough room to do so. More to it, in presence of an increased debt burden on Eurozone members ECB debt relief intervention can even be an optimal strategy increasing its instrument independence to mitigate sovereign debt risk in the euro area, pursue its statutory goal, and ensure correct transmission of monetary policies. The room for manoeuvre would be even larger if the main world CBs were to accept the fiscal paradigm shift and agree on a common strategy. The conditions for such a co-operative equilibrium appear to exist in the present circumstances, since our proposed strategies for debt relief would only produce small effects on inflation and exchange rates. On the other hand, the social and allocative benefits of debt relief are likely to outweigh any potential costs.

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Table 1. Effects of the seven forms of COVID-19 debt relief *

	Description of the proposal	ECB asset/liability	ECB profit/losses	Inflation risk	Exchange rate risk	Room for anti-inflationary policies	Art. 123
(1)	Rolling over a target share of EU government bonds by ECB plus returning interest payments to issuing countries becomes irreversible.	Neutral	Neutral	Neutral	Neutral	Slightly reduced	Neutral
(2)	Conversion of bonds held by the ECB into irredeemable zero-interest bonds	Neutral	Neutral**	Neutral	Neutral	Slightly reduced	Neutral
(3)	Outright write-off of a given portion of public bonds held by the ECB	Negative net position	Neutral**	Neutral	Positive	Slightly reduced	Neutral
(4)	Issue of perpetual bonds from member countries with a commitment by the ECB to buying them on the secondary market	Positive net position	Negative	Positive	Positive	Increased	Neutral
(5)	Outright cancellation of part of the debt and ECB commitment to a progressive replacement of the stock of government bonds	Negative in the SR neutral in the LR	Negative	Strongly positive	Positive	Slightly reduced in the SR, Neutral in the LR	Neutral
(6)	Commitment to increase progressively the stock of member states government bonds	Slightly positive	Slightly negative	Slightly positive	Slightly positive	Slightly increased	Neutral
(7)	Purchase by the ESM of government debt held by the ECB	Compensated by profits	Positive	Negative	Neutral	Slightly reduced	Neutral

* Expected effect according to the evaluation made in the paper.

** Under the current ECB policy of interest rate reversal.