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► **To cite this version:**

Xavier Ragot. More or less public debt in France?. OFCE Policy Brief, 2021, 86, pp.1-18. hal-03382755

HAL Id: hal-03382755

<https://sciencespo.hal.science/hal-03382755>

Submitted on 18 Oct 2021

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More or less public debt in France?

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* This text benefited from comments by Guillaume Allègre, Christophe Blot, Edouard Challe, Jérôme Creel, Éric Heyer, Paul Hubert, François Le Grand, Raoul Sampognaro, and Xavier Timbeau.

- ◆ The purpose of this Policy brief is to present an estimate of the fiscal space for a new stimulus plan in France that takes fully into account the impact of the low interest rate environment.
- ◆ Negative rates should lead to a different way to measure the public debt, a method that complements the Maastricht measurement. An alternative measure of the cost of the debt should take stock of the low interest rates and the repurchase of public debt by the central banks.
- ◆ The public debate is marked by some harmful confusion about the redistributive effects of public debt. First of all, it involves redistribution within each generation. An increase in public debt does not constitute a debt to future generations.
- ◆ The low interest rates are the result of an increase in the global savings rate, with no medium-term factors apparent that could push this back down. The Covid-19 crisis, which pushed up French savings by 89 billion euros in 2020, will increase the excess of savings over investment.
- ◆ The fall in real interest rates over the past several years reflects that demand for public debt has risen more than supply. The shortage of public debt is not being offset by a rise in private net debt. We are experiencing a shortage of secure savings vehicles.
- ◆ A conservative estimate points to a fiscal space of 5 GDP points, i.e. around 100 billion euros for an additional stimulus plan. This fiscal space is elaborated on the basis of a prudent level of debt service amounting to no more than 2 GDP points and an apparent interest rate on public debt of less than 1%.
- ◆ In drawing up a new recovery plan, concerns around managing the risks of rate hikes and future crises, as well as the European framework, should lead to promoting public investment.
- ◆ This recovery plan must be understood as complementary to the European recovery plan and accompanied by a possible Europe-wide mutualizing of part of the public debt inherited from the Covid-19 crisis.
- ◆ Finally, this estimate shows that the low interest rate environment provides substantial room for fiscal maneuvering and that a cancellation of the public debt held by the central banks could deprive us of this environment due to the loss of confidence it could engender.

Like every country around the world, France is facing two trends that must modify its public finance strategy. The first is a historically low level of apparent interest rates, which have been falling steadily for 40 years and are now in negative territory (with maturities of up to twenty years). The second trend is high public debt. World public debt has reached an unprecedented level, even considering times of war. Its level has even surpassed the peak reached during the Second World War (IMF, 2020), although this is not the case for France's public debt, which will nevertheless reach a high point of 116% of GDP in 2021 according to OFCE forecasts (Dauvin *et al.*, 2020). These high public debts are the unintended result of the 2008 and Covid-19 crises. They also reflect a reasonable public choice in a low interest rate environment, in order to protect private balance sheets and avoid sharp hikes in unemployment and bankruptcies.

The purpose of this text is to consider all the consequences of this new low rate environment, in order to provide an estimate of the additional fiscal space in France, relative to the situation in December 2020. This debate is critical for drawing up recovery plans that could restore the French economy after the Covid-19 crisis period, while respecting its environmental commitments and not increasing inequality (Blanchard 2019; Furman and Summers 2020). This will be an important, even central issue in France's public debate over the coming months.

This estimate of fiscal space requires a discussion of the economic impact of public debt, which is currently creating a great deal of confusion in the public debate. For example, issuing more public debt does not amount to making future generations pay. Distortions like this conceal the real debate over redistributive issues. Second, the current debate on the cancellation of public debt is an example of a false debate which, once again, obscures the real issue, which is the amount of additional public debt that could be issued (and that is desired) and the goals to be targeted.

To anticipate the conclusion, the estimate of fiscal space is significant, on the order of 5% of GDP in the short term, which appears to be a conservative estimate (in addition to the current stimulus package). This amount represents 100 billion euros of additional investment over the coming ten years. The condition for this additional debt is its political, social and European acceptability, not its economic feasibility. This Policy Brief breaks down these issues into five questions.

1. What is the amount of public debt? How is public debt measured?

Contrary to facile assertions, measuring the financial debt of States is no easy matter. The difficulty can be summed up in a single question: if the State borrows 100 today and has to repay 105 in a year's time (so at an interest rate of 5%), is the public debt 100 or 105? The figure 100 is the amount borrowed, the figure 105 is the amount that will have to be repaid. The measure of the current public debt, in particular that retained by the Maastricht Treaty,¹ is based on the assumed choice of 100, and not 105. The arguments in favour of 100 as well as those in favour of 105 need to be considered.

1. See here <https://www.insee.fr/fr/metadonnees/definition/c1091> for a formal definition.

If the role of the public debt estimate is to measure the State's fiscal imbalances, i.e. its financing needs, then the choice of 100 is the most relevant. The public deficit (which may include the repayment of past debt) is then measured without taking into account future interest rate changes, which can vary over time and between countries. In the case of Europe, it can be used to introduce rules on indebtedness (the infamous 60% debt-to-GDP ratio).

Choosing 105 would be a different choice, based not on the fiscal imbalances of each year but on future financing needs. If the point is to forecast taxes and the interest charges on the State budget, in a word the cost of the public debt, the amount of 105 is much more relevant than the amount of the 100 borrowed.

Indeed, what is essential for the public finances is the cost of the debt, not its amount. To properly represent this difference, the following two graphs present France's debt, in the Maastricht sense (Figure 1), and the interest charges of the public debt in relation to GDP (Figure 2), which represents the cost of the public debt to the public purse. This cost is the total interest burden on public debt paid by the French State. Figure 1 represents a stock of debt in relation to GDP, which is an annual wealth flow. This measure gives no indication of the actual cost of the public debt. The second graph is the cost of interest on the public debt as a percentage of GDP. It is therefore a ratio of two flows, which is much more coherent. This second graph distinguishes the impact of the public debt held by the European System of Central Banks. This makes it possible subsequently to address the issue of the repurchase/cancellation of public debt by the central banks.

The difficulty revealed by the two graphs is obvious: the measure of debt in the Maastricht sense is rising, while the effective cost of debt, which is the element for measuring the tax burden of public debt, is falling. The divergence between the two measures stems from the downward trend in the interest rate on public debt. This fall in interest rates is a powerful argument for rethinking the measurement of public debt. The focus should be on Figure 2, and not Figure 1.

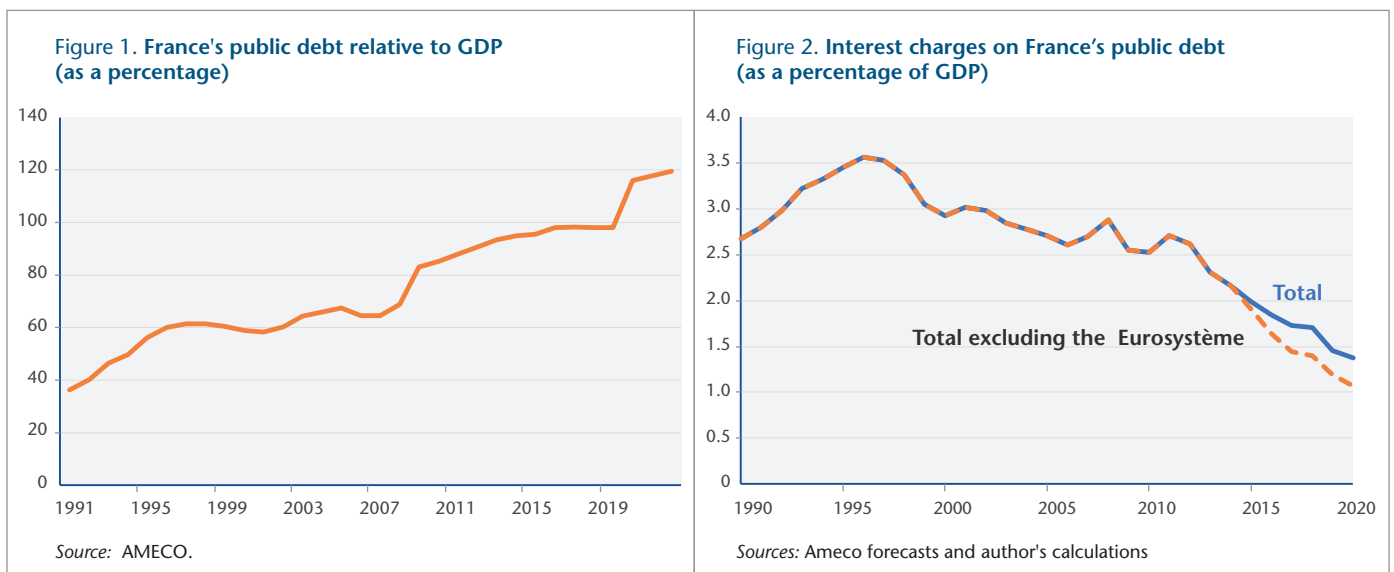
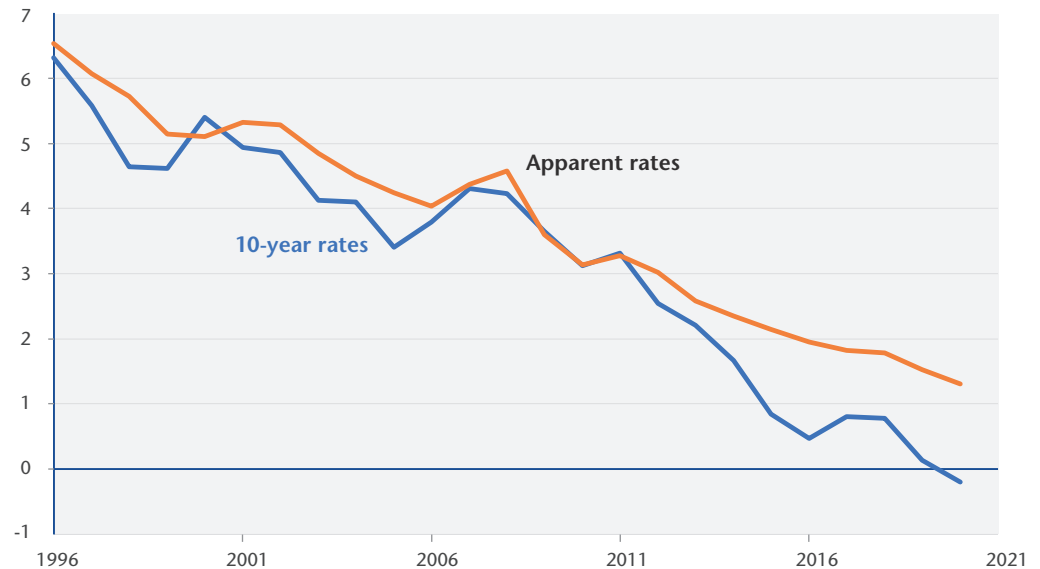


Figure 3 shows the apparent interest rate on public debt (which is the average rate taking into account all maturities) as well as the 10-year rate on new issues. The average maturity of French debt is between 7 and 8 years. It takes several years for the low rates on new issues to be passed on to the apparent rate. As the rate on new issues is much lower than the apparent rate, a decrease in the apparent rate is to be expected.

Figure 3. Interest rates on French public debt



Source: Ameco et FRED.

Indeed, the cost to the public finances of the debt is not the debt itself, but first and foremost the interest charges on the debt. States are economic agents that live for centuries, even millennia. If a State wants to stabilize its debt at 100 and the interest rate is 5%, it will have to issue 100 euros of debt each year and pay only 5% interest: it repays 105 each year by issuing 100 of debt and pays 5 euros with tax revenue. The cost of the debt to the public finances is therefore indefinitely 5. What happens when interest rates fall and become negative? If the interest rate is -1%, the government borrows 100 and has to repay 99, so it earns 1 euro each year by doing nothing! Does it make sense to treat 100 euros of debt identically when interest rates are 5% and when they're -1%?

Another way to understand the question of debt measurement is to look back at one of the biggest defaults on public debt that capitalism has ever experienced in its history, i.e. Greece's default in 2012. How was a reduction in Greek public debt possible? Not by reducing the amount of Greece's debt in the Maastricht sense, but by reducing the interest rate that Greece had to pay. First, the European institutions bought a large amount of Greek debt and undertook to pay the interest due on it to the Greek government. Second, it was agreed to extend the maturity of the Greek debt. These clarifications are important, because the equivalent of the reduction in Greece's debt was on the order of 30% in the long term as a result of the reduction in interest rates and the extension of maturities, with no substantial reduction in the amount of debt within the Maastricht meaning.²

2.

See the discussion presented by the European Stability Mechanism at <https://www.esm.europa.eu/publications/safeguarding-euro/debt-relief-real-savings-greece>

A second argument for rethinking the measurement of the debt is the changing behaviour of the central banks. The relationship between public debt and monetary policy is a source of extraordinary confusion, whereas the mechanisms involved are basically quite simple. Nowadays the central banks massively repurchase public debt by creating money, which is used as reserves by banks (Blot and Hubert, 2020). The Eurosystem (which is all the central banks of the euro zone plus the ECB) buys back amounts of public debt not directly from governments, but from private purchasers who have public debts. This last point is secondary here. The European central banks therefore hold amounts of public debt and receive the interest paid by the States. However, the central banks belong to the States, and they return any profits they make to the States. More specifically, the profit for a central bank holding public debt is the difference between the interest rate on the debt and the rate of return on their reserves arising from the repurchase of public debt. As the rate on the reserves is negative, the repurchase by the Eurosystem does a little more than cancel the cost of the debt. The independence of the central banks is operational within the framework of the mandate set by the States: it is not in any way financial. Thus the States pay interest to the central banks, which repay this same interest to the States. It is as if the public debt is *de facto* non-existent during the period it is held by the central bank, as it doesn't give rise to any financial cost for the States (they receive what they pay to the central banks). It is difficult to determine the holding period of the debt for the central banks. The central banks could decrease this amount if inflation rose above 2% over the longer term, which would be good news for the public finances, as will be discussed below.

Box 1. Cancelling debts?

The amounts held by the central banks appear in Figure 2 under the “total excluding the Eurosystem”. This curve removes from the cost of the public debt an estimate of the amount paid to the European central banks (and paid back to the French State).³ Figure 2 is important for the current debate on debt cancellation. The graph shows that the share of interest from central bank holdings of the public debt in the total reduction of the cost of debt is low. Most of the reduction in the cost of debt comes from the reduction in interest rates. Thus, the only value in the cancellation of public debts held by central banks is making the reduction in the cost of public debt permanent. In the current framework, this reduction in the cost of debt could disappear if the European Central Bank chose another policy, which is unlikely. On the other hand, the cost of such a cancellation would be to put an end to the repurchase of debt by the central banks and to make possible a default on France's public debt. These two effects would contribute to raising interest rates on French debt, without any short-term fiscal gain. While the debate should be about how best to use low interest rates to invest, the discussion about public debt cancellation is turning its back on this short-term economic issue.

3.

This amount is calculated on the assumption that the Eurosystem maintains an average maturity structure on the public debt. It is then assumed that the rate on reserves is zero (and not negative).

2. Are we putting future generations in debt? No!

The discussion of the redistributive effects of public debt between generations is giving rise to a great deal of confusion, such as the statement that, “We are putting future generations in debt”. Clarifying the distributive issues concerning the public debt is essential for the public debate.

Let's start with the factual and accounting data before moving on to economic analysis.

By issuing public debt, the State is taking on debt to current generations and will repay its debt to future generations, assuming the maturity is long enough (assume that the State is indebted over 30 years⁴). The State is therefore indebted to the current generations that are willing to lend it money: Emma, for example, wants to save 100 euros (Emma's savings). The State receives the 100 euros from Emma and gives her an acknowledgement of debt, to be repaid in 30 years, with a promise to repay, for example, 180 euros in 30 years (i.e. an annual interest rate of 2%). Someone will necessarily have this IOU in 30 years' time. Let us assume that Emma's daughter inherits this IOU. As the taste for first names evolves between generations, Emma's daughter is called Emmatrix. Thus, the State takes 100 from Emma and gives 180 to Emmatrix in 30 years.

Is that all? No: the State will use the 100 euros for the benefit of the current generations, be it by transferring income to others, by making public investments, or by paying civil servants. Households will receive this money. Let's assume that Dorothea receives the 100 euros today. Dorothea consumes part of it (Dorothea's spending). She could also save another part, increasing the wealth of her child Dorotheatrix, but let's assume that this is not the case.

The public debt is therefore a transfer from Emma to Dorothea within the current generation, and to Emmatrix and partly Dorotheatrix in future generations.

Is that all? No, the State will have to pay back its debt in 30 years to pay Emmatrix. How is it going to do that? It will tax future generations. If the State taxes Dorotheatrix to pay back Emmatrix, then Emmatrix is enriched from the inherited public debt and pays no tax. Conversely, Dorotheatrix does not receive any inheritance, but pays additional taxes. In this case, Dorothea and Emmatrix are happy with the increase in public debt, while Dorotheatrix pays the cost.

The public debt is first of all a redistribution within current generations (between Emma and Dorothea) and within future generations (between Emmatrix and Dorotheatrix). Future generations will pay more tax, but they will also receive the amount of tax paid! The following four assertions are therefore all true at once: "The State is indebted to the current generations (Emma)"; "The current generations receive income thanks to the public debt (Dorothea)"; "Future generations will be richer as a result of the current debt (Emmatrix)"; and "Future generations will pay for the current public debt (Dorotheatrix)".

This example seems trivial, but it summarizes the main direct redistributive effects of public debt. More public debt means first of all more redistribution within each generation.⁵ This first effect is the most important. Before introducing the matter of external debt (i.e. France's debt vis-à-vis the rest of the world), it is necessary to discuss the indirect effects related to transfers between generations, whose magnitude is very difficult to measure. Indeed, the different theories about the magnitude of indirect effects are in conflict.

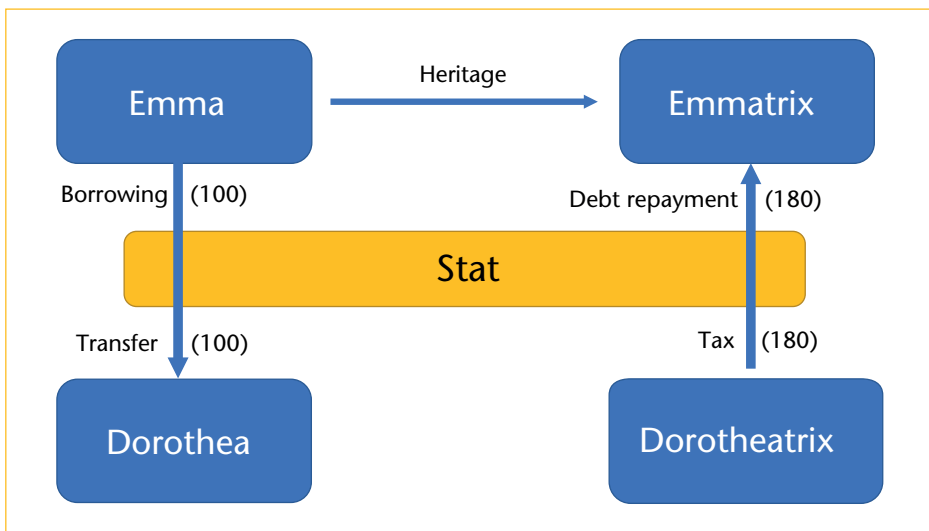
4.

As a reminder, in 2019 the average maturity of public debt at issue is 11.1 years in France.

5.

This statement can be made more rigorous. Whatever the non-Ricardian model, there is a tax system that neutralizes intergenerational redistributive effects and restores Ricardian equivalence (see Weil 1989 for example). Intergenerational effects must be conceived as a deviation from this tax system.

Figure 4. Redistributive effects of public debt*



* There are many possible cases. Dorotheatrix can also inherit part of the public debt, and Emma can receive part of the transfers. This complicates the redistributive effects but not the conclusion: public debt is first of all a transfer between generations.

Indirect effects

Public debt's indirect effects between generations arise through growth and investment. This is the heart of the argument.

If the State had not borrowed 100 euros from Emma, she could have lent this money to companies to finance new investment. So the intergenerational effects pass through investment. These indirect effects are complex. Indeed, in our example, Dorothea could invest the money transferred by the State and do so more efficiently than Emma!

This effect via investment has given rise to an extensive literature, in which three theories can be identified:⁶

1. The first is “crowding out” theory. Public debt “absorbs” part of national savings. It therefore contributes to a reduction in the aggregate savings rate and a reduction in investment. Future generations suffer from a reduction in useful investment;
2. The second is “Ricardian” theory. The public debt gives rise to future taxes to pay the public debt. Households will therefore increase their savings by the very amount of the public debt, without any modification of investment. Public debt therefore has no significant effect on private investment and intergenerational transfers;
3. “Keynesian” theory. The State borrows to stimulate activity and investment. This increase in national income pushes up savings and investment and thus future activity. In fact, future generations benefit from public debt.

What does the data say? Prior to the crisis, the dozens of empirical estimates tended to reject a strict Ricardian equivalence. The most refined estimates showed a small positive effect of public debt on interest rates (which increases the cost of investment). The average estimates pointed to an increase of 3 or 4 basis points (i.e. 0.03%) for a 1 point increase in a country's debt-to-GDP ratio. A 30-point increase in the debt-to-GDP ratio,

6.

The crowding out theory is obtained in a non-Ricardian model with dynamic efficiency (public debt reduces capital and welfare). The Ricardian theory is presented by Barro (1974). The Keynesian theory is obtained in a model with nominal rigidities and hysteresis. Recent arguments in terms of multiple equilibrium and secular stagnation reinforce the “Keynesian” view, presented in Furman and Summers (2020) for example. It should be noted that in Woodford (1990), an increase in public debt can also increase investment in the event of credit constraints on firms.

for example from 65% to 95% as in France during the subprime crisis between 2007 and 2015, should have led to a 1-point increase in real interest rates (i.e. $30 \times 0.033\%$).

However, and this is the main conundrum we face, during the same period real interest rates fell from 2.8% to 0.8%, a drop of 2%. The decline in real interest rates for more than forty years now indicates that the increase in global private savings has more than offset the rise in public debt, despite the latter's dramatic increase. Thus, the three effects presented above (crowding out, Ricardian and Keynesian) are all dominated by a global trend towards rising savings rates and falling interest rates, a trend that began well before the Covid-19 crisis. In other words, low global interest rates indicate that the weak investment seen throughout the world is due not to a crowding out effect of public debt but to other, weightier trends.

To summarize the discussion on the redistributive effects of public debt, the latter is first of all a redistribution within current generations and within future generations. The intergenerational effects are dominated by much more fundamental global trends, which contribute to an increase in household savings and a fall in investment.⁷

At this point in the analysis, the crucial issue for future debt dynamics concerns trends in interest rates and thus in global savings. Should we expect a fall in the savings rate and an increase in interest rates, or on the contrary, have we entered into a world of long-term low interest rates?

7.

There is a vast literature on the redistributive effects of public policies, called inter-generational accounting, initiated by Kotlikoff (1992). See Masson (2002) and Pestiau (2010) for a presentation and the limitations. For a more general discussion of the redistributive effects of public debt, see the summary by Timbeau (2011).

3. Where do all these savings come from? Will interest rates remain low?

In order to understand who finances State debt, it is useful to return to the simple accounting relationships that are the cornerstone of economic theory. Looking at the State budget and the definition of GDP, it is easy to find a well-known accounting relationship that explains the financing of States' primary deficits. The primary deficit, called D , is the surplus of public expenditure (excluding the interest burden on the public debt) over public revenue. This public deficit is of necessity equal to the excess of private savings over both private investment and the current account balance.

$$D = S^{private} - I - BC$$

This relationship implies that the increase in the public deficit is caused either by an increase in the country's private savings (households and companies) S private (the above-mentioned Ricardian and Keynesian effects), or by a fall in private investment (crowding out effect), or by the country's indebtedness to the rest of the world and a deterioration in the current account (CA). The latter effect is known as the "theory" of twin deficits: a primary public deficit would lead to a current account deficit, i.e. to an international debt on the part of the country.

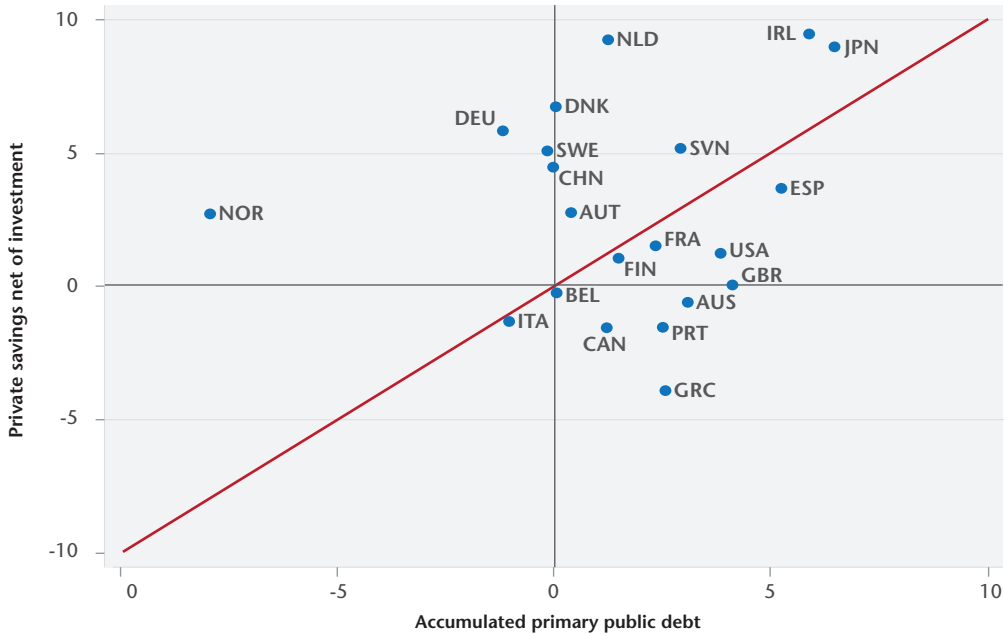
As noted above, the fall in interest rates indicates that it is the rise in global savings that has more than offset the increase in public debt. However, does this increase in global savings come from one country in particular, or does it involve all countries?

To answer this question, Figure 5 shows the increase in public debt on the x-axis over the period 2007-2017, and the difference between private savings and investment on the y-axis for the main OECD countries. The line is the 45° curve.

A country that finances its primary public debt by an equal increase in private savings (net of private investment) is right at 45° (Ricardian country). A country that has saved more than the increase in its public debt and investment is above the 45°

curve and has therefore lent to the rest of the world. A country that has saved less (net of investment) is below the 45° curve (twin deficits). It has therefore had to borrow from countries above the 45° line.

Figure 5. Relationship between the national public deficit and net savings, 2008-2017



Source: Author's calculations, see Pinois and Ragot (2019).

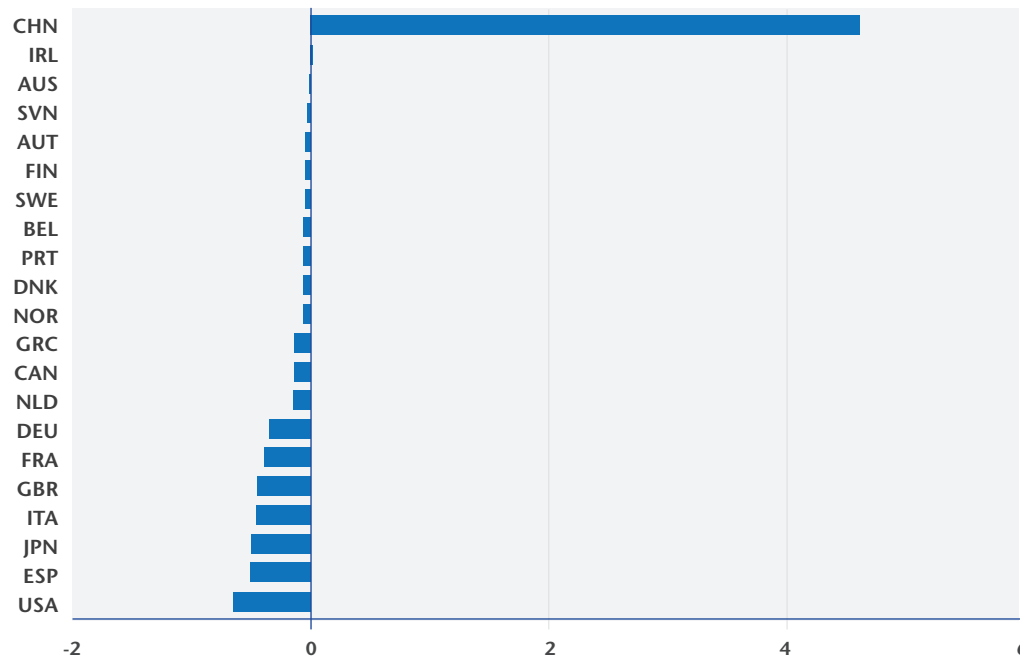
The situation in France is close to the 45° line. The increase in savings is very close to the increase in public debt over the period. It was not the rest of the world that financed public debt over the period, but mainly domestic savings.

The second lesson from this graph is that many countries are in a position where private savings have increased more than investment (most countries are in the upper half of the graph, i.e. above the 0° horizontal line where savings net of investment is positive). This means that many countries have increased net savings more than investment over the period. In other words, the increase in domestic savings is a global phenomenon, affecting most countries. The rise in national savings rates stems from structural phenomena such as ageing populations, rising inequality in some countries, the emergence of middle classes with higher savings rates, and macroeconomic uncertainty, among various factors (see Ragot *et al.*, 2016, for a more in-depth discussion).

Before going back over the period of the Covid-19 crisis, we must zero in on one particular point, i.e. changes in investment. As noted above, since interest rates are particularly low, it is not the lack of savings that explains the low level of investment. The following graph shows the change between 2007 and 2017 in investment relative to world GDP.

It is clear that all countries have experienced a decline in global investment, with the exception of China, where investment has grown strongly. Chinese investment accounted for 5% of global investment in 2007 and now represents 30%. The magnitude of this impressive change in global capital accumulation is not generally appreciated. For our purposes, it can be said that the increase in investment in China was the result of a voluntarist policy to support economic activity. There are now signs

Figure 6. Change in investment 2008-2017 as a share of world GDP



Source: Author's calculations, see Pinois and Ragot (2019).

of over-accumulation of capital in China, suggesting that investment is likely to fall in the future. Overall then, while the global investment rate has remained constant over the period 2007-2017, this was due to an increase in the Chinese rate, which is probably not sustainable. Furthermore, the gradual introduction of a social protection system in China will eventually lead to a decline in the savings rate. The horizon for this decline is, however, much further off than that of the decline in the investment rate.⁸

The Covid-19 crisis has led to a profound change in household savings. Savings have increased considerably because of the impossibility of consuming certain goods and services and because of uncertainty. Household income stayed relatively stable in France due to a significant increase in the public debt and by mechanisms such as short-time working and the fund for compensating the self-employed, among other measures. According to OFCE estimates (OFCE, Dauvin *et al.*, 2020), household savings rose by 89 billion euros in 2020 while investment fell by 11%. It should be noted that, during the crisis, France experienced a deterioration in its current account balance due to the worsening of its trade balance.

However, there is such uncertainty about international trade (also linked to Brexit) that it is premature to anticipate the evolution of France's current account balance and its international debt.

Let's summarize. There are strong trends towards increasing savings worldwide, which will continue in the medium term. There are powerful trends towards a decline in global investment, except in China where it cannot be expected to last. As a result, it is exceedingly difficult to predict new trends that would lead to a break in the trends that are driving down the global interest rate. The hypothesis of a stabilization of rates seems to be a prudent assumption.⁹ The most likely scenario is that interest rates on public debt will continue to fall.¹⁰

8.

The work of Rachel and Summers (2019) provides additional arguments for the permanence of low interest rates.

9.

The analysis in this section focuses on the interest rate on public debt. Generally speaking, all interest rates, even on risky assets, have declined over the period (see Jorda *et al.*, 2019).

10.

Furman and Summers (2020) have also recently provided evidence for the persistence of low interest rates in the United States. The same arguments hold for the euro zone.

Box 2. What is the optimal amount of public debt?

A profound change in economic thinking

After these accounting considerations, the question of the optimal level of public debt can now be addressed. This question is strangely absent from the public debate, even though it has given rise to highly interesting economic analyses in recent years. Indeed, public debt is still perceived as a cost. Recent studies show that it is also a public good, as it provides a secure vehicle for savings. Even if these recent studies do not lead to precise quantitative targets, they do provide a framework for the thinking that underpins the understanding of the current low interest rate environment.

Indeed, recent work has revealed the possibility that market economies may not produce enough savings vehicles (Woodford, 1990; Holmstrom and Tirole, 1998). In other words, there are not enough borrowers who issue good quality assets. How is this shortage of safe assets expressed? Precisely by the low interest rates on public debt. Savers compete with each other and accept increasingly low returns for relatively scarce savings vehicles.

In a world with a shortage of safe assets, who is it that can provide sufficient savings vehicles? The State, of course. By issuing public debt, the State provides savings vehicles. The State then faces the following trade-off: to provide adequate and safe savings vehicles for all households while raising taxes (with possible negative effects) in order to pay the interest on the new public debt. A quantitative analysis of these two effects by Aiyagari and MacGratan (1998) points to an optimal level of public debt on the order of 60% of GDP. However, subsequent studies have shown that this optimal level is poorly identified and can easily vary between 20% and 200% of GDP. Indeed, the public debt has only a weak effect on well-being in the long term.

These reflections may seem abstract. However, they lead to two strong conclusions: low interest rates may be a sign of a shortage of safe assets. The optimal amount of public debt exists, but is subject to much uncertainty, which is not of great concern.

These reflections, which are among the few important new concepts in macroeconomics, have influenced the thinking of economists about the construction of Europe. A shortage of secure European assets leads to a premium (i.e. very low interest rates) for those States whose debt is perceived as the safest, which is the case in particular of Germany, while other more fragile countries, such as Italy, may be subject to higher interest rates, penalizing the States' capacity to intervene. The creation of a European safe asset, such as Eurobonds, is a way of ensuring that all EU countries benefit from the demand for safe assets. Discussion of this first arose in 2011 and has animated European debate since then (see the literature review by Leandro and Zettelmayer, 2019). The analysis led, with no obvious difficulty, to the intellectual framework that allowed the emergence of Eurobonds during the Covid-19 crisis. This intellectual transformation, which would have seemed unthinkable only a few years ago, is the fruit of advances in economic thought, which unfortunately have not been explained much to the general public.

For our purpose here, which is limited to France's public debt, within the European framework, it is sufficient to recognize that the current levels of public debt are not alarming.

4. How much fiscal space does France have?

It is possible to use these analyses to deduce an estimate of the fiscal space in France. Here we try to determine the additional amount of public debt, on top of the debt resulting from the Covid-19 crisis at the end of 2020, that could be used to stimulate investment in France and the recovery of economic activity.

The notion of fiscal space here aims to measure a State's additional debt capacity, before the sustainability of the public debt becomes an issue. This thorny issue has been

addressed in work that presents a set of relevant indicators over different time horizons (Blanchard, 1990; OECD, 2016), which can be used to ensure the sustainability of debt servicing, i.e. the payment of interest on the public debt. For example, in the very long term, the sustainability of public debt depends on the difference between the nominal interest rate paid on public debt and the nominal growth rate of the economy, i.e. $r-g$, which is difficult to anticipate in the wake of the Covid-19 crisis.

For France, the analysis can be simplified by focusing directly on trends in debt servicing.¹¹ The public debt will be sustainable if debt servicing is acceptable: for a country like France, the fiscal problem is not the deficit, nor the debt, but the servicing of the public debt. This point is essential for taking account of the new interest rate environment.

11.

For developing countries, debt sustainability depends also on debt issuance capacity and access to markets. Liquidity problems may exist. These are managed by the central banks of large areas, as the example of Greece in 2012 has shown. See also Ducoudré, Sampognaro and Timbeau (2019) for an analysis of debt dynamics.

a. Determining the fiscal space for an additional stimulus package

Consider once again the key points in the previous analysis: 1) the fiscal space should be measured by an estimate of the maximum tolerable interest burden on GDP, which is the relevant summary of the cost of the public debt; 2) the amount of the interest burden depends crucially on changes in interest rates (more than on repurchases by central banks); and 3) interest rates are likely to be low over the next ten years, but it is essential to manage the risk that real rates could rise again (Creel, 2020).

Let us then construct a prudent scenario. Assume that the average level of the interest burden on GDP has declined from 3.5 per cent to 1 per cent of expected GDP in 2022, without creating significant strains on the public finances. The average debt service over the last twenty years can therefore be considered as an acceptable limit, i.e. 2% of GDP, a level far below the peak of 3.5% reached in the early 2000s.

Second, the apparent interest rate on public debt is 1% today. It will fall in the near future. Indeed, new 10-year issues have negative interest rates, i.e. -0.35% in January 2020. The current apparent rate is much higher, as the average maturity of French debt lies between 7 and 8 years. As a result it takes 8 years for the apparent rate to adjust to the rate for current issues.

Finally, and most importantly, it is the rate of new issues in the fiscal space measured here that will affect future charges on the debt. Therefore, considering a rate of 1% over the next ten years seems critical, i.e. a majorant.

Thus, taking a current interest burden of 1% of GDP, a future interest rate of 1%, as well as a conservative upper bound of 2% of GDP for the interest burden leads to an initial amount of 100% of additional GDP-to-debt. This is a debt level that is comparable to that of Japan. This amount does not subtract the volumes held by the central banks, so as not to rely on the permanence of current monetary policy. Starting from this high estimate, we then take into account various factors that lead to reducing this fiscal space.

Uncertainty of the Covid-19 crisis. The new debt arising from the management of the Covid-19 crisis is not yet clearly identified, nor is the impact of the crisis on potential growth. Two-thirds of the loss of income from the crisis was absorbed by the State budget (Dauvin *et al.*, 2020), leading to an increase of around 20 GDP points in the ratio of public debt to GDP. A strategy for exiting the crisis will then require the continuation of plans to support the economy. More specifically, one cannot rule out partial and sectoral cancellations of the State-guaranteed loans (PGEs) granted or the cancellation, following their deferral, of social and tax charges. Without claiming to make a forecast here, amounts on the same order over the next ten years could increase the debts resulting from the current crisis.

Financial crisis. The subprime crisis in 2008 followed by the Covid-19 crisis in 2020 show that macroeconomic crises are now recurrent phenomena. It is therefore unfortunately necessary for any prudent estimate to consider a fiscal space with the occurrence of a crisis in the next ten years that is likely to cause a sharp rise in the public debt.

Public accounts adjustments. The State's commitments for the next ten years, for example for the pension system (COR, 2019) or for the social protection system more generally, depend on the political decisions taken to ensure their financing. The time to adjust these parameters will probably lead to increasing the public debt.

Subtracting the increases arising from all these elements leads to a more conservative estimate of the fiscal space of between 5 and 10 GDP points, on top of the recovery plan presented in 2020. Considering this low range, an estimate of an additional stimulus plan of 5% of GDP, i.e. around 100 billion euros for new public investment (described below), is therefore prudent.

b. Management of the risks associated with using the fiscal space

Management of rate uncertainty. The risk of an interest rate rise has a dual nature. If interest rates rise as a result of higher nominal growth, this rise would not be problematic for public finances, as tax revenues and GDP will increase with growth. The real risk is that interest rates rise without any increase in the country's nominal growth. In this case, interest charges relative to GDP could become high. This interest rate uncertainty can be easily managed. The debt strategy should be implemented so long as the interest rate on new public debt issues remains either below 1% (it is currently equal to -0.35% for 10-year issues) or 1 point below the economy's average growth rate (the average rate was 2.8% in 2019, i.e. 1.5% growth and 1.3% inflation). This latter threshold calls for a forecast of average growth over the next few years, which should be around 1.2% in real terms, once the health restrictions against the spread of Covid-19 have been lifted.

Finally, the uncertainty on interest rates can be partly contained by lengthening the maturity of the public debt. The rates presented in this note are mainly 10-year rates. This maturity could be further extended at low rates, which would make it possible to envisage refinancing needs for distant time frames.

Managing uncertainty in aggregate demand. There is uncertainty about consumer behaviour following the Covid-19 crisis. The savings accumulated by households could be consumed when health conditions permit. Some of it could also be transformed into the long-term accumulation of wealth. Some of the fiscal space could be used to manage the risk of low aggregate demand. The risk of aggregate demand that is excessively dynamic is much easier to manage. First of all, a rise in inflation is good news for the public finances. Second, a gradual increase in taxation helps to reduce both demand and the public debt. It would therefore be rather desirable if the risk of rising aggregate demand materialized.

c. Fiscal space, public investment and net debt

The discussion of the fiscal space per se deliberately put off discussion of the use of the space. First of all, this amount is a total amount for the coming years. The point is not to increase the deficit by 10 GDP points every year. A permanent increase in public expenditure must therefore be financed either by an increase in compulsory levies or by savings in other public expenditures. On the other hand, public investment that generates non-recurrent expenditure, which can be seen to be useful today for the energy transition, the health system, the education system and national research, fits perfectly into the logic of estimating this fiscal space.

Second, it is of course desirable that this fiscal space be used for public investments that have a strong impact on well-being and future tax revenues, i.e. strong impacts on economic activity (see Le Garrec and Touzé, 2020). These investments will lead to the accumulation of assets, and thus to an increase in the gross public debt, but a smaller increase in net debt (see Plane, Saraceno and Ragot, 2019, for the difference between gross and net public debt in France). Some opportunities for public investment, with Europe taken into consideration, are presented in Plane *et al.* (2020), Creel *et al.* (2020) and Cerniglia and Saraceno (2020).

5. A European strategy?

This estimation of France's fiscal space must now be put in the European context. The additional French fiscal space has been determined independently of possible European initiatives, and in addition to the 750 billion euro Next-Generation EU plan. An additional initiative coordinated at the European level would be more effective than uncoordinated national initiatives, as it would benefit from low interest rates, due to a common guarantee. Furthermore, a European recovery plan would avoid crowding-out effects between countries: a recovery in one country could stimulate exports from other countries that had not implemented a recovery plan. However, it is unlikely that a European agreement will emerge for an additional European recovery plan financed by borrowing. Pooling part of the national debts generated by the Covid-19 crisis is a more realistic objective, as is described below. The coexistence of European and national stimulus plans would help to manage the heterogeneity of European situations, which is not diminishing in this crisis.

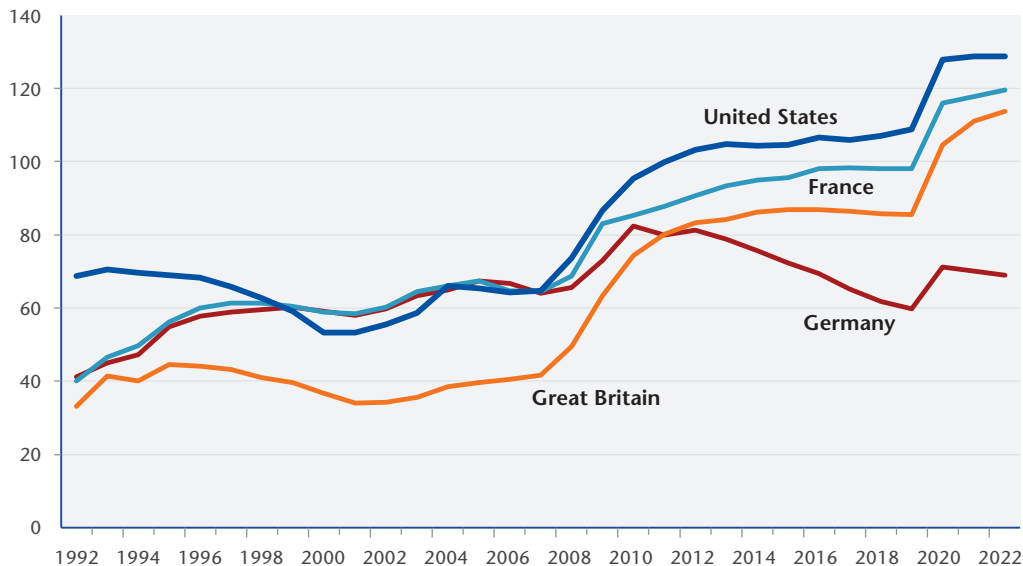
By way of example, consider the divergence between France and Germany, the two largest countries in the euro zone. The following graph shows the debt (in the Maastricht sense) in relation to the GDP of the two countries, as well as that of the United States and Great Britain. There are two clear periods in the trend in public finances in France and Germany, which include the European Commission's forecasts up to 2022. From 1990 to 2010, the public debts of the two countries overlap. In the absence of explicit coordination, France and Germany followed the same trajectory in their public debt. The divergence appears following the subprime crisis in 2010. Germany's debt returned to 60% of GDP whereas France's debt continued to rise, to reach 100% of GDP before the Covid-19 crisis. The divergence between France and Germany was unprecedented. In 2022, the divergence will be on the order of 50 points of GDP.

This is not the place to explain the divergence between France and Germany (see Ragot and Le Moigne, 2015). Let us simply mention that Germany's export capacity has enabled it to take advantage of European and global demand to stimulate its economy, which translates into holding down its public debt without increasing unemployment or reducing growth.

This European divergence will create problems in the use of the flexibilities of the European treaties, which is necessary for the use of the national fiscal space. To be more precise, the European treaties have stipulated a maximum debt-to-GDP ratio of 60% since the 1993 Maastricht criteria. This threshold, which economically is arbitrary, seemed to be an upper limit at the time the treaties were drawn up. This figure now makes no economic sense, although there is no strong desire to change the treaties. Flexibilities have been introduced in the European framework to make this figure a target. In practice, countries whose debt exceeds 60% of GDP must cut the gap between their debt and the 60% threshold by 1/20th each year, with some exceptions.

These exceptions are nowadays commonplace among European countries, with the debt criterion not being implemented.

Figure 7. Public debt in France, Germany, the United States and Great Britain as a percentage of GDP



Source: AMECO for data and forecasts.

The possibility of effectively using the national fiscal space for a recovery plan will depend on a political agreement between European countries that allows the current situation to be treated as exceptional. It's necessary to distinguish two different discussions. The first concerns the reform of European rules to take account of low rates and to rethink the 60% of GDP debt benchmark target within this framework (see Ducoudré *et al.*, 2018, for a consideration of European rules). The second concerns the use of the flexibilities of the European treaties within the current framework. It is in this framework that the divergence of European debts poses a problem. Europe's institutions need to be convinced that the additional increase in French debt is not fiscal irresponsibility but an investment in recovery that will boost future international transfers.

The previous chart also showed the expected debt dynamics of the United States and Great Britain. The point is that the use of the national fiscal space is not a French specificity, but is an issue shared with the United States and Great Britain. On the contrary, it is Germany's strategy of rapid debt reduction that is an international peculiarity, which is made possible by its strong trade surplus. France should not seek to reproduce a strategy that is not adapted to its economy. Finally, the argument that the strength of the dollar justifies the possibility of American indebtedness (which is not the case for France) is not relevant.¹² The consolidation of European construction in the Covid-19 crisis is strengthening the euro and making Europe's public debts more attractive, as shown by the negative rate of French debt issues. If the new debts are perceived as an investment, financing capacity will manifest itself in low rates, which is also the case for Great Britain.

To conclude on the European dimension, the real debate on debt at the European level concerns the strengthening and the logic of the Next-Generation EU plan, which has led to a common, solidarity-based euro zone debt of 750 billion euros, which is

12. See <http://www.cepii.fr/BLOG/bi/post.asp?IDcommunique=720> for a demonstration of France's "exorbitant privilege".

distributed among the countries according to their economic needs and not their contribution to the European budget. The next step is to pool the European debts created by the various plans to support the economy during the Covid-19 crisis, along with some of the stimulus plans. A large portion of these debts, some 25% of the euro-zone's GDP, is now held by central banks. The mutualisation of these national debts seems a more realistic European objective than the development of an additional recovery plan at the European level.

So the order of the day now is to manage the coexistence of national and European recovery plans and national and European public debts. This coexistence will make it possible to manage the heterogeneity of the different national situations.

Conclusion

The transformation of global capitalism is leading to an unprecedented situation of high public debt and historically low interest rates. The existence of low interest rates is what is most critical, as rising public debt must now be understood as an appropriate response by government to this new environment. The analysis of this Policy Brief points towards an additional French fiscal space of 5 points of GDP, i.e. around 100 billion euros, as a conservative estimate. How this fiscal space is used must depend on the relevance of the investment it allows. This debt capacity must be used wisely, as it will increase redistribution within future generations, so its political acceptability must be ensured through democratic debate.

Second, this analysis shows that the debate must focus on determining what public debt France allows itself and for what purposes. Framing the debate in terms of the need for debt cancellation is out of step with the current situation of debt at negative rates. On the contrary, the signal to be sent to savers is that France's debt is solid, so long as low interest rates are used. ■

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Xavier Ragot, 2021, « More or less public debt in France? », *OFCE Policy brief* 86, March 9.

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