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## Europe home alone

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### Abstract

Anyone who doesn't bury their head in the sand can see that Europe is at war with Russia. At the same time, the USA is withdrawing its protective hand over Europe. It is clear that Europe must do more to protect itself. To do so, defence spending must increase dramatically. But how is this to be financed? The debate in Europe is currently centred on the question of joint or national debt financing. In the first part of this paper, I argue that both paths are likely to cause major problems for Germany and the European Monetary Union. In the second part, I put forward a proposal for discussion on how Germany could protect itself against this.

### Zusammenfassung

Wer nicht den Kopf in den Sand steckt, sieht, dass Europa sich im Krieg mit Russland befindet. Gleichzeitig ziehen die USA ihre schützende Hand über Europa zurück. Klar ist, dass Europa mehr tun muss, um sich selbst zu schützen. Dafür müssen die Verteidigungsausgaben drastisch steigen. Aber wie soll das finanziert werden? Gegenwärtig spitzt sich die Debatte in Europa auf die Frage gemeinschaftlicher oder einzelstaatlicher Schuldenfinanzierung zu. Im ersten Teil dieses Papiers stelle ich die These auf, dass beide Wege große Probleme für Deutschland und die Europäische Währungsunion bringen dürften. Im zweiten Teil stelle ich einen Vorschlag zur Diskussion, wie sich Deutschland dagegen schützen könnte.

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<sup>1</sup> ChatGPT 4 provided research assistance. Errors are attributable to the author.



Anyone who doesn't bury their head in the sand can see that Europe is at war with Russia. The war is hot in Ukraine, still cold in the rest of the world, but could also become hot there if Russia defeats Ukraine. At the same time, the USA is withdrawing its protective hand over Europe, perhaps not completely, but in such a way that it is worrying. It is clear that Europe must do more to protect itself. To do this, defence spending must increase dramatically, and quickly, to levels similar to those seen during the Cold War against the Soviet Union.

But how is this to be financed? By reorganising government spending, raising taxes or increasing government debt with or without support from the central bank? A look at history shows that all of these forms of financing played a role in earlier wars. Today, however, the debate in Europe is focussing on the question of joint or national debt financing for armaments. In the first part of this paper, I argue that both approaches are likely to cause major problems for Germany and the European Monetary Union. In the second part, I put forward a proposal for discussion on how Germany could protect itself against this.

### **How wars were financed**

Tax increases, cuts in civilian government spending, increases in government debt and monetary financing through money creation all played a role in the financing of wars. However, the instruments were used to varying degrees depending on the circumstances.

Budgetary policy: During the Napoleonic Wars from 1803 to 1815, Britain increased its income and consumption taxes, with higher taxes on the purchase of luxury goods in particular (Bordo and White, 1991). During the First World War from 1914 to 1918, Germany and Britain introduced progressive income taxes to cope with rising military expenditure (Ferguson, 1988). During the Second World War, income tax was extended in the US, and price and wage controls were introduced to stabilise the war economy (Rockoff, 2012). However, since raising taxes and cutting civilian spending is politically difficult to implement, these instruments were usually only used to finance part of the war costs - especially if the war dragged on for a long time.

Debt: A further and usually larger part of the cost of the war was financed by issuing government bonds. In the American Civil War from 1861 to 1865, the Northern government under Abraham Lincoln issued "Liberty Bonds" to finance the costs of the war against the Confederates (Bordo and White, 1991). During the First World War, the USA, Great Britain and Germany issued war bonds to the population on a large scale, often under pressure from patriotic campaigns (Ferguson, 1998). And during the Second World War, so-called "war bonds" were sold to citizens in the US (Rockoff, 2012). Although this allowed tax increases and spending cuts to be limited, future generations were left with mountains of debt. In peacetime, long phases of budget consolidation often followed to reduce the war debt.



Monetary financing: When war became existential, the costs of war were directly monetised by issuing new money. In the French Revolutionary Wars from 1792 to 1802, the young French Republic issued "assignats", an early paper currency that led to massive inflation (Sargent and Velde, 1995; Mayer, 2022). During the Napoleonic Wars, Britain abandoned the gold standard in 1797 and began issuing unbacked paper money to finance its war effort. This led to a devaluation of the currency and rising inflation but allowed government spending to expand in the short term (Bordo and White, 1991).

During the American Civil War, the northern states of the USA issued so-called "greenbacks", paper money that was not backed by gold or silver. Although this helped to finance the costs of the war, it led to strong price fluctuations and a devaluation of money (Rockoff, 2012). In the Weimar Republic, Germany printed large amounts of paper money after the First World War to cover war debts and reparation payments. This led to hyperinflation in 1923, which resulted in a currency reform in 1924 (Eichengreen, 1996; Mayer, 2022). And during the Second World War, Nazi Germany financed a large part of its war economy through the direct creation of money. The resulting money overhang was also eliminated by a currency reform in 1948 (Mayer, 2022).

However, monetary war financing did not only play a role in times of existential crisis. During the Vietnam War, which stretched from 1955 to 1975, the US central bank kept interest rates artificially low, particularly in the second half of the 1960s and in the 1970s, to keep the national debt affordable. The increasing military spending and the simultaneous social programmes of Lyndon B. Johnson's "Great Society" should not burden the private economy with high interest rates. The result was a steep rise in inflation in the late 1960s and 1970s. The international dollar overhang created by government debt and loose monetary policy ultimately led to the abandonment of the dollar-gold peg and the end of the Bretton Woods monetary system (Rockoff, 2012, Mayer, 2022).

### **The debate today**

At present, the debate in Germany and Europe is primarily centred on the question of national or joint new borrowing to finance armaments. In view of high tax burdens, the need for infrastructure investment and a bloated welfare state that is dear to voters, tax increases and reallocations of civilian government spending play a subordinate role.

Why the French and other governments of highly indebted euro states are in favour of joint borrowing and why Germany rejects this becomes clear when one considers the financing of the Napoleonic wars. As the economic historian Michael Bordo and his co-author Eugene White describe in a study published in 1991 (Bordo and White, 1991), Great Britain financed its war costs primarily through debt, while France raised taxes to do so. Great Britain was able to borrow at low interest rates because the British state was considered a good debtor with a high credit rating on



the financial markets. In view of the associated confidence in the British pound, the British government was also able to temporarily suspend the gold standard to support war financing with newly created paper money. The markets did not fear that the government would ruin the currency through excessive paper money creation. In fact, Britain returned to the gold standard after the defeat of France and paid off the national debt.

The situation in Napoleonic France was completely different. The state had ruined its creditworthiness on the financial markets and its currency by issuing assignats to finance the war during the revolutionary wars. With this history, it was impossible for Napoleon to finance the costs of the war through government debt and money creation. War bonds could not have been sold, and newly created money would have been worthless. As an absolute ruler, however, he was able to fleece the citizens by raising taxes to finance the war. The fact that dictatorships are superior to democracies in this respect is shown by the policies of fascist Italy, where Benito Mussolini paid off the war debt from the First World War by imposing tax increases and spending cuts on the citizens, while the young Weimar democracy had to accept state bankruptcy through hyperinflation. Today, Putin's Russia is also managing to finance the costs of the war in Ukraine to a considerable extent through forced cuts in civilian spending and tax increases, despite a weak economy.

France's current financial situation is similar to that of Napoleon and Germany to that of Great Britain in the early nineteenth century. The French state is heavily indebted and has a poor reputation for currency stability. Its creditworthiness, which enables it to pay low interest on its debt, is based on its membership of the monetary union. Its creditworthiness is primarily supported by Germany's comparatively low level of debt and German voters' preference for currency stability. The debt interest on joint debt would be kept low by Germany's joint and several liability. With the NextGeneration EU Fund, Italy in particular, as the largest recipient, benefited from Germany's creditworthiness. France is now pushing for the renewed issue of European Union bonds to also benefit from the transfer of Germany's creditworthiness for its defence financing.

Understandably, Germany opposes France's request. In the first twenty-five years of monetary union, Germany allowed France and other eurozone countries to borrow cheaply because it protected its creditworthiness with a conservative fiscal policy. As the welfare state grew strongly under Angela Merkel's governments, Germany's conservative fiscal policy came at the expense of public infrastructure and defence capabilities. France may have high debts, but it has a fat welfare state, good public infrastructure and a "force de frappe". Germany has nothing of the sort but has a high credit rating on the financial markets. It would now have to maintain this creditworthiness for other euro states being able to finance armaments at low interest rates. To this end, it would have to keep its debt low by reducing the welfare state while increasing expenditure on public infrastructure and armaments.



Financing the rearmament through national rather than joint debt reduces the transfer of creditworthiness from Germany to highly indebted euro states but undermines currency stability. This is because if France and other highly indebted euro states continue to significantly increase their debt, the European Central Bank would have to buy up some of the newly issued bonds to limit the rise in interest rates. The consequence of the money overhang created with new money would be inflation and currency devaluation. The euro would probably be spared the fate of the French assignats or the German Reichsmark in the young Weimar Republic. But it could follow in the footsteps of the US dollar, whose exchange rate fell due to high inflation in the 1970s.

### **New ways of financing armaments in Germany**

In the first part of this paper, I showed that both joint and national debt to finance armaments are likely to cause considerable problems. These problems could be minimised for Germany if the German state were to take a new approach to armaments financing: issuing a digital coin.

Let us assume that the German state was to set up a defence financing fund (DF). The DF issues the digital taler. Like other digital coins, the taler is neither a debt instrument nor debt money, as it is not repaid in euros at a fixed rate by the state. However, because it is issued by the state, it is state money in character, even if it is not declared legal tender - the euro already has this status. As Adam Smith described, this nevertheless gives the taler "some additional value" (Duarte and Mayer, 2025).

The supply of talers is determined by the demand for them. To estimate this, we rely on the fiscal theory of the price level (Duarte and Mayer, 2025). If we abstract from the issuance of bonds, in this theory the real value of government money is backed by the present value of all real surpluses of the government budget expected in the future. In the DF, these surpluses are represented by the repurchase of talers by the German state. The initial marketable expenditure of talers to finance armaments can therefore be determined by the present value of these repurchases.

The "valuation equation" of the fund can be formulated as follows using the Gordon Growth formula:

$$\frac{MT}{P_0} = \frac{R_0}{k - g}$$

Where MT denotes the nominal quantity of talers,  $P_0$  the price index for defence equipment in talers in year 0,  $R_0$  the repurchases of talers made by the government in year 0,  $k$  the time discount rate and risk premium, and  $g$  the growth rate of repurchases.



Germany plans to spend 73.4 billion euros on defence in 2025. This determines the initial value of  $R_0$  in the valuation equation. If we assume that this expenditure grows at the rate of nominal potential gross domestic product, we obtain two per cent for  $g$  (zero real growth plus two per cent inflation). The demand for thalers is determined by the buyers' time preference and the risk premium they demand. For the time preference, we assume that buyers are indifferent between one thaler today and 1.02 thalers in a year's time. The time preference is therefore two per cent per year. Although the thaler benefits from its character as sovereign money and potentially high liquidity, as it can be traded directly via a distributed ledger (e.g. blockchain), it is new and unfamiliar. Buyers will therefore demand a risk premium because they do not fully trust the promised redemption. We generously estimate this premium at eight per cent. Based on these assumptions, the volume of the DF fund is as follows:

$$\frac{MT}{P_0} = \frac{\text{€ } 73,4 \text{ Mrd}}{(0,10 - 0,02)} = \text{€ } 917,5 \text{ Mrd}$$

The German state could therefore raise almost a trillion euros by issuing thalers at an initial rate of 1:1 against the euro.

The thaler would presumably be attractive to a broad group of buyers because the money supply in thalers is limited to the real present value of the buybacks (and decreases over time due to the buybacks). In this case, the expected long-term purchasing power of the thaler remains stable (or even increases due to the buybacks), while the purchasing power of the euro tends towards zero with the European Central Bank's inflation target of two per cent.<sup>2</sup> If the market price of the thaler were therefore to rise against the euro after the initial issue,  $P$  in thalers would fall and the real money supply would rise from  $MT/P_0$  to  $MT/P_1$  ( $P_1 < P_0$ ). At the same time, however, the present value of the repurchases in euros would also rise and the government would have to buy back  $R_1$  euros instead of the lower quantity  $R_0$  euros.

To reduce the exchange rate risk, the state could grant itself the option of levying taxes in thalers in future, with the exchange rate to the euro fixed at the initial parity. To hedge their currency risk, taxpayers would demand thalers right from the start. Furthermore, the state could offer defence companies to conclude supply contracts in thalers. If they expect the thaler to appreciate in value, this option would be lucrative for them. The defence companies would thus contribute to the distribution of the thalers when they sell them to cover their costs in euros.

The advantage for Germany of financing the rearmament by issuing a digital coin would be the avoidance of higher debt in the traditional sense. European debt rules and the debt brake enshrined in the constitution would not be affected by the coin issue, which is like equity financing. One disadvantage would be a possible rise in

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<sup>2</sup> The expected long-term real value of the euro is zero with the ECB's inflation target of two per cent per year, as  $\frac{1}{1,02^\infty} \rightarrow 0$



interest rates for bond financing if investors were to favour the thaler over traditional federal bonds as a means of preserving value. However, this disadvantage could be limited if financing were to shift from the issuance of bonds to the issuance of digital coins.

The greater disadvantage is likely to be political resistance from other euro countries, including France in particular. The highly indebted euro countries could see the issue of a digital coin in Germany as competition to the euro. A German withdrawal from the euro - even if only partial - would limit the transfer of Germany's creditworthiness to France and other highly indebted euro countries and could ultimately even end it.

## **Conclusion**

Europe must rearm to counter the military threat posed by Putin's Russia and the withdrawal of the USA as a protective power. This is likely to be financed primarily by taking on new debt. Joint borrowing in the European Union would only be lucrative for the highly indebted euro states if Germany were to maintain its credit rating through fiscal austerity. Over the past 25 years, the German state has achieved the transfer of its creditworthiness to the other euro states by criminally neglecting spending on public infrastructure and military defence to keep German debt low.

Due to the need to catch up on public infrastructure and defence, Germany would have to maintain its credit rating in future by drastically reducing the welfare state. However, it is likely to be politically difficult to communicate that Germany must reduce its social spending so that the highly indebted euro states can take on more debt at low interest rates. It is doubtful whether the parties of the "democratic centre" will be able to continue to deceive the German public when it comes to transferring German creditworthiness to other countries. If the citizens were to realise this, the AfD would benefit even more.

If debt were to be taken on by individual states for the purpose of rearmament, it is to be expected that the ECB would be forced to curb interest rates for highly indebted euro states. The result would be higher inflation and the decline of the euro. A model for this development would be the financing of the Vietnam War in the USA from the mid-1960s to the 1970s. It is also doubtful whether the monetary union could survive the decline of the euro in the long term.

In order to pursue the interests of German citizens, it would make sense to finance rearmament in Germany by issuing a digital coin. The creation of a German thaler would in all likelihood meet with fierce resistance from France because it would threaten the transfer of German creditworthiness. However, a German government mindful of the interest of its citizens should at least demand a price for renouncing a digital coin and the transfer of creditworthiness: for example, the extension of the French military nuclear umbrella to the whole of Europe.



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