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Economic Theory

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HYPERINFLATION IN THE EURO AREA?

Abstract

In the non-academic sector in Germany, it is often advocated that the expansion of the ECB's money supply would inevitably lead to high inflation or even hyperinflation. This paper explores the question of whether inflation could arise in the euro zone, if so how high it would be and whether it would be hyperinflation. The work is based on theoretical considerations on the subject of hyperinflation and inflation and outlines a possible scenario in which the latter could actually become a reality. The thesis is that the greatest danger to the euro zone would come if Italy and / or Spain chose to leave the Union. Covid-19 has increased the risk of divergent economic developments in different countries in the euro zone. Italy and Spain have to reckon with a dramatic increase in public debt, weak growth and deteriorating conditions on the labour market. The main risk is unlikely to be that the euro zone will not help Italy or Spain, but the people in these countries may feel that aid is not enough, thus making an exit a serious option. If these countries left the Eurozone, then they would likely opt for an orderly exit. That means Italy would join EMS II after a one-time devaluation and not leave the EU. If the exit was not negotiated, then a disorderly parting would commence, which is the scenario with a high risk of hyperinflation.

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5 figures, 1 table, 23 references.

Introduction

Since the turn of the millennium, there have been significantly less adherents to the quantity theory. A study by Teles et. al. (2017) examining data between 1970 and 2005 from developed economies has showed an extremely poor correlation between money supply growth and inflation. At the beginning of the 1990s, however, the verdict on the validity of quantity theory was quite different. Back then, Barro (1993) showed in his textbook that the deviation from the 45 degree line was small. The question of the effectiveness of the quantity theory of money especially gained attention after the world's major central banks employed unconventional monetary policy after the financial crisis in 2008. In Germany, some economists still expect high inflation or even hyperinflation[1] to result from the strong expansion of the money supply of the ECB, the FED and other major central banks. Examples of authors from the non-academic field are Krall (2017) and Homm et. al. (2016). Both denounce the monetary policy of the ECB after the financial crisis and see the high national debt as the reason for an emerging hyperinflation. In his book, Krall has referred to the «Austrian economist» Roland Baader and is a proponent of the idea that strong monetary expansion leads to hyperinflation or high inflation. Rieck (2011)[2] has gone in a similar direction as the two

[1] One has to be careful about the context in which the term hyperinflation is used. Many fund managers or investors often speak of hyperinflation a little too quickly and mean an inflation rate of around 5-10%. Hyperinflation starts at 50%. There is also a big difference between high inflation and hyperinflation (Äslund., 2012).

[2] Rieck is a professor for finance at the University of Applied Sciences in Frankfurt.

aforementioned authors. According to Rieck (2011), in contrast to Krall and Homm, inflation does not automatically result from more money. However, he has suggested that constant increases in the central bank's money supply act like a drug. He has posited that the ECB carrying out government financing through purchases of government bonds is a «fall from grace». Rieck has also highlighted an important fundamental difference between the inflation of goods and the inflation of asset prices clear, namely that the latter is precipitated by demographic development. Fuest (2020) has explained in great detail the rise in government bond prices and the associated decline in yields. In addition to demographic reasons, Fuest cites the unequal distribution of income, the increased purchases of government bonds by the central banks and the weakness in investments due to the falling potential output as reasons for the low interest rates and thus high bond prices.

In complete contrast to the aforementioned critics of high fiscal deficits and unconventional monetary policy, the Modern Monetary Theory takes the view that government deficits should be used to guarantee full employment and that the central banks can easily finance the budget without causing inflation, Especially when the actual output is below the potential output, (e.g. Palley, 2015). The financial resources for high fiscal deficits could come from government funding from the central banks. The latter cannot become insolvent because they have the monopoly on creating money (Palley, 2015). It has been confirmed in the literature that a central bank technically cannot default (Buiter, 2008), but there are arguments on why one should react to a decline in equity at a central bank. A decline in central bank equity could jeopardize long-term price stability. The findings of the Modern Monetary Theory fundamentally contradict both the quantity theory and the theories of the aforementioned German authors.

This article aims to shed light on the above-mentioned risks of high inflation or hyperinflation in the euro zone. The causes of high inflation and hyperinflation are dealt with at the beginning. The third chapter shows a possible scenario for a rise in inflation. The author considers this variant to be possible but not desirable.

Literature Review

There is ample literature on theories of what causes hyperinflation (Liping, 2017; Moosa, 2014). In principle, inflation can arise because of demand and supply effects. Shortages on the supply side can lead to high inflation or hyperinflation. If central banks «print money» in order to stimulate the demand for goods, this can cause hyperinflation. After the financial crisis, the major central banks increased the demand for government bonds and other public and institutional bonds in particular. This reduced the cost of public financing. The large developed countries of the world, however, have not increased their budget deficits

excessively. Immediately after the crisis, the output was also well below the potential output and, as the Modern Monetary Theory rightly stated, no high inflation was registered in this situation. On the contrary, one had to ward off the danger of deflation first.

Shocks in the balance of payments could be another cause of high inflation. These include, for example, an excessive increase in foreign debt or a strong overvaluation of the currency, which leads to a high current account deficit. A sharp rise in the budget deficit has already been mentioned, which in turn could have a negative impact on the current account. A continuous expansionary monetary policy with a rapidly increasing supply of money and low interest rates can also lead to hyperinflation (Liping, 2017). In addition, a non-economic factor, such as a technological shift or political revolution, could also cause hyperinflation (Äslund, 2012). However, the most common cause of hyperinflation is the breakdown of a fixed exchange rate system. Äslund (2012) has rightly pointed out that the euro area is a monetary union and is therefore at risk in this regard.

Moosa (2014) has discussed the causes of hyperinflation using the example of the USA. The author saw a structurally too high budget deficit and a disproportionately strong increase in debt (also to be achieved through monetization) as the main reason for a coming hyperinflation in the USA. The author has also tried to calculate the timing of an impending hyperinflation. According to his approach, hyperinflation occurs when the rate of tax revenue / debt is equal to the rate of interest payments / debt. Based on a conservative scenario, this would be the case in the US in 2034. Another possibility would be that the debt to GDP ratio is over 80% over a longer period and the budget deficit as a percentage of government expenditure increases over 40% over a longer period of time. The debt to GDP ratio has long been above 80% and the fiscal deficit as a percentage of government spending is still below 40%.

Äslund (2012) has pointed out that hyperinflation only occurs in very exceptional circumstances. Examples of this are wars or a change from a communist to a market economy system. Historically, hyperinflation never emerged after a recession or depression. Rather, the problem after a recession or depression is deleveraging. No matter how much the central bank raises the monetary base, M2 will still not rise strong enough to cause high inflation because the money creation multiplier falls. There is no historical evidence that a quantitative easing strategy by a central bank would have led to high inflation or even hyperinflation.

The US economists Eichengreen and Feldstein have dealt in great detail with the criticism of the monetary union in the euro zone (Zipper & Lechner, 2019). Eichengreen (2010) published an article in 2010 entitled *The Breakup of the Euro Area*. The time of publication coincides relatively exactly with the start of the European debt crisis. The author has predicted that no country would leave the Eurozone in the next ten years. In his view, the reason for this lay in the high costs of leaving. The technical details of the reintroduction of a national currency

and the political and economic costs would be too high compared to the short-term benefits of an exit. Instead of one country leaving the Eurozone, Eichengreen foresaw the monetary union facing further disintegration. One consequence of a country's exit would be increasing spreads on government bonds and an increased risk of default and thus a rise in interest rates. The situation would be particularly precarious in countries like Italy and Portugal. These states had weak growth and high levels of debt, making reintroduction of the national currency and thus inflation of the economy and debt relief an appealing possibility. When Feldstein (2010) commented on Eichengreen's article, he assessed the likelihood of a country leaving as slightly higher and pointed to the relatively weak support for the euro within the euro zone. In Italy, support for the euro was already relatively low in 2006, with only 40% in favour.

Sauer (2012) has also presented an interesting hypothesis on what could happen in the euro zone. His focus revolved around what could happen if Greece defaulted. In this case, the bonds would drastically drop in value, and the ECB would have to write them off, which would reduce the equity capital. If the value of the bonds dropped significantly or even became negative, then there would be achance that the taxpayers would have to pay for a recapitalization of the ECB. Even if this did not happen, there would still be a risk of a sharp devaluation of the euro and an increase in inflation. Trichet, the former president of the ECB, warned of a partial default by Greece. He said the Eurosystem would have to increase equity in this case. However, Sauer has only discussed the case of a default rather than the possible effects of an exit of a country like Italy. In the event of an exit of a large country like Italy, there is a definite risk of hardship because, in addition to the bonds, there will also be negative target two balances from this country.

Research Results

When looking at the Euro zone data, it does not seem realistic to assume that hyperinflation is imminent. The ECB's inflation target has almost been achieved in the last five years, the national debt as a percentage of GDP in the euro zone was 86.3% in 2019 and the fiscal deficit as a percentage of GDP was only 0.6% of GDP. However, Covid-19 has drastically worsened the situation in terms of the fiscal deficit and debt.

Table 1 shows the debt ratios of selected Euro zone countries from 2019 to 2021. The estimates for 2020 and 2021 come from Eurostat. Here, the well-known problem with the national debt of southern European countries like Italy, Spain and Greece can be seen. The theoretical stipulation that the national debt must not remain above 80% of GDP for any length of time was violated by Italy and Greece in particular. Spain has only been well above the 80% since the financial crisis in 2008.

Table 1

Debt to GDP ratio in selected countries of the Euro zone

Debt to GDP	2019	2020	2021
Greece	176.6	196.4	182.6
Spain	95.5	115.6	113.7
Italy	134.8	158.9	153.6
Euro Zone	86.0	102.7	98.8
Germany	59.8	75.6	71.8

Source: Urmersbach, B. (2020). European Union & Euro Zone: Budget Balance from 2009 to 2019 in relation to gross domestic product [Infographic] [in German]. Statista. https://de.statista.com/statistik/daten/studie/155253/umfrage/haushaltssaldo-in-eu-und-eurozone-in-relation-zum-bruttoinlandsprodukt-bip/

Figure 1 shows that joining the Eurozone has paid off for Spain, Italy and Greece, because the interest burden as a percentage of fiscal revenue in 1997 (i.e. before the introduction) was 20% or higher in these countries. Today, only Spain is above 15%. Despite the euro crisis, the three countries have increased the stability of their budgets. This is due to the prescribed discipline of the EU Commission and the ECB. Even after the financial crisis, the European sovereign debt crisis forced them to structurally improve the state budget. For Greece, this meant years of recession.

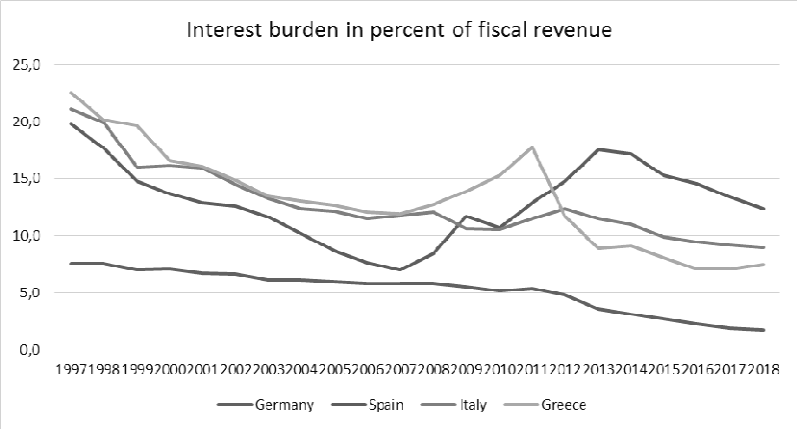
Even by end of spring of 2020, Spain and Italy had already been relatively badly affected by the corona pandemic. Covid-19 could set back the southern European countries in these statistics, because fiscal revenues will fall significantly due to the decline in GDP and the interest burden could also rise slightly. However, the southern European countries benefit from very low yields on government bonds.

Figure 2 shows that the southern European countries have recovered economically from the shock after the financial crisis and the European sovereign debt crisis. The decline in the unemployment rate was very gratifying in Greece and Spain. However, with Covid-19, the situation on the labour market has worsened significantly. The southern European countries lacked tourism income in the summer of 2020, on which the countries depend.

Figure 3 shows the weak real economic development in Italy and Greece since the introduction of the euro. In Italy, real GDP per capita was around the same level in 2019 as it was in 1999 when the euro was introduced. Greece was only slightly above that. Covid-19 deteriorated GDP per capita for the southern European countries. In Germany and the other core countries there was also a step backwards, albeit not be as strong.

Figure 1

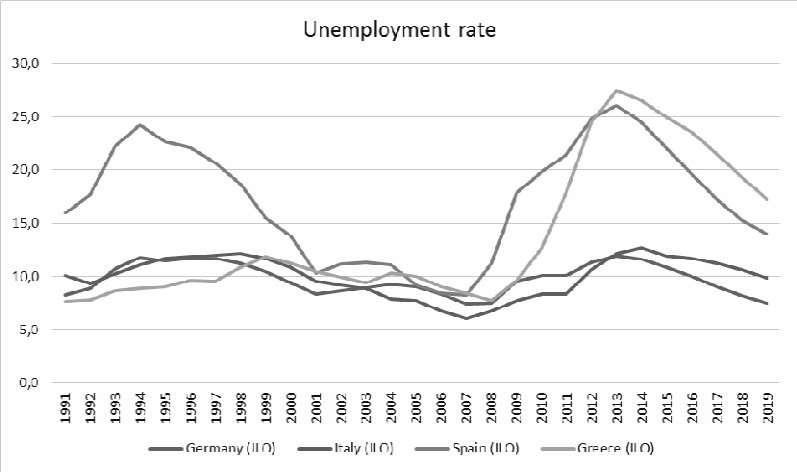
Interest burden in percent of fiscal revenue for selected countries of the Eurozone



Source: World Bank. (2021a). *Interest payments (% of revenue)* [Interactive infographic]. Retrieved March 23, 2021 from https://data.worldbank.org/indicator/GC.XPN.INTP.RV.ZS?end=2018&locations=IT-ES-XC-GR&start=2000&view=chart

Figure 2

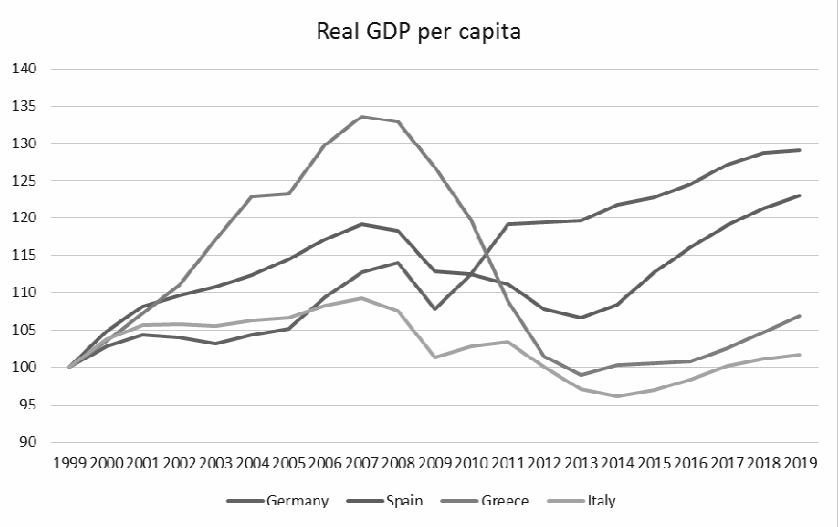
Unemployment rate in Germany, Italy, Spain and Greece, 1991-2019



Source: World Bank. (2021b). *Unemployment rates (ILO estimate)* [Interactive infographic]. Retrieved March 23, 2021 from https://data.worldbank.org/indicator/SL. UEM.TOTL.ZS

Figure 3

Real GDP per capita in Germany, Italy, Spain and Greece, 1999-2019



Source: World Bank. (2021c). *Real GDP per capita Euro area* [Interactive infographic]. Retrieved March 23, 2021 from https://data.worldbank.org/indicator/NY.GDP.PCAP.KN?end=2019&locations=DE-IT-ES-GR-PT&start=1999

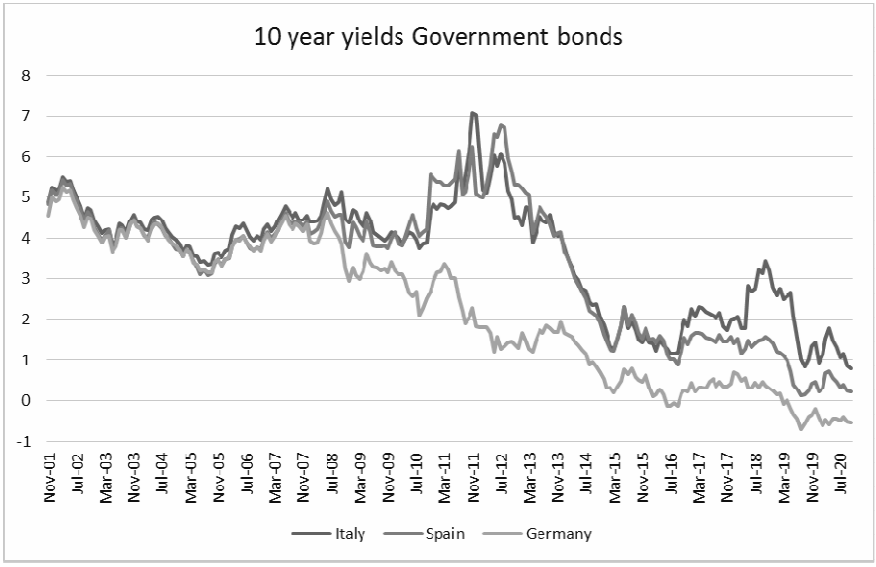
The disintegration mentioned by Eichengreen threatens to increase. The agreement on the EU's EUR 750 billion reconstruction program and the ECB's government bond purchases have eased the situation on the bond market for the time being.

Figure 4 shows that the developments on the bond markets in Italy and Spain after the outbreak of Covid-19 were not as dramatic as the European sovereign debt crisis. The market estimates the probability of default in Italy to be much higher than it does for Germany, but at the moment a high probability of default is not expected. However, one must not forget the interventions of the ECB, because without them the situation on the bond markets would not be as stable.

Figure 5 shows the result of a possible exit referendum in Italy for the years 2016 to 2018. The positive sentiment for the euro has gradually improved over this period. However, one has to assume a certain cyclical dependence in this survey. After the end of the Corona crisis, the situation could turn in the other direction. The unemployment figures are a good indicator of this survey.

Figure 4

Government Bonds yields of Italy, Spain and Germany, 2001-2020



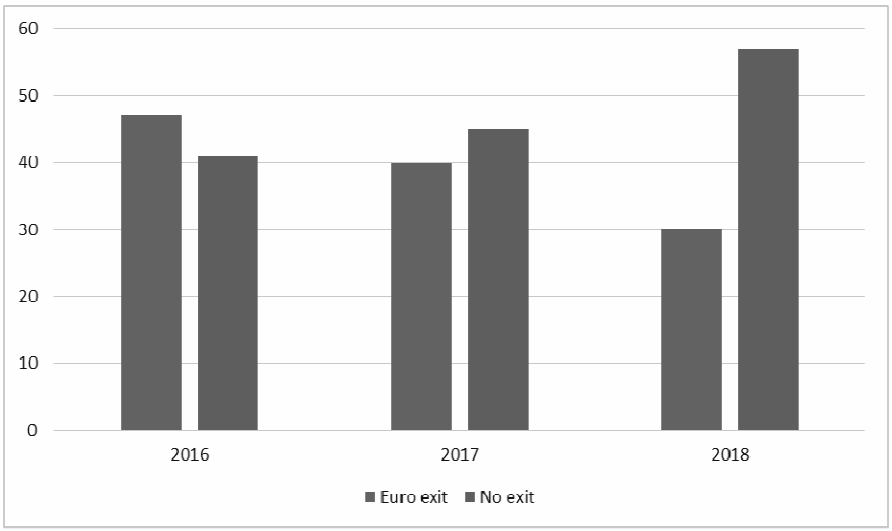
Source: created by the author using the data of (Investing.com, n.d.).

If euro-scepticism increases again in Italy or in one of the other southern European countries and the majority of the population is in favour of an exit from the euro zone, then that could become a political option. If you take into account the costs of an exit, which Eichengreen and Feldstein mentioned, then a lot would have to happen for the countries in question to actually hold a referendum on the future of the euro. However, if the population is in favour of leaving the eurozone, then no reconstruction programmes and no ECB interventions will help. A shock of a large country like Italy leaving the Eurozone could lead to a drastic devaluation of the currency. In the case of Italy, an exit from the EU is still unlikely, even if that would be a legal requirement for an exit from the Eurozone. These provisions can be repealed. Italy could choose the option of a fixed exchange rate to the euro if it left the Eurozone. Italy was already a member of the European Monetary System. Realignments could be made. That means you devalue, for example, by 20% once and then you stay within a given range. Immediately after leaving the euro, the Italian central bank and the ECB could conclude an agreement stating that Italy would remain in the European Exchange Rate Mechanism II after a one-time devaluation. That would curb speculation and the risk of inflation would decrease because the devaluation was orderly. Italy

and the Eurozone countries would likely also sign a negotiated agreement. Such a scenario would not be accompanied by lasting panic among investors and would have advantages for Italy and the Eurozone.

Figure 5

Survey on a possible referendum on Italy's exit from the Eurozone



Source: created by the author on the basis of Süddeutsche (2018).

A scenario like the one Äslund has outlined would only come about in the event of a no-deal exit from the Eurozone. High inflation in Italy would then be very likely due to the devaluation of the national currency (lira) and a significant increase in inflation would also be expected in the Eurozone as the euro would depreciate against the other currencies. Only then or at the same time would there be high write-downs on bonds from the exiting country. As a result, the ECB would have to bear considerable losses on bond prices and equity could even become negative. Sauer's (2012) scenario would not materialize come to pass because he assumed the losses of the central banking system only for possible defaults by countries (not exits). In the event of an exit, the losses accumulate. In addition to the bonds, there are also debts from the Target-2 balances to consider, which would be immediately apparent in the event of an exit. Immediately after the European sovereign debt crisis, Karadzic and Keller (2014) calcu-

lated the costs of a «Grexit» for Germany. In the case of Greece, the exit could probably be coped with. However, in the case of Italy, in the event of a total loss of the Target-2 balances for Germany, 27% of the total Target liabilities of Italy would be due. According to Statista Research Department (2020), this currently means around EUR 100 billion, because Italy's Target liabilities are currently at EUR 513 billion. The Target-2 balances would not be the Eurozone's biggest worries if the euro were to depreciate drastically and in an inflation scenario. Any domino effects caused by withdrawals from other countries would be more worrying (Karadzic & Keller, 2014).

Eichengreen (2010) was right in saying that no country was likely to leave the Eurozone in the next 10 years. However, the question now is whether this will still be the case after Covid-19. It is to be hoped that if a country leaves, at least an «orderly exit» can be agreed. Because Äslund (2012) is right that no-deal exit could lead to hyperinflation. The dire forecasts by Krall or Homm, which were described in the introduction, would then become reality. They would be right, but for the wrong reasons, because the quantity theory of money or the mere increase of the money supply by the ECB would not be the reason for the economic catastrophe.

Conclusions

This paper dealt with what the author considers to be the most dangerous scenario for the Euro zone, namely a large country like Italy or Spain leaving the Eurozone. The economic data in these countries has and will continue to deteriorate considerably due to Covid-19, thus making a possible exit more attractive. However, as long as the population does not opt for leaving the euro, the dangers for the Eurozone are rather low. If an exit comes due to the dissatisfaction of the population in these countries, then an orderly exit is the best scenario for politicians. This would, on the one hand, fulfil the wish of the population and, on the other hand, would at least partially retain autonomy over monetary policy and avoid chaos and possible hyperinflation. The risk of hyperinflation actually occurring would be very high only in the event of a no-deal exit. However, such a scenario is still unlikely.

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