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# Monetary and Fiscal Spillovers Across the Atlantic: The Role of Financial Markets



Policy Department for Economic, Scientific and Quality of Life Policies  
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# Monetary and Fiscal Spillovers Across the Atlantic: The Role of Financial Markets

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## **Abstract**

We present a review of the channels through which the US fiscal and monetary post-pandemic policies may affect the euro area. US spillovers will likely be relevant and worth considering while setting the policy stance in the euro area, at a crossroad between economic global recovery and global overheating. A key role is going to be played by global financial markets, their appetite for open-ended stimulative policies and fears of hard disinflation scenarios affecting central banks' ability to keep the economies on the recovery path and inflation expectations anchored.

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## LIST OF ABBREVIATIONS

<b>AIT</b>	Average inflation targetting
<b>BTP</b>	Buoni Poliennali del Tesoro (Italian Government Bonds)
<b>CPI</b>	Consumer price index
<b>ECB</b>	European Central Bank
<b>EONIA</b>	Euro OverNight Index Average
<b>GDP</b>	Gross domestic product
<b>GFC</b>	Global financial crisis
<b>GFCy</b>	Global financial cycle
<b>HICP</b>	Harmonised index of consumer prices
<b>IMF</b>	International Monetary Fund
<b>OECD</b>	Organization for Economic Development and Cooperation
<b>US</b>	United States

## EXECUTIVE SUMMARY

- **The US Administration has launched an unprecedented post-pandemic rescue plan** of some USD 6 trillion (28% of GDP), on top of already large fiscal and monetary packages adopted by the previous Administration. Since the euro area is also engaged in fiscal and monetary support for recovery, this state of affairs raises interest but also concerns about the transatlantic spillovers that might occur and with what effects.
- **A lively debate is ongoing in the US concerning whether the plan is appropriate** to boost the economy out of the pandemic recession or it will overheat the economy. As other times in history, it all depends on people's expectations. After a prolonged period of time when inflation expectations have been sticky, expectations could eventually "de-anchor" giving rise to a cost-wage-price spiral.
- **At crossroad between economic global recovery and global overheating**, the euro area policy makers cannot ignore what their counterparties are doing, even though they are not constrained in their choices by external conditions as it would be the case in presence of a fixed exchange rate regime.
- **For both monetary and fiscal policies, cross-country spillovers go through two main channels of transmission**, a **real** one and a **financial** one. The real channel is activated by **bilateral trade**, i.e. the demand effects of domestic policy through exports. The financial channel is activated by **capital movements**, and it is mediated by the impact of domestic policy on the domestic interest rates *vis-à-vis* the foreign ones. Real, monetary and financial channels are all at work and contribute to determine the intensity and sign of the spillovers.
- **Spillovers are time- and state-contingent: this increases uncertainty** regarding their actual magnitude and it also leads to fairly differentiated effects across countries within the euro area.
- **The financial channel stands out among the various mechanisms** as it connects, through changes in financial prices and capital flows, fundamentals and expectations across the Atlantic. At the present juncture, a key role is going to be played by global financial markets' appetite for open-ended stimulative policies, and fears of hard disinflation scenarios, affecting central banks' ability to keep the economies on the recovery path and inflation expectations anchored.
- **Spillovers may be challenging for the ECB. Should US interest rates grow**, either because the authorities will increase the policy interest rates to contain inflation or because financial markets expect inflation to raise in the medium term, the ECB will be forced to choose between choking the recovery, and jeopardising financial stability especially in the sovereign debt segment, or preserving/increasing its accommodative stance.
- **These considerations suggest that too a rigid and binding inflation target should be avoided** in the forthcoming review of monetary policy strategy.



## 1. INTRODUCTION

As of spring 2020, the pandemic outlook is improving in large parts of the Western world mostly thanks to successful vaccination campaigns (less so in other areas). The United States (US) are leading the rush towards normality in social and economic life. Concomitantly, the new Biden Administration has launched an unprecedented rescue plan of some USD 6 trillion (28% of GDP), on top of already large fiscal and monetary packages adopted by the previous Administration. Since the euro area is also engaged in fiscal and monetary support for recovery, this state of affairs raises interest but also concerns, about whether international transatlantic spillovers might occur and with what effects.

In the conventional setup of open macroeconomics, the US and the euro area are two large economies with reciprocal spillovers. Hence, in principle, spillovers from the US to the euro area are as important as those from the latter to the former and cannot be fully understood separately. As a matter of fact, available empirical evidence shows that this bilateral relationship is more asymmetric, due to the fact that the US currency and the US financial system play a pivotal role in the world economy. Another key ingredient in the scenario is the exchange rate regime. The free float regime between euro and dollar may imply the substantial independence of policy choices on the two sides of the Atlantic, unless some implicit target is assigned to the exchange rate (which, at the moment, seems a remote case), but again financial markets tend to align expectations and incorporate possible spillover effects, thereby strengthening the co-dependency of the two areas. This implies that the euro area policy makers cannot ignore what their counterparties are doing (and *vice versa*), even though they are not constrained in their choices by external conditions as it would be the case in presence of a fixed exchange rate regime.

In this paper we, first of all, report on the recovery strategy undertaken by the US Biden Administration in Section 2. Then in Section 3 we review the lively debated in the US about the risks of overheating of the economy and upsurge of inflation that could be "exported" to the rest of the world. In this perspective, in Section 4 we present the most important transmission channels and provide a concise discussion of the main results in the literature. In sum, real, monetary and financial channels are all at work and contribute to determine the intensity and sign of the spillovers. Yet, these channels appear also to be state- and time-contingent, thereby opening doubts on the possibility of predicting with accuracy their relevance in specific conditions. Particularly important is the financial channel and the expectations of financial operators across the continents: these are hard to predict, but of fundamental importance, as we shall try to explain.

We also consider important to stress at outset that in the present Transatlantic scenario most of the available studies about international linkages and spillovers of macroeconomic policies are of limited use, and should be handled with care. Apart from the high degree of uncertainty still surrounding the future developments of the pandemic and of the social and economic life, the main reason for caution is that international spillovers, especially the empirical ones, are normally studied considering one shock (in one country) and one response (in one country) at a time. By contrast, both the US and the euro area have been hit by the same shock at the same time, and both are reacting by means of strongly supportive monetary and fiscal policies at the same time.

A final note of caution is associated with two peculiar characteristics of this period. The first one is the sectoral nature of the crisis and of the policy measures adopted to kick start the recovery. This is unprecedented and likely to cause heterogeneous results across activities and regions. Both in the US and in the euro area, the actual effects of the policies may differ a lot because of the idiosyncratic characteristics of the local economies and of the transmission channels. The second issue has to do with the presence of a one-in-a-life-time event: the world economy frozen for half a year and in need

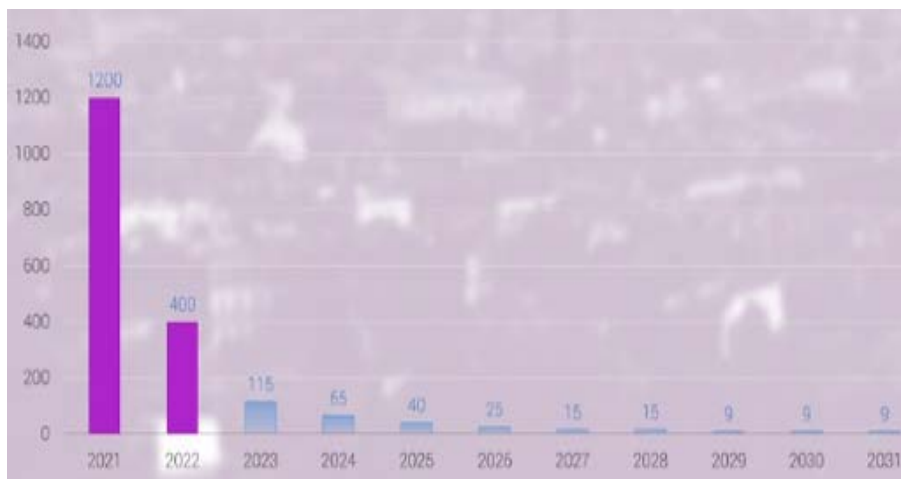
to be re-started. Against such a drawback, it is genuinely hard to distinguish temporary and permanent phenomena, cyclical and structural factors. Judgement, more than rules, will drive the authorities' responses; instinct and animal spirits will lead financial actors to take their stance in the markets.

## 2. THE US STIMULUS PACKAGES AND THEIR MACROECONOMIC IMPLICATIONS

In the US, the first relief package in response to the COVID-19 pandemic was the USD 2.2 trillion Cares Act that the Congress approved in March 2020. It has been noticed that, as an effect of this plan, Americans' personal disposable income rose by 3% over the year 2020, in spite of a 2.4% fall in GDP. This led to a dramatic rise of the households' saving rate, which in 2020 soared to 16.3% from a much lower 7.5% before the pandemic, with a USD 1.4 trillion increase (6.7% of GDP) in personal savings. The fall in consumer spending was anything but evenly distributed across different categories of goods and services: stimulated by the drop in interest rates brought about by the ultra-expansionary Federal Reserve's (Fed's) policy, spending in consumer durables such as motor vehicles and houses went up 6.3% and 14.3%, respectively, during 2020.

In December 2020, when former President Trump was still in office, a bipartisan majority passed another relief package, this time amounting to USD 900 billion. In March 2021, the newly elected President, Joe Biden, secured the passage of a new USD 1.9 trillion rescue plan (8.9% of GDP projected for 2021), of which USD 1.2 trillion will be spent within 2021 (see Figure 1).

Figure 1: Spending timetable of the USD 1.9 trillion American Rescue Plan



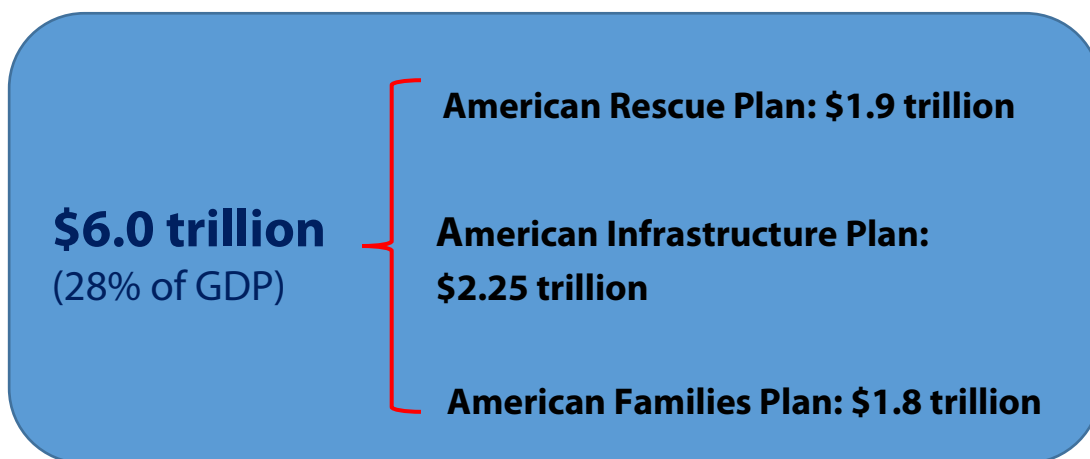
Source: Xerfi Canal, available at <https://www.xerficanal.com/economie/emission/Olivier-Passet-Les-deficits-americains-vont-ils-nous-mener-dans-le-mur-3749664.html>.

This plan is financed entirely with borrowed money and aims at mitigating the effects of the pandemic for poorer households. With these families typically being liquidity and/or income constrained, one could think that they will spend a large fraction of the money transfers they are will receive thanks to the plan. However, many of these families are supposed to allocate a substantial share of these transfers to debt repayments, since as a consequence of the lockdowns they are in arrears on rent and utilities payments, or in moratoria on their mortgages and other loans (Roubini, 2021a). In addition to his USD 1.9 trillion rescue plan, President Biden proposed to spend another roughly USD 4.1 trillion on infrastructures and social programs (mostly education and child care) over the next decade, some of which will be financed by tax hikes (Figure 2).

Adding the Biden's USD 1.9 trillion rescue plan to the USD 900 billion approved in December, but leaving apart any possible increase in spending linked to the proposed infrastructure and social plans that has been announced in late March 2021 by the US President, one arrives to a total stimulus of USD

2.8 trillion. Assessing the possible macroeconomic impact of this fiscal stimulus on the US economy requires some estimates of the current output gap and of the multipliers associated with the different components of the various relief plans (e.g., direct federal spending to fight the pandemic, subsidies, transfers to state and local governments, jobless benefits, tax cuts ...). Larry Summers (2021), who had a role in designing President Obama’s stimulus plan in 2009, claims that Biden’s stimulus is roughly three times the output gap (and accordingly, excessive), thus igniting a lively debate on the pros and cons of the plan.<sup>1</sup> Relying on the Congressional Budget Office’s estimate of potential real growth for the years before the pandemic, and making the reasonable assumption that when the pandemic erupted at the beginning of 2020—with unemployment at a record-low rate of 3.5%—output was close to its potential, Blanchard’s (2021) best guess is that at the end of 2020 the output gap was 4.2% (about USD 900 billion). This guess might overestimate the output gap, since the economy’s growth potential could be damaged by the supply disruptions caused by the pandemic; moreover, part of the abnormally high savings accumulated by US consumers in 2020 will be probably spent when the pandemic is over, reducing further the expected gap at unchanged policies. These being additional factors as they may, an output gap of USD 900 billion implies that only a maximum of 30 cents of every dollar of the USD 2.8 trillion government aid should be spent in order to prevent an overheating of the economy. The question is then: how realistic is an overall multiplier of 0.3? Put it in other words: how likely is it that the US plan will turn out to be so ineffective that the economy will not overheat?

Figure 2: Biden’s stimulus packages



Source: Own calculations.

Using the 2014 report of the Council of Economic Advisers to estimate the multipliers associated with the various components of the Biden’s USD 1.9 trillion plan, Blanchard (2021) finds that the mean overall multiplier is 1.2. Thus, even admitting that the uncertainty about the true value of the overall multiplier is high (under the low multiplier estimates, the overall multiplier is 0.4, while under the high multiplier estimates it is nearly 2), Blanchard concludes that it is very unlikely that the overall average multiplier can be close to 0.3.

The implications of this conclusion for the inflation rate are not necessarily dramatic. Indeed, Blanchard (2021) argues that a positive output gap (an excess of actual output over potential output) of 5% could

<sup>1</sup> Among others, Krugman (2021) defended the Biden’s plan and argued that the package would not lead to the overheating of the economy, causing inflation, because a large fraction of the money transfers received by the US families will be saved, rather than spent.

bring the unemployment rate to 1.5%, namely 2.5 percentage points below the natural rate, which—**if the current relation between unemployment and inflation would hold**—is likely to raise the inflation rate by 0.5 percentage point, a quite modest increase. Obviously, one should expect a larger increase of the inflation rate as a result of a positive output gap if one takes larger estimates of the slope coefficients of the Phillips curve (the inverse systematic relation linking the inflation rate to unemployment), but—according to Blanchard—it would not be a catastrophic increase, and above it would be only temporary.<sup>2</sup>

In fact, Blanchard himself emphasises how this relatively optimistic conclusion about the inflationary risks that the US economy is running because of the probable overheating caused by the Biden's stimulus plans can be maintained **only if the relation between unemployment and inflation that has emerged in recent years would hold, which is far from certain**. Indeed, as other times in history, it all depends on people's expectations. After a prolonged period of time when inflation expectations have been sticky (i.e., not reacting to movements in observed inflation), which in turn supported a relatively stable and low trade-off between inflation and unemployment, expectations could eventually "de-anchor". This would shift the Phillips curve and bring about a persistently higher inflation.<sup>3</sup> Are there the conditions in the current situation for this de-anchoring of long-term inflation expectations, namely for convincing most economic agents that future policies will be more complacent than in the recent past towards inflation?

This question is of fundamental importance given that, as we shall discuss in what follows, expectations play a central role both in the transmission of the transatlantic spillovers and in the internal dynamics in each of the two areas. Accordingly, before turning to these aspects, we shall tackle such questions in the following Section.

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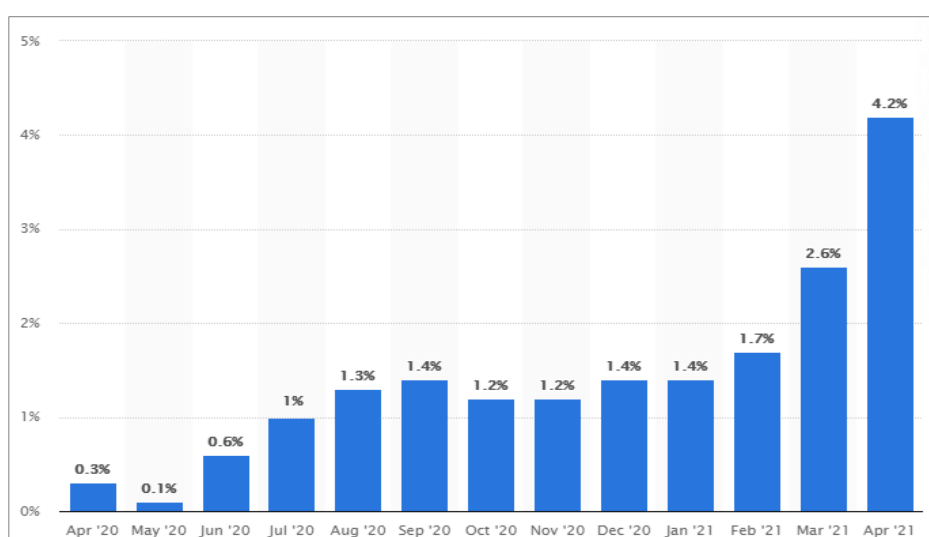
<sup>2</sup> Based on their own Phillips curve estimates, Ball et al. (2021) predict that, if the ongoing fiscal expansion reduces unemployment to 1.5% (as argued by Blanchard), median CPI inflation would rise to 2.9% by 2023. Considering a steeper Phillips curve, median CPI inflation would reach 3.1%. According to Ball et al. (2021), "if the fiscal expansion is temporary and monetary policy remains clearly communicated and decisive, there is little risk of a 1960s-type inflationary spiral."

<sup>3</sup> In the past, such shift worked in the opposite direction, towards lower inflation, in the aftermath of the Volcker's monetarist "u-turn".

### 3. IS INFLATION POISED FOR A COMEBACK?

The spike in consumer prices that is currently going on in the US (see Figure 3) is being fuelled by supply chain bottlenecks and the rapid economic reopening. As a matter of fact, with the end of the pervasive lockdowns and the recovery of consumer demand after months of "involuntary" savings, producers of final goods and services have rapidly increased and temporally concentrated their demand for raw materials, energy, intermediate products and transport services.<sup>4</sup> Many firms had and still have to cope with a sudden increase in orders (which is also driven by public measures to revive the economy), while at the same time trying to re-build inventories, which were reduced during the lockdown. This pace of expansion in demand cannot be matched in some sectors by the rise of supply, especially the supply of raw materials and intermediate products, and particularly in those service sectors where limitations and slowdowns due to COVID-19 containment measures still persist.

Figure 3: Monthly 12-month inflation rate in the US (April 2020-April 2021)



Source: Statista, available at <https://www.statista.com/statistics/273418/unadjusted-monthly-inflation-rate-in-the-us/>.

If there is agreement about the origins of the inflationary flare-up (albeit with differences on the role played by the shortening of global value chains, the abundance of credit and liquidity in the economy, and the government aid), there is disagreement about the duration of the phenomenon.

One may think that the increase in consumer prices remains circumstantial and temporally limited:<sup>5</sup> once the reopening of economic activities, the accumulation of inventories and the reduction of the stock of forced savings will be completed, inflation will fall toward the Fed's target of near 2% as soon as the current increase in production costs has entirely translated into an increase in consumer prices.

An important part of this narrative is that the persistence of labour market slacks, namely of a non-negligible number of workers out of job because of the pandemic (and because of the consequent restructuring and sectorial reshuffling), will prevent large "second round effects", that is, generalised

<sup>4</sup> Consider that over the past year commodity prices have surged, with oil prices that are now back to their pre-crisis levels, and metal prices and food prices that are almost, respectively, 50% and 30% higher than their pre-crisis levels.

<sup>5</sup> Ball et al. (2021) remark that the record one-off price drops that occurred in the second quarter of 2020 in airline fares, lodging, apparel, and motor vehicle insurance prices, which to a large extent rebounded in the following quarter, can determine a base effect pushing up year-over-year measures of CPI (excluding food and energy) inflation in the second quarter of 2021. If this is the case, starting from the third quarter of 2021, year-over-year measures of CPI inflation should reflect more accurately the "true" underlying core inflation.

and substantial wage increases. Consistently with this view, monetary policy should remain accommodative and tolerate a temporary inflation spike beyond the 2% target, in accordance with the new policy framework unveiled in July 2020, the so-called average inflation targeting (AIT) (see Svensson, 2020), whereby the Fed “seeks to achieve inflation that averages 2% over time” by allowing rates higher than 2% to offset periods when inflation is below the target.<sup>6</sup>

Although central banks and other institutions, such as the International Monetary Fund (IMF), suggest that the current rise of inflation worldwide—and in the US in particular—is largely due to transitory factors and that high inflation will not be a problem for the advanced economies in the foreseeable future<sup>7</sup>, some observers believe that the COVID-19 pandemic has favoured the emergence of structural forces and policy constraints that will make inflation stably higher. In a nutshell, one may summarise this viewpoint by arguing that the reversal of globalisation, accelerated by the governments’ growing reluctance to depend on other countries for strategic goods (masks, medicines, vaccines, semi-conductors...) and the disruptions along the global supply chains, might favour reshoring (with a shift of production back into high-cost economies) and strengthen labour bargaining power in the US and other advanced economies (see, e.g., Goodhart, 2020).

This trend is further strengthened by a political climate that more than in the past has induced governments to intervene so as to limit income inequalities and protect domestic workers, in the attempt to prevent a political backlash against the authorities in power and further social separatism. In the US—for instance—this can be done by imposing a higher minimum wage or by giving priority to the achievement of maximum employment also among the minorities.<sup>8</sup> This would also match the sovereigntist rhetoric that presents a greater self-reliance as a mechanism to ensure greater resilience.<sup>9</sup> Furthermore, the argument goes, it will be hard for the policy makers to reverse the ultra-expansionary fiscal and monetary policies underway, as it would be necessary for preventing the current inflationary impulses from being embedded in people’s expectations. With respect to monetary policy, the unprecedented growth of money supply and of the Fed’s balance sheet that has taken place since the beginning of the pandemic<sup>10</sup> could be stopped by rapidly allowing its short-term policy rates to start rising and some of its holdings of government debt to run off.

Obviously, this would create serious difficulties for the government in the financing of its huge recovery plans. But, above all, such a policy reversal could trigger abrupt price drops in the asset markets, where bonds and stocks are currently priced on the basis of the expectation that interest rates will still remain ultra-low for a long period of time. This could be highly destabilising at a time when public and private

<sup>6</sup> Commentators noticed that this new policy framework creates uncertainty over how the Fed intends to make up for the past shortfalls (Wolf, 2021). For instance, US inflation has fallen short of the 2% target by a cumulative total of 5 percentage points since 2007, which applying AIT could justify, say, 3% inflation for 5 years, or say 4% inflation for 2 years and 3% inflation for 1 year, before a return to 2%.

<sup>7</sup> Fed’s Chair Jerome Powell appears very confident that the current inflation surge is a one-time price increase that is not likely to lead to persistent inflation: “During this time of reopening, we are likely to see some upward pressure on prices, and I’ll discuss why. But those pressures are likely to be temporary as they are associated with the reopening process. In an episode of one-time price increases as the economy reopens is not the same thing as, and is not likely to lead to, persistently higher year-over-year inflation into the future— inflation at levels that are not consistent with our goal of 2 percent inflation over time. Indeed, it is the Fed’s job to make sure that that does not happen. If, if, contrary to expectations, inflation were to move persistently and materially above 2 percent in a manner that threatened to move longer-term inflation expectations materially above 2 percent, we would use our tools to bring inflation and expectations down to mandate-consistent levels” (Powell, 2021: pp. 13-14).

<sup>8</sup> This is the opinion, for example, of Ellen Zentner, chief US economist at Morgan Stanley, who said: “The focus on inequality drives the maximum-employment mandate, and it really takes precedence over the inflation mandate.” Along these lines, Roubini (2021b) writes: “...rising income and wealth inequalities mean that the threat of a populist backlash will remain in play. On one hand, this could take the form of fiscal and regulatory policies to support workers and unions – a further source of pressure on labor costs. On the other hand, the concentration of oligopolistic power in the corporate sector also could prove inflationary, because it boosts producers’ pricing power.”

<sup>9</sup> This position could be rightfully questioned, as done by Miroudot (2020), but it appeals part of the public opinion.

<sup>10</sup> Greenwood and Hanke (2021) calculate that, in the 12 months that followed the beginning of the pandemic in the United States (February 2020), M2 increased by an astonishing 26% (USD 4 trillion), many times more than its annual growth from 2010-19, that averaged 5.8%, while the Fed’s holdings of Treasuries and mortgage-backed securities increased by almost USD 3 trillion.



debt ratios are at historically high levels worldwide, and are on the rise. Hikes in US interest rates that happen sooner and that are more abrupt than expected would represent a serious shock for the world financial markets and it could cause a generalised “flight to quality”. Although emerging markets would be especially vulnerable to sudden stops and reversals of capital flows, the euro area would also be impacted heavily.

It derives from what is outlined above that, if the current inflation surge had to continue, the Fed would face a dilemma. By promptly using its tools “to bring inflation and expectations down to mandate-consistent levels”, as Chair Powell has recently declared, it will risk halting the post-pandemic recovery prematurely, making it difficult to finance President Biden’s fiscal packages and setting the conditions for another financial crisis. With regard to the latter, it seems plausible—especially in the light of how the Fed behaved in the last four decades—that the US monetary authority will be more concerned about the effects that rising policy rates and tapering on bond purchases might have on financial markets, than about their effects on public finance. As we argued elsewhere (Bonatti et al., 2020), it makes sense to speak, for the Fed, of some sort of “financial dominance”, rather than of fiscal dominance.

In any case, to avoid the above-mentioned risks, the Fed may prefer to stick to its current policy stance even if the inflation flare-up will not appear to be transient, thus being in tune with the currently prevailing political climate. By doing so, however, the Fed risks the de-anchoring of inflation expectations that “years of ultra-low inflation are firmly embedded in the public psyche” (Rogoff, 2021). According to Barro (2021), this can jeopardise the anti-inflationary “reputational capital that Volcker bequeathed” and that “is now being threatened by reckless monetary and fiscal policies”. For these critics, the problem is that rebuilding such reputation—once undermined—might take time and involve a high cost in terms of foregone output and high unemployment. Moreover, it is argued that the short-term benefits of such tolerance for inflation would be reduced by the fact that—once high long-term expected inflation has taken root—low policy rates can hardly prevent longer-term market interest rates from rising anyway. As far as the long-term consequences of a possible return of inflation are concerned, it is emphasised that, by bringing about higher nominal and real interest rates, such a return would make today’s debt unsustainable and lead to equity market crashes, possibly triggering persistent stagflationary pressure (Roubini, 2021b).

To conclude, we would like to share Martin Wolf (2021)’s claim who, in contrast with Milton Friedman’s famous quote, argued that ultimately “inflation is always and everywhere a political phenomenon. The question is whether societies want low inflation. It is reasonable to doubt this today. It is also reasonable to doubt whether the disinflationary forces of the past three decades are now at work so strongly.”



## 4. CHANNELS OF INTERNATIONAL SPILLOVERS

Having set the background against which the Federal Reserve and the US administration are likely to move, in this Section we shall review the main channels of international spillovers. As argued in the introduction, these channels are of extreme importance for the ECB and the fiscal authorities in the euro area as they should be considered while setting their stance. Yet, as mentioned in the Introduction and we shall explain in what follows, the current circumstances are peculiar: monetary, fiscal and financial shocks will occur simultaneously at both sides of the Atlantic.

In the basic conceptual framework of open macroeconomics,<sup>11</sup> monetary and fiscal policy are mostly instruments to boost or restrain aggregate demand with a view to smoothing the business cycle and keeping inflation aligned with a target. For both instruments, cross-country spillovers go through two main channels of transmission, a **real** one and a **financial** one. The real channel is activated by **bilateral trade**, i.e. the demand effects of domestic policy through exports. The financial channel is activated by **capital movements**, and it is mediated by the impact of domestic policy on the domestic interest rates *vis-à-vis* the foreign ones. Therefore, substantial analogies and overlaps are present when examining the international spillovers of monetary and fiscal policies. Nonetheless, each policy instrument retains some specificities that we shall point out in what follows.

### 4.1. Monetary spillovers

The literature on the effects of US monetary policy shocks on foreign economies is abundant. Most has focused on emerging markets, due to their historically high exposure to the dollar and to the US economy. US monetary shocks may affect foreign countries via three channels: the aggregate demand channel, the expenditure-switching channel associated with exchange rate variations, and the financial channel. Focusing on the euro area, Ca' Zorzi et al. (2020) assess as limited the impact of US monetary measures on trade balances and inflation, whereas a Federal Reserve monetary policy tightening does exert strong pressure on the euro area real effective exchange rate, on unemployment and on industrial production, and the effects on these latter do not appear to die out quickly.

More precisely, they find that a tightening in the US monetary policy has a large negative impact on US exports (due to expenditure-switching effects) but also on US imports (contracting because import prices are sticky and set in US dollars, and the aggregate demand effect thus dominates). Hence, although a Federal Reserve tightening leads to a persistent real depreciation of the euro with respect to the currencies of EU trade partners, and to a more limited and less persistent depreciation against the US dollar, the impact of US monetary policy shock on the overall trade balance of the EU is limited. Similarly, the evidence in Ca' Zorzi et al. (2020) shows that US and euro area monetary policy spillovers to consumer prices in the other area are relatively small, but a statistically significant increase in euro area prices for about one quarter follows in response to a tighter Federal Reserve monetary policy. This is due to the depreciation of the euro, given that the domestic component of inflation in the euro area is unaffected. Yet, again, these effects are limited to the short term.

It is worth noticing that most of these spillovers seem to be due to the financial channel, given the limited impact on US monetary shocks on US and euro area trade balances. This is not to say that the aggregate demand and the expenditure-switching channels are absent or irrelevant: they do find strong support in the empirical literature. For instance, Adler and Buitron (2016) show that the loosening of the US monetary policy affects foreign exchange rates and trade balances, and Dedola et al. (2021) conclude that also quantitative easing (QE) measures in the US led to a non-negligible and

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<sup>11</sup> Reference is to the so-called Mundell-Fleming-Dornbusch approach (Dornbusch, 1980).

persistent exchange rate depreciation of the dollar (in line with previous findings in Dedola et al., 2017). Yet, as the US tend to price exports in dollars (adopting a producer currency pricing strategy) and to price imports in local currency (i.e., local currency pricing), this peculiar combination prevents large changes in import prices in dollars and thus large fluctuations in the US terms-of-trade.

It is interesting to note that the literature has consistently shown that the international transmission of monetary shocks is affected by country-specific characteristics (Dedola et al., 2017; Georgiadis, 2016; Hanisch, 2019; Iacovello and Navarro, 2019)<sup>12</sup> and exchange rate regimes.<sup>13</sup> Those interested in the effects on specific countries and groups of countries, thus, have to resort to *ad hoc* models able to capture relevant specific conditions. The ECB global macroeconomic model (ECB-Global) developed by Dieppe et al. (2018), for instance, features various channels of international shock propagation and it envisages large spillovers from US monetary policy. Hanisch (2019) finds that contractionary US monetary policy has asymmetric spillover effects on economic activity, as well as in financial markets, of the individual countries of the euro area.

As mentioned above, the financial channel remains one of the most effective mechanisms through which monetary policy shocks in large advanced countries reach other economies. Monetary policies in large advanced economies and global risk aversion are two important global drivers of capital flows (e.g. Forbes and Warnock, 2012; Schularick and Taylor, 2012; Miranda-Agrippino and Rey, 2020; Cerutti et al., 2017b; Ha et al., 2017; Davis and van Wincoop, 2021; Gerko and Rey, 2017). Even when monetary spillovers do not directly affect trade with other large foreign countries, as shown by Ca' Zorzi et al. (2020) in the case of the euro area, they do affect international capital flows and also local financing conditions.

Although the importance of the global financial cycle (GFCy) has been questioned (see Cerruti et al. 2019; Georgiadis and Jančoková, 2020), the transmission of the GFCy to foreign markets may either go through international capital flows (loans, bonds and stocks) or through its impact on domestic banks' credit creation (Miranda-Agrippino and Rey, 2020).

Ca' Zorzi et al. (2020) find that, for stock prices, bilateral spillovers from both ECB and Fed monetary policy shocks are negligible. Bauer and Neely (2014) and Rogers et al. (2014) analyse the impact of US unconventional monetary policy measures on global asset prices, capital flows and exchange rates, and Rogers et al. (2014) find that US unconventional monetary policy causes a depreciation of the US dollar and reduces foreign longer-term interest rates. Neely (2015) concludes that unconventional policy measures in the US were able to reduce international long-term yields and to depreciate the US dollar, even when the short-term rate hit the zero bound. Albagli et al. (2019) show the existence of significant US monetary policy spillovers to international bond markets (and their increase after the 2007–2009 global financial crisis [GFC]); these spillovers work through different channels, concentrated in risk-neutral rates for developed countries and on term premia in emerging markets. Advanced countries respond by partially adjusting risk-neutral rates and partially through currency adjustments, whereas emerging countries cushion exchange rate variations through movements in term premia. Ca' Zorzi et al. (2020) reveal that, after a Fed tightening, a significant and persistent increase in the spread of speculative-grade corporate bonds in the euro area occurs due to the reduction in the Bund yields, possibly because of *“some (systematic) offsetting response by the ECB to mitigate the effects of Fed*

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<sup>12</sup> Georgiadis (2016) shows that the magnitude of the US monetary spillovers depends on various features of the receiving country's trade and financial integration, de jure financial openness, exchange rate regime, financial market development, labour market rigidities, industry structure, and participation in global value chains

<sup>13</sup> The role of the exchange rate is complex. On the one hand, countries managing a currency peg are more sensitive to changes in foreign monetary policy as their monetary policy is tied to that of the peg; on the other hand, it is more difficult to measure external pressures due to the nature of the regime (Goldberg and Krogstrup, 2018).

*monetary policy shocks*" (p. 34). Besides this direct impact on the euro area, as US financial conditions affect those in the rest of the world, the intensity of the financial spillover channel from Fed monetary policy cannot be underestimated: for instance, as shown in Ca' Zorzi (2020), international portfolio investment drops after a tightening in the US: this is indeed the essence of the global financial cycle driven by the Fed and explains the unidirectional spillovers from the United States to the euro area.

As mentioned, domestic credit may be affected by foreign monetary conditions because of many channels, such as the balance sheet channel (Correa et al., 2021) and the bank lending channel (Cetorelli and Goldberg, 2012a,b). Albrizio et al. (2020) find that an increase in funding costs after an exogenous monetary tightening in systemic countries leads to a decline in cross-border bank lending. Under the international bank lending channel (see Cetorelli and Goldberg, 2012a,b; Miranda-Agrippino and Rey, 2020), changes in the short-term funding costs of banks and banks' liquidity constraints determine the ability of local banks to extend credit to the domestic private sector. The portfolio (or balance sheet) channel stems instead from the imperfect substitutability of asset classes and limits to arbitrage (Haldane et al., 2016): under this channel, foreign monetary policy shocks affect the risk structure of banks' assets and create incentives to substitute domestic and foreign credit. Miranda-Agrippino and Rey (2020) find that US tightening leads to a decline in asset prices that reduce EU banks' balance sheets and their leverage.

What is worth noticing is that such international spillovers into domestic lending to the private sector depends on the existence and relevance of various frictions. As these vary across intermediaries and countries, the international transmission of monetary policy shocks through the financial channel is affected by country-specific (Georgiadis, 2016) and bank-specific heterogeneity (Baskaya et al., 2017; Bruno and Shin, 2015; Buch et al., 2019; Cetorelli and Goldberg, 2012a,b; Gambacorta and Shin, 2018; Schmidt et al., 2018). Miranda-Agrippino and Rey (2020) show that the international transmission of US monetary policy operates through global financial actors, as these intermediaries adjust their operations across countries and currencies, as also noted by Brauning and Ivashina (2020); similarly, Morais et al. (2019) identify an international credit channel whereby a softening (tightening) of foreign monetary policy expands (contracts) credit supply of foreign banks in Mexico, generating also real effects. In addition to the features and behaviour of the domestic banking system, other financial country-specific factors, such as house prices and exchange rates, can amplify the expansionary effect of capital inflows induced by a loosening of foreign monetary policy (Cesa-Bianchi et al., 2018).

Other spillovers that should be considered as distinct from those associated with the transmission of pure monetary shocks regard the information channel. As shown by Cieslak and Schrimpf (2019), non-monetary news are an influential part of central bank communication. This implies that central bank information shocks, as shown Jarociński and Karadi (2020), can add to the impact of the monetary decisions, and reach other countries through different channels. Armelius et al. (2020) study the co-movement in sentiment across central banks and show the presence of cross-country spillovers, with the Fed being an influential generator of such spillovers.

Only recently, researchers paid attention to the variation over time of how capital flows react to such global drivers, and they showed that the sensitivity of the international capital flows is time- and state-contingent (Avdjiev and Hale, 2019; Buono et al., 2020), for instance varying considerably during the GFC period and in the tapering period (Avdjiev et al., 2021). Buono et al. (2020) show that the taper tantrum marked the beginning of a new phase with greater sensitivity of capital flows to global factors and domestic vulnerabilities. This suggests that the estimates of international spillovers may suffer of imprecise measures of the shocks, particularly when unconventional policies are considered, as discussed by Buch et al. (2019), or when the decisions contain also central bank information shocks, as shown by Jarociński and Karadi (2020), and of state-contingent multipliers. An increased post-GFC

sensitivity to US monetary policy began to unwind when the Fed started tapering. The decline in the sensitivity to global risk occurred due to the post-crisis shift in the composition of global lenders, with stronger and less sensitive banks getting larger shares (Avdjiev et al., 2020).

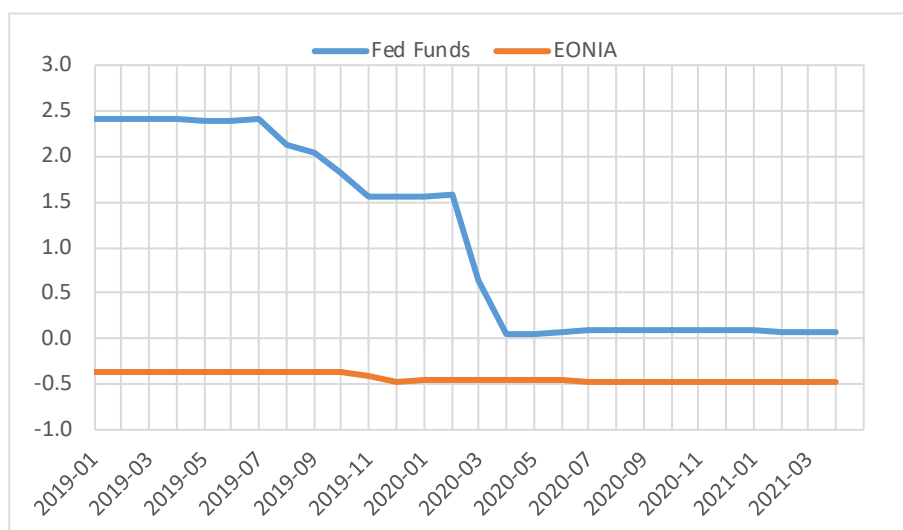
Finally, it is worth noticing that monetary spillovers may occur without international capital flows and trade imbalances, but through the global production networks. Recently, di Giovanni and Hale (2020) have focused on the interconnection and interdependence associated with global production networks to determine how US monetary policy may affect world stock markets. Changes in demand created by variations in monetary policy propagate upstream from customers to suppliers, and this finding is robust to controlling for other variables that may drive a common financial cycle across markets.

## 4.2. Fiscal spillovers

As far as fiscal policy is concerned, the real and financial channels of external spillovers do not work separately. The basic mechanisms are such that, to the extent that the US fiscal expansion raises the US interest rates, domestic demand is partially crowded out, while capital is attracted with a consequent appreciation of the dollar against the euro. Thus, the joint effect on demand and GDP of higher interest rates and exchange rate appreciation plays a critical role. Traditional wisdom holds that this joint effect sets a substantial limit to the effectiveness of fiscal expansion in the originating country while its exchange rate appreciation creates a positive spillover in partner countries through exports.

Recent empirical studies broadly support the prediction that, on balance, US fiscal expansions have **sizeable stimulative effects** on demand and GDP abroad, and in the US itself. More controversial is the evidence about which channel is more relevant. For instance, Metelli and Natoli (2018) find that trade effects are more prominent while financial effects are more limited, but they also underline that effects differ whether fiscal expansion is implemented by means of tax cuts or larger expenditures. As to the exchange rate, its specific contribution is unclear.<sup>14</sup>

Figure 4: Effective federal funds rate and euro area's EONIA rate 2019-2021:03 (monthly observations)



Source: FRED online database, ECB *Interest Rate Statistics*.

<sup>14</sup> As we explain in the subsection devoted to the monetary spillovers, the exchange rate channel works in a peculiar way in the US due to the dollar's central position in the world economy.

As a matter of fact, throughout 2020 the dollar has been **constantly depreciating** by some 10%, with a slight correction in the early months of 2021, in spite of large fiscal packages being already activated by the Trump Administration and a nontrivial positive differential on short-term rates (see Figure 4).

By contrast, Faccini et al. (2016) show that the main driver of positive US fiscal spillovers is the financial channel, of a particular nature though. In the basic setup recalled above, the rise of interest rates in the US is followed by higher interest rates also abroad (one reason being that the US absorption of financial resources heavily impinges on the global pool: e.g. Kose et al., 2017). Faccini et al. (2016) instead find a **fall of real interest rates** abroad associated with US fiscal stimuli. This evidence has been explained by Corsetti et al. (2010, 2012) to be a result of expectations of spending reversal, i.e. expectations that (in the originating country) the debt-financed fiscal stimulus is temporary and will be reversed in the future. According to these authors, this positive effect via lower interest rates is indeed a major booster of the effectiveness of the fiscal stimulus both at home and abroad.<sup>15</sup>

The financial channel, however, should be enlarged beyond sovereign debt markets to stock markets (Ehrmann and Fratzscher, 2009; Ehrmann et al., 2011; Kose et al., 2017; De Santis and Zimic, 2019). On the one hand, stock markets themselves react to developments in the sovereign debt segment, on the other hand, their own developments have an impact on economic activity. As a matter of fact, stock markets are highly integrated globally, their co-movements are strong and fast, and the US stock market plays a pivotal role. In particular De Santis and Zimic (2019) report that the US rates are the main source of spillovers globally and are less exposed to foreign shocks. After identifying distinct shocks to the US medium term money market rates, they find that about one-fifth of the shock has been transmitted to the euro area rates in short time.

The evidence during the pandemic suggests that the US stock market is highly sensitive to prospects of recovery, and hence it shows **appetite for supportive policies** as large as necessary and for as long as necessary. If stock markets place more emphasis on support to short-/medium-term growth than to medium-/long-term debt sustainability, the US fiscal stimulus may more easily be transmitted to the euro area economies.<sup>16</sup> On the other hand, reversal of the supportive regime may trigger a sudden downturn of stock markets which may quickly spread across the Atlantic.

Further complexity has been added to the basic setup by recent research stressing the dependence of domestic as well as cross-border fiscal multipliers on the cyclical position of the economy (-ies) and the concomitant monetary policy stance(s). It is now widely agreed that fiscal multipliers are larger when the economy is in recession and accommodative monetary policy keeps interest rates low all along the yield curve (Auerbach and Gorodnichenko, 2012, 2013; IMF, 2017). These seem to be the prevailing conditions both in the US and in the euro area. The accommodative stance of monetary policy on both sides, enhanced by "forward guidance" techniques (Lane, 2020), inhibits the negative components of the financial channel of the international spillovers due to higher interest rates. The direct multiplicative impact of the fiscal stimulus is maximised both in the originating country (the US) and in the recipient country (euro area), though the intermediate effect of the dollar appreciation is dampened. At the same time, the positive component of the financial channel operates due to the global stock market reaction.

It is a well-established principle that in the presence of reciprocal spillovers, **policy coordination** is recommended (Auerbach and Gorodnichenko, 2013). However, historically, this principle has remained

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<sup>15</sup> It may be noted that this conclusion contrasts with the so-called "Ricardian equivalence" (Barro 1974), which predicts that the expectation of future debt consolidation nullifies the effect of the fiscal stimulus on GDP and on the real interest rate.

<sup>16</sup> The ambivalent role of these two components of investors' behaviour was emphasised in connection with the sovereign debt crisis in the euro area by Berti et al. (2013).



on paper (Bayoumi, 2014; Frankel, 2015), and we do not see conditions for explicit policy coordination between the US and the euro area at this moment. Moreover, as said above, the euro-dollar free float regime reduces incentives for policy coordination. As shown by Figure 4, the comparison between the US federal funds rate and the euro area EONIA interbank rate, which is closely linked to ECB main refinancing rate, signals substantial independence, in particular during the Fed's attempt at tapering during 2019. Nonetheless, euro area policymakers may well take into account the spillovers coming from the US fiscal packages. If most of the positive spillovers will materialise as a boost to exports, these will mostly be felt at the level of single countries. With the usual asymmetric effects that characterise the euro area, Germany, the Netherlands and to some extent Italy and France will probably benefit more than others (see also Section 5). As far as the euro area's overall macroeconomic outlook is concerned, positive US demand spillovers will have to be taken into account in order to calibrate the monetary-fiscal policy mix created by the ECB accommodative measures, the fiscal impulse coming from centralised programmes such as NextGenerationEU, and the supportive fiscal measures carried on by national governments.

How does inflation enter the picture? According to today's mainstream macroeconomics, the necessity and effectiveness of fiscal stimuli is predicated on the assumption of sticky wage-price responses, large and persistent output gaps and slack in the labour market, strongly accommodative monetary policy with interest rates close to zero or negative. These conditions, also known as "divine coincidence" after Blanchard and Galí (2007), have been prevailing over the last decade in advanced economies (Lane, 2020; Schnabel, 2020). They imply that inflation is either **unproblematic** or is a problem for **being too low** (below the central bank's target and expected to remain low or to be falling in the future). It is worth recalling that in this picture the problem of too low inflation is that the real interest rate relevant for private expenditure is too high, keeping the economy in its depressed state. With the policy rate at the zero lower bound, conventional monetary policy becomes impotent. Then the central bank can move to unconventional monetary policies, among which "forward guidance" is meant to predetermine a future path of **rising inflation** and **low real interest rate** to stimulate private expenditure. At the same time, the fiscal stimulus is necessary as an additional boost to aggregate demand, and if expectations of future inflation rise, this is a welcome additional means to lowering the real interest rate.<sup>17</sup>

Recent events warn that **inflation expectations**, more than actual or "fundamental inflation", i.e. due to structural factors, may challenge this view and create unwanted effects. As discussed in Sections 3 and 5, some recovery scenarios anticipate an acceleration of inflation due to the interaction between boosts to aggregate demand, abundant liquidity, and bottlenecks on the supply side. On the one hand, acceleration of inflation precisely fits the policy strategy designed above – to the extent that it is conducive to closing depressive output gaps, **not to stagnation**. On the other hand, the recent spike in the yields of US Treasury bonds (see Figure 5) warns that an unexpected conflict may arise between that policy strategy and the reaction of financial markets. A possible explanation is that financial markets anticipate, and hedge against, a **"Volcker disinflation" scenario**, that is to say a reaction of the central bank to the inflation acceleration with a spike in interest rates (see also Bonatti et al. 2020).<sup>18</sup>

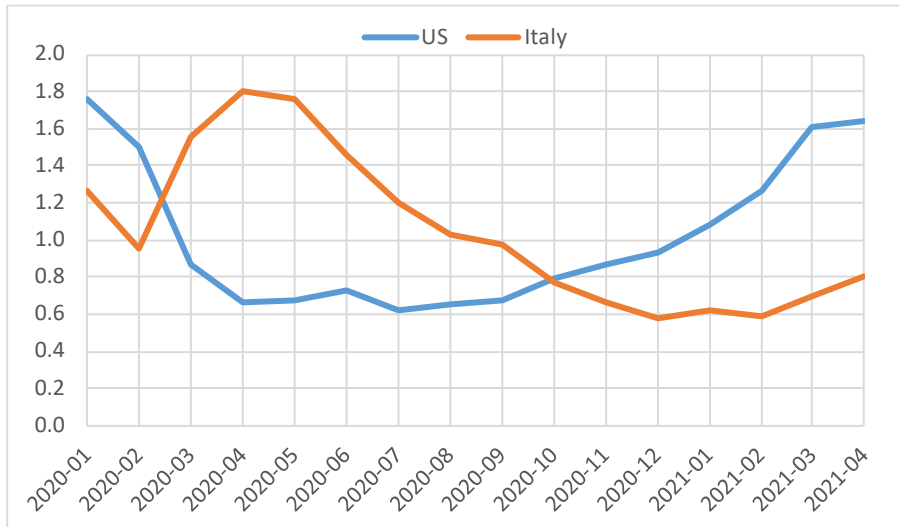
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<sup>17</sup> Though quite different in nature, this mechanism is akin to that found by Faccini et al. (2016) associated with the spending reversal hypothesis.

<sup>18</sup> The "Volcker disinflation" owes its name to the anti-inflationary shock therapy that the newly appointed Chair of the Federal Reserve Paul Volcker enacted from the fourth quarter of 1979. The Federal funds rate was brought from 10% to 17.5% by April 1980. After some softening in the third quarter of the year, the Fed rate was progressively raised again to remain at an average level of 17% throughout 1981. By the end of year, the quarterly rate of inflation had fallen to 0.2% from the peak of 1.2% in the Summer of 1979. Over the same time span, however, the economy recorded two recessions (in the first semester of 1980, and from the second quarter of 1981 to the second quarter of 1982), unemployment rose from 6% to 11%, and the Standard & Poor's stock market index lost some 20%. As is often

This hypothesis is not in contrast, actually it is consistent, with the evidence of the appetite of financial markets for open-ended supportive policies, and it is also consistent with the advent of "financial dominance", as mentioned above. There are two consequences of this scenario. The first is that real interest rates increase, which may hinder the recovery. The second is that financial debtors, sovereigns in the first place, start suffering. Hence the US may turn from being a pole of global recovery to being a pole of global instability.

Figure 5: Yields on ten-year US Treasury bonds and Italian BTP 2020-2021:04 (monthly observations)



Source: FRED online database, ECB *Interest Rate Statistics*.

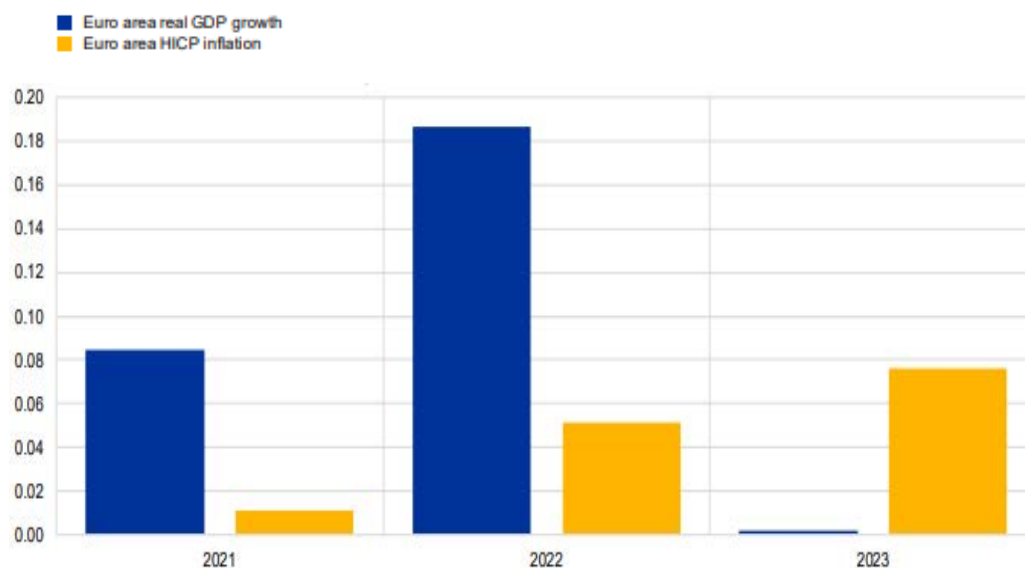
The comparison in Figure 5 between the yields on ten-year US Treasuries and on the Italian BTP, representative of high-debt vulnerable countries in the euro area, presents no evidence of contagion so far. Quite the contrary, while in 2020 the yield on US Treasuries began to rise, the Italian BTP enjoyed the effects of the pandemic emergency packages of the ECB. Nonetheless, the chances of an inflation acceleration triggering a Volcker disinflation scenario – whether enacted by the central banks or precipitated by the financial markets – remain particularly worrisome for the euro area owing to the high level of some sovereign debts and the ensuing conflicting objectives with the ECB and among governments.

the case with financial market sentiments, it is unclear whether they anticipate what would happen anyway or they materialise what they fear.

## 5. TRANSATLANTIC SPILLOVERS AND THE ECB

According to the ECB staff macroeconomic projections for the euro area (ECB, 2021), the spillovers to the euro area of the USD 1.9 trillion American Rescue Plan can be “notable” (see Figure 6): the increase in euro area GDP relative to the baseline scenario (which—to a certain extent—already incorporate the improvement of the global growth outlook due to this package) is estimated to be about 0.3% over the period 2021-2023 (with a peak of nearly 0.2% in 2022), while the cumulative impact on Harmonised Index of Consumer Prices (HICP) inflation is estimated to be 0.15% over the same period.

Figure 6: Estimated impact of the USD 1.9 trillion American Rescue Plan on euro area real GDP growth and inflation (in percentage points)



Notes: Euro area simulations conducted with intra-euro area trade spillovers evaluate the impact of the changes to euro area foreign demand, competitors’ prices in domestic currencies, stock prices and a risk premium entering the credit spreads. Fiscal and monetary policies in the euro area are kept exogenous. US monetary policy in 2021 and 2022, nominal short and long-term interest rates, nominal exchange rates and oil prices are assumed to remain unchanged. euro area effects are computed using the ECB’s New Multi-Country Model, in which expectation formation is backward-looking with learning.

Source: ECB.

One should expect that the positive effect of the increase in US imports brought about by the Biden fiscal stimulus on the GDP of each euro area country is greater for the countries with a larger exposure to US demand. As a matter of fact, trade figures show that the US market is relatively more important for countries such as Ireland, Belgium, Germany and the Netherlands than for Spain, Greece, Cyprus or Malta, with France and Italy in the middle (see Figure 7).<sup>19</sup>

Although the American Rescue Plan is likely to give a small but positive boost to the GDP of the euro area in the current year, it widens the growth differential expected for 2021 between the latter and the US. The OECD, for instance, predicts that this year annual GDP growth will be 6.5% in the US, compared to a mere 3.9% for the euro area,<sup>20</sup> in spite of the fact that in 2020 GDP fell by 6.6% in the euro area and

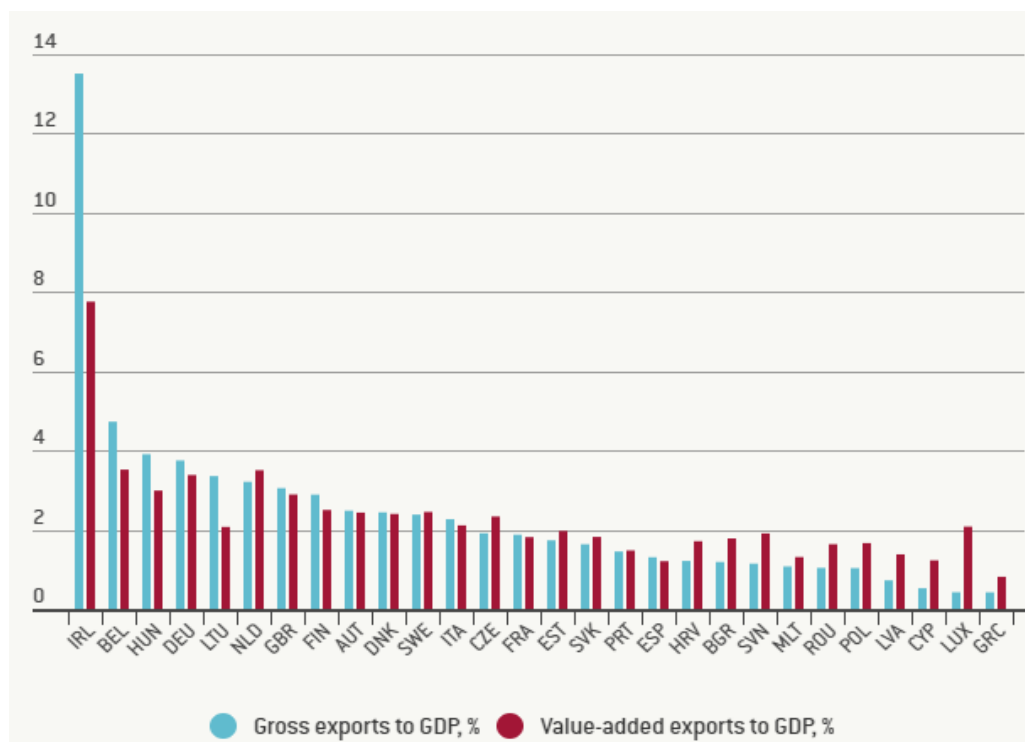
<sup>19</sup> This is consistent with the findings of Hanisch (2019), who shows that the effects of a shock coming from the US that operates via the trade channel are distributed unevenly within the euro area, with Germany that is affected the most.

<sup>20</sup> The IMF reckons that in 2021 GDP growth in the US will be 6.4%, compared to 4.4% in the euro area.



by 3.5% in the US. In contrast, projected GDP growth rates for 2022 are approximately the same in the euro area and in the US. Given these figures, one may wonder to what extent the slower rebound that seems to characterise the European economies is attributable to structural factors rather than to macroeconomic policies. Notice that the same question arose when Europe emerged much more slowly than the US from the 2008-09 GFC. Even if this time an additional factor is at play, namely the delays with vaccine rollouts across continental Europe that are making the reopening of the economy slower in the EU than in the US, some have argued that the relative lack of dynamism and dampened reactivity that Europe typically displays in the aftermath of a crisis is the manifestation of a social contract that implicitly gives priority to secure existing jobs and businesses rather than allowing new ones to emerge.

Figure 7: Countries' exposure to US demand (gross bilateral exports to GDP and value-added exports to GDP in percentage points)



Source: Chiacchio and Efstathiou (2018).

If the recovery in the euro area is lagging behind that of the US, also the inflation rate has not increased in the euro area as fast as in the US (in April 2021, euro area annual inflation was at 1.6% against 4.2% in the US). In March 2021, ECB staff macroeconomic projections for the euro area foresee annual inflation at 1.5% in 2021, 1.2% in 2022 and 1.4% in 2023. ECB's chief economist Philip Lane said recently that *"to generate persistent inflation you need a strong labour market"* (Lane, 2021). Actually, the euro area unemployment rate rose to 8.1% in March 2021, but with millions of people who have dropped out of the workforce, and millions more who are on state-subsidised furlough schemes.

However, one should not underestimate two important phenomena that can be particularly relevant for Europe. The first concerns the duration of public support for workers and businesses. The severity of the crisis has prompted national governments to adopt and preserve wide-ranging support policies that can only be removed very slowly and gradually. This is possible because of the willingness of the central bank to sustain the credit market, the banking system and to provide abundant liquidity,

making public debt less expensive. The second issue concerns the sectoral and regional nature of the crisis and the recovery. Indeed, the mismatches of skills required from and possessed by workers employed in different sectors, the wide regional disparities in income and employment opportunities, the low territorial mobility of people in Europe can make the labour market at the same time depressed and overheated: depressed due to low labour market participation and “subsidised” underemployment, overheated due to the increase in the demand for skilled labour in the sectors and in the areas that are rapidly recovering. Added to this, it is the expanding public sector that is benefiting from the measures contained in the various recovery programmes.

In this context, it cannot be ruled out that once the COVID-19 emergency is over, with prices of many goods and services pushed upwards by higher logistics costs, health safety measures, and increases in the prices of energy, raw materials and semi-finished products, a second round may follow. Substantial wage increases might be obtained by those groups of workers (such as public employees) that enjoy bargaining power and political protection. And this while at the same time other sectors and workers are suffering, with governments that will try to subsidise them indefinitely, whether or not they have some real chance of recovery. If this scenario were to materialise in some euro area countries, the inflationary flare-up that will accompany the post-COVID recovery could turn into stagflation in such countries. This is a situation in which a stagnant or anaemic economy coexists with an inflation rate persistently and not marginally higher than the one we have become accustomed to in recent years.

In this scenario, which is exactly what the Recovery and Resilience Facility is supposed to avert, it would be increasingly difficult for the ECB to reconcile the different interests and preferences of the euro area Member States with regard to its policy. In such a scenario, indeed, a financial shock such as an inflationary surprise in the US inducing the Fed to rapidly raise its policy rates (which is not at all—as we have seen—a zero-probability event) would be highly asymmetric for the euro area, with the high public debt/low growth countries that would be very exposed to the risk of a sharp increase in interest rates and some other countries that would strongly prefer to not import inflation from the United States. Even if the inflation surprise had not its origin in the US, but in Europe, the risk of a sovereign debt crisis in some euro area countries and the presence of entrenched differences in the national attitudes towards inflation would probably make the choices of the ECB more problematic than those faced by the Fed should the inflation rate exceed its target level.

These considerations may suggest to the ECB, at minimum, to re-interpret its mandate in the forthcoming strategy review, so as to loosen the self-imposed constraint that obliges it to stick the inflation rate (over the medium term) to be below, but close to, 2% target.

## 6. CONCLUSION

In this paper we offered a review of the current debate on the consequences of US fiscal and monetary policies on the euro area. To start, we have addressed the implications of the gigantic stimuli promoted by the US Administration and their implications on the US and the world economy. Afterwards, we discussed to what extent these may make of the US a pole of global recovery, or else they might ignite permanently higher inflation exported from the US to the rest of the world.

Moving from these scenarios, we have illustrated what the literature has revealed as to the channels through which fiscal and monetary shocks in the US may impact on the euro area. There are three main observations to take away. First, at the crossroad between global economic recovery and global overheating, euro area policymakers cannot ignore what their counterparties are doing, even though they are not constrained in their choices by external conditions as it would be the case in presence of a fixed exchange rate regime. Second, real, monetary and financial channels are all at work and contribute to determine the intensity and sign of the spillovers. Yet spillovers are time- and state-contingent: this increases uncertainty regarding their actual magnitude and it also leads to fairly differentiated effects across countries within the euro area. Third, the financial channel stands out among the various mechanism as it connects, through changes in financial prices and capital flows, fundamentals and expectations across the Atlantic. We highlighted that at the present juncture a key role is going to be played by global financial markets' appetite for open-ended stimulative policies, and fears of hard disinflation scenarios, affecting central banks' ability to keep economies on the recovery path and inflation expectations anchored.

Transatlantic spillovers will be challenging for the ECB. Due to the delayed and more moderate rate at which the euro area is bouncing back from the crisis, the ECB will find itself to follow the US lead. Should US interest rates grow, either because the authorities will increase the policy interest rates to contain inflation or because financial markets expect inflation to raise in the medium term, the ECB will be forced to choose between choking the recovery or preserving/increasing its accommodative stance. Quantitative easing, in particular, may turn out to be necessary again. Not to redress deflationary pressures (as it did in the early 2010s), nor to address non-fundamental problems in the transmission of the monetary stimuli across jurisdictions and markets (as it did during the pandemic period), but rather to prevent that excessive inflationary expectations may slow down the recovery and jeopardise debt sustainability. Such an accommodative stance cannot be open-ended, and will be politically and economically sustainable only to the extent that inflation will not exceed the acceptable target for too long. As usual, the highly asymmetric and heterogeneous developments and conditions within the euro area will play a decisive role. These considerations led us to conclude that a too rigid and binding inflation target should be avoided in the forthcoming review of monetary policy strategy.

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We present a review of the channels through which the US fiscal and monetary post-pandemic policies may affect the euro area. US spillovers will likely be relevant and worth considering while setting the policy stance in the euro area, at a crossroad between economic global recovery and global overheating. A key role is going to be played by global financial markets, their appetite for open-ended stimulative policies and fears of hard disinflation scenarios affecting central banks' ability to keep the economies on the recovery path and inflation expectations anchored.

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