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From the Cliff to the Top: The Path to a Resilient and Sustainable Europe

Policy Department for Economic, Scientific and Quality of Life Policies
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Abstract

The European Union has put in place an extraordinary array of policy measures to mitigate the devastating economic consequences of the COVID-19 pandemic. The sheer amount and extent of the support economic lifelines makes a rushed termination of policies potentially subject to dire cliff effects. Avoiding these cliff effects requires a combination of decisive and long-lasting fiscal stimuli with an accommodating monetary stance, as well as a renewed European strategy that presents a unified fiscal policy, growth-enhancing investments, and a green modernisation of the economy.

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LIST OF ABBREVIATIONS

APP	Asset purchase programme
BVerfG	German Federal Constitutional Court
CIP	Covered interest rate parity condition
COVID-19	Coronavirus disease 2019
EBA	European Banking Authority
ECB	European Central Bank
EC	European Commission
ECOFIN	Economic and Financial Affairs Council
EIB	European Investment Bank
ESM	European Stability Mechanism
EU	European Union
FX	Forex
GDP	Gross domestic product
IMF	International Monetary Fund
OMT	Outright Monetary Transactions
PEPP	Pandemic emergency purchase programme
PSPP	Public Sector Purchase Programme
SGP	Stability and Growth Pact
SMEs	Small and medium-sized companies
SURE	Support to mitigate Unemployment Risks in an Emergency
US	United States

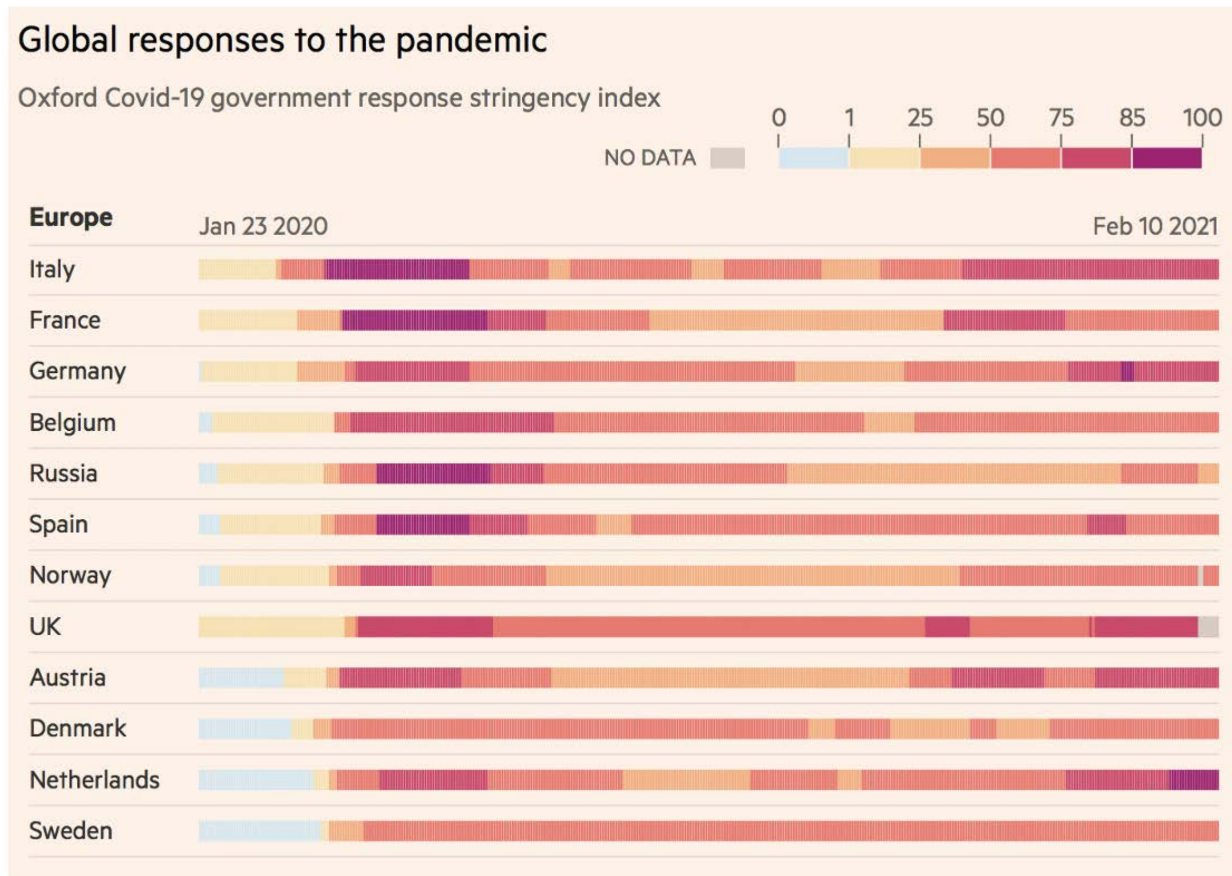
EXECUTIVE SUMMARY

- **Swift and large-scale economic measures have helped protect households and firms from severe economic distress.** The COVID-19 pandemic triggered exceptional fiscal, prudential, and monetary policy measures to stabilise the real and financial sectors. The swift reaction of policymakers was crucial in protecting households and firms from severe economic stress. These measures include broad-based stimuli (including unemployment benefits, grants, and transfers) and liquidity facilities (including low-rate loans and tax deferrals). Monetary policy interventions prevented an even greater economic toll of the pandemic.
- **However, terminating such support measures could trigger "cliff effects" for the real sector and the financial sector.** Policy interventions were designed to be exceptional, targeted, and short-lived. As economic activity is stalled, a rushed and/or uncoordinated termination of these support measures could worsen the situation, known as "cliff effects". For the private sector, cliff effects can result in layoffs, furloughs, bankruptcies, and depressed consumer confidence. For the financial sector, cliff effects could result in a banking crisis. Finally, the euro area economy will also have to deal with increased political risk following the pandemic, which will further endanger the economic stability of the monetary union.
- **Policymakers should shift their focus from emergency support to fostering a deeper engagement of European institutions to promote long-term sustainable growth and job creation for the new economy.** Safeguarding long-term growth, in turn, will shield the euro area economy from short-term cliff effects when the pandemic comes to an end. The recovery package "Next Generation EU" is a step in the right direction. Euro area countries can make use of this fund to finance large-scale projects that address climate change, digitalisation, and EU-wide infrastructure systems, thus creating new jobs and fostering sustainable growth. Such projects can be financed through a European safe asset, jointly issued by the Member States of the monetary union. Additionally, a European safe asset would make financial markets more resilient, increasing the ability to share risks in the future.
- **Current European institutions are well equipped to tackle cliff effects with additional policy instruments**. Policymakers can ease the job of the European Central Bank by democratically validating that the current course of the institution is in line with the mandate. Further, rethinking mandate limits will contribute to planting the seeds of the Europe of tomorrow. The European Investment Bank should be made the competent authority for digitalisation, transition risks, and fostering sustainable long-term growth.

1. INTRODUCTION

Since the outbreak of the Coronavirus (COVID-19) at the end of 2019, its rapid spread has upended the lives and livelihoods of millions of people around the world. In Europe, governments implemented lockdowns, shelter in place orders, curfews, and other measures in an attempt to flatten the spread of the virus. These protective measures reached peak toughness in April 2020 and were progressively eased through the summer months. Nevertheless, the resurgence of a second wave in the majority of European countries in the fall resulted in the reimplementation of previous restrictions to greater or lesser degrees, as shown in Figure 1, which depicts an index of measure stringency, as developed by researchers at Oxford University.

Figure 1: Severity of the Oxford stringency index of pandemic measures



Source: Max Harlow, Caroline Nevitt, Alexandra Wisniewska. Blavatnik School of Government, University of Oxford. Copyright: Financial Times.

These containment measures severely affected economic activity. World gross domestic product (GDP) is estimated to contract in 2020 by -3.5%, according to the International Monetary Fund (IMF), and estimates are worse (-7.2%) for the Euro area (IMF, 2021). Therefore, stimulus packages became indispensable, softening the economic impact of containment measures. Across European countries, responses to the crisis were broadly similar, including substantial targeted fiscal, monetary, and financial measures (Blanchard et al., 2020). There is ample consensus that these swift and substantial economic measures helped protect people and firms from additional severe economic distress and will ease the road to economic recovery (IMF, 2020c; Baldwin et al., 2020).

However, the path towards the new normal is riddled with downside risks from so-called cliff effects, which describe the short-term negative side effects following the abrupt termination of an economic support measure. If these materialise, it may complicate the return pre-pandemic levels of activity.

In light of the current situation in Europe, where the vaccination rollout is proceeding slowly and new variants of the COVID-19 virus are rapidly spreading, the outbreak of a third wave is a realistic threat for the European economy. The high uncertainty with respect to the pandemic's end date will probably lead to extensions of most relief measures for an undetermined period. In this case, the economic damage caused by short-term cliff effects may become a secondary concern for policymakers, as these are less likely to happen in the immediate future. Rather, policymakers must focus on how to improve already-existing policy measures that are designed to sustain the long-term stability of the euro area economy, which will also help mitigate the cliff effects once the pandemic comes to an end.

Euro-wide coordination of fiscal authorities, combined with new monetary policy measures, will prepare the euro area for the post-pandemic period. Regarding the fiscal side, we explore the implications of a (i) euro-wide cooperation in debt management and (ii) the introduction (and fast execution) of pan-European projects that can boost economic activity in a sustainable manner. From the monetary side, it is desirable that the European Central Bank (ECB) maintains its accommodative policy stance and provides liquidity to the financial markets.

This paper reviews the policy responses to the COVID-19 outbreak and the possible cliff effects that their termination poses to the European Union (EU). We argue that this might be the moment to solidify some of the emergency measures and transform them into mid- or long-term structural features of the European architecture, resulting in a more resilient and thriving Europe.

2. POLICY RESPONSES TO COVID-19

In response to the COVID-19 pandemic, governments took extraordinary measures to protect people's health, workers' jobs, and firms from the consequences of an economic halt. These measures included broad-based stimuli (including unemployment benefits, grants, and transfers) and liquidity facilities (including low-rate loans and tax deferrals). The measures had two foci: (i) sustain the livelihoods of the citizens during lockdown, and (ii) build confidence in the eventual economic recovery. Monetary accommodation using conventional and unconventional tools prevented an even greater economic toll of the pandemic.

In what follows, we briefly describe the functioning of the widest spread policy responses in the euro area.

2.1. Fiscal and monetary interventions

Fiscal measures were among the first and most frequently used measures that countries all around the globe resorted to during the pandemic. Worldwide fiscal response reached unprecedented highs. According to the IMF, as of 11 September 2020, announced fiscal measures amounted to USD 11.7 trillion globally; that is, approximately 12% of global GDP (IMF, 2020).

Initial interventions in the euro area comprised individual country aid packages in the form of fiscal support. At the European level, the ECB was quick to react, supporting the individual countries and, later on, new pan-European policy interventions were devised to inject funds and liquidity into the member countries.

2.1.1. Individual country measures

In the euro area, all countries adopted stimulus packages. Fiscal support has been massive and swift, much larger than the fiscal response to the global financial crisis. Governments activated all the policy measures in their toolkit, be it discretionary measures, automatic stabilisers, and off-budget assistance. Jointly, discretionary fiscal measures increased to 3.25% of GDP (European Commission, 2020), whereas other liquidity support measures amount to approximately 20% of the euro area GDP (European Semester 2020: National Reform Programmes and Stability/Convergence Programmes). Initial responses to the coronavirus mainly targeted two objectives: (i) protect people in an environment of high contagion risk, and (ii) stimulate demand in the wake of a recession driven by low aggregate demand.

First and foremost, policies had to address the immediate health consequences of the spread of the virus. Right from the start of the outbreak, a large effort was made to strengthen the health system, including buying specific equipment and hiring professionals, setting up containment and tracking infrastructures, as well as investing in the development of vaccines and therapies.

While the world waited for the development of a vaccine or a treatment that is effective and universally accessible, public health policies concentrated on containing the spread of the virus by promoting social distancing. These public health policies reduced production by reducing the number of hours worked and amplifying the supply-side shock to the economy. Contrary to appearances, though, Chetty et al. (2020) show that measures that contain the spread of the virus are effective tools to support the recovery because they save lives, restore confidence, and allow for a safe reopening of activity.

Secondly, fiscal measures attempted to shield employment and firms from the massive slowdown in aggregate demand during the COVID-19 pandemic. Depressed demand was largely driven by an

unprecedented plunge in private consumption, which exceeded that of household disposable income. Thus, there was a sizable increase in the saving rate. Part of this increase is due to the inability to consume during lockdowns and, hence, it is expected to jump back when normalcy returns. However, it could also be that consumption levels may remain low for as long as there is uncertainty regarding new pandemic waves and the subsequent intensity and duration of the expansionary policy measures.

Fiscal measures to stimulate demand in the euro area generally took the form of cash transfers, unemployment benefits, and wage subsidies. The associated fiscal multiplier of these measures should be high, as "hand-to-mouth" behaviour is typical of constrained people (Bayer et al., 2020). Other off-budget fiscal measures included tax deferrals, tax reductions, equity injections, and direct or guaranteed loans, which were meant to support liquidity. In general, fiscal measures successfully mitigated the negative effect of the pandemic on economic outcomes[1].

2.1.2. Pan-European interventions

The fiscal measures of Member States were complemented by EU-level actions. The depth of the crisis and the heterogeneity in the fiscal space available across the members provided a rationale for an EU response to complement those of the Member States. As we argue in the next section, the announcement of the intervention at the EU level was welcomed, as evidenced by the subsequent stabilisation of the financial markets, thus indicating that the coordination between Member States was deemed beneficial for the management of the crisis.

These actions allow for a greater flexibilization of the use of structural funds, the creation of a support scheme to mitigate unemployment risks, a credit line to provide liquidity to firms, and a full-fledged EUR 750 billion recovery fund to support investment and structural reforms. Box 1 provides an overview of the various pan-European actions and their intended duration.

The ECB's response to the crisis was crucial for avoiding bigger losses in the real economy and was helpful for stabilising the financial markets. Already in mid-March 2020, the ECB started announcing a range of monetary and credit policy measures. The central piece of those measures was the pandemic emergency purchase programme (PEPP). The PEPP was designed to "prevent the fragmentation of credit markets and the impairment of monetary policy transmission" (European Commission, 2020).

This kind of policy measure was not entirely new. The ECB was already purchasing sovereign and corporate securities through the asset purchase programme (APP), which was extended at the beginning of March with an additional EUR 120 billion for the rest of 2020. The rollout of the PEPP and the expansion of the APP contributed, at least in part, to stabilising financial markets (Lane, 2020; Bernoth et al., 2020; Ettmeier et al., 2020). Most importantly, these programs also facilitated the fiscal response by using its asset purchasing capacity to help member countries scale up debt issuance. Figure 2 depicts holdings of sovereign bonds from the four largest euro area countries (Germany, France, Italy, and Spain) and the projected increase (dotted lines) in the percentage of their securities held by the Eurosystem.

In June, in response to a downward revision of expected inflation, the size of the PEPP was expanded (to a total of EUR 1.35 trillion) and its minimum duration extended by six months until July 2021. In December, the size of the PEPP was further expanded, to EUR 1.85 trillion and extended until March 2022. As long as inflation expectations remain well-anchored and subdued, the asset purchases programs should also ease the monetary policy stance to aid the recovery (WEO, 2021).

[1] Fiscal multipliers are typically large in recessions driven by low demand (WEO, 2020). However, standard fiscal stimulus can be less effective than usual this time because the Keynesian multiplier is low when some sectors are shut down (Guerrieri et al., 2020) and its effect on employment may also be muted (Baqaee and Fahri, 2020).

2.2. Prudential measures and foreign liquidity

The pandemic's damage to the financial sector has been somewhat smaller than to the real economy. This is due to the fact that (i) the nature of the pandemic is a non-financial shock, and (ii) financial institutions were more experienced, regulated, and equipped with shock absorbers since the global financial crisis. In addition, central banks, prudential authorities, and regulators acted swiftly to prevent a virulent spillover to financial markets. They launched a complex combination of measures that supported each other. These included measures that ease the balance sheet of banks (capital buffers, moratoria for bank loans, dividend bans), moratoria for insolvencies of non-financials, and supporting foreign denominated liquidity via central bank swap lines.

Box 1: Actions at the EU level to assist and promote member countries' fiscal measures

Phase 1: Providing fiscal space

On 19 March 2020, the European Commission (EC) adopted a temporary state aid framework with the objective of supporting public assistance to European companies while levelling the playing field in the EU. Such initiatives were meant to be short-term measures for urgent needs. This state aid framework has been extended twice: 3 April and 8 May 2020.

On 23 March, the Economic and Financial Affairs Council (ECOFIN) activated the general escape clause of the Stability and Growth Pact (SGP). Consequently, Member States were allowed to depart from the budgetary requirements of the SGP under the condition that a severe economic downturn endangers the euro area or the EU as a whole. Member States should remain committed to respect the SGP and, thus, the response to the exceptional circumstances should be targeted and temporary.

On 30 March, the EC allowed the use of cohesion funds, structural funds and EU solidarity funds to address the consequences of the COVID-19 crisis. The scope of these legislative acts is limited to the budgeted funds.

Phase 2: Facilitating loans and credit lines

The EUR 100 billion Support to mitigate Unemployment Risks in an Emergency (SURE) scheme was approved. It consists of temporary loans that assist governments to set up and fund short-time employment schemes for the duration of the emergency.

On 16 April, the European Investment Bank (EIB) created a European Guarantee Fund of EUR 25 billion to scale up its support to small and medium-sized companies (SMEs) and others in the real economy by mobilising up to EUR 200 billion.

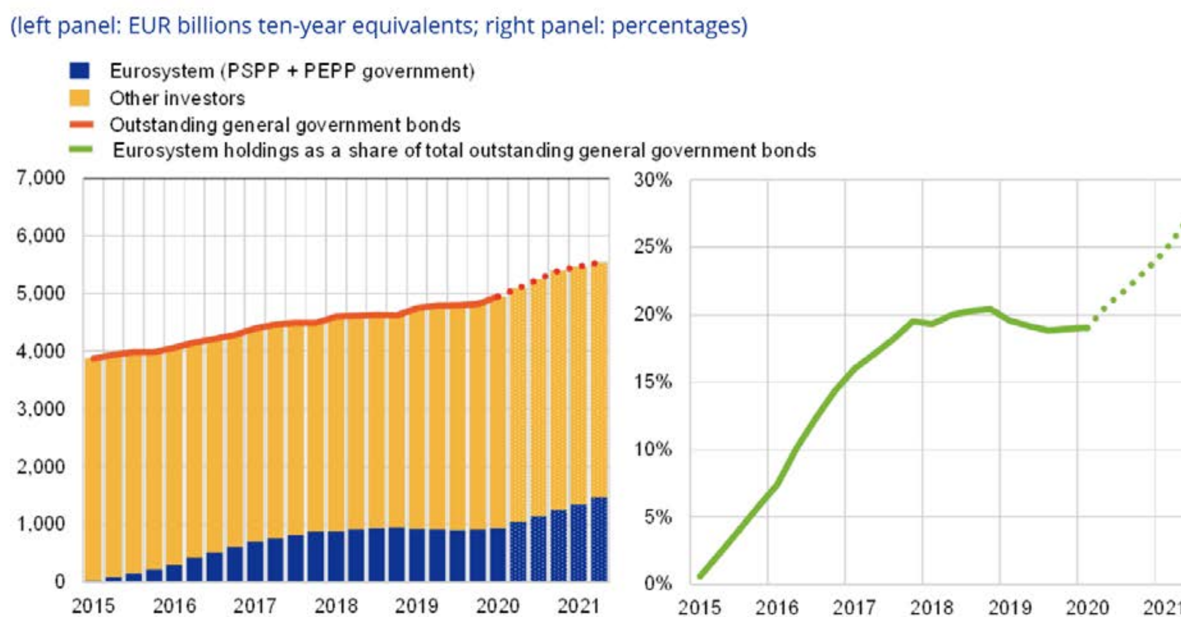
On 15 May, the European Stability Mechanism (ESM) established a Pandemic Crisis Support credit line worth EUR 240 billion for health-related issues related to the COVID-19 pandemic. Requests may be made until 31 December 2022.

Phase 3: Introducing a recovery package

On May 27, the Commission presented a recovery package containing an enlarged long-term EU budget for 2021-2027 and a new Recovery Instrument, "Next Generation EU". It consists of EUR 500 billion in grants and EUR 250 billion in loans for long-term strategic investments from Member States.

Source: ECB Economic Bulletin, Issue 1/2021 and KPMG "European Union. Government and institution measures in response to COVID-19."

Figure 2: Outstanding holdings of the Eurosystem and other investors



Source: Securities holdings statistics, government finance statistics, ECB and ECB calculations.

2.2.1. Non-bank financial intermediation and foreign liquidity provision

The total assets in the non-bank financial sector have risen by more than 80% since 2009 and have reached a share of more than 60% of the total financial sector (ECB, 2018). According to ECB estimates, money market and investment funds experienced significant stress during the March 2020 turmoil. Rising margins in the derivative markets and increased dollar funding costs amplified the stress (FSB, 2020). Risks in these sectors are particularly hard to control, since non-bank financial institutions do not have access to conventional central bank liquidity and are also only indirectly affected by the regulatory framework for banks - such as the countercyclical capital buffers. Nevertheless, the domestic and foreign monetary policy measures (Fed swap lines and PEPP) also eased the tensions in the non-bank sector.

Since the global financial crisis, deviations from the covered interest rate parity condition (CIP) imply large and persistent arbitrage opportunities - and potential inefficiencies - in one of the largest asset markets in the world. The fact that they are not exploited, implies high dollar funding and hedging costs for European institutions and a risk to financial stability[2]. While the dollar funding premia came down from the financial crisis peak, they have never returned to pre-2009 levels. Around the end of February 2020, dollar funding conditions started to become tense again for European institutions (Persi, 2021). This led the major central banks to implement new facilities that provided Forex (FX) liquidity to foreign institutions (ECB, 2021).

[2] There are several recent studies discussing both demand and supply factors that explain CIP deviations; these are Bahaj and Reis (2020), Bräuning and Ivashina (2020), Cenedese et al. (forthcoming), Du et al. (2018), Iida et al. (2016), and Liao (2020). In summary, two main factors contribute to the collapse of the CIP: (i) Tighter post-crisis capital requirements for banks, which increased banks' balance sheet costs and inhibited banks' arbitrage trading between the spot dollar and FX swap markets; and (ii) A divergence in interest rates between the United States and abroad, which has led to a large demand from foreign banks to exchange their domestic currency for higher-yielding dollars that could not be accommodated at a constant price due to tighter bank capital.

The Federal Reserve took action as the overnight EUR/USD FX swap spread rose by about 6 percentage points (600 basis points) - a prohibitively strong increase. However, the announcement of the expansion of the US dollar swap lines with longer maturities, on 15 March 2020, was not enough to calm down the markets. The first operations with the eased pricing conditions on 18 March 2020 began to eliminate tensions in the market. Nevertheless, the volatility and funding costs remained high until 7-day US dollar operations were offered on a daily basis as of 23 March 2020. To prevent international spillovers and the forced sales of euro-denominated assets, the ECB reacted by extending its liquidity facilities.

3. OFF THE CLIFF: AFTER THE PANDEMIC

In the previous section, we documented the swift and sizable efforts that policymakers undertook to mitigate the economic consequences of the coronavirus outbreak. However, although these policy interventions are meant to be temporary; the early and/or uncoordinated withdrawal of these measures could disrupt the euro area economy, as the economic recovery process may last longer than the pandemic itself. This phenomenon is known as the "cliff effect".

In this section, we start by presenting how cliff effects can affect the real and financial sectors of the euro area economy. We then introduce political risk as an additional cliff effect, as the pandemic resulted in exceptionally high debt levels of the member countries and an expanding balance sheet for the ECB.

3.1. The private sector

3.1.1. Firms

A study of Demmou et al. (2020) shows that, within a simulated exercise, without government intervention, 20% of firms would run out of liquidity after only one month of confinement, 30% after two months, and around 35-58% after three months. These numbers - even though they rely on assumptions and, thus, must be interpreted with caution - confirm the necessity and effectiveness of the swift and decisive fiscal interventions that were introduced during the pandemic. However, at the same time, it also highlights the heavy reliance of the corporate sector on fiscal support[3]. As the euro area has entered a second wave of the pandemic, the increased uncertainty with regard to the end of the pandemic forces firms to further deplete their cash and equity buffers. At this point, the question arises of whether firms can cope with these damages when government support expires after the pandemic.

In general, the pandemic has led to the quick depletion of firms' cash buffers. Therefore, a (sudden) termination of government support would result in high and persistent insolvency rates. In addition, firms that have survived will have to focus on deleveraging their positions, for instance through job cuts, and, thus, may not be able to exploit new investment opportunities that are crucial for mid- to long-term growth.

Within this context, it is also important to address whether all corporations will be able to recover from the pandemic in a homogeneous manner. Mann (2020) argues that the recovery process of the manufacturing sector will be a "V" or "U" shape, while the service sector, including tourism, transportation, and local services, may take longer to recover. Or even worse, they may never fully recover, thereby exhibiting a "L" shape recovery. The reason for this reluctant recovery of the service sector can lie on health risks, but also on permanently shifted consumer preferences (Hacioglu et al., 2020; Hodbod et al., 2020a). Within this context, policymakers must examine the trade-off between (i) extending financial support for firms that will suffer from longer recovery rates, and (ii) allowing such obsolete firms to fail quickly such that resources can be reallocated to more efficient purposes[4].

3.1.2. Households

As for firms, households have also suffered from lower income levels due to job losses or reduced

[3] See also the report by Revoltella and de Lima (2020), which uses the Investment Survey of the European Investment Bank to visualize the negative impact of the COVID-19 shock on EU firms.

[4] Jordà et al. (2020) and Hodbod et al. (2020b) discuss the danger of so-called "zombie" firms: low productivity firms that hamper productivity growth by crowding out opportunities for other new firms.

working hours. Fortunately, swift and large-scale responses of the euro area governments were successful in mitigating such damages: According to the Economic Bulletin of the ECB, although euro area households could have experienced up to a 22% decrease in their labour income due to reduced working hours, the short-time work benefits limited the drop in net labour income to an average of only -7% (ECB, 2020). Hacioglu et al. (2020) shows that effective government transfers were able to mitigate the negative income effect of lower-income households in the United Kingdom, thus enabling them to limit the reduction of their consumption[5].

However, an abrupt termination of such short-time work benefits can result in a direct increase in unemployment after the pandemic. As we discuss in the previous subsubsection, firms are likely to go through heterogeneous recovery paths - this combined with high uncertainty with respect to their earnings is likely to result in job reductions. In addition, high unemployment rates can dampen consumer sentiment and significantly affect household expenditures. This, in turn, builds a base for a vicious circle as low consumption can negatively influence corporate profits, which is crucial for job creation.

3.2. The financial sector

Even though the swift large-scale responses of the policymakers were crucial for stabilising the financial markets, the variety and magnitude of the introduced measures created a complex web of interdependencies. These bear their own risks if they are reversed as swiftly as they were implemented or reversed in the wrong order. Understanding the optimal timing and order is particularly challenging because it requires coordination among institutions that are designed to be independent of each other.

Overall, we see three highly impactful, but also unlikely, scenarios of cliff effects on the financial sector:

1. Cascade of mass insolvencies that transform into a banking crisis;
2. Repo runs and bank runs; and
3. Interbank dollarization and dependence on foreign liquidity.

3.2.1. Cascade of mass insolvencies that transform into a banking crisis and credit crunch

Countercyclical buffers can only be released once: if capital buffers are depleted, banks might be more vulnerable when a financial shock hits the economy. Guarantees, moratoria on bank loans, and moratoria on insolvencies support both the financial and real economies. Like capital buffers, these ensure that banks have enough leeway on their balance sheet to lend to economic entities and to ease the burden on those most affected by the crisis. Fading out the guarantees or moratoria too early could trigger a vicious circle of defaulting companies and tighter lending conditions.

3.2.2. Repo runs and bank runs

While a too accommodative monetary and regulatory stance might lead to excessive risk taking, a too swift monetary or regulatory tightening might cause interbank stress. Such stress could be amplified under a scenario where some countries, sectors, or banks must carry more of the burden of the crisis than others. For example, the macroeconomic imbalances and heterogeneous fiscal positions in the euro area have led to an asymmetric distribution of shocks across the countries. When an adverse shock hits, export-intensive countries with slower growing real wages suffer disproportionately less. This widens the already existing spreads between the euro area countries (see Figure 4). Consequently, high quality collateral, which supports the repo markets with liquidity, becomes scarce. This might be

[5] Baker et al. (2020) and Chetty et al. (2020) also show similar results for households in the United States.

amplified by a concentration of business-model-related risks (e.g., tourism or health) or advantages in some countries. The seminal work of Brunnermeier and Pedersen (2009) highlights the importance of high quality collateral in the repo market and shows how liquidity spirals can end up in repo runs that eventually trigger large scale fire sales of assets. As the repo market is a cornerstone of the banking system and plays a key role in monetary policy transmission, its stability is a necessary condition for financial stability. Through this lens, the deviation from the capital key in PEPP is a right step for preventing liquidity spirals, as it enables the ECB to act as a circuit breaker in the amplification mechanism.

3.2.3. Interbank dollarization and dependence on foreign liquidity

When the dollar funding premia spiked during the March 2020 turmoil, major central banks took coordinated action. Most importantly, the Federal Reserve of the United States (US) acted swiftly, easing the dollar lending conditions for European institutions. Notably, here the Federal Reserve plays a dominant role since swap and repo agreements among central banks are predominantly denominated in US dollars.

While US dollar liquidity injections from the Federal Reserve are a short run remedy for volatile money and derivative markets, they might imply financial stability risks and obstruct the monetary sovereignty of the receiving country in the long run. Moreover, a very harmful cliff effect arises from the fact that the reversal of the Federal Reserve's policy is not controlled by a European institution. In theory, the US monetary authority could just refrain from lending to European institutions at all. This could cause the Eurodollar market collapse, with many unforeseeable consequences. However, with the stable political relation between the United States and the EU, this can be rendered as a very unlikely scenario.

However, there might be long term consequences that are more subtle. The more a country is dependent on liquidity provided by a foreign central bank, the more the monetary transmission mechanism will be dependent on the action of the donor central bank. Moreover, foreign-denominated liquidity and leverage is more difficult for domestic regulators to control. Search-for-yield motives and persistent interest rate differentials might incentivise some institutions to hold more dollar denominated assets to increase their returns. If this situation persists for decades, it could dollarize the interbank market and obstruct monetary policy.

Box 2: Central bank liquidity swap lines

With the 2008 global credit crunch, central bank liquidity swaps became of global importance. A bank liquidity swap is a currency swap used by a country's central bank to provide liquidity of its currency to another country's central bank. The provision of liquidity to a foreign country can prevent the fire sale - and thereby a devaluation - of assets that are denominated in the currency of the donor central bank. From another perspective, they can be seen as a political tie between countries. While one central bank acts as a lender of last resort to the receiving country, the receiving country has easy and secured access to the foreign currency. Evidence shows that with swap lines, the donor central bank can increase the dominance of its currency in international capital markets (Bahaj and Reis, 2020). In addition, Coffey et al. (2009) find that the supply of dollars by the Federal Reserve (Fed) to foreign central banks via reciprocal currency swap lines reduced CIP deviations during the global credit crunch. Nevertheless, as Gros and Capolongo (2020) note, it is not clear if the swap lines of the ECB are as powerful as those of the Federal Reserve when it comes to currency competition and providing international backstops against fire sales of assets.

Additionally, the ECB acted as a donor central bank and extended the provision of euro swap and repo lines to other countries. We see a small legal cliff risk regarding these instruments, which is not yet explored. While it seems natural, for pragmatic reasons, that a central bank can affect the international role of its currency, at least for the ECB, it is unclear how engaging in the competition is exactly related to its mandate and even ECB officials mainly point to the euro's international role when it comes to justifying them (ECB, 2020a). However, as the reversal of the ECBs repo and swap lines might trigger the sale of euro denominated assets in the receiving countries, the ECB can likely argue that maintaining the swap lines is a prerequisite for financial stability of the euro area.

3.3. The political sector

In this section, we discuss the political risks of the pandemic in greater detail to provide a better understanding of how to think about policy designs for the post-pandemic period. One potential cliff effect of removing fiscal support is a protracted downturn. If confidence does not return to the private sector and demand falls short of pre-pandemic levels, economies could find themselves in a prolonged recession. Ultimately, this may require further fiscal assistance down the line, at least in the form of automatic stabilisers, which would compound the problem of debt sustainability and its associated risks.

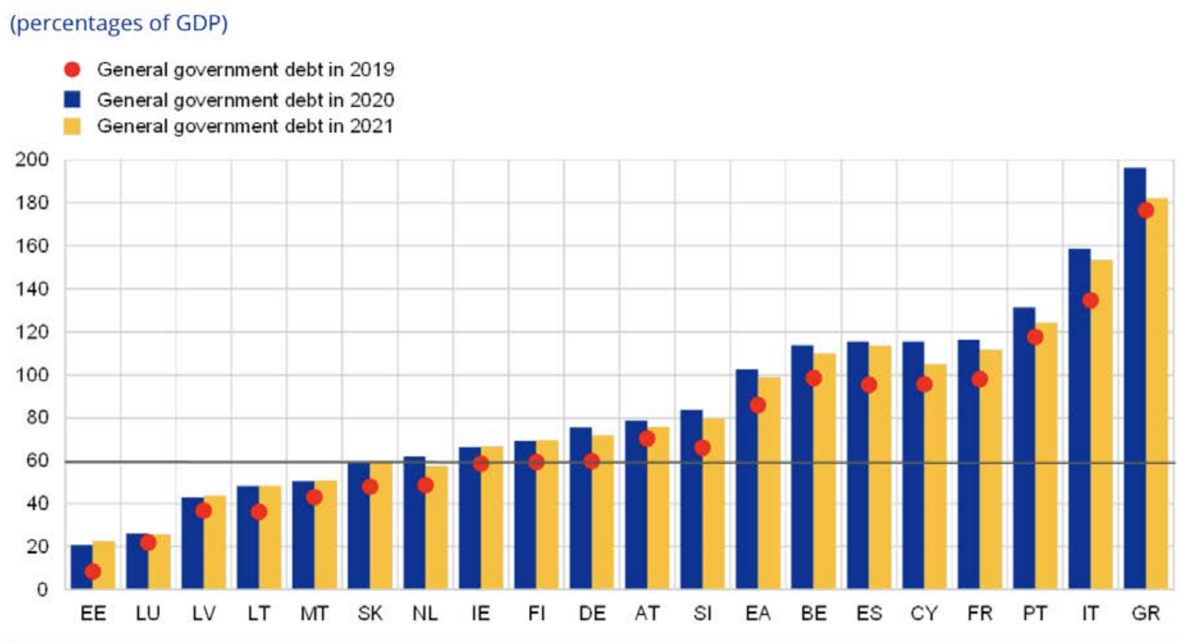
However, with high overall indebtedness levels, the risk of a debt rollover crisis cannot be ignored. The debt levels of many industrialised countries have reached new record highs since the pandemic, including euro area countries. Micossi (2020) shows how fiscal balances and sovereign debts of EU Member States - especially in the euro area - deteriorated in a drastic manner during 2020. Interesting is the fact that, different from the European sovereign debt crisis, debt levels have increased for all countries, reflecting the severeness of this crisis: from 2019 to 2020, Italy's debt level increased by 20%, Greece by 13%, Spain by 29%, France by 21%, and Germany by 23%.

Within this context, a question arises with regard to what will happen to this debt after the pandemic. As shown in Figure 3, the vast majority of Member States have already exceeded the requirements of the Maastricht Treaty, which states that the ratio of gross government debt to GDP must not exceed 60% at the end of the preceding fiscal year. In addition, the pandemic has hit the euro area countries in a heterogeneous manner, such that it is not clear when countries will be able to terminate their pandemic rescue programs in the subsequent years. Therefore, debt can further increase or stay at a high level that may not be sustainable in the long-term, leading to potential default scenarios of certain euro area countries[6].

The introduction of ECB asset purchase programs, such as the PEPP, is also not without controversy. After the introduction of the PEPP in March 2020, German politicians filed complaints against the program; questioning the legality of the ECB's reaction to the pandemic. Already during the European sovereign debt crisis, the outright monetary transactions (OMT) and the public sector purchase programme (PSPP) of the ECB were challenged by legal issues, as German politicians took these programs to the German Federal Constitutional Court (Bundesverfassungsgericht, BVerfG) by accusing the ECB of exceeding its mandate. The active phase of the OMT lawsuit, in 2012 and 2013, was especially characterised by high political turbulence in Germany (and thus the euro area as a whole), as a German exit from the EU would have been the likely inevitable consequence had the BVerfG ruled against the OMT.

[6] In addition to these factors, Gibert (2016) shows that using debt deleveraging as a signalling device may backfire when implemented as a "one-size-fits-all" policy for all countries simultaneously.

Figure 3: General government gross debt (2019-2021) as a percentage of GDP



Source: European Commission and ECB calculations.

With respect to the PEPP, Yves Mersch, former member of the Executive Board of the ECB and Vice-Chair of the Supervisory Board, argued that the "crisis measures [of the ECB] must be temporary and targeted. They are justified only in the light of the exceptional circumstances seen during the pandemic". As soon as the crisis evolves, "the ECB will reconsider its tools and supervisory practices"[7]. Therefore, the careful timing of the termination of such asset purchase programs is critical for avoiding legal challenges that would negatively affect the financial stability of the euro area. Even though a study by Grund (2020) shows that PEPP is compatible with EU law, political turbulence is inevitable if these measures exceed.

To summarise, the unprecedented fiscal response to the pandemic increased the sovereign debt vulnerabilities of euro area member countries to an exceptional level. The euro area faces a dilemma at this point: on the one hand, the end of the pandemic is not yet in sight and an abrupt termination of government rescue packages could result in a protracted economic downturn, as the economic damages caused by the pandemic are artificially mitigated with governmental support. On the other hand, secular high debt levels of euro area governments and massive asset purchases by the ECB could result in high political uncertainty, thereby having the potential to threaten the stability of the monetary union. In addition, high uncertainty with regard not just to the duration of the pandemic, but also its long-term impact on the economy combined with political risks will exacerbate these cliff effects.

[7] Keynote speech at the European System of Central Banks Legal Conference on November 2, 2020.

4. POLICY RECOMMENDATIONS FOR THE FUTURE OF EUROPE

Given the current situation in Europe, where the breakout of a third wave cannot be excluded, the policy measures introduced to mitigate the economic damage of the pandemic are very likely to be extended. In this case, we argue that short-term cliff effects may temporarily become a secondary concern for policymakers, as they are less likely to happen in the near future. Instead, policymakers should focus on improving the already existing policy measures. In this section, we emphasise the importance of EU-wide cooperation to initiate new projects and investments that boost economic activity in a sustainable manner. At the same time, it is important that the ECB further maintains its accommodative policy stance and provides liquidity to the financial markets.

4.1. EU-wide commitment to debt

The pandemic is causing exceptional economic damage resembling that of wars. Fiscal authorities have recognised the importance of working together to facilitate economic sustainability. The largest step was in May 2020, when Angela Merkel and Emmanuel Macron announced a EUR 500 billion spending programme, despite opposing opinions from the Frugal Four as well as French and German politicians[8]. A VoxEU report of Ettmeier et al. (2020) shows that this event had large stabilising effects on the financial markets compared to nation-specific fiscal rescue packages, thus emphasising the importance of fiscal cooperation in times of crises.

In this subsection, we focus on the fiscal side, showing how cooperation not just in debt management, but also mutual projects that foster mid- to long-term economic sustainability will help the euro area to enhance growth, which is crucial for mitigating the cliff effects of the post-pandemic period.

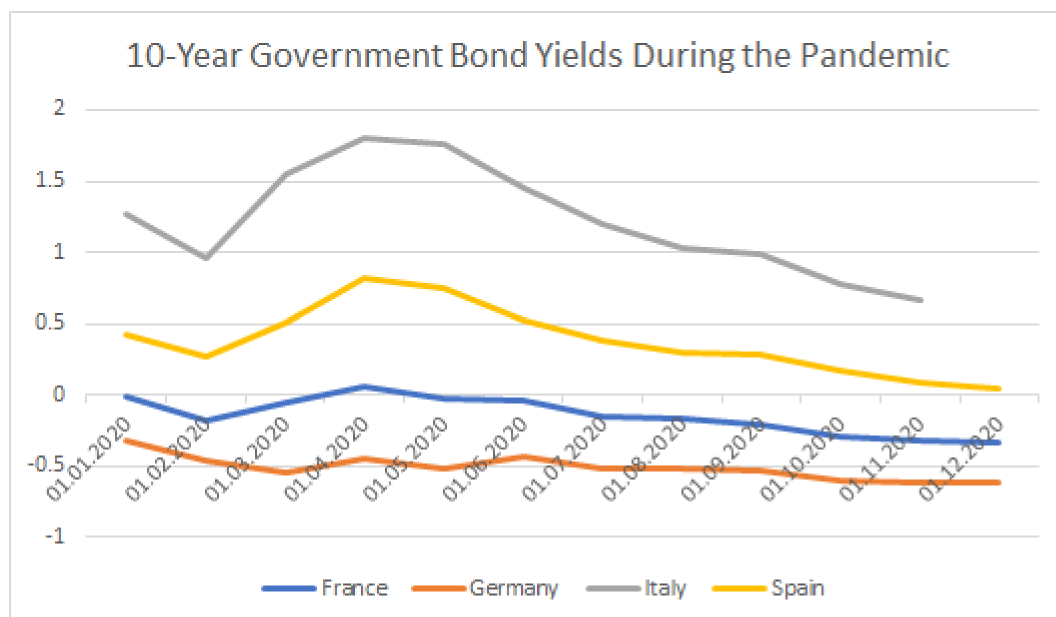
4.1.1. Further pan-European debt instruments

During times of high economic and financial instability, policymakers must focus on how to manage the high debt levels of its member countries. This is of particular importance as sovereign solvency plays a crucial role for their financial accessibility. Furthermore, we learned from the European sovereign debt crisis how default scenarios, deteriorating credit ratings, and concerns about a potential exit can threaten the euro area as a whole (Bayer et al., 2019). During the pandemic, credit risk increased more for peripheral countries like Italy and Spain, while France and Germany exhibited negative yields for their government bonds (see Figure 4)[9]. However, the increase in yields is not as severe as it was during the sovereign debt crisis. Nevertheless, a key question is how these borrowing conditions will evolve, as countries are heterogeneously affected by the pandemic - with Italy and Spain having worse circumstances than France and Germany. Therefore, it is not clear whether the pandemic will simultaneously come to an end for all member countries. These factors, in turn, can result in worsening economic outlooks for the peripheral member countries, leading to worsening conditions in the future.

[8] The Frugal Four is term that groups European countries that share a similar conservative policy stance. This group includes Austria, Denmark, the Netherlands, and Sweden.

[9] In section 3.2., we also show that heterogeneous credit risk of euro area countries can increase financial stress in repo markets.

Figure 4: Long-term government bond yields in the four largest EU countries



Source: Federal Reserve Economic Data.

As one solution, pan-European bond issuance is vividly debated among policymakers. However, this debate is unlikely to come to a quick conclusion because some countries still have concerns about debt mutualisation. It is feared that a common debt instrument may lead to bad incentives for certain fiscal authorities to not manage their debt in a sustainable way.

Nevertheless, the introduction of such common debt instruments can have many advantages that outweigh their disadvantages. First, the issuance of common bonds does not rely on a specific sovereign credit rating, but rather is backed by the whole monetary union. This will not only improve the credit conditions of many euro area member countries, but the issuance of pan-European debt instruments can also have a signalling effect to global markets, reassuring them of a true European commitment. Additionally, these instruments would be available for all member countries, compared to other European Stability Mechanism (ESM) programs that have strict requirements and carry a stigma of only being used by countries with weak economic conditions. Finally, a European safe asset would provide clear advantages for euro area financial markets. First, it would foster the liquidity of the repo market and support the stability of funding markets during times of financial turmoil. Second, a common debt instrument would also solve the problem of the ECB having to buy the bonds of individual member countries.

In addition, as we cannot foresee the end of the pandemic yet, the issuance of European bonds can have immense advantages in ensuring stable credit conditions for the future, thus minimising cliff effects. In particular, a common European debt instrument can support the heterogeneous fading out of fiscal reliefs, as certain countries that may suffer longer from the pandemic than others do not have to worry about worsening credit conditions.

4.1.2. Focus on sustainable projects

One further advantage of the euro-wide commitment to debt is the possibility to coordinate and finance projects that need the cooperation of all member countries to enhance the stability of the Economic and Monetary Union as a whole. As the introduced relief measures that provide short term support cannot persist forever, policymakers must implement and design new tools that allow for a

transition to measures fostering long term growth and sustainable innovation. This could also create attractive euro denominated investment opportunities and prevent an excessive reliance on dollar denominated investments as discussed in section 3.2.2.

Indeed, with the Next Generation EU stimulus package agreed to in July 2020, the European Council established an unprecedentedly large, EUR 750 billion, stimulus fund to not only support member countries during the pandemic, but also to encourage investment in green finance and digitalisation to boost the European economy in the long run. Such pan-European projects are key to enhancing the stability of the monetary union as a whole, as they facilitate long-term growth that generates a base for quick economic recovery following the pandemic.

Within this context, policymakers have already emphasised the importance of green and digital transformations. For instance, the World Economic Outlook sees the pandemic as a chance for fiscal authorities to give a big push to green investment to overcome subdued economic activity while simultaneously addressing climate change related problems[10]. Other than climate change, additional large-scale investments in digitalisation, but also EU-wide infrastructures, would also have positive long-term effects on economic activity by creating new jobs and optimising economic processes. Further, fiscal expenditures on research subsidies to support innovation in these fields would induce waves of technological changes that can boost productivity in the medium- to long-term.

In fact, the EU already possesses mutual instruments to collect funds for such large-scale projects: since 2007, the European Investment Bank (EIB) issues "Climate Awareness Bonds" to finance projects that address climate change. In October 2020, the European Commission announced its issuance of EU SURE bonds of up to EUR 100 billion as social bonds to support jobs in 17 Member States during the pandemic[11]. All these instruments can be used and expanded to push further projects that will support long-term economic growth in the EU.

4.2. Validating central banking and upgrading the institutions of Europe

Section 3 mentions a set of cliff effects that, hopefully, will not materialise. Nevertheless, the ECB's toolkit is well equipped to tackle economic risks coming from an eventual third wave of the pandemic or the scenario of heightened economic uncertainty as a residual effect of the pandemic. If one of the cliff risks/effects was about to materialise, we are likely to see a prolonged and further expansion of the ECB's balance sheet. With limited technical possibilities for conventional measures[12], monetary policy will continue to resort to unconventional measures. Even if fiscal capacities might reach its limits and regulatory easing is impeded or undesirable for financial stability reasons, the ECB still has some powerful tools left for the worst-case scenario (Fritsche and Steininger, 2019).

Nevertheless, the legal challenges around the ECB's mandate and programs are an effective limit to its credibility. These could be most efficiently addressed by lawmakers, who can validate or reject the action of the ECB, by specifying its mandate. The ECB's existing mandate was successful, equipping the euro with attributes of a dominant currency (Fritsche and Harms, 2020). Therefore, lawmakers should

[10] Their policy design suggests the introduction of higher carbon prices combined with government support for sustainable investment and technologies, where the negative economic effects of higher carbon prices are mitigated through a strong increase in economic activity through higher net investments. Source: World Economic Outlook, October 2020. "A long and difficult ascent".

[11] More detailed information on the SURE bonds is provided in Box 1.

[12] Monetary policy is partly constrained by the effective lower bound. Altavilla et al. (2019) show how the monetary transmission channel changes with negative interest rates. In particular, "healthy" commercial banks (whose solvency and liquidity are not affected) pass on the negative interest rates, while "weaker" banks are likely to have difficulties passing on negative rates.

not play around with the ECB's mandate recklessly, as an inconsiderate change could do more harm than good. To not interfere with the independence of the institution, the debate around the ECB's mandate must be as independent as possible of the current policy stance of the central bank.

While the ECB might be able to tackle structural risks and carry out programs that foster long term sustainable growth, it would require an immense change in the mandate to do this on a large scale and in an effective manner. Other institutions, such as the EIB, are already institutionally ready to carry out such operations.

4.2.1. Helicopter money

Helicopter money is a debt-free direct transfer to individuals and/or the government. A direct transfer to the government would probably constitute a breach of mandate or would be legally extremely restricted. Emitting helicopter money to individuals in the euro area would be relatively simple in technical terms, but a novelty in monetary policy terms (Bützer, 2017). Nevertheless, there is already promising evidence by van Rooij and de Haan (2016), who document positive effects of helicopter income on both inflation expectations and growth.

4.2.2. Buying uncollateralised bank debt

Unsecured bank bonds represent a large segment of the European bonds that have not been bought in any of the ECBs purchase programs. Purchasing these bonds would provide additional relief and liquidity to the banks. At the same time, these bonds are generally considered less safe than secured bonds that have been purchased by the ECB in the past. Currently, the ECB only buys bonds from banks that are collateralised with mortgage loans.

4.2.3. Central Bank Digital Currency

Like other central banks, the ECB is also currently designing and prototyping a central bank digital currency. While the People's Bank of China is already live with the third iteration of testing its currency in Shenzhen, the ECB is focusing on understanding the needs of users better in the course of the "ECB digital euro consultation". A digital currency would not only be a safer and less volatile alternative to current digital currencies for users but could also help to stabilise the business cycle more directly with the ECBs conventional monetary policy tools[13]. By being a backstop against the excessive use of crypto currencies or the widespread use of foreign currencies, this could foster the ECB's ability to achieve its current monetary policy objectives (Davoodalhosseini et al., 2020).

4.2.4. Limits of the ECB

However, a central bank's power is always limited by its credibility. At least since the launch of its asset purchase programs, the ECB has been operating in an environment of legal challenges. Moreover, there is a vivid debate about the role of financial stability as a prerequisite to price stability. Legal ambiguity is an effective limit to the credibility of the central bank and only lawmakers have power to create legal clarity.

Agreeing on an updated and long-lasting legal framework for European monetary policy will have beneficial effects as the current programs are likely to continue to operate in an environment of legal challenges. Legislators can eliminate doubts about the legality of these programs by specifying the ECBs mandate. Obviously, modifications to the mandate of a central bank carry some transition risk.

[13] This holds true under the assumption that the technical risks are at least equally well addressed as in other digital currencies and that the digital euro is designed as a stablecoin that is tied to the euro.

However, a debate about what the ECB shall do in the future can only be carried out in the Parliament. Within the ECB, debates can only point to past legislation and its current mandate. There is wide consensus in economics that a linear combination of inflation and GDP-related targets are working well to stabilise the business cycle of an economy. There is also evidence that the current ECB hierarchical mandate, which focuses primarily on price stability, has not led to comparative disadvantages relative to other central banks. However, this is all conditional on economic history, with inflation expectations being less anchored and natural interest rates being much higher than in 2021. With new challenges and risks ahead, the ECB might need new instruments to tackle climate change or prolonged periods of natural interest rates below zero. As an alternative or complement to passing new legislation on the tasks of the ECB, an extension of the budget and mandate of EIB might be worth discussing. As the EIB has been responsible for the European investment policy in recent decades, its staff and infrastructure might be better at managing the risk of loan programs that are more closely related to the non-financial side of the economy – such as credit lines for sustainable companies and programs that foster long term growth and digitalisation. Additionally, dividing the tasks would prevent a power concentration, increasing the checks and balances across European institutions.

Finally, to gain a better understanding of the risks in the financial markets, policymakers could strengthen the oversight, making it mandatory to report granular data. Further, making the data collected under the European Market Infrastructure Regulation, Money Market Statistical Reporting, Securities Financing Transactions Regulation, Common Reporting and Financial Reporting framework available to a broader set of institutions could help to get a more diverse perspective and deeper understanding of the proceedings at the core of financial markets.

5. CONCLUSION

We will not fall into the trap of not seeing the forest for the trees. Indeed, cliff effects can become significant drivers of short-term economic instability that policymakers must take into consideration. However, the end of the pandemic might not be imminent and (most) policy interventions will need to continue for now to further support attenuated economic activity. Therefore, we believe it is necessary to find strategies that will not just improve existing policy measures but also help to secure long-term economic growth.

Despite the huge economic and social damages provoked by COVID-19, the pandemic reminds us of the importance of euro-wide cooperation to overcome such crises. Since its outbreak in Europe, national governments have not only committed to joint debt management, but have also introduced pan-European projects designed to kick-off long-term economic activity by investing in sustainable projects that address climate change and build new infrastructures. Pushing this agenda will not only help the euro area secure long-term growth, it will also create new jobs and investment opportunities that will mitigate cliff effects in the post-pandemic period.

The ECB is well equipped to tackle these potential cliff effects. It is also likely to maintain an accommodative stance for a prolonged horizon. Policymakers can ease the job of the ECB by democratically validating that the current course of the institution is in line with its mandate. Nevertheless, the ECB should not be the sole authority confronting euro area challenges. Sustainable long-term growth and digitalisation is better promoted by other institutions, like the EIB.

Decisive steps towards a more comprehensive integration, such as establishing pan-European debt, promoting green finance, and widening the role played by the European institutions, will better equip the European Union for a better future.

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The European Union has put in place an extraordinary array of policy measures to mitigate the devastating economic consequences of the COVID-19 pandemic. The sheer amount and extent of the support economic lifelines makes a rushed termination of policies potentially subject to dire cliff effects. Avoiding these cliff effects requires a combination of decisive and long-lasting fiscal stimuli with an accommodating monetary stance, as well as a renewed European strategy that presents a unified fiscal policy, growth-enhancing investments, and a green modernization of the economy.

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