IN-DEPTH ANALYSIS
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Financial Stability
Risks and Policy Options

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Abstract

We pay special attention to the different types of financial risk discussed in the public debate: equity, housing, corporate debt, public debt sustainability, and banks and insurance companies’ profits. Our assessment does not point to significant risks in the euro area even if attention should be drawn on some local or specific market segments. Even if monetary policy may not be the most appropriate tool to dampen these risks, the ECB has still some policy options to respond to an economic slowdown.

This document was provided by Policy Department A at the request of the Committee on Economic and Monetary Affairs.
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# LIST OF ABBREVIATIONS

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<th>Description</th>
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<tr>
<td>ABSPP</td>
<td>Asset-Backed Securities Purchase Programme</td>
</tr>
<tr>
<td>CBPP</td>
<td>Covered Bond Purchase Programme</td>
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<tr>
<td>ECB</td>
<td>European Central Bank</td>
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<tr>
<td>ELB</td>
<td>Effective Lower Bound</td>
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<tr>
<td>FRFA</td>
<td>Fixed Rate Full Allotment</td>
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<tr>
<td>HICP</td>
<td>Harmonised Index of Consumer Prices</td>
</tr>
<tr>
<td>LTRO</td>
<td>Long Term Refinancing Operations</td>
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<tr>
<td>MRO</td>
<td>Main Refinancing Operations</td>
</tr>
<tr>
<td>OMT</td>
<td>Outright Monetary Transactions</td>
</tr>
<tr>
<td>PCA</td>
<td>Principal Component Analysis</td>
</tr>
<tr>
<td>SMP</td>
<td>Securities Market Programme</td>
</tr>
<tr>
<td>TLTRO</td>
<td>Targeted Long Term Refinancing Operations</td>
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<tr>
<td>VLTRO</td>
<td>Very Long Term Refinancing Operations</td>
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<td>ZLB</td>
<td>Zero Lower Bound</td>
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EXECUTIVE SUMMARY

- **It is crucial to monitor financial risks regularly** and to account for the multiple sources of these risks.

- **The valuation level of equity markets in the euro area is still 20 % below its peak of 2007.** Comparatively, the US Standard and Poors’ index is twice its value of 2007.

- **Risks have emerged for corporate debt and notably leveraged loans, which share some similarities with the subprime market.** However, securitisation of these loans is less important than it was for subprime loans. These markets also differ in terms of the underlying nature of risk.

- **House prices in the euro area are synchronised and risks remain moderate** except in Germany where house price have sharply risen and are disconnected from house price cycles in other countries. However, credit dynamics in Germany remain subdued.

- The argument that banks’ profitability is negatively affected by low interest rates is often made. Yet, **banks’ and insurance companies’ profits are steady and are recovering** since 2012.

- Although monetary policy is expected to influence asset prices, there is evidence that **central banks may affect stock price imbalances but no evidence that they could do so for housing markets.**

- **Policy options in case of a recession range from an extension of QE towards corporates and households** – to support investment and consumption – the use of macroprudential tools – to mitigate the effect of financial risks – and **fiscal policy** notably in an environment characterised by low interest rates.
1. INTRODUCTION

The dramatic consequences of the global financial crisis have renewed the interest in the financial cycle and the financial risk. It is now crucial to monitor financial risks regularly and to account for the multiple sources of these risks. The subprime crisis has highlighted the role of the housing market and its close connection to household debt. A few years ago, risk stemmed from equity markets and the burst of the dotcom bubble had triggered a significant slowdown – but not a recession – of the world economy. Besides, finance inevitably entails risk and institutions in charge of surveillance – central banks or financial regulators – must not only be able to evaluate and monitor the global level of risks but also be able to identify who is bearing the risk. A fine diagnosis of financial risks is also crucial for monetary, fiscal and financial policy. Financial stability has become a major policy objective and all relevant tools must be employed in order to reduce risks once they are identified. Regarding preventive actions, the role of monetary policy remains disputed and it is not clear that central banks should set the policy instruments – the short term interest rate and assets purchases – in order to account for financial stability.\(^1\) Besides, the euro area may still be characterised by heterogeneities such that the common monetary policy may not be the most appropriate tool to deal with financial risks.

Ten years after the crisis, the euro area has not fully recovered and even if the unemployment rate has now reached its pre-crisis level, it is still high in some countries and estimates of the output gap still point to a global economic slack in the euro area as a whole. A new financial crisis would inevitably delay the ongoing recovery and in the worst case scenario trigger a new recession. Consequently, beyond preventive actions, monetary and fiscal space is needed to stabilise the economy in case of a negative shock. However, with the policy rate at the zero lower bound and with public debt at a higher level, it is crucial to assess whether there is still monetary and fiscal space.

In this Monetary Dialogue paper, we document the current financial risks in the euro area by investigating the equity, the housing and the debt markets (corporate and public debt). Banks’ situation is also analysed not only because they play a crucial role in the issuance and propagation of risks. The role of the ECB is assessed through its ability to reduce risks and to make monetary policy more expansionary if the euro area suffers from a downturn. With interest rates at the zero lower bound, is the ECB able to further resort to unconventional measures?

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\(^1\) See Smets (2013) for a survey.
2. FINANCIAL STABILITY RISK DIAGNOSIS

In a challenging internal and global environment with downside risks to economic growth, asset valuation corrections in some euro area countries or in some markets may pose threats to financial stability. These threats are discussed in the following.

2.1. Equity market

Stock price developments over the last decade show at least three interesting features (Figure 1). First, the valuation level achieved before the global financial crisis has been exceeded everywhere except in Europe. Actually, the Euro Stoxx 50 is still 20\% below its peak in 2007. Second, the US Standard and Poors’ index is twice its value of 2007, which is substantial in comparison with other advanced countries. Third, at first sight, the evolutions of the Euro Stoxx 50 and the UK FTSE are pretty much connected.

![Figure 1: Euro area stock price indices](image)

Source: Eikon Thomson Reuters. 2007 = 100.

Monetary policy stimulus could threaten financial stability by inflating asset price bubbles. Borio and Zabai (2016), for example, argue that the benefits of unconventional monetary policies diminish while the risks of financial instability worsen. They echo the criticisms made by Taylor (2009) concerning the Federal Reserve’s low rate policy between 2001 and 2004 which would have fueled the boom in the real estate market and subsequently triggered the subprime crisis. With negative policy rates and asset purchases, most sovereign yields are negative in the euro area. Financial investors are looking for higher returns and are driving up stock and housing prices. However, share and housing prices remain well below the peak observed in 2007. Drawing on the method by Blot et al. (2018) shows no sign of strong imbalances in the prices of assets in the euro area (Figure 2). There may well be local imbalances, e.g. in the German housing market, but it cannot be argued that this feature is under the sole responsibility of the ECB monetary policy if other markets do not show similar signs of imbalances.
2.2. Corporate bond market

Whereas household debt has decreased after the global financial crisis, international institutions have now drawn their attention on corporate debt and especially on leveraged loans. According to the International Monetary Fund (IMF), this segment of the market is characterized by ‘loans, usually arranged by a syndicate of banks, to companies that are heavily indebted or have weak credit ratings’ and would be the current major source of risk for the financial system. To some extent, leveraged loans share similarities with the subprime market, which was at the origin of 2008 crisis. First, it entails loans to lower quality debtors. Second, those loans have also been securitized and integrated in structured assets such as CLOs (collateralized loan obligations).

In the euro area, debt issued by non-financial corporations is still below the 2007 level (62 % of GDP in 2019 Q2 according to the Banque de France against 65 % in 2009 Q2). But this may hide important differences across countries since corporate debt has strongly decreased in Spain whereas it has steadily increased in France (Figure 3). Actually, risks may not stem mainly from European firms but rather from US corporate debt, which has increased from 40 % of GDP in 2011 to 47 % in 2019, a level which is less than half of the household debt. More than the aggregate level of debt, it is the composition of this US corporate debt that has raised some concerns as the outstanding amount of those leveraged loans was estimated between 1 800 and 2 300 billion dollars. Though it would be much lower in Europe, the risk should not be minimised as those loans have been securitized and may therefore be held by European banks. As for the subprime crisis, the outburst of the crisis may be related to a macroeconomic risk in the US but then be propagated in the whole financial system.

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3 In 2019 Q2, the total debt of US households amounts to 101,5 % of GDP, 21 points below the peak reached in 2009 Q3.
However, though it is important to monitor the source of risks in the financial system and to send warning signals to lead financial regulators to increase protection, there remain important differences compared to the pre-crisis period. According to the Banque de France, there is less securitisation of leveraged loans today: ‘one third of leveraged loans are reportedly securitised, compared with 80% of subprime loans in 2007’ representing 5.5 % of the US GDP in 2019 against 8 % of GDP for the subprime loans in 2006. Besides, the nature of the underlying risk is not located on a single market (the housing market) but related to the macroeconomic risk. The rise in the default rate on corporate debt is related to the risk of downturn in the United States. Finally, collateral provided by firms that would be insolvent is also different as firms’ assets are more diversified than households’ assets.

2.3. Housing market
The 2007-2008 financial crisis has been notably triggered by imbalances in several housing markets and credit booms that have gone bust as labelled by Schularick and Taylor (2012). Literature on financial instability and financial crises have highlighted that recessions, which are preceded by a housing bubble and a credit boom are longer and deeper. It is therefore of crucial importance to monitor the dynamics of housing prices and of mortgage credits. Since 2014, real house prices have grown by 2.1 % on average in the euro area as a whole (Figure 4), much less than the average yearly growth rate observed from 1999 to 2007. House prices have strongly recovered since the end of 2013, but are still lower than in 2007 Q3, the highest point observed since 1999.

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5 See Claessens et al. (2009) and Jorda et al. (2013).

6 The nominal value of house prices is yet 12 % higher than in 2008Q2.
Besides, it seems that house prices in the 5 biggest euro area countries are essentially driven by idiosyncratic dynamics rather than by a common factor. Whereas prices are increasing rapidly (4.1 % on average) in Germany, they are still declining in Italy and are stable in France. The German housing market seems notably strongly disconnected from other housing markets. Prices have decreased for almost 25 years (Figure A in appendix) and notably during the years 2000 whereas there was a boom in Italy, France, Spain and in the Netherlands.

A simple statistical analysis highlights the lack of synchronicity of housing markets in the euro area. To that end, we follow Meller and Metiu (2017) and first estimate the housing price cycle using the Christiano-Fitzgerald statistical filter and then assess whether expansionary and contractionary phases coincide between 8 EMU countries for which data are provided by the Bank for International Settlements (BIS) at least since 1971. We consider an expansionary phase (respectively contractionary) on the housing market when the price is above (respectively below) the trend. For each date (t), cycles are synchronized if country (i) and country (j) are in the same phase, whether expansionary or contractionary. A synchronicity index is calculated as the ratio of the number of periods when cycles are synchronised over the total number of periods. When the value of the ratio is below 0.5, it indicates that cycles are not synchronised for more than 50 % of time. Table 1 illustrates the synchronicity of house price cycles in the euro area and suggests that the German house price cycle is relatively

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7 The parameters of the filter are set such as to include medium-term cycles with frequency within the 45 and 120 months.
disconnected from other cycles. It coincides with the cycle in the Netherlands for 62% of periods. Conversely, the French, Italian and Spanish cycles are more synchronised.

### Table 1: Synchronicity of house price cycles

<table>
<thead>
<tr>
<th></th>
<th>DEU</th>
<th>FRA</th>
<th>ITA</th>
<th>ESP</th>
<th>NLD</th>
<th>BEL</th>
<th>FIN</th>
<th>IRL</th>
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<td></td>
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<tr>
<td>FRA</td>
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<tr>
<td>ITA</td>
<td>0.49</td>
<td>0.87</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>ESP</td>
<td>0.45</td>
<td>0.84</td>
<td>0.77</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>NLD</td>
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<td>0.64</td>
<td>0.69</td>
<td>0.68</td>
<td>1.00</td>
<td></td>
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<tr>
<td>BEL</td>
<td>0.52</td>
<td>0.85</td>
<td>0.97</td>
<td>0.80</td>
<td>0.70</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN</td>
<td>0.23</td>
<td>0.56</td>
<td>0.46</td>
<td>0.64</td>
<td>0.45</td>
<td>0.48</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>IRL</td>
<td>0.54</td>
<td>0.63</td>
<td>0.66</td>
<td>0.60</td>
<td>0.88</td>
<td>0.65</td>
<td>0.43</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Sources: BIS (Property price database) and authors calculations.

These figures suggest that house prices in the euro area are strongly driven by domestic dynamics, which may raise more challenges for the common monetary policy, which may consequently not be the most appropriate tool for dealing with financial risk stemming from the housing markets. The risk associated with the housing market is also related to credit dynamics. The threat for financial stability is all the more important when a credit boom is simultaneous with a rise in house prices. For the euro area as a whole, the ratio of credit for house purchases to GDP has reached a peak of 39% in 2013 Q1 and has slightly decreased since then to amount to 37.5%. Here again, it may hide heterogeneity across countries. For instance, the ratio of credit to GDP has fallen sharply in Spain during the crisis from a peak at 62.7% in 2012 Q4 to 41% in 2019 Q2. Meanwhile, it has increased moderately in Germany and stands at 37.3%, only one point higher than in 2011 Q2 and still below the pre-crisis period (Figure 5). For France, the ratio has increased continuously since 2003.

From the development of credit, it may be noticed that while house prices have increased recently in Spain, the ratio of credit to GDP is still declining. In Germany, the recent surge in prices is not accompanied by a rapid rise in credit. For France, prices stabilise but credit to households is still rising. On average, it seems that credit ratio for the euro area as a whole does not show signs of overheating. But the house and credit markets are characterised by important heterogeneity that may not be easily fixed by the common monetary policy.

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8 Table A in appendix shows the correlation of cycles.
2.4. Bank profitability

Monetary policy has also been criticized by banks because it would limit the benefits of the intermediation business. Because of their deposit and lending activities, banks' profitability depends in part on the difference between interest rates on loans -usually long term- and interest rates on deposits -short term-, the so-called net interest margin. Asset purchases help flatten the yield curve, which reduce interest margins. The effect can be exacerbated by the negative interest rate policy if the effects of interest rate cuts on the interest rates on loans are greater compared to the interest rates on deposits. If the interest paid to households and businesses on their deposits cannot be at its own discretion - the bank is reluctant to lose customers - or, for legal reasons, the margins of commercial banks would decrease. However, the argument needs to be qualified because the TLTRO programmes allow banks to finance themselves at the central bank at negative interest rates. Profitability can also increase as lower interest rates decrease corporate and household interest expenses and the loan default rate.

The impact of interest rates on bank profitability is ultimately an empirical issue. However, there is no consensus in the literature. Dell'Ariccia et al. (2017) have found a negative effect, while Madaschi and Nuevo (2017) have found a positive one. Boungou (2019) specifically analysed the effects of the negative interest rate policy on a sample of 2 442 banks in the 28 Member States of the European Union. He notes that negative interest rates weighed on banks' margins, but not profitability, as banks were able to increase their non-interest income (commissions and fees). These conclusions are supported by the recent dynamics of earnings and margin indicators in the euro area. Indeed, there are no signs of a decline in profits and not even a decrease in net interest margins (NIM) since the introduction of
negative interest rates in the euro area (Figure 6) or in Germany (Figure 7), where criticism of the ECB’s policies has been the most severe. The return on equity and assets was negative in 2011 and 2012 and has increased gradually since then.

**Figure 6: Euro area banks’ profits**

![Euro area banks' profits chart](Image)

Source: ECB.

**Figure 7: German banks' profits**

![German banks' profits chart](Image)

Source: ECB.
The same argument was also used to suggest that insurance companies may incur major costs in terms of profitability and solvency in a low interest rate environment. This stems from the main feature of the insurance business model: these companies hold a large number of fixed-term investments in their balance sheets. The life insurance business in particular is often characterised by financial guarantees that provide the insured with a minimum return. These guarantees could pose a threat to life insurers who have sold many of these products in the past. However, the front-end loads and management fees account for a significant portion of insurance companies’ revenue (in addition to revenue that is not bank interest), which can offset the decline in interest rates. Figure 8 shows the sales and profits of the 13 major insurance companies in the euro area - a highly concentrated market in which the largest provider, Allianz, generates more than 10 times the turnover of the 13th actor Ageas. Overall, the impact of low interest rates on insurance companies’ profits does not seem to be noticeable, at least for their future prospects. The operating result of one of the most important players in the industry, Axa, rose from EUR 4.7 billion in 2013 before the introduction of negative interest rates to EUR 6.2 billion in 2018. Finally, risks associated with low interest rates for insurance companies and for banks seem to be overestimated.

Figure 8: Turnover and profits of major euro area insurance companies

Source: Zonebourse.com. Note: Expectations for 2019, 2020 and 2021 are the average of market analysts’ expectations. The sample comprises Aegon, Ageas, Allianz, Axa, CNP Assurances, Generali, Hannover Re, Mapfre, Munich Re, NN Group, Scor, Talanx, and Unipolsai.

2.5. Public debt sustainability

The latest ECB Financial Stability Review raises doubts on the capacity of euro area high-debt countries to achieve or maintain debt sustainability if a severe and prolonged economic downturn occurred. Although low interest rates have spurred longer debt maturities to reduce sensitivity to possible changes in market sentiment, the ECB analysis shows diverging trends in debt-to-GDP ratios between medium-debt euro area countries and high-debt ones after output and interest rate shocks and a fiscal
stimulus (Figure 9). The scenario raises two concerns, bearing in mind that it excludes fiscal reactions to the shocks.

First, there has been a long tradition since Barro (1986) and Bohn (1998) to assess public debt sustainability via fiscal reaction functions. According to the European Fiscal Board in its latest report (EFB, 2019, pp. 65-67), panel results for 36 developed countries (including the 28 EU Member States) show that higher public debt-to-GDP ratios produce fiscal consolidation. While point estimates are not reported, these results point in the direction of debt sustainability. Following Beetsma and Giuliodori (2010) and Cimadomo (2012), Aldama and Creel (2018) compared fiscal reaction functions for OECD countries obtained with ex post (revised) data and those obtained with real-time data. They report a positive reaction of either the primary surplus or the primary cyclically-adjusted surplus (both expressed in percentage points of GDP) to the debt-to-GDP ratios in the case of euro area and non-euro area countries whatever the data. According to the point estimates in Table 2 (p. 296), debt sustainability is achieved.

Second, Blot et al. (2019a) question the ability of euro area Member States to achieve the 60 % debt limit at a 20-year horizon. They use the iAGS model for euro area medium term projections and simulate the path of public debt-to-GDP ratios to 60 % until 2040, which is the horizon of the debt rule in the
Stability and Growth Pact and the Fiscal Compact.\(^9\) The simulations highlight countries that are not abiding by the rule and the required amount of additional fiscal consolidation while, for countries that abide by the rule, simulations give an assessment of their fiscal space. Blot et al. (2019a) show that without fiscal impulses beyond 2021 and under some important assumptions (no risk premia, inflation expectations anchored at 2\% per year and real interest rate equal to potential growth), some countries (Belgium, France, Italy and Spain) would exceed the debt limit in 2040. However, after this baseline scenario, they also compute the required fiscal impulses for all euro area Member States to reach the debt limit. This would necessitate countries with (resp. without) margins of maneuver to implement a fiscal stimulus (resp. contraction) of 0.5\% per year over horizons ranging from 2021 to 2023 (Finland, fiscal stimulus) to 2021 to 2032 (Italy, fiscal contraction). They report that in this second scenario, all euro area countries would meet the 60\% criterion in 2040. It remains that achieving debt convergence towards the 60\% limit via additional fiscal consolidation would be economically costly. Countries implementing additional fiscal consolidation would undergo lower output gaps than in the baseline scenario, despite the fiscal stimulus from countries with fiscal space. A trade-off between sustained economic recovery and debt sustainability remains.

3. THE EFFECT OF MONETARY POLICY ON ASSET PRICES

Monetary policy – conventional and unconventional measures – is expected to influence asset prices as the reaction of financial markets plays a key role in the transmission of monetary policy. Empirical evidence suggests a positive link between expansionary monetary policy and asset prices, stressing the effectiveness of monetary policy.\textsuperscript{10} However, asset prices may increase beyond the expected effect of monetary policy and trigger mispricing. It is then crucial not only to assess whether monetary policy influences asset prices but also if it fuels asset price bubbles.

Blot et al. (2020) deal with this issue. They first provide an indicator of asset price bubbles based on the estimation of several empirical approaches and assess the effect of monetary policy on those identified asset price bubbles in the stock and housing market of the euro area.

Figure 10: Asset price imbalances

The synthetic measure of deviations of the house and stock prices in the euro area stem from three approaches: a structural model, a data-driven approach and a statistical model. Then Blot et al. (2020) compute a bubble indicator from the first principal component using a principal component analysis.

\textsuperscript{10} For the euro area, see Angeloni and Ehrmann (2003), Bohl et al. (2008), Andersson and Overby (2009), Filbien and Labondance (2012) and Altavilla et al. (2019).
(PCA) that summarizes the information provided by the three models. The PCA summarizing the deviations from the benchmark in the stock and housing markets are represented in Figure 10. For stock prices, imbalances have been significant in the early 2000 and in 2007 consistent with the dot.com bubble and the financial boom preceding the global financial crisis. Low points are observed in 2004 and 2012. For the housing market, deviations have become positive after 2005 and reached a peak in 2009.

Then, Blot et al. (2020) find that both restrictive and expansionary monetary surprises influence stock price imbalances (Figure 11). Expansionary monetary policy tends to inflate stock price imbalances while restrictive monetary policy tends to deflate these imbalances. The effects of monetary policy are now much more symmetric than for actual asset prices. Both responses become non-significant after around 14 months. The effect is overall small in magnitude. While they find that ECB monetary policy is transmitted to house prices in the euro area since 2008, they find no evidence of a significant impact of both restrictive and expansionary monetary on house price imbalances. Hence, this means that the effect of monetary surprises on house prices should be driven by the response of the benchmark value of house prices.

Figure 11: Non-linear responses of asset price imbalances to monetary surprises

Note: Non-linear responses correspond to estimates of equation (3). Shaded area represents the 1 and 2 standard errors confidence interval of the response of the monetary surprises. The dependent variables are the first principal component of the three asset price imbalances estimated in Blot et al. (2020). ECB monetary surprises are computed as the intraday change in the 2-year nominal German sovereign bond yield around the ECB monetary event. We have checked that the responses of house price imbalances to restrictive surprises (the black line with the grey confidence interval) is non-significant.

The PCA consists in estimating a unique indicator which maximises the common variance of the individual series standing for asset price imbalances. More specifically, PCA seeks a linear combination such that the maximum variance is extracted from the variables.
4. POLICY OPTIONS IN CASE OF A RECESSION

4.1. QE for corporates
In a former Monetary Dialogue paper (Blot et al., 2019b), we argued that instead of buying public securities, the ECB could buy private assets, thereby redirecting QE to corporates. The ECB can draw on the Bank of Japan (BoJ) experience, which has implemented this strategy since 2010 with purchases of exchange-traded funds (ETFs). The ECB could thus provide monetary stimulus through a new channel. In fact, this strategy is already in the ECB toolkit with the CSPP (Corporate Sector Purchase Program).

On 12 September 2019, the ECB reactivated the CSPP. Adding a target for riskier purchases, including stocks, is an option for further monetary easing. There can be two channels through which QE for businesses would be effective. First, it would reduce risk premiums and the cost of financing businesses, stimulating investment. The increase in share values could also increase the collateral value of the assets held by companies, easing the funding constraint. Second, rising asset prices would trigger a positive wealth effect for households, stimulating private consumption.

Farmer (2019) has also suggested that central banks should target asset prices. Here, the objective may be not only to stimulate the economy by easing financing conditions and creating a positive wealth effect for households, but also to strengthen financial stability. Indeed, the central bank would aim at mitigating excessive valuations on stock markets.

4.2. QE to households
In the same paper (Blot et al., 2019b), we also argued that the ECB could implement direct measures in favour of households. There are various reasons why quantitative easing may have had limited effects on the decisions of household consumers via, e.g. the wealth channel, the collateral channel or the distribution channel.

One much-discussed option for the ECB to surpass these limits is to provide households with a transfer from the ECB via so-called helicopter money: ‘print money and distribute it to the public!’. While nothing in the euro area rules prevents the ECB from taking such independent action, this policy would directly finance household spending by increasing their disposable income. The implications for the size of the balance sheet could be permanent or temporary depending on whether the central bank plans to debit a fraction of this amount in subsequent years or not. Regarding the implications for the central bank’s balance sheet, it is important to add that the central bank could also offset the effect of this policy on the size of its balance sheet by selling bonds to the private sector for its assets.

An argument against quantitative easing for households refers to moral hazard of two types. First, in the case of an over-indebted private sector, households would reduce their deleveraging efforts by expecting that printing money would always go to the rescue, hence increasing future risks. Second, this policy could undermine incentives to work and amplify the inactivity trap. In the case of an occasional and unexpected transfer, the argument is rather flimsy. Furthermore, it overlooks that conventional monetary policy and QE yield asset price increases, which benefit the wealthiest households. The quantitative easing to households would rebalance monetary expansion towards the lower end of the distribution of income and wealth.

4.3. Macroprudential policies
Macroprudential policy has attracted attention from policymakers and researchers since the global financial crisis because of the deep roots of the crisis within the leverage and risk-taking of individual economic agents and banks. The objective of macroprudential tools is to ensure the stability of the
financial system by reinforcing its resilience and preventing systemic risks. The main focus is on credit growth and leverage, maturity mismatch and market illiquidity, direct and indirect exposure concentrations, moral hazard, and the resilience of financial systems. The main instruments include the countercyclical capital buffer and the loan-to-value ratio.

However, macroprudential policies raise various issues. First, Galati and Moessner (2018) assess whether these policies are effective at limiting credit growth and housing prices. Second, the question of how macroprudential policy interacts with monetary policy is open. The two policies can have adverse effects on the effectiveness or the objectives of the other. Garcia-Revelo et al. (2019) show that a restrictive monetary policy enhances the impact of macroprudential tightening on credit growth and that monetary policy helps to reduce the transmission delay of macroprudential policy actions. However, Cumming and Hubert (2020) show that tighter borrowing limits would reduce the effectiveness of monetary policy. Although macroprudential regulations seem effective, there seem to be strong interactions between monetary policy and macroprudential tools.

### 4.4. Public investment

At the Jackson Hole symposium in 2014, the President of the ECB, Mario Draghi, acknowledged that monetary policy could not be ‘the only game in town’ in sustaining the euro area recovery. With the policy rate at the zero lower bound, and the continuing large savings of the private sector, he argued that fiscal expansion needed to support monetary policy.

More recently, and against the backdrop of the economic slowdown, the European Commission (2019) and the OECD (2019) have advocated a fiscal stimulus in the euro area. The implementation of a fiscal stimulus raises two main issues though, one regarding the fiscal space to implement the stimulus and one related to the ‘best’ instrument to perform a fiscal stimulus. Section 2.5 already discussed fiscal space and debt sustainability. We may add that recent interest rate developments show that investors’ appetite for European public debts remains high and suggest that an expansionary fiscal policy would not necessarily translate into higher risk premia. In this respect, Blanchard (2019) has highlighted the fiscal room for manoeuvre that stems from negative critical gaps (the difference between the nominal GDP growth rate and the apparent interest rate on debt).

While it is well-established that the macroeconomic impact of fiscal policy may be high, particularly during an economic crisis (Jordà and Taylor, 2016), the choice of the best instrument remains disputable. The meta-analyses of Gechert and Will (2012) and Gechert (2015) show that the spending multipliers are usually larger than tax multipliers, but the multiplier value depends on a number of factors such as the degree of openness of the economy, the exchange rate regime, the monetary stance and the output gap. Overall though, multiplier effects of public investment stimuli are generally on top of the distribution. This feature is confirmed by another meta-analysis (Bom and Ligthart, 2014).

Against the backdrop of the downward trend in public investment since the 1980s, and its acceleration during economic crises when governments try to curb deficits and debts through cuts in public investment (European Fiscal Board, 2019), a public investment stimulus in the euro area appears as a good option. It would not only foster real activity if the economic slowdown continues but it would also help addressing the issue of climate change. This new impetus may require amending European fiscal rules so that governments have more incentives to adopt long term strategies.
REFERENCES


ANNEX

Figure A: House price dynamics (deflated by CPI)

Source: BIS (Property price database). Note: 2007=100.

Table A: Correlation of house price cycles

<table>
<thead>
<tr>
<th></th>
<th>DEU</th>
<th>FRA</th>
<th>ITA</th>
<th>ESP</th>
<th>NLD</th>
<th>BEL</th>
<th>FIN</th>
<th>IRL</th>
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<td></td>
<td></td>
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<tr>
<td>FRA</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>1.00</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ESP</td>
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<td>0.77</td>
<td>1.00</td>
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<td></td>
<td></td>
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</tr>
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<td>1.00</td>
<td></td>
<td></td>
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<tr>
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<td>0.92</td>
<td>0.64</td>
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<td></td>
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</tr>
<tr>
<td>FIN</td>
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<td>-0.12</td>
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<td>0.88</td>
<td>-0.37</td>
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<td>1.00</td>
</tr>
</tbody>
</table>

Sources: BIS (Property price database) and authors' calculations.
We pay special attention to the different types of financial risk discussed in the public debate: equity, housing, corporate debt, public debt sustainability, and banks and insurance companies’ profits. Our assessment does not point to significant risks in the euro area even if attention should be drawn on some local or specific market segments. Even if monetary policy may not be the most appropriate tool to dampen these risks, the ECB has still some policy options to respond to an economic slowdown.

This document was provided by Policy Department A at the request of the Committee on Economic and Monetary Affairs.