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Financial Dominance: Not an Immediate Danger

Policy Department for Economic, Scientific and Quality of Life Policies
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Authors: Daniel GROS, Farzaneh SHAMSFAKHR
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Financial Dominance: Not an Immediate Danger

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Abstract

Financial dominance describes a situation in which a central bank does not dare to tighten its policy stance as this would threaten the stability of the financial system. The danger of this happening is limited at present. The banking system is well capitalised. Private credit has not expanded much, not even during the COVID-19 recession in most euro area countries – except in France. However, in some countries, the financial sector remains highly exposed to sovereign debt. "Indirect financial dominance" could thus easily arise if sovereign risk premia return. Continuing asset purchases under the PEPP increases the danger of fiscal dominance.

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AUTHOR
Daniel GROS, CEPS
Farzaneh SHAMSFAKHR, CEPS

ADMINISTRATOR RESPONSIBLE
Drazen RAKIC

EDITORIAL ASSISTANT
Roberto BIANCHINI

LINGUISTIC VERSIONS
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To contact the Policy Department or to subscribe for email alert updates, please write to:
Policy Department for Economic, Scientific and Quality of Life Policies
European Parliament
L-2929 - Luxembourg
Email: Poldep-Economy-Science@ep.europa.eu

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LIST OF ABBREVIATIONS

ECB	European Central Bank
GDP	Gross domestic product
PEPP	Pandemic emergency purchase programme
TARP	The Troubled Asset Relief Program
TLTRO	Targeted longer-term refinancing operations

EXECUTIVE SUMMARY

- **Financial dominance, as distinct from fiscal dominance, does not represent an acute problem at present.**
- **Private sector indebtedness has risen little** in the wake of the COVID-19 recession because the extraordinary fiscal rescue packages have, in most cases, compensated for the losses due to the lockdowns.
- **The banking system's exposure remains high but it has improved gradually** over the last few years and is now much lower than at the peak just before the Great Financial Crisis.
- **The root of the last financial crisis was a combination of rising private sector credit and high leverage in the financial system**. Today, one can observe only one of these two elements and even that is in mitigated form.
- **The available data for the euro area average thus suggest that financial dominance is not an acute danger at present**. However, there are large divergences across member countries, with France showing a persistent increase in the size of its banks and their credit exposure.
- **The overall conclusion is thus that the stability of the financial sector does not seem to be in immediate danger due to exposure to private credit**. In some countries, stability remains highly exposed to national sovereign debt, however. The "doom loop" remains dormant for the time being. But the potential threat of its return represents another form of financial dominance.
- **The large and increasing amount of public debt on the Eurosystem's balance sheets creates the danger of fiscal dominance**.
- **This paper deals with a narrow view of financial dominance**. Monetary policy is always influenced by the state of financial markets in general, and vice versa. A sudden fall in asset prices coupled with a return of risk aversion would of course necessitate a monetary policy reaction.

1. INTRODUCTION

The term "financial dominance" was first used by Fraga et al. (2003), in the context of emerging market economies with inflation-targeting regimes. It refers to the situation in which, due to a weak and/or over-leveraged financial system, the central bank is not able or willing to tighten its policy stance as this would threaten the stability of the financial system. Hellwig (2014) also designates financial dominance as a regime in which central banks adapt their policies to the situation of the financial system, where weak financial institutions are not able or not keen to absorb losses and force the public sector to provide for recapitalisation (Diessner and Giulio, 2020). In this situation, financial dominance appears as a form of *hidden fiscal dominance* (Hellwig, 2014). Brunnermeier (2016, 2020) describes financial dominance as a "game of chicken" of the financial sector versus the central bank. The two opposing forces are the inability of the financial sector to absorb losses without major damage to the economy versus the ability (and willingness) of the public sector to absorb these losses. The public sector could in principle be either the fiscal authorities or the central bank. Financial dominance arises when the central bank has to deal with this problem.

All authors agree that a danger for financial, or even hidden fiscal, dominance arises when the financial sector is weak and cannot absorb losses in a crisis. We do not find indications of a weakening of the financial sector. We do not observe excessive private credit growth or worrisome financial imbalances. What remains is the concern that 'indirect financial dominance' can arise from a surging public debt level, a large part of which is on the central bank's balance sheet. This risk increases as long as the central bank conducts large-scale asset purchases.

In this paper we concentrate on trends over the last few years and their implications for the future, implicitly assuming that the COVID-19 shock has been mostly overcome and that the recovery will continue, allowing the euro area economy to regain its pre-crisis level by next year. The recession itself has constituted much less of a shock to the financial system than one might have assumed initially because governments have compensated most COVID-19 related losses via transfers. The COVID-19 crisis has thus led to little stress for the financial system. The price for this is a sharp increase in public sector indebtedness, much of which has been absorbed by the Eurosystem via the pandemic emergency purchase programme (PEPP) (and the continuing operation of the public sector purchase programme, PSPP).

The remainder of this paper is organised as follows: the next section provides a brief overview of the framework for financial dominance in academic literature. Section 3 highlights one key indicator of financial vulnerability which can be more easily compared across the US and the euro area. Section 4 then provides more detail on the state of the banking system in the euro area. Section 5 illustrates briefly the similarity between financial dominance and the potential for fiscal dominance created by central bank asset purchases. Section 6 concludes and discusses policy implications.

This paper thus deals with a narrow interpretation of financial dominance under which monetary policy cannot be tightened because financial intermediaries are too weak to absorb losses arising from an exogenous shock. But this is not the only way that the state of financial markets influences monetary policy. The level of stock markets, as well as the general degree of risk aversion always influence how central banks set their policy. This is the case particularly in the US where each pronouncement of the Federal Reserve's leadership seems to be guided by the concern not to produce a repeat of the 'Taper Tantrum' of 2013 (Gros, 2016). Actions by the European Central Bank (ECB) have a much smaller impact on asset prices, in particular stock markets. In this wider sense, monetary policy is now already dominated by concerns about the state of financial markets.

2. AN ANALYTICAL FRAMEWORK: MODELS OF FINANCIAL DOMINANACE

Farhi and Farhi and Tirole (2009, 2012) have developed in formal models the idea that private borrowers and banks might choose to increase their leverage because they anticipate that in a crisis the central bank will rescue them as it cannot let the entire financial system fail. In their model(s) the central bank can reduce the losses to highly leveraged investors by lowering interest rates.

These papers show that there could be a feedback loop between the expectations of financial institutions to be bailed out in case of a negative shock and their incentive to increase leverage, which then puts more pressure on the central bank to lower interest rates in a crisis to avoid a meltdown of the financial system (financial dominance). The mere expectation of a bailout by the central bank might thus encourage banks (and their borrowers) to leverage themselves higher than would be prudent otherwise.

Farhi and Tirole (2009) summarise their conclusions:

> *"This central insight has four immediate corollaries. First, private interest-rate exposure is highly sensitive to macroeconomic conditions. Second, private borrowers may deliberately choose to increase their interest-rate sensitivity following bad news about future needs for liquidity, a conclusion that runs afoul of the pattern predicted by standard modeling focusing on the microeconomics of corporate finance. Third, optimal monetary policy is time inconsistent, but not for the standard, inflation-bias reason; the central bank does not want to commit to lower the interest rates, but may ex post face the fait accompli of excessive short-term wholesale market exposure. Fourth, and related to the previous point, macro-prudential supervision is called for".*

Farhi and Tirole emphasise that a direct bailout of insolvent financial institutions by the fiscal authorities would be preferable but is often not possible because it is deeply unpopular. Hence, it usually falls to the monetary authorities to rescue the financial system by lowering rates. This chain of arguments seems to be based on the experience of the US where in 2009 the Troubled Asset Relief Program (TARP) was initially rejected by Congress. In Europe, the political obstacles to rescuing the financial system seem to be much less strong. However, a government might also be reluctant to bail out the financial sector if it already has a high debt burden. In this case, one could view 'financial dominance' just as a variant of fiscal dominance. The 'financial variant' of fiscal dominance arises when the central bank feels it has to support the financial system via low interest rates because the government is unable to do so given its high debt level. This is not very different from a situation where the government first rescues the financial system by issuing more debt and then the central bank supports government debt, either by buying it or by keeping rates low.

One needs to keep in mind that the financial system does not consist of one single actor. The contribution of any single bank to the overall leverage of the banking system is small (unless there is a very high degree of concentration). This is why any single bank will not incorporate the impact of its own leverage on the central bank's decision on whether or not to lower rates in a financial sector crisis.

However, if all banks face the same incentive to increase leverage, the feedback loop will be put into motion.

The fragility of the financial system with respect to shocks also increases when financial institutions hold each other's debt. The failure of a single large bank can then cascade through the entire system. This is why one should consider the extent of inter-bank lending as an important indicator of the system's overall fragility.

The credit boom leading up to the Great Financial Crisis seemed to fit this pattern. The crisis was preceded by a general increase in leverage, massive inter-bank lending, and a rapid increase in credit to the private sector.

In the following sections this paper considers a number of excessive leverage or credit indicators to investigate whether similar developments can be observed today.

An important caveat to applying the literature on financial dominance to the situation in the euro area today is that this literature assumes that lower interest rates help the borrower and thus avoid losses for the financial system. This assumption seems reasonable, but recent experience in the euro area suggests that ultra-low interest rates do not necessarily stabilise banks. This issue was discussed in Gros and Shamsfakhr (2021).

2.1. TLTRO as a form of financial dominance

The term 'financial dominance' focuses on the reaction of the central bank to a negative shock which implies losses for the financial system. The models by Farhi and Tirole discussed here assume that the central bank helps borrowers by lowering the overall interest rate. However, one does not only need to consider a crisis situation to find instances of financial dominance in the sense that the central bank feels obliged to support the banking system.

This is the case in the euro area as the Eurosystem provides direct financing to banks at rates below its deposit rate in the form of targeted longer-term refinancing operations (TLTROs), to refinance an increase in lending.

Gros and Shamsfakhr (2021) report that as of May 2021, this long-term financing amounted to over EUR 2 trillion, equivalent to nearly half of all the lending by banks to non-financial corporations (NFCs). Banks are charged a rate of potentially 50 basis points below the deposit rate if (and only if) they meet certain thresholds on loan growth. This means that banks can obtain funding from this facility at -1%, much less than even the zero rate they maintain for most household deposits (and which is also the rate at which they could obtain funding from the Eurosystem). An interest "rebate" of 1% on EUR 2 trillion represents a subsidy of EUR 20 billion annually. The TLRTOs were not introduced to prevent a crisis, but they nevertheless represent a way in which the Eurosystem supports the banking system which is not available elsewhere.

The ECB's reason for this step was that it wanted to induce the banking system to increase lending by more than would be possible otherwise given its policy rates. One of the reasons the banks were unwilling to extend more credit was that the cost of capital made this unattractive. The TLTROs provide a source of profits (and thus capital). In this sense, one could view the TLRTROs as a manifestation of financial dominance.

The two-tier deposit system introduced recently by the ECB under which banks have to pay the negative rate on deposits that are only part of their (excess) reserves could be considered in a similar way. The effective deposit rate was increased by this tiering. This measure thus represents another instance of a monetary policy decision taken to shore up the banking system.

These examples show that it is difficult to delineate a clear border between financial dominance and the fact that the health of financial intermediaries (and the state of financial markets in general) represent factors that central banks have to take into account. The dominant role of concerns about financial market reactions is particularly acute in the US. Here, one key underlying concern of the many pronouncements made by the Federal Reserve's leadership seems to be the desire not to produce a repeat of the 'Taper Tantrum' of 2013 (Gros, 2016). The (ex post short) period of financial market

volatility in the spring of 2021 also led to strong actions by central banks across the world to re-establish confidence (for the similarity with the Taper Tantrum, see Ferriani, 2021). In this wider sense, the state of financial markets always "dominates" monetary policy.

In the following section, we will concentrate on the narrow issue of the resilience of financial intermediaries as measured mainly by the degree of leverage in the economy.

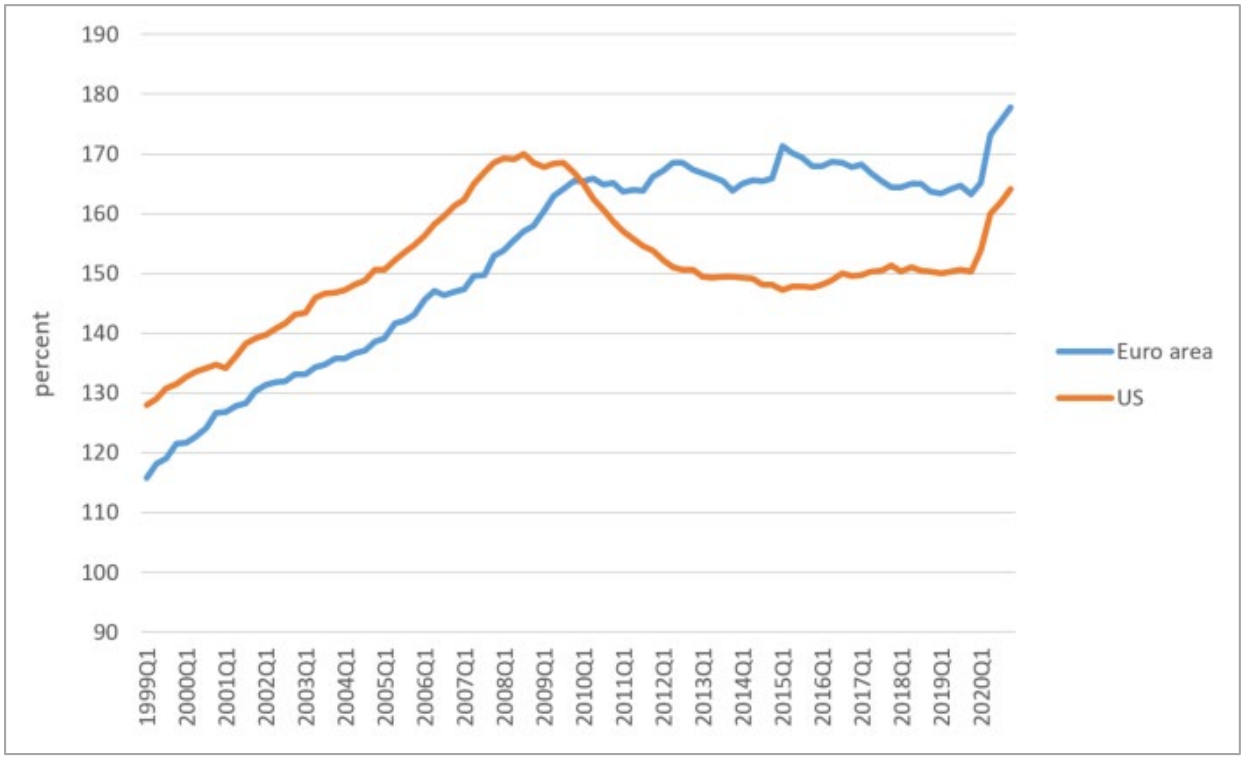
3. CREDIT GAP ANALYSIS

The first indicator we consider is the so-called "credit gap", i.e. the ratio of credit-to-GDP. Credit gap[1] analysis is widely used as a predictor for possible financial crises (Beltran et al., 2021).

Indeed, the credit gap indicator is so widely used that the Bank for International Settlements (BIS) has published a concrete indicator, namely the ratio of private credit-to-GDP.

We start by comparing the euro area to the US in the chart below:

Figure 1: Credit-to-GDP gap, euro area and US



Source: BIS.

For the US and the euro area, credit-to-GDP ratios have not increased over the last 10 years (after a strong increase leading up to the Great Financial Crisis). This is the first piece of evidence that there is little danger of another global crisis. The chart also shows that there has been considerable deleveraging in the US (where the ratio of credit to GDP fell from 170% to 150%), but little improvement in the euro area.

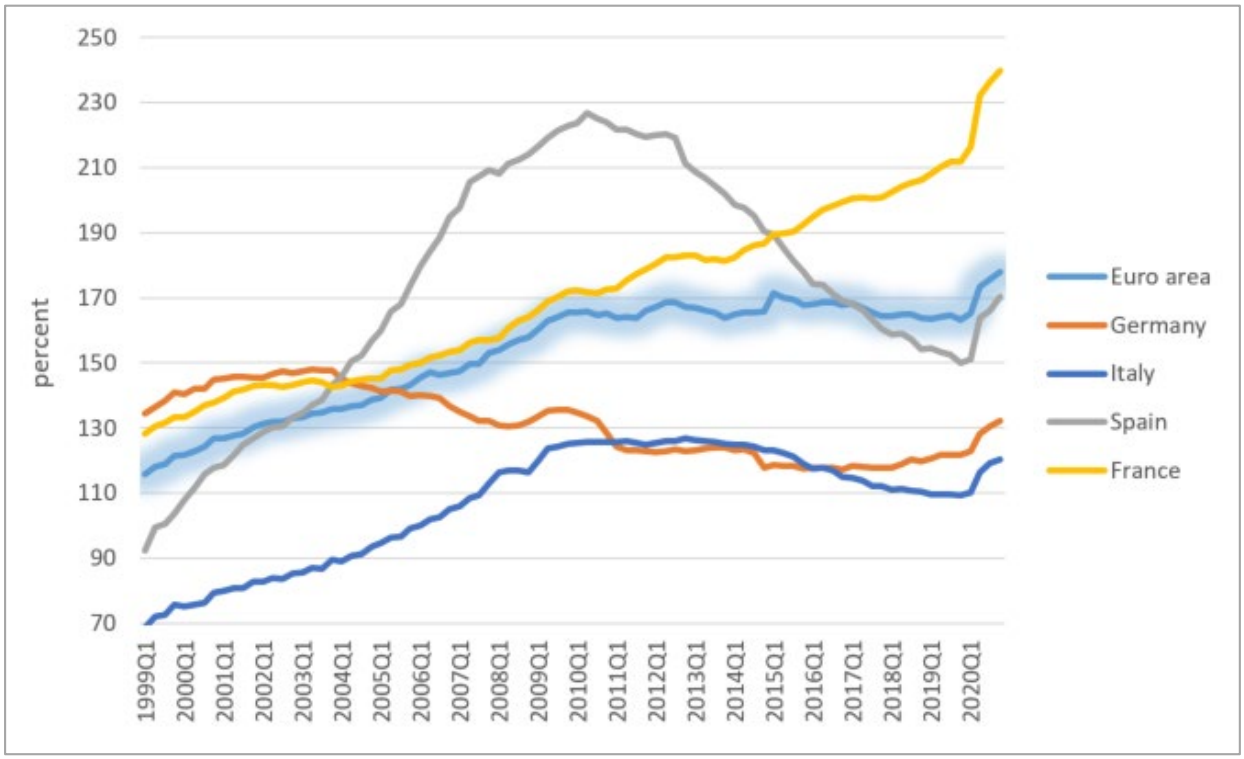
We do not discuss here the empirical literature on the determinants of a financial crisis as this is not useful in the present circumstances. Until the Great Financial Crisis, it was widely assumed that credit-to-GDP ratios should be increasing trend-wise as the financial sector expanded and distributed risk ever more widely. This hypothesis is of course not compatible with developments after the crisis. Actual developments after the crisis render it difficult to estimate any meaningful trend or cycle. The trend in credit relative to GDP seems to have changed in a similar fashion in both the US and the euro area with the onset of the crisis.

The flat average credit-to-GDP ratio for the euro area hides important divergences across member countries. In Figure 2 we highlight the divergent developments in the four largest euro area economies

[1] This ratio changes only when there is a difference, i.e. a "gap", between credit growth and the growth of nominal GDP.

as a financial crisis in any one of them could force the ECB into a financial dominance situation.

Figure 2: Private sector credit-to-GDP ratios: divergences within the Euro area



Source: BIS.

In the run-up to the Great Financial Crisis one could observe an outsized credit boom in countries such as Spain (which had a real estate boom) whereas credit contracted at the same time in Germany. By contrast, France constitutes the outlier today, with a credit-to-GDP ratio one half higher than the euro area average. The ratio of private credit-to-GDP in France is now at close to 240%, higher than it was in Spain on the eve of the financial crisis in that country.

It is difficult to pinpoint the reason behind this extreme value in France. It arises from a gradual, but persistent, increase in credit which is larger than GDP growth, a trend that had already started 20 years ago. Until around 2010, the French trend followed the euro area average. However, since then the values for France have diverged, seeing a continuous increase whereas they have been falling in most of the rest of the euro area (including Germany, Italy and Spain).

In both Figures 1 and 2 one observes an uptick with the onset of the COVID-19 recession. The sudden increase in the private debt-to-GDP ratio that can be observed almost everywhere is not due to a sudden expansion of credit, but mostly due to the fall in the denominator. This can be illustrated with euro area data: if nominal GDP falls by 8%, the ratio will increase by about 14 points if it started at 170%.

Differences in the fall in GDP experienced in 2020 might also, at least partially, explain the intra-euro area differences. For the euro area average the increase amounts to about 14 percentage points of GDP, but here again there are notable differences as the French ratio increased by about 28 points, compared to about 10 points for Germany. An explanation for these differences might also be found in the nature and size of the national rescue packages, and the demand from businesses for working capital.

In the course of 2021, both elements might reverse and lead to some backtracking in the jump in the credit gap observed in 2020: nominal GDP is growing quickly, and the recovery has reduced the

demand for liquidity by the non-financial sector. The latest data available for the euro area banking system seems to confirm this conjecture. This is because the growth of the aggregate euro area banking system's balance sheets has slowed down considerably (to about 3% from 8% in 2019 and 2020). We will further discuss other banking related indicators in the next section.

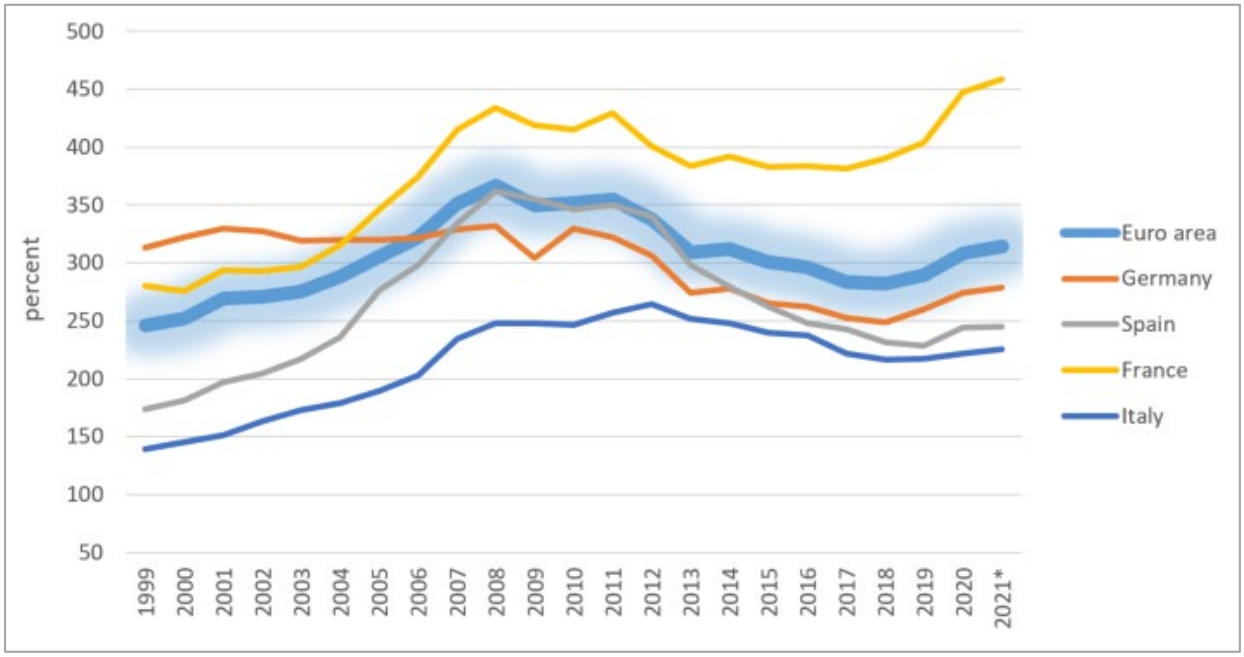
Overall, the broader picture that emerges from this consideration of standard credit gap analysis (which takes into account all credit, not just bank credit) is that '*this time is different*.' The COVID-19 recession, unlike the previous recession, was not preceded by a credit boom.

In the following section, we present mostly ratios relative to potential GDP since all ratios using actual GDP as the denominator will show a temporary sharp uptick in 2020. Using ratios relative to potential GDP allows one to see through the impact of the large temporary fall in GDP experienced in 2020-21.

4. BANK CREDIT AND LEVERAGE IN THE EURO AREA

We start by considering the size of the banking system in terms of overall assets/liabilities (relative to potential GDP). The chart below reveals a similar pattern as the standard overall credit gap in the previous section. There is a rapid increase in banking activity up to the Great Financial Crisis and a stabilisation for most countries thereafter. France again stands out in that the aggregate balance sheet of its banks amounts to over 4.5 times of what GDP is now.

Figure 3: Total assets/liabilities to potential GDP ratio

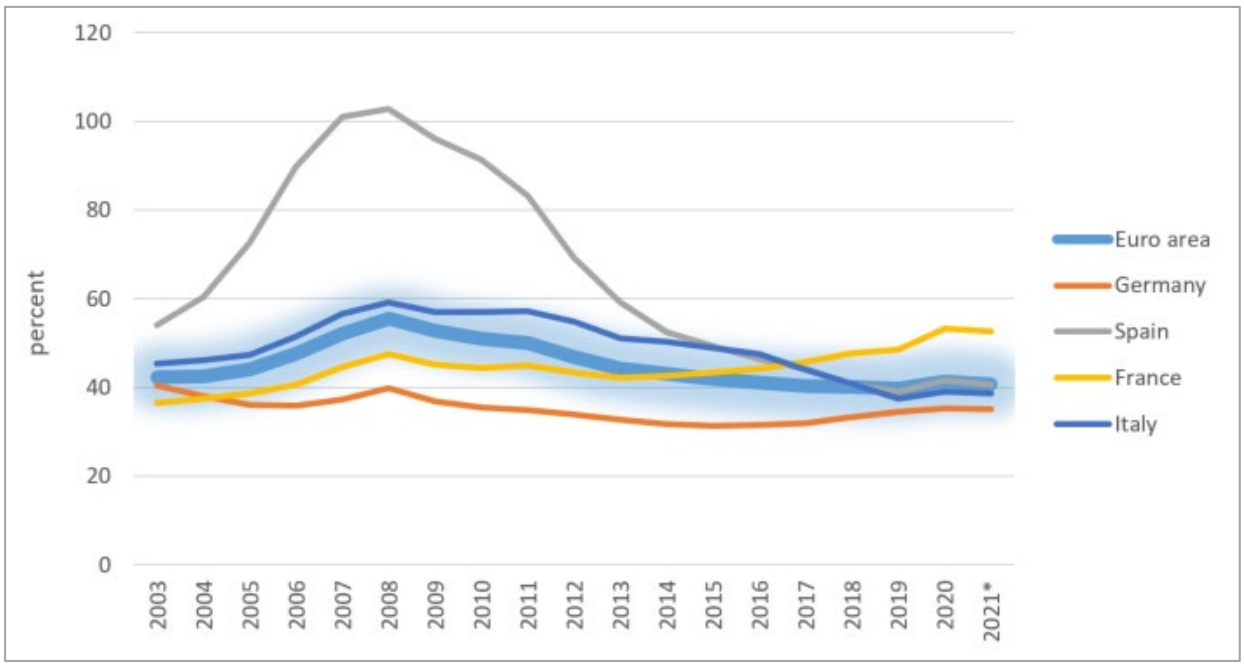


Source: ECB.

Note: * June 2021.

Bank lending to euro area NFCs constitutes another potential source of financial dominance. But indicators provide a similar message. There had been an extraordinary increase in lending to NFCs in Spain during its real estate boom that preceded that country's financial crisis. But once Spain's bubble burst after 2008-09, lending first fell and later stabilised. A similar, but less extreme, cycle can be observed in other countries, with the large economies converging and now clustering around 40% of GDP. Of course, this is with the exception of France that has been deviating from the euro area average and has been increasing since 2015.

Figure 4: Loans to NFCs to potential GDP ratio



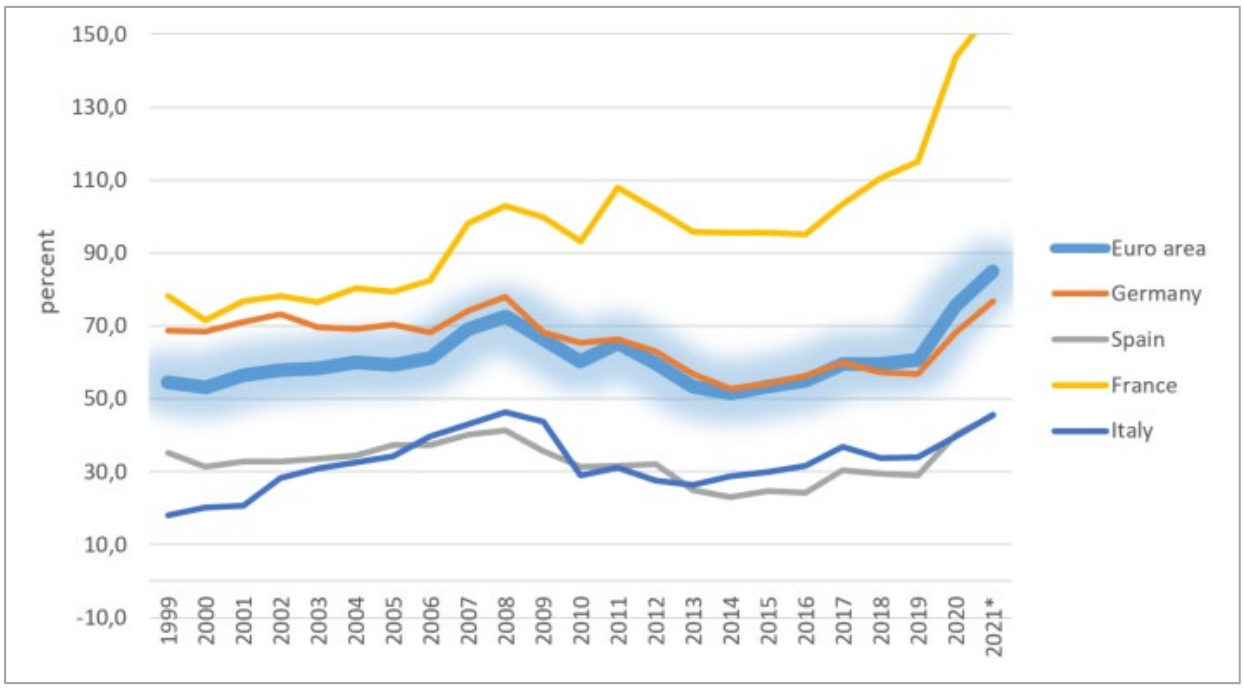
Source: ECB.

Note: * June 2021.

Interbank lending constitutes another source of fragility for the banking system (and hence a potential source of financial dominance). Figure 5 shows below that inter-bank loans are larger than loans to NFCs. This indicator has also been flat since the financial crisis, with Germany moving closer to the euro area average, Italy and Spain co-moving at the lower level and France, again, sticking out. However, an upsurge during the COVID-19 crisis is visible in these countries, with again a relatively larger increase in France.

Interbank loans are much larger (about twice as large as loans to NFCs). They are also mostly very short term and thus more likely to become a source of financial dominance than other forms of lending.

Figure 5: Interbank loans to potential GDP ratio



Source: ECB.

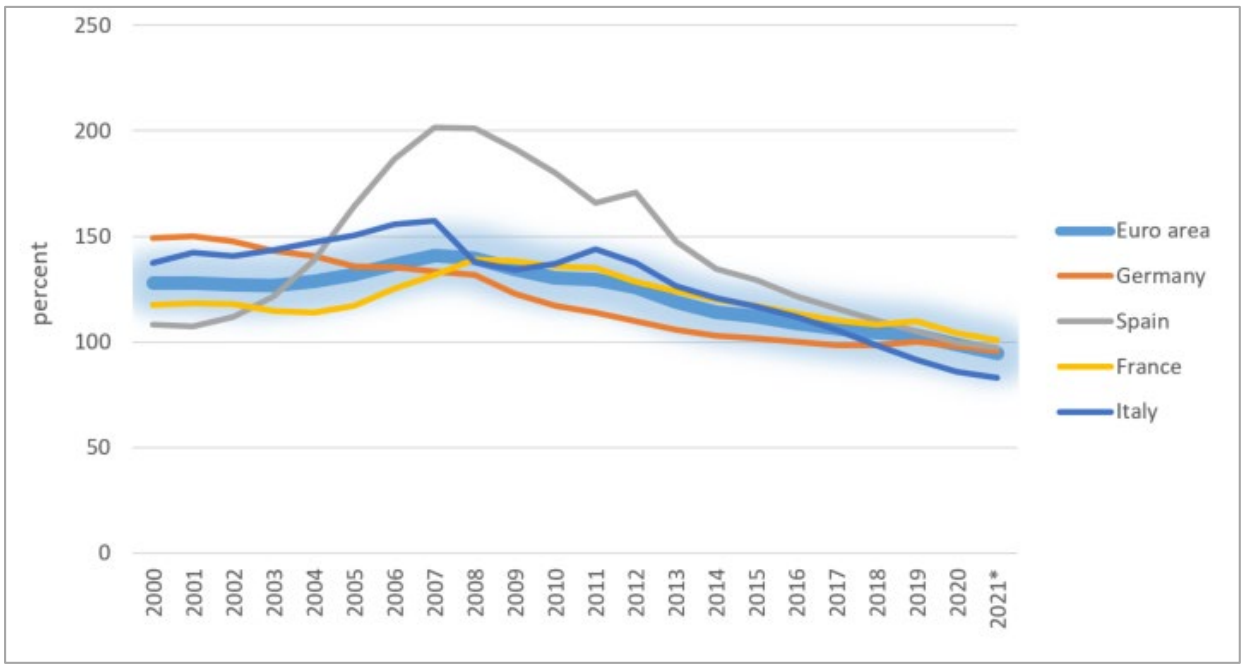
Note: * June 2021.

4.1. Loan-to-deposit ratio

The indicators considered thus far mostly depict a stabilisation, but little outright deleveraging after the Great Financial Crisis. The one indicator which shows a continuous improvement in the resilience of the banking system is the 'the loan-to-deposit' ratio. The more loans a bank has given out relative to its deposit base, the more vulnerable it becomes to a withdrawal of funding, especially market-based funding which is often short term and can dry up quickly in a crisis.

This indicator of vulnerability had increased prior to the financial crisis and has fallen since then. The COVID-19 recession has not led to an interruption in this trend. All of the large banking systems now have a loan-to-deposit ratio below 100%, compared to close to 150% before the financial crisis and 200% for Spain at the peak of its boom in 2008.

Figure 6: Loan-to-deposit ratio



Source: ECB.

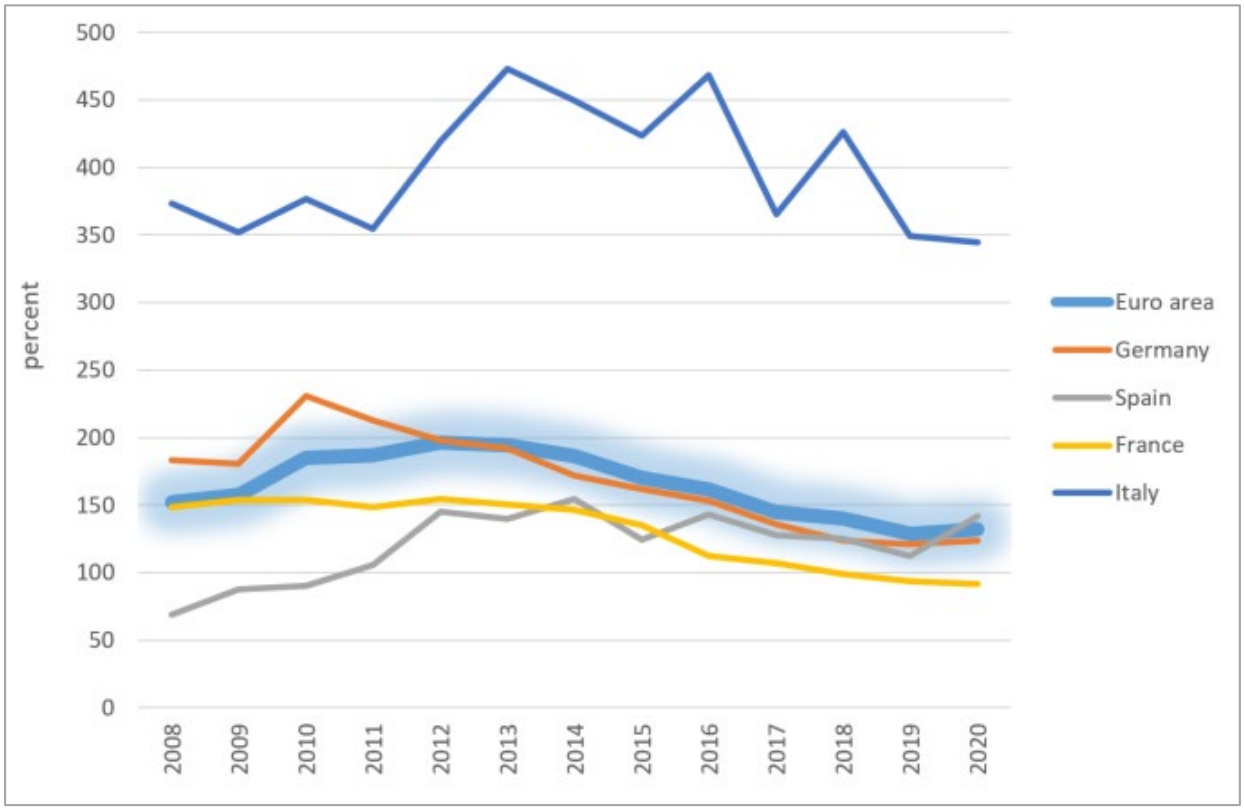
Note: * June 2021.

4.2. The "doom loop" as another form of financial dominance

The term 'doom loop' refers to a situation where banks hold a large amount of bonds issued by their own sovereign. When the risk premium on the sovereign increases, the value of these bond holdings falls and the banks themselves might experience financial stress, possibly leading to the need for support from their sovereign. This term has become so popular that it even used by the European institutions (see Alogoskoufis and Langfield, 2019). The EU's (incomplete) banking union has much alleviated the feedback loop between weak sovereign and weak banks. In reality though, it still exists (Breckenfelder and Schwaab, 2018; Fratzscher and Rieth, 2018), at least in the sense that the risk premia on sovereigns and the banks located within the country remain highly correlated. Moreover, the sums accumulated in the Single Resolution Fund would not be sufficient to deal with any of the large French banks.

Figure 7 shows the amount of 'home' sovereign debt held by banks in the euro area as a proportion of their capital. The total amount held by banks (not shown) has remained but the ratio-to-capital, which represents an indicator of their loss absorption capacity, has trended downward since 2012. The values for Italy stand out from the other large euro area economies. But even there the ratio has declined from the peak reached in 2013 (mostly because the capital base of Italian banks has improved since the Single Supervisory Mechanism (SSM) has taken over banking supervision).

Figure 7: Holdings of domestic sovereign debt by Monetary Financial Institutions (MFIs) other than the central bank (as a percentage of tier 1 capital 2)



Source: ECB.

These large public debt holdings by banks raise the question on why savers hold so few government bonds directly. The explanation might simply be low interest rates coupled with minor differences in transaction costs and liquidity.

A comparison with the past can illustrate this point. In Italy, an important share of public debt was held by families directly (the so-called "BOT people") in the 1990s, when short-term interest rates were in the double digits. At the time, families held large amounts of short-term (2-3 year) papers, accepting the loss of liquidity relative to bank accounts because of the interest earnings these "Buoni Ordinari del Tesoro" (BOT) promised. However, few households in the euro area would today envisage holding government debt at negative or very low interest rates when more liquid instruments, such as current or savings accounts, have a yield which is often higher (i.e. non-negative). The fact that banks hold a large fraction of public debt is thus unlikely to change in the near future.

A substantial amount is also held via investment funds, which allow households to diversify their holdings at low cost (see Gros, 2019 for the case of Italy).

[2] Tier 1 capital of domestic banking groups and stand-alone banks.

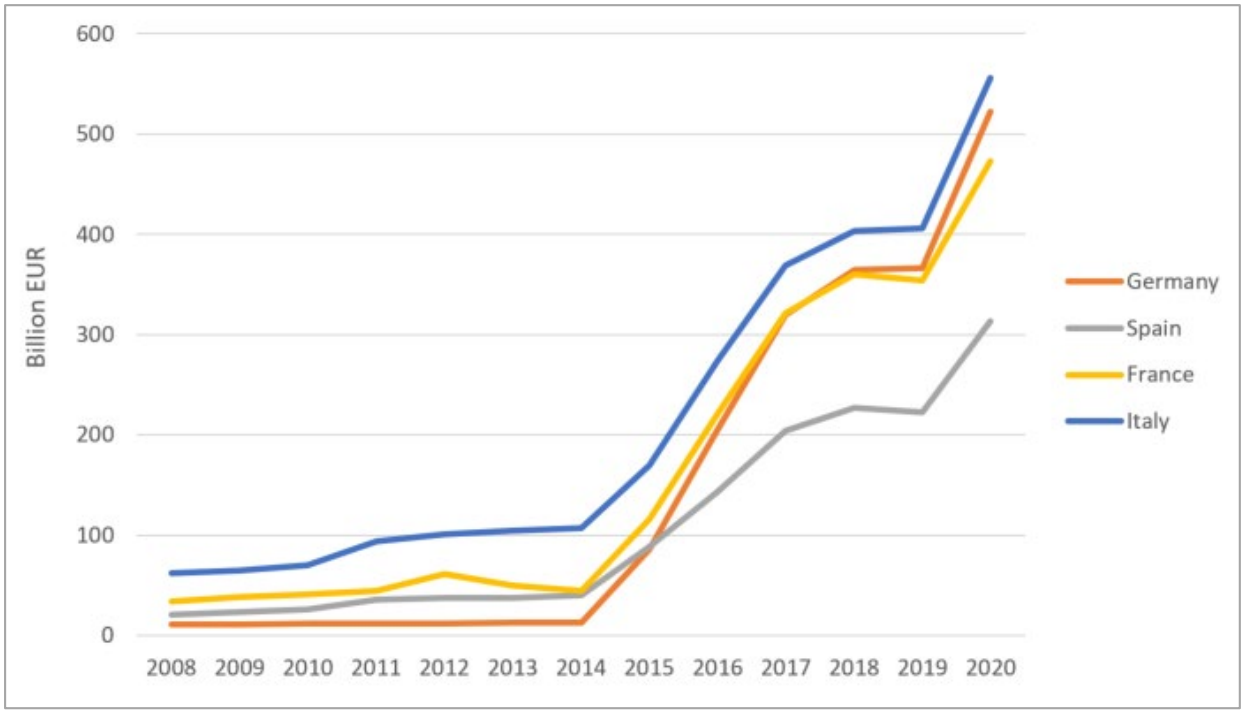
5. QE AND FISCAL DOMINANCE

There is, however, one development which seems to fit the idea that over-leveraged debtors will be rescued in a crisis and thus this induces them to accumulate more debt. This is the case for public debt and the massive amount of debt now found on central banks' balance sheets.

The amount of sovereign debt held by national central banks has vastly expanded from 2014. It stabilised in 2018-2019 and then escalated again during the pandemic (Figure 8).

Central bank purchases of government debt reduce the average duration of public debt and increases the direct impact of central bank policy rates on the overall cost of public debt. The Farhi and Tirole model (2009) could thus be applied to public borrowers as well.

Figure 8: Holdings of government debt by (national) central bank



Source: ECB.

The conclusion reached by Farhl and Tirole (2009), discussed above, is thus valid for public borrowers as well. When they can count on support from the central bank, public borrowers abandon prudent public debt management. The rules of the Stability Pact could be regarded as the equivalent to the macro-prudential regulation which is advocated for the private sector.

6. CONCLUSIONS

The picture that emerges from our empirical analysis is that the euro area's financial sector has become somewhat more robust over the last few years. Most indicators show an improvement since the financial crisis, but some of them remain at high levels, indicating continuing vulnerability.

The least one can say is that over the past few years, leverage has not increased with regards to overall trends. But this applies only to the euro area average. The banking system in France has grown in size and credit has expanded much more than in the rest of the euro area.

The Covid recession has not led to a significant increase in leverage. A large part of the non-financial corporate sector's losses has been compensated by government aid and the quick recovery in 2021 has led to a strong recovery of profits. If the economic recovery continues as robustly as forecast, there seems to be little danger of the standard threat of financial dominance resulting from a weak financial system.

However, the large amount of assets accumulated on national banks' balance sheets in the euro area create a potential threat of fiscal dominance as it will be difficult for the ECB to raise rates should this become necessary if inflation continues. An increase in the policy interest rates would immediately impact the profits of all national central banks and thus their respective governments (to whom central bank profits go, Gros, 2016).

With public debt levels already very high, this might put a number of countries in an uncomfortable situation.

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Financial dominance describes a situation in which a central bank does not dare to tighten its policy stance as this would threaten the stability of the financial system. The danger of this happening is limited at present. The banking system is well capitalised. Private credit has not expanded much, not even during the COVID-19 recession in most euro area countries —except in France. However, in some countries, the financial sector remains highly exposed to sovereign debt. "Indirect financial dominance" could thus easily arise if sovereign risk premia return. Continuing asset purchases under the PEPP increases the danger of fiscal dominance.

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