

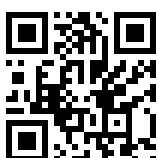
IN-DEPTH ANALYSIS

Requested by the ECON committee

Monetary Dialogue Papers, September 2021



The Tail Wagging the Dog? Overcoming Financial Dominance



Policy Department for Economic, Scientific and Quality of Life Policies
Directorate-General for Internal Policies
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PE 662.945 - September 2021

EN

The Tail Wagging the Dog? Overcoming Financial Dominance

Monetary Dialogue Papers
September 2021

Abstract

The idea of financial dominance has gained some notoriety in recent years as a further constraint on central bank policymaking. This paper examines the reality of financial dominance and how the financial sector may be an impediment to the necessary unwinding of all unconventional monetary policies in Europe. In line with the existing literature, I conclude that the financial sector has been made more vulnerable as a result of quantitative easing – and allowing the financial tail to wag the monetary dog will lead to only more vulnerability.

This paper was provided by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the committee on Economic and Monetary Affairs (ECON) ahead of the Monetary Dialogue with the ECB President on 27 September 2021.

This document was requested by the European Parliament's committee on Economic and Monetary Affairs (ECON).

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Manuscript completed: September 2021

Date of publication: September 2021

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This document was prepared as part of a series on "Beyond the Pandemic: Avoiding the Risk of Financial Dominance and Disorderly Market Reactions", available on the internet at:

<https://www.europarl.europa.eu/committees/en/econ/econ-policies/monetary-dialogue>



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For citation purposes, the publication should be referenced as: Hartwell, C.A., *The Tail Wagging the Dog? Overcoming Financial Dominance*, Publication for the committee on Economic and Monetary Affairs, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg, 2021.

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LIST OF ABBREVIATIONS

APP	Asset purchase programme
BIS	Bank for International Settlements
CDO	Collateralised debt obligation
CPI	Consumer Price Index
ECB	European Central Bank
EU	European Union
GFC	Global financial crisis
HICP	Harmonised index of consumer prices
IMF	International Monetary Fund
NBFI	Non-bank financial institution
NPL	Non-performing loan
QE	Quantitative easing
ROE	Return on equity

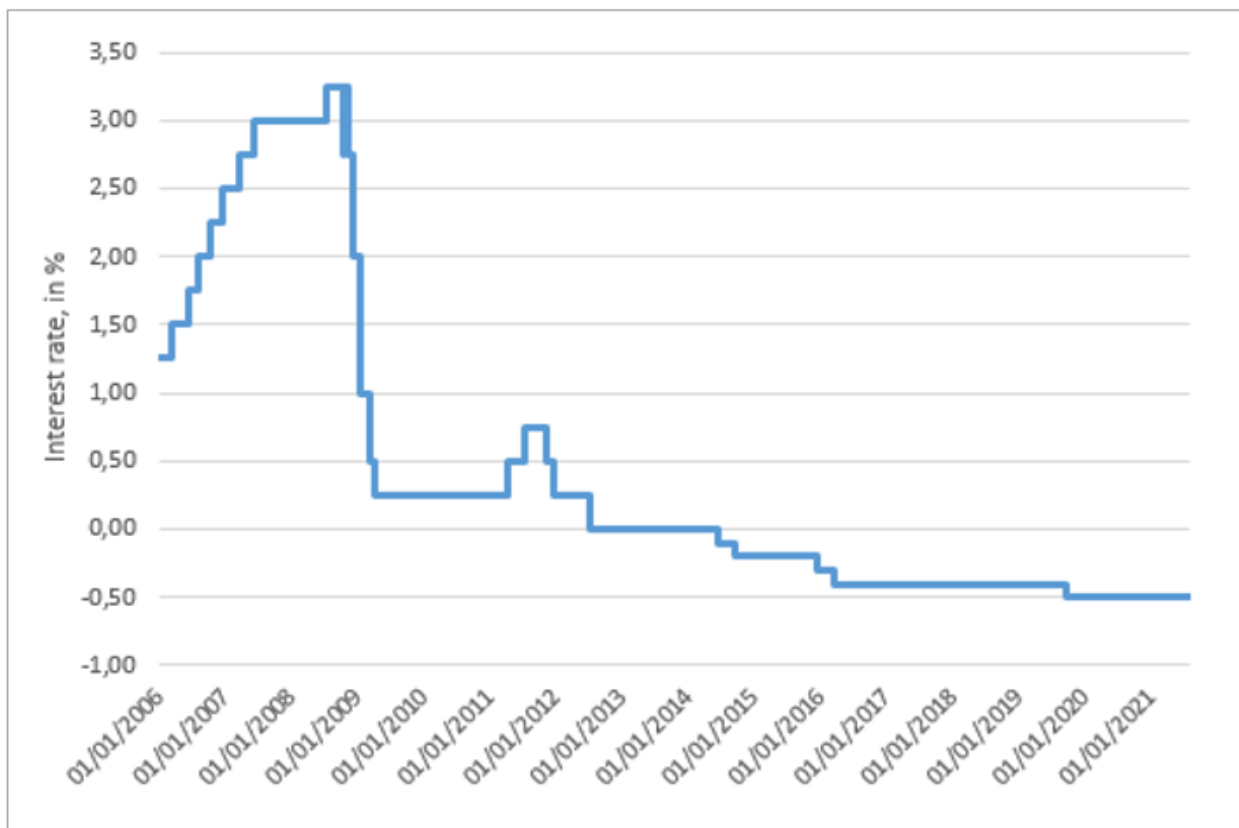
EXECUTIVE SUMMARY

- **The idea of "financial dominance" has gained credibility in recent years as a theory of bank behaviour.** Financial dominance postulates that banks, facing accommodative monetary conditions, will remain undercapitalised so as to avoid losses from being pushed onto their balance sheets.
- **Financial dominance, if real, puts monetary authorities in a bind.** In order to preserve financial stability of a system of undercapitalised banks, monetary authorities will have to resort to ever-more-accommodative monetary policy. However, such a reliance on the printing press and other unconventional methods can threaten the core mandate of a central bank, price stability.
- **Under financial dominance, a central bank is damned if they do, damned if they don't.** At least one mandate will have to be de-prioritised, either financial stability (by unwinding accommodative monetary policy) or price stability (by keeping it going to ensure bank stability). No matter which avenue is taken, however, the central bank will suffer a loss of credibility, making it more difficult to manage inflationary expectations in the future.
- **Overall, the performance of European banks has been subpar since the euro area crisis, with low returns to equity and assets.** The thin interest rate margins occasioned by zero interest rates and the recurring threats to the real economy has made the performance of euro area banks slow at best. This has been uniform across all euro area Member States.
- **On the other hand, the evidence from the European financial sector, and in particular in the euro area, are of a well-capitalised banking sector,** violating the condition which is the basis for financial dominance theory. Rather than being undercapitalised, euro area banks may be overcapitalised, retaining large capital buffers at a time when they should be looking forward to playing a greater role in financial intermediation. These capital buffers have undoubtedly been helped by accommodative monetary policy but are by no means tied to continued policies.
- **If financial dominance, as defined in recent years, can be ruled out as an impediment to unwinding unconventional monetary policy, another culprit must be found.** The issue is that "financial dominance" is defined too narrowly, in terms of the formal banking sector and its capitalisation. In reality, the expansion of non-bank financial institutions (NBFIs) and their reliance on accommodative monetary policy (especially with regard to bond prices) have created the situation where the ECB is constrained in its movements.
- **The only way forward is to unwind the policy creating financial dominance,** and this is the ECB's multifaceted unconventional monetary stimulus. While there will be short-term financial pain, paradoxically, the capital buffers built up by banks will help them to weather the storm while wringing out excess liquidity from the NBFIs sector.
- **In the future, the way to avoid financial dominance is to avoid the policies which lead to it.** This means a rededication to pursuing price stability, with the idea of price stability widened to encompass asset prices, money growth, and the effects that monetary policy may have on the financial sector.

1. INTRODUCTION

In the fourteen years since the global financial crisis (GFC) began, the practice of monetary policy has become stagnant, unidimensional, and unfailingly accommodative (Figure 1). Across all developed countries – and many emerging markets – a "race to the bottom" with zero (negative) interest rates, coupled with new and innovative ways to monetise stimulus (including a plethora of asset purchase programmes, or APPs), has led to subpar growth rates and persistent worries about literally any economic downturn. At the same time, the COVID-19 pandemic has exposed just the fragility of the recovery in the real economy globally, although the prohibitions on economic activity (colloquially known as "lockdowns") have been an artificial hiccup in an otherwise underwhelming business cycle.

Figure 1: The race to the bottom and beyond



Source: European Central Bank.

Note: Figure shows the ECB rate for the overnight deposit facility.

In the midst of this reality has stood the financial sector, the epicentre of the GFC and a key node in the transmission of monetary policy (Schnabel, 2016). In many ways, the post-GFC response to financial sector weakness moved across a broad front of policies but in each case, missed the mark. For example, financial regulation in the form of new Basel regulations focused on the same metrics which were immaterial to the crisis (asset, debt, and other ratios) and has instead continued to foster "too-big-to-fail" institutions (Claessens and Kodres, 2014). At the same time, monetary policy has been geared at erasing the time value of money in an attempt to provide cheap funds for financial institutions for well over a decade. Financial markets, including equity markets but also extending to banks, have become addicted to the risk-free liquidity (Mendonça, 2017), structuring themselves in more complex ways similar to what occurred before the GFC (Correa and Goldberg, 2021). With monetary profligacy occurring at the same time as (and, I would argue, contributing to) an erosion of property rights and investor protections (Hartwell, 2013), the overall situation has heightened risks in the banking sector

(Oino, 2018) rather than mitigating them (as seen in emerging market economies, see Uddin *et al.* 2020).

Indeed, the role of the financial sector in causing, guiding, and benefiting from unconventional monetary policy has led to a situation known as "financial dominance" (Brunnermeier & Sannikov, 2012), where the needs of the financial sector (and in particular financial sector stability) have pushed aside other concerns and/or policy goals of central banks to become the dominant issue (Diessner and Lisi, 2020). Financial dominance was originally defined by Markus Brunnermeier (2016:3) as "the ex-ante behaviour of the financial sector, which out of fear that losses will be pushed onto it, purposely stays (or even becomes) undercapitalised", meaning a sub-par equilibrium brought about by paradoxical moves of the financial sector to actually remain vulnerable. This state of affairs means that central banks, with a (possibly contradictory) dual mandate of price stability and financial sector stability, are forced to forsake their traditional role in fighting inflation in favour of policies which support a financial sector (which is deliberately weakened). The extent of the constraints placed upon central banks cannot be understated, for, as Lewis and Roth (2018:70) note, "A too aggressive response of the interest rate to inflation can lead to debt disinflation dynamics that destabilise the financial sector". Central banks are damned if they attempt to tighten up monetary policy, but are also damned if they do not, in terms of the damage to the real economy; in this sense, the idea of "financial dominance" has dovetailed with other critiques of finance-based capitalism, mainly the idea of "financialisation" (Krippner, 2005).

The purpose of this paper is to examine financial dominance in the euro area, if it exists, and how it could be enabled and supported by monetary policy. Perhaps more importantly, we will examine if financial dominance, as a tactical and strategic move of the financial sector, is blocking the critical unwinding of the unconventional monetary policy of the European Central Bank (ECB). This analysis shows that the true current state of the financial sector across European countries and the accumulated threats to the economy which have accrued mean that financial "dominance" is actually a weakness in operations coupled with strength in capital buffers. In reality, the euro area does not appear to be threatened by financial "dominance" as defined in the extant literature, but rather to be threatened by a different type of financial dominance, mainly the prioritisation of financial stability over price stability even in the absence of undercapitalisation risks. As predicted in earlier briefing papers and other work (Hartwell, 2018b), unconventional monetary policy has been "a narrow success and a broad failure", and the delayed unwinding of unconventional monetary policy – in all of its guises – has made the potential pain to the real economy even larger; the financial dominance examined in this paper magnifies this threat by making another financial crisis more likely, either in the short-term (due to policy) or the longer-term (due to collapse).

Facing this reality, central banks, never really independent (Hartwell, 2019) but even further constrained by the financial sector, must redefine themselves in terms of pursuing their core (and, some would argue, only appropriate) objective of price stability. In order to do this, they must be willing to back out of the corner into which they have painted themselves and unwind unconventional monetary policy *whatever the short-term costs in financial stability*. This necessary action – and likely ensuing correction – is necessary to return the issue of financial stability to two other actors in the economy: first, the banks themselves, weaning them off of their free ride of easy money and forcing a return to due diligence and prudent capitalisation policies. Secondly, it should also move financial stability concerns to political authorities, where (as Mabbet and Schelkle [2019] hint at but never explicitly state) financial stability can become an explicit part of overall policymaking and not the exclusive purview of a conflicted central bank.

2. THE INTERPLAY OF FINANCIAL DOMINANCE AND MONETARY POLICY

As noted in the previous section, the idea of "financial dominance" has grown in mainstream economics over the past decade as the negative consequences of unconventional monetary policy have grown more apparent. This section of the paper will examine the theoretical basis of financial dominance, how it manifests itself throughout an economy, and, perhaps most importantly, how financial dominance acts to constrain monetary policy authorities.

2.1. Financial dominance in theory

Financial dominance as a theory is fairly new, in that it has come about in response to a specific event (the global financial crisis), a specific policy (unconventional monetary policy), and a specific part of the financial sector (banks). One of the first proponents of the financial dominance theory was Princeton Professor Markus Brunnermeier, who has written extensively in central bank circles since 2012 on the causes and effects of financial dominance post-GFC. In a 2015 presentation to the Bundesbank, Brunnermeier (2015) outlines more explicitly the mechanisms underpinning how financial dominance operates. In the first instance, the driving force for bank behaviour is not the bank's own balance sheets but the creation of a redistributive monetary policy, e.g., quantitative easing, which provides ample liquidity for the financial sector. In the wake of a financial crisis, the mandate of central banks to protect financial stability becomes crucial, and liquidity provision is (theoretically) "needed" in order to stave off systemic collapse. Banks thus are the recipients of this largess of liquidity, a largess which does not distinguish between types of banks but is instead a very blunt instrument.

It is here that the Kydland-Prescott (1977) idea of "time inconsistency" – the foundation of modern independent central banking – rears its head: central banks are charged in their mandates with promising to provide liquidity for stability, but, crucially, not to bail-out insolvent institutions. However, banks *know* that this is the mandate of central banks and thus may act in ways such that liquidity provision becomes a *de facto* form of bail-out across the entire sector. Financial dominance then ensues as banks deliberately remain undercapitalised, aware of the reality that monetary policy authorities will supply needed liquidity. In this manner, bank losses are socialised while profits remain privatised.

While time inconsistency is the backbone of the idea of financial dominance, there are other forces at play as well. In particular, the idea of the "soft budget constraint", in the manner of Kornai (1986), has a large part in determining bank behaviour. The financial sector, aware that financial stability must be guaranteed in some part by monetary authorities, have an incentive to reduce their own burdens of capitalising, secure in the knowledge that bail-outs will eventually come in some form. Rather than facing a hard budget constraint in terms of their reserves, banks are allowed to remain somewhat fragile, knowing that monetary authorities *must* ensure systemic stability. This reality is a generalised application of "too big to fail", where specific financial institutions are so crucial to the current functioning of financial intermediation that they engage in moral hazard, knowing that there is a safety net; financial dominance asserts that the entire banking system acts in such a manner (whether or not the specific institution is systemically important) for the same reason, i.e., the presence of an accommodative monetary authority. As Brunnermeier (2015) notes, this is a game of "chicken" between banks and central banks, one which results in fiscal authorities and central banks facing off against each other. Indeed, any costs of the financial sector are thus pushed onto either monetary authorities or fiscal authorities, who then attempt to "pass the buck" to each other: fiscal authorities would try to push financial sector losses onto central bank balance sheets and avoid direct fiscal stimulus, while monetary authorities would prefer fiscal measures for recapitalisation and avoidance of the use of monetary tools.

In any event, the losses are directed away from the banks, who are strategically acting to avoid losses themselves, creating their "dominance" in the system.

2.2. Financial dominance in practice (of monetary policy)

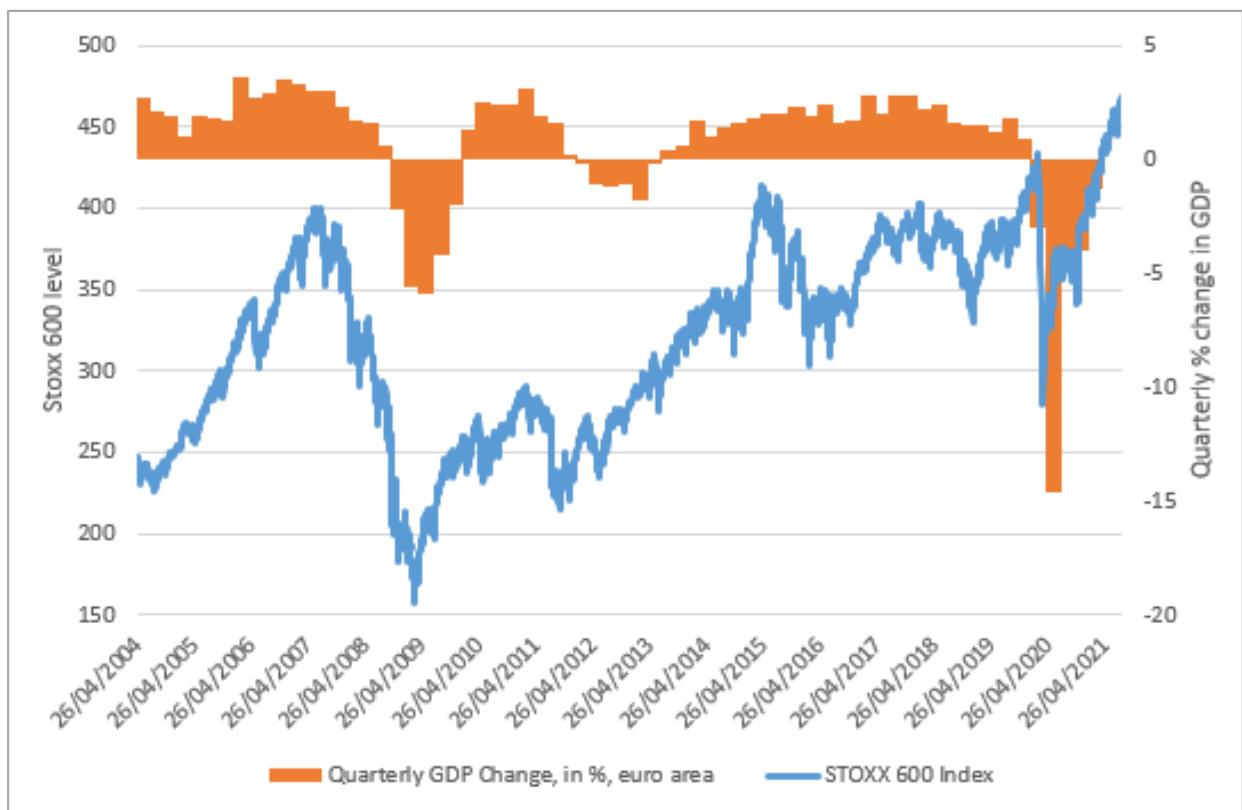
Given this description of what financial dominance comprises, the link between the emergence of financial dominance and central banks should be readily apparent. In particular, the deliberate weakness of the financial sector creates a situation where financial sector stability becomes, by necessity, the overriding concern of the central bank. Empirical work has shown that the damage done by a financial crisis is longer, deeper, and more persistent than other types of crises (Oulton and Sebastián-Barriol, 2017), and the lingering effects of the GFC, 14 years from its onset, still colour policies and output paths (Ball, 2014). By forcing the hand of the monetary authority to use monetary instruments to support the financial sector, banks create a downward spiral: accommodative monetary policy results in financial fragility which requires additional accommodative monetary policy which exacerbates financial fragility. For a central bank concerned with financial stability, the prospect of cutting the liquidity lifeline means possibly shattering its stability mandate, especially if the game of "chicken" with the fiscal authorities cannot be won (Brunnermeier, 2015).

On the other hand, and perhaps more importantly, financial dominance also diverts central bank attention from its other (and, I would argue, singular) mandate, namely price stability. Over 30 central banks worldwide, comprising the vast majority of the world's productive output, have explicit inflation targets and, indeed, the impetus behind the creation of independent central banks in the 1980s and 1990s was precisely to control inflation rather than protect an ill-defined concept of financial "stability" (Berger *et al.*, 2001). With the evidence overwhelmingly in favour of the ability of an "independent" central bank to control inflationary impulses (Klomp and De Haan, 2010), the "conservative" central banker of Rogoff (1985) appears to have been installed via an institutional innovation (Hartwell, 2019); more importantly, the adoption of explicit inflation targets has also reduced uncertainty and anchored inflationary expectations, allowing for lower inflation in even challenging circumstances.

Despite the successes recorded in taming inflation in the major economies of the world up to the GFC, the recourse to monetary stimulus for well over a decade has once again brought back the spectre of inflation across asset classes (Papadamou *et al.*, 2019). Indeed, considering accommodative and redistributive monetary policy only for its effects on the financial sector would ignore the massive and deleterious effect that easy money has on the real economy over time (Guerello 2018; Acharya *et al.* 2019), even if it may paper over a crisis in the short term by raising asset prices (and even then, not terribly effectively, see Kucharčuková *et al.* 2016). History is replete with instances of high inflation and hyperinflation and the disastrous consequences this has on economic calculation, investment, growth, personal lives, and even rule of law (Hartwell, 2018a). The monetisation of what is essentially a fiscal matter – or, more accurately, a matter for private banks themselves – leads to profligate money creation unconnected to money demand and/or productivity gains.

Financial dominance is thus more than just a situation which absorbs central bank energy and makes it difficult to focus on anything but financial stability; in reality it is a state of affairs – created and exacerbated by central bank policies – which is directly in conflict with (and damaging to) the goal of price stability. In order to continuously accommodate weak banks, central banks must by definition threaten price stability. Of course, price stability may not be threatened immediately, as monetary policy can work with very long lags; the lack of movement in headline inflation and the continuous obsession with deflation in the post-euro area crisis acting as an example of how basic inflationary pressures have been somewhat dormant over the past decade. However, the accumulation of distortions and monetary overhang means that threats to price stability may manifest in other realms.

Figure 2: Asset prices unmoored from reality



Source: Author's calculations based on data from Eurostat and STOXX Europe 600.

Note: Figure shows the annualised rate of quarterly growth of GDP versus the level of the STOXX Europe 600 Index.

There are signs of this threat to price stability in the euro area when one considers the channels via which price discovery is enabled. While the rapid expansion of money can eventually result in inflation in commonly utilised measures such as the consumer price index (CPI) or the harmonised index of consumer prices (HICP), it may occur more immediately, through rapid increases in asset values, including in stock markets, real estate prices, commodities, or even cryptocurrency. Figure 2 shows a compelling example of this from the pre- and post-GFC years, plotting the real economy (expressed in change in annualised GDP per quarter) in the euro area against the benchmark STOXX Europe 600 Index. Despite anaemic gains in growth across the euro area, stocks have continuously reached new heights due to monetary policy, including during the COVID-19 pandemic, where growth has been artificially crushed due to prohibitions on economic activity.

The fact that financial stability under financial dominance requires threats to price stability as a rule is troubling enough, but perhaps of even more consequence is the fact that financial dominance is a self-reinforcing phenomenon. The lack of progress in bank restructuring and recapitalisation which quantitative easing enables makes any attempt to veer towards price stability a threat to banks which rely on easy liquidity, precipitating a turn towards financial instability. Put another way, rather than using unconventional monetary policy as a breathing space in order to recover from crisis and become stronger, financial dominance means that banks purposely remain weak, forcing central banks to accommodate their weakness rather than return to a policy of price stability. In this manner, the unconventional becomes the new normal, and any attempt to wean banks off of easy liquidity results in more pain over time to the financial sector (while at the same time weakening the real economy). The financial sector remains "stable", in the sense that it is not plummeting to the ground, but the price of this "stability" is the real economy and basic price discovery mechanisms crucial to a market

economy.

The final threat of financial dominance is that this state of affairs forces central banks to sacrifice one of its mandates in order to appease the other, especially if a bank wishes to extricate itself from unconventional monetary policy. Indeed, any change of central bank policy will have longer-term ramifications for the conduct of monetary policy as, no matter which avenue is chosen, the credibility of the central bank will be diminished: either it will sacrifice its price stability mandate to preserve "stability", or it will abandon short-term financial stability in order to return to price stability. In each direction, the diminution of the bank's credibility may then also negatively impact its ability to influence expectations and fight inflation in the long run (Masciandaro, 2018).

3. THE STATE OF THE FINANCIAL SECTOR IN EUROPE

The theoretical and practical issues related with financial dominance thus appear daunting from the point of view of a central banker, forcing a shift in decision-making which is necessary to prevent an economy from once again falling prey to financial vulnerabilities. Indeed, with a dual mandate of price *and* financial stability, a central bank cannot help but to take action to shore up the financial sector to ensure that the sector a) does not collapse entirely and/or b) does not create a situation which threatens price stability. Unfortunately, as shown previously, the actions which the financial sector prefers – liquidity, loose monetary policy, and a commitment to both – are precisely those actions which do threaten price stability.

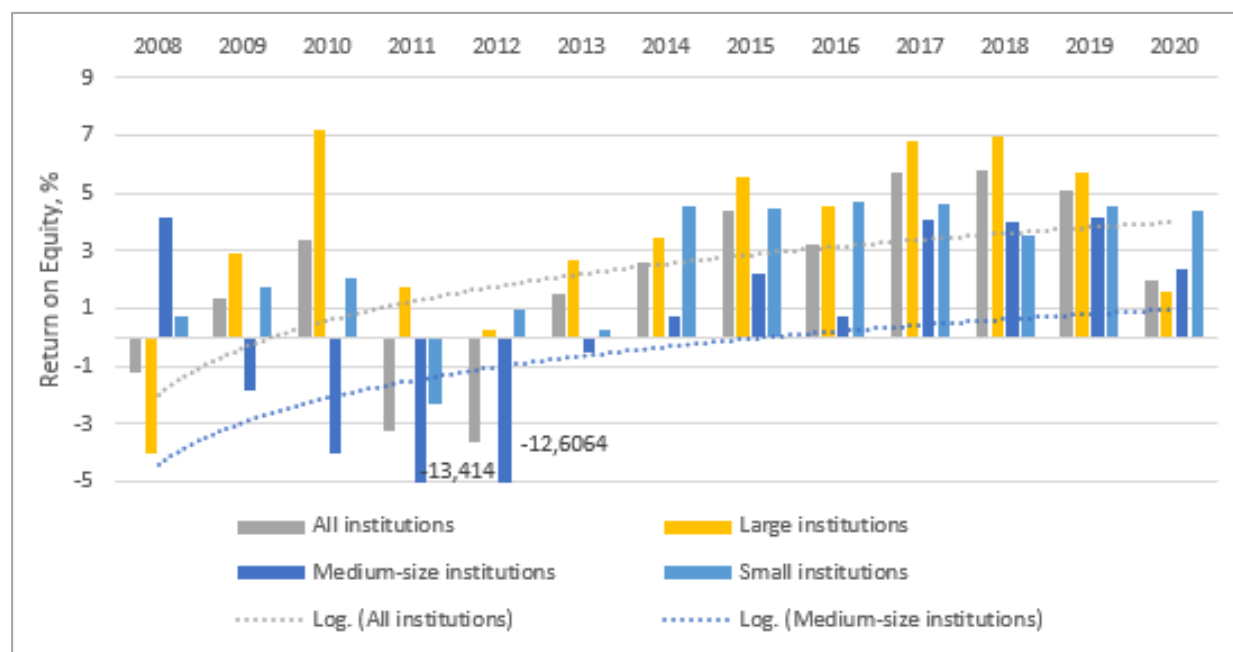
The purpose of this section is to understand the scope of this problem in the European Union (EU) and particularly in the euro area. Just how far along is the EU to being mired in a state of financial dominance? Here we will zero in on the financial sector itself and see if it has deliberately pursued a strategy which lends itself to financial dominance, i.e., undercapitalisation, or if the rumours of financial dominance are greatly exaggerated.

3.1. The state of Europe's banks

As a system based more on traditional banking rather than American-style capital markets, the European financial sector is thus reliant on these same financial institutions for the overall tenor, size, and conduct of financial intermediation. However, and similar to many other difficulties facing policymaking in the euro area, the diversity of its 19 members means that there is no easy way to characterise the health of "Europe's" banks apart from an aggregation of the individual Member State financial sectors and/or looking at very broad aggregates.

One of the key aggregates utilised in the literature to ascertain bank health is return on equity (ROE), a simple ratio of net income to shareholder equity. Looking at the ROE of euro area banks across all institutions and broken out by large, medium, and small banks (Figure 3), it is apparent that euro area banks were in a much better position in 2019 than they were during the worst of the GFC in 2008 and especially 2009 (and were far stronger than the days of the euro crisis in 2011 and 2012). However, the dual crises have taken their toll, compounded by the ultra-accommodative monetary policy of the ECB, which has kept margins incredibly low and left banks with razor-thin profits. This can be seen in the ROE trend figures, shown as dashed lines in Figure 3; while all institutions show an upward trend, it has moderated in the 4% range and appears to be driven specifically by the performance of large institutions in 2017 and 2018. On the other hand, medium-sized institutions are barely keeping their heads above the water in terms of profitability, and, across all institutions, there was a marked decline in profitability in 2019 *before* there was any knowledge of the disruption that COVID-19 would cause. This trend comports with views and data expressed in earlier briefings for the European Parliament (Hartwell, 2020), mainly that the interest rate squeeze and slow growth in the euro area was making it very difficult for banks to stay afloat.

Figure 3: Return on equity in the euro area post-GFC



Source: Author's calculations based on data from the ECB Statistical Data Warehouse.

Note: Log lines are the logarithmic trends for ROE for both all institutions and for exclusively medium-sized banks.

This raw data also comports with analyses done by both European institutions and academics regarding the state of the euro area banking sector, even if other metrics of profitability are utilised; for example, Aiyar *et al.* (2021) show return on assets in the euro area in 2019 were far below those of non-euro EU and non-EU countries. However, this data misses the COVID-19 pandemic, which has increased the existing risks for European banks markedly and has the potential to make operations even more depressed. As the ECB notes in its November 2020 *Financial Stability Review* (ECB, 2020), the pandemic and the ensuing prohibitions on economic activity have increased credit risk to banks, which have increased their lending to non-financial corporations throughout 2020 and early 2021, as well as creating the likelihood of a spike in non-performing loans (NPL) depending upon the extent of future policy choices intended to combat COVID¹. Indeed, euro area banks were suffering enough from the slow growth in the euro area, dampening demand for financial intermediation, and the lockdown-related recessions across Member States have heightened the fragility of the banking sector as a whole.

The structure of the banking sector in the euro area also has shown some troubling trends, with the Herfindahl Index of bank concentration showing an increase in every single euro area country save the Netherlands and Finland from 2016 to 2020, with the largest increases in the smallest countries (Belgium, with a 28% increase, and Cyprus, with a 68% increase). Similarly, the share of the five largest credit institutions in total credit has increased in nearly every country over the same time period (Finland once again being the outlier), according to data from the ECB's Statistical Data Warehouse, a signal of less bank competition in Europe since the GFC (Maudos and Vives, 2019). The phenomenon of "too big to fail" has not been eradicated globally since the end of the global financial crisis (despite worries about it having receded, see Tölö *et al.* [2021]) and, in fact, larger banks have received an implicit subsidy allowing them to continue to be "too big to fail" (Fernández Bollo *et al.*, 2021).

¹ By this, I mean if continued and oscillating lockdowns are instituted to fight each new variant or wave of the virus. The uncertainty this engenders, coupled with the inevitable dampening of commerce, are likely to increase the probability of NPLs with each successive policy.

In sum, the banking sector in Europe appears to be stronger than it was on the eve of the GFC in 2007, but it still has underwhelmed in terms of performance. More importantly, the economic slowdown occurring in 2019, coupled with the intense contractions associated with COVID-19 in 2020, have heightened risks to the sector, making extraordinary monetary policies – in tandem with a whole host of fiscal support mechanisms – still attractive as a way to support financial stability.

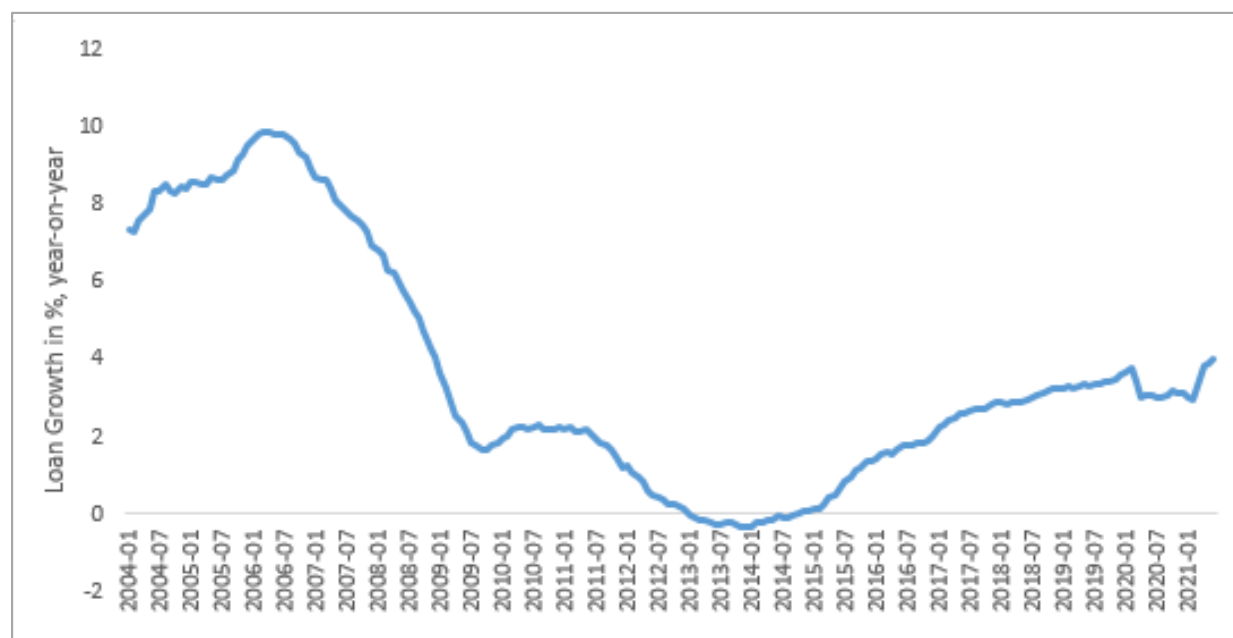
3.2. How "dominant" is the European financial sector?

However, the idea of "financial dominance" as described by Brunnermeier (2015) and others in recent years is not linked to the overall health of the financial sector, and instead is predicated on the idea that banks would choose deliberate strategies related to capitalisation in order to avoid losses and socialise risk. While the European banking sector is struggling with its own mild cough, small fever, and perhaps loss of (risk) appetite, are the conditions associated with financial dominance actually present? That is, has undercapitalisation plagued the euro area?

As was encountered with assessing the health of the European banking sector, understanding the extent of financial dominance across the euro area must also take into account the wide dispersion of abilities, conditions, and policies in each of the 19 constituent countries. Even with this reality, a glance at headline numbers on capitalisation shows that the banking sector in the euro area is more than satisfying its obligations to regulators. By late 2020, every single member of the euro area had banks which exceeded the total capital ratio of 8%, ranging from a high in Estonia of 28% to a low in Spain of 16.2%, with the EU average at 19.2%. According to the International Monetary Fund (Aiyar *et al.* 2021), while the threat of continued policy responses to the pandemic, in terms of lockdowns and other prohibitions, will eat away at bank capital, the buffers built are sufficiently large to withstand the likely impact of the diminishing waves of the pandemic.

Indeed, Table 1 shows that this performance in 2020, in the midst of the pandemic, was no outlier as, across nearly every capitalisation metric, European banks (across all of Europe, not just in the euro area) are well capitalised and have been trending in that direction since the euro area crisis. Tier 1 capital, the best picture of a bank's capital position, has more than doubled from 2011 to 2019, while total capital has more than doubled. The numbers shown in Table 1 are for the whole of the EU, specifically the countries within the Single Supervisory Mechanism (SSM), but the performance of the euro area is even slightly better, as a sample of banks in the euro area taken by Aiyar *et al.* (2021) shows similar Tier 1 numbers but even better common equity Tier 1 percentages (e.g., 14.4% v. 14.33% for the whole EU in 2019). As the Bank for International Settlements (BIS) notes (Basel Committee on Banking Supervision, 2020), this situation has improved more rapidly than, and actually overtaken developments in, the Americas, a reverse of the situation from 2011 to 2014. Moreover, leverage and liquidity coverage ratios have also increased substantially, reflecting a banking sector which has much more in reserve than the fragile system which was pushed to the brink by the GFC.

Figure 4: Monthly loan growth in the euro area, 2004 to 2021



Source: Author's calculations based on data from the ECB Statistical Data Warehouse.

Taken together with the data presented in the previous section, one could conclude that the banking sector in the euro area is well capitalised and ready for any inevitable downturn, while at the same time its performance is unspectacular. One could also thus conjecture that perhaps a bit *more* undercapitalisation could be used to improve performance in the short run. This idea is given some credibility by Figure 4, which shows the loan volume growth in the euro area remaining relatively flat since approximately 2016; at the same time, the loan-to-deposits ratio of euro area banks has fallen from a high of 141.1% in Q3 2008 to a new low of 93.2% in Q2 2021. Of course, this reduction in loan volume and as a percentage of deposits is likely due to demand side factors as well (i.e., soft growth in the euro area), but it also reflects the usage of the liquidity pushed out by the ECB as a buffer against future shocks (that is, high capitalisation). This augmentation of capitalisation has then come at the expense of financial intermediation, meaning that unconventional monetary policy has actually occasioned the opposite of financial dominance: overcapitalisation tied to monetary easing while performance remains tepid at best.

Table 1: Key capitalisation ratios in the EU

	Jun 2011	Dec 2011	Jun 2012	Dec 2012	Jun 2013	Jun 2014	Jun 2015	Jun 2016	Jun 2017	Jun 2018	Jun 2019	Jun 2020	Mar 2021
Common Equity Tier 1 Capital	5.30	7.00	7.80	8.30	9.00	11.40	12.72	13.51	13.88	14.10	14.33	14.89	15.49
Tier 1 Capital	6.80	7.20	8.10	8.50	9.20	12.10	13.44	14.39	14.88	15.30	15.55	16.13	16.77
Total Capital	8.10	8.30	9.10	9.70	10.90	14.30	15.84	16.95	17.56	17.76	18.00	18.66	19.34
Leverage Ratio (3%)	2.80	3.00	3.10	3.00	3.10	4.00	4.40	4.70	5.08	5.14	5.24	5.16	5.56
Liquidity Coverage Ratio	71.00	76.00	-	113.00	110.00	115.80	128.00	135.00	142.79	140.91	146.7	165.41	172.73

Source: European Banking Federation (pre-2015) and European Central Bank Statistical Data Warehouse (2015 onward).

4. RECONCILING DOMINANCE AND WEAKNESS

If, as shown in Section 2, financial dominance is a threat to monetary policymaking and, as shown in Section 3, financial sector weakness still rules the day in Europe but dominance in its theoretical form is not present, then the ECB may be at less of an impasse regarding its options going forward. Indeed, the evidence in Section 3 is that financial dominance of banks in Europe, in terms of undercapitalisation, is not the issue. This section examines, given this state of affairs, why unconventional monetary policy then continues to persist. Is the reason that we are conceiving financial dominance far too narrowly? That is, are European banks standing in the way of unwinding unconventional monetary policy not because of their capitalisation, but because of their influence on monetary policy in general? Or are there other factors at play?

4.1. Mis-defining "financial dominance"

As shown, if we rely on the current theoretical foundation of financial dominance - mainly that banks remain wilfully undercapitalised in the face of accommodative monetary policy and thus constrain central banks - the statistics shown in Section 3 argue that the euro area is not under the threat of "financial dominance". Banks are well capitalised according to current financial regulatory strictures, and round after round of stress testing and scenario modelling shows that all banks tested across the euro area are able to withstand even adverse scenarios with adequate buffers (European Banking Authority, 2021). And yet, unconventional monetary policy, and worries about financial sector weakness, persists within the euro area, perhaps suggesting that other forms of "financial dominance" are at play rather than just undercapitalisation of the banking sector.

The first area which the current conception of financial dominance falls short is in its implicit focus on banks alone as the main source of financial intermediation and risk, positing that central bank constraints are driven by banks who will behave strategically (and sub-Pareto optimally) with regards to capitalisation in the face of accommodative monetary policy. The rise of non-bank financial institutions (NBFIs) in the euro area and elsewhere challenges this dominant role for bricks and mortar banks, with NBFIs seeing a rise in their assets and importance from the end of the euro area crisis onward. Indeed, since 2017, credit to the private non-financial sector by euro area banks has risen from a low of EUR 9.6 trillion (in Q3 2014) to a new high of EUR 11.01 trillion in Q4 2020, an increase of 15%². By 2019, the percentage of non-bank assets in total financial sector assets reached 60%, on a persistent climb since the end of the euro area crisis and its relative stability from 1999 to 2011 in the high 30/low 40% range of total financial sector assets³.

Where does this fit into financial dominance? Obviously, NBFIs are "non-bank" for a specific reason, in that they do not accept deposits, and thus are free from the capitalisation rules set by the ECB and other organisations at the Member State and supranational level (i.e., Basel). Capitalisation thus means something very different in the context of NBFIs, related to risk appetite and their relationship to both banks and monetary policy authorities. In tandem with the greater role NBFIs have played in the euro area, they also have become greater credit risks (especially in the post-pandemic world); in particular, their increasing risk has been tied to their massive purchases of bonds (noted by the ECB as the largest net buyer of bonds overall in 2020), and the economic weakness caused by COVID-19 and the policy response to the pandemic threatens the vast majority of NBFIs bond holdings, both corporate and

² Data comes from the US Federal Reserve Bank of St. Louis Economic Data (FRED), series available at: <https://fred.stlouisfed.org/series/CRDQXMBPABIS>.

³ Based on data from the ECB, available at: https://www.ecb.europa.eu/pub/pdf/annex/ecb.fie202003_annex.en.pdf.

sovereign.

Given that NBFIs are facing their own risks of capitalisation, not tied specifically to capital reserves but more to their investment positions, any increase in interest rates tied to an unwinding of monetary policy positions would impact NBFIs substantially and reverberate throughout the euro area economy. While NBFIs are differentiated across market segments and asset classes, and some NBFIs may stand to gain from unwinding monetary policy (such as insurers), on the whole, the net effect on NBFIs of a return to the "old" normal would be a substantial shake-up of the sector and increased risks for the real economy. Given the size of the NBFIs sector, this reality provides much of a constraint on the ECB unwinding "QE infinity".

The position of NBFIs in creating financial stability risks feeds into the second missed facet of the current definition of financial dominance, and that is the continued and once-again-increasing complexity within the financial sector in the euro area. NBFIs, as well as the banks that lend to them, have a great ability to amplify liquidity shocks via the same transmission mechanisms as seen pre-GFC: through a reliance on derivatives and other financial instruments. While derivatives *per se* are not destabilising – in reality, they perform a valuable role in diversification and liquidity provision in volatile markets – the use of credit derivatives (and especially collateralised debt obligations, or CDOs) was a prominent factor in the real estate crash precipitating the GFC. Whether via the massive new set of financial regulations put in place post-2008 or via the continued reliance on accommodative monetary policy making credit derivatives more attractive, there is no doubt that there has been an increase in the use of derivatives concentrated in particular euro area members, namely Ireland, France, and Italy. Ireland, Italy, and Luxembourg have also seen a marked increase in securitisation-based credit intermediation, with Italian banks making large use of these vehicles to sell off NPLs.

Again, there is no direct theoretical or empirical correlation between increased complexity within a financial sector and its propensity towards crashes... or its need to be supported by accommodative monetary policy. However, there is undoubtedly a link between yields on complex instruments and monetary policy (Kohn, 2009), meaning that complexity becomes much more attractive in an environment of increased liquidity and accommodative monetary actions. The increase in complexity can then have a deleterious effect on the overall financial sector and the real economy, as was seen in the GFC, making central bankers reluctant to normalise policy as they do not have a good grasp on what exactly the risks may be. In such a situation, Rogoff's (1985) "conservative" central banker may be conservative in his or her preferences towards inflation but even more conservative towards financial stability, preferring to not rock the boat if it is not warranted. Once again, this creates inertia in monetary policy, constraining central bank actions, and forcing financial stability above price stability as the overriding goal of the central bank.

4.2. Financialisation, not capitalisation

If we conceive of financial dominance in this more expansive way, showing the overall power of a financial sector which is tightly interlinked but based on easy money to keep going, then a real picture of "dominance" emerges. It is a financial sector – not just banks – which takes on excessive risks and/or various forms of undercapitalisation due to accommodative monetary policy, and which creates a matrix of risks which can only be supported by the continuation of such monetary policy. It is here that the constraints to central bank actions occur, not merely through undercapitalisation but through the construction of an inherently fragile and non-resilient system. In this way, the financial tail wags the monetary authority dog, keeping deleterious policies in place for as long as possible.

It is important to note, however, this reality of financial dominance does not need to be encapsulated under some new theoretical innovation, as what appears to be happening in the euro area is closer to

the idea of "financialisation" rather than the narrow metrics of financial dominance. As noted briefly in the Introduction, the theorised effects of financial dominance have many commonalities with heterodox critiques of finance-based capitalism, encompassed under the broader heading of financialisation. As developed in a large literature (typified by Krippner [2005] and Van der Zwan [2014]), financialisation refers generally to the increasing power of finance in an economy, whether in terms of acceptance of financial concepts within households and firms, the ascendance of capital-market systems over bank-based ones, or, most closely related to financial dominance, the increase in political and economic power of financial institutions. Under the standard analysis of financialisation, the accumulation of political power in both banks and financial markets leads to public policies which are deleterious to the real economy, diverting resources away from production and/or other "beneficial" activities and towards financial activities (which, in line with the Marxist origins of this idea, are seen as non-productive). Various papers have documented the increase in financialisation in Western Europe and the US (Jayadev *et al.*, 2018), while several others have attempted to draw a link between financialisation and the GFC (typical of this work is Bresser-Pereira [2010]).

While there are commonalities between financialisation and financial dominance, the financial dominance literature in its current form emphasises the specific tactics of the financial sector rather than a vaguer association between financial accumulation and political power. But in both theoretical conceptions, the financial sector operates in a manner which relieves it of the burden of responsibility while simultaneously exerting a powerful influence on policymaking. And, as shown in Section 4.1, the narrow conception of financial dominance does not adequately explain the current state of monetary policymaking in the euro area (or globally) today nor does it capture the reality of the banking sector in the EU; it is only by widening the net of financial dominance to encompass other institutions beyond banks that we can understand the true constraints on central banking. This necessarily means shifting towards a more realistic view of central banking which centres on financialisation and the challenges encapsulated therein (Gabor, 2010).

In order to overcome this state of affairs, financialisation scholars have offered typically Marxist policies, e.g., massive new regulations on non-bank institutions or the squashing of capital-based measures in favour of traditional banking. Unfortunately, these unworkable policies also suffer from a misdiagnosis of the problem: in the same breath as castigating central banks for encouraging financialisation (Walter and Wansleben, 2020), researchers then admonish central banks from not pursuing even more accommodative monetary policy (as noted by Gabor, 2012). In reality, as financial dominance theory asserts, it is the accommodative monetary policy which creates the conditions for financialisation, and to continue to push such a policy would only lead to more financial dominance, not less.

In sum, the idea of financial dominance is far too narrowly tailored, but the more relevant and expansive concept of financialisation is too focused on the demand side (the financial sector) rather than the supply side (the monetary authorities). By marrying these two ideas, we can see that financial dominance is real but that it springs from the central bank and then spreads out across a broad set of financial institutions, not just banks. Unfortunately, that leads to an uncomfortable conclusion for central banks wishing to escape financial dominance, and that is the abandonment of accommodative monetary policy – and, for a short time, financial stability – in pursuit of price stability.

5. CONCLUSIONS

In many ways, the academic literature (apart from the contributions of Brunnermeier) and actual policymaking is still attempting to catch up to the real world of financial dominance. Many have preferred to rely on injunctions such as that from Smets (2014), who argued that the possibility of financial dominance calls for closer coordination between financial stability policies and monetary actions. Unfortunately, seven years have passed since Smets argued that financial dominance "could" be a problem; the reality is that financial dominance is already a prominent feature of the global landscape, especially if we witness the so-called "taper tantrum" of 2013 and the fact that unconventional monetary policy remains in place. While the best policy would have been to avoid any situation where financial dominance might manifest, i.e., eschewing accommodative monetary policy in the first place, the reality of 2021 is that accommodative monetary policies have substituted for long term and more rational thinking on economics; given this state of affairs, the probability of financial dominance has grown with each passing year that the policy is in place.

This paper has shown that financial dominance is not necessarily limited to its narrow definition of undercapitalisation, i.e., the tactical and strategic move of banks to avoid losses by having the monetary authority shoulder the risk. As shown in Section 3, the banking sector in the euro area is actually fairly well situated and with adequate capital buffers to withstand even a crisis as expansive as the COVID pandemic and the ensuing prohibitions on economic activity. It is instead the proliferation of NBFIs and a return to highly complex financial instruments buoyed by accommodative monetary policy – much as in the run up to the GFC – which shows that financial dominance is coming from another portion of the euro area financial sector.

This conception of financial dominance, beyond banks alone, take the entire theoretical basis of "financial dominance" away from its current narrow definition to a broader idea of central bank constraints. However, by expanding this definition, we find that we are closer to the heterodox idea of "financialisation" i.e., the ascension of financial interests in society over the real economy. Such a state of affairs appears to be precisely where the ECB is trapped, favouring financial stability over price stability for over a decade and using ultra-accommodative monetary policy to achieve it. This approach has led to banks rebuilding their capital buffers with easy money but not increasing their financial intermediation functions, while at the same time allowing for NBFIs to increase their position but with a higher risk profile.

Given this reality, the only way for a central bank such as the ECB to break financial dominance is to prioritise one mandate over another and, more specifically, to prioritise *the central mandate of price stability*. Caught between a Scylla of financial dominance and the Charybdis of financial crisis, the ECB is in an untenable situation which cannot continue. It is thus imperative for the ECB to break the cycle via the only means available to it, which is to swiftly return to normal monetary policy and end the lifeline which is feeding financial dominance. Such an approach will occasion financial hardship in the short-term certainly, but it is not the job of the ECB to ensure that specific financial institutions are pursuing "correct" goals; it is the role of the ECB to oversee systemic issues, including the creation of financial dominance via its own policies. By withdrawing the massive distortion creating financial dominance, the consolidation and reshuffling of the financial sector can begin; and, as noted, most of the euro area banking sector is on sound footing regarding capital buffers and thus will be able to survive.

Going forward, the re-emphasis on price stability needs to also expand beyond the narrow definitions of "inflation" currently in vogue: that is, the ECB must not merely observe headline inflation but also expand its horizons to asset prices, commodities, pure monetary growth, and even the effect that

monetary inflation has on the financial sector. The bubble in money which has grown unabated since the GFC has created the current situation in the financial sector where financial dominance is unquestioned, a situation which could have been foreseen (given the lessons of the GFC) and prevented if monetary policy had gone back to "normal" sooner. For the lessons of the current crisis, it is crucial for the ECB to understand it should be monitoring the effects that monetary actions have on financial actors and adjust these actions accordingly. Only in that way will the dog regain control of its tail and be able to chart a course for the euro area economy.

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The idea of financial dominance has gained some notoriety in recent years as a further constraint on central bank policymaking. This paper examines the reality of financial dominance and how the financial sector may be an impediment to the necessary unwinding of all unconventional monetary policies in Europe. In line with the existing literature, I conclude that the financial sector has been made more vulnerable as a result of quantitative easing—and allowing the financial tail to wag the monetary dog will lead to only more vulnerability.

This paper was provided by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the committee on Economic and Monetary Affairs (ECON) ahead of the Monetary Dialogue with the ECB President on 27 September 2021.
