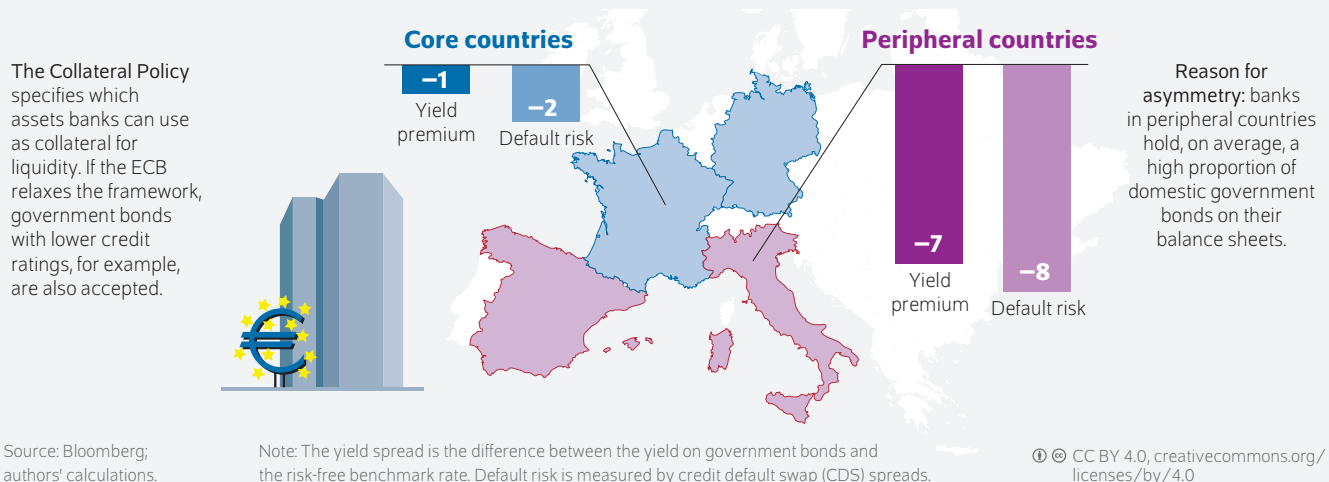


An underestimated policy lever: the ECB's collateral policy supports financial markets and reduces uncertainty

By Pia Hüttl, Gökhan Ider, and Matthias Kaldorf

- In addition to interest rate decisions, the collateral framework is an important monetary policy tool of the European Central Bank
- Collateral policy determines which assets (like government bonds) banks are permitted to pledge to the ECB as collateral for refinancing operations
- When the collateral framework is relaxed, banks' stock prices rise and their default risk falls, particularly for riskier banks
- Yields on government bonds from eurozone peripheral countries, such as Italy and Spain, react more strongly than those from eurozone core countries, such as Germany and France
- A banking union and euro government bonds could reduce the asymmetric impact of collateral policy between peripheral and core countries

If the ECB eases its collateral policy, peripheral countries benefit more than core countries



FROM THE AUTHORS

“Monetary policy in the euro area should affect all member states equally. The fact that it has an asymmetric effect in terms of collateral policy is an undesirable side effect. Thus, it is important to finalize the banking union. This requires higher capital requirements for risky government bonds and a fully integrated European deposit insurance scheme.” — Pia Hüttl —

MEDIA



Audio Interview with Pia Hüttl (in German)
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An underestimated policy lever: the ECB's collateral policy supports financial markets and reduces uncertainty

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ABSTRACT

A central bank's collateral policy determines which assets banks may use as collateral for refinancing operations. Thus, it is a critical tool for providing the banking system with liquidity while simultaneously stabilizing it. Using a high-frequency identification approach, this study examines how the European Central Bank's collateral policy influences banks, financial markets, and government bond markets. When the ECB's collateral policy is eased, bank stock prices rise more sharply than those of the overall market, market uncertainty declines, and the default risk of banks decreases, particularly for riskier banks. Furthermore, yield spreads between government bonds of euro area peripheral countries, such as Italy and Spain, and those of core euro area countries, such as Germany and France, narrow significantly. This asymmetric spillover from the banking system to government bond markets differs fundamentally from the effects of conventional monetary policy, such as adjustments to key interest rates, which affect euro area countries uniformly. In principle, this asymmetry between the eurozone's peripheral and core countries can be counteracted through greater harmonization of banking regulation and insolvency law.

While the European Central Bank's (ECB) interest rate decisions have an immediate impact on the markets and usually receive media attention, another monetary policy tool is typically unnoticed: the ECB's collateral policy. Although it receives little media attention, it has a decisive influence, determining which assets banks are allowed to pledge as collateral with the central bank to obtain liquidity. The collateral framework is broad enough to ensure the smooth implementation of monetary policy, yet narrow enough to prevent the ECB from incurring significant losses.

The ECB's collateral framework is exceptionally broad. While the U.S. Federal Reserve primarily provides liquidity against U.S. Treasury bonds as collateral, financial institutions in the euro area can pledge not only government and corporate bonds but also less common and riskier securities from the private sector. There is a simple reason for this. There is no common safe-haven bond in the euro area, and the volume of highly liquid government bonds with the highest credit ratings is simply too small relative to the size and diversity of its banking sector.

Over the years, the collateral policy has been anything but a rigid set of rules. It is adjusted an average of six times a year—mostly independently of the ECB Governing Council's regular meetings. The effectiveness of this—often underestimated—tool became explicitly clear during the COVID-19 pandemic: the ECB temporarily accepted government bonds with lower credit ratings as collateral.¹ The announcement alone helped lower yields on government bonds, create fiscal leeway for eurozone countries, and avert a looming banking crisis.

If the ECB changes its collateral policy, it can do so using two levers: the eligibility criteria and the valuation haircuts. The eligibility criteria determine which assets are accepted as collateral in the first place. For example, there are minimum requirements for credit ratings and tradability. The

¹ Luis de Guindos and Isabel Schnabel (2020): Improving funding conditions for the real economy during the COVID-19 crisis: the ECB's collateral easing measures. ECB blog post, April 22, 2020 (available online, accessed May 22, 2026. This applies to all online sources in this report, unless otherwise noted).

Box

How to identify unexpected changes in collateral policy

The identification of the effects of collateral policy follows the logic of high-frequency identification, which has long been established in monetary policy research.¹ The basic idea is simple: If stock prices already reflect all available information shortly before a change in collateral policy, then a price change within a very narrow time window around the relevant policy announcement must be attributable to new information that “surprised” the market—that is, it was unexpected.

Specifically, the study proceeds in several steps. First, a comprehensive list of 98 changes to the ECB’s collateral framework between January 2007 and December 2022 was compiled. Using the historical archive of the Thomson Reuters news agency, the exact time at which the news reached the financial markets is determined. Of the 98 events, 55 received sufficient attention to be recorded in the news archives. After excluding announcements that coincided with ECB monetary policy decision days, 44 events remain.

For each of these 44 events, the stock prices of the ten largest banks in the EuroStoxx Banks Index are used at a high (intra-day) frequency. The price change for each individual bank is measured within a 45-minute window surrounding the policy announcement.

A common denominator is then extracted from the individual price reactions (“Principal Component Analysis”). This ensures that no bank-specific factors distort the result. If the aggregated bank stock price constructed in this way moves upward, the announcement is classified as easing; if it moves downward, it is classified as tightening.

This approach can be illustrated with two examples: On January 20, 2009, the ECB raised the minimum rating for asset-backed securities (ABS) accepted as collateral to the highest rating, AAA. This is a measure that market participants viewed as a burden on the financial markets rather than an improvement

¹ See Kenneth N. Kuttner (2001): “Monetary Policy Surprises and Interest Rates: Evidence from the Fed Funds Futures Market.” *Journal of Monetary Economics* 47(3), 523–544 (available online); Refet S. Gürkaynak, Brian Sack, and Eric T. Swanson (2005): Do Actions Speak Louder Than Words? The Response of Asset Prices to Monetary Policy Actions and Statements. *International Journal of Central Banking* 1(1), 55–93 (available online); Carlo Altavilla et al. (2019): Measuring Euro Area Monetary Policy. *Journal of Monetary Economics* 108, 162–179 (available online).

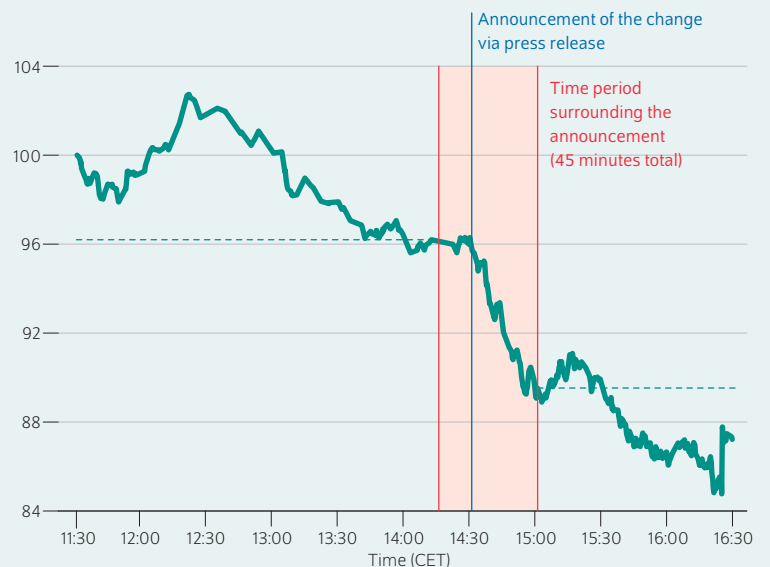
haircuts determine the portion of the collateral’s market value that commercial banks cannot use as collateral. The higher the haircut, the less central bank credit banks receive for the same collateral.

During crises, banks demand more liquidity from the central bank, while, at the same time, fewer assets meet the requirements for collateral—for example, because asset ratings have been downgraded. Typically, the central bank then expands its collateral framework by accepting bonds with

Figure

Evolution of bank stock prices¹ on January 20, 2009, following a tightening of the collateral policy

Indexed, January 20, 2009, 11:30 a.m. = 100



¹ Daily adjusted share price of the ten largest banks in the EuroStoxx Banks Index.

Note: The horizontal dashed green lines indicate the median price levels before and after the announcement.

Sources: Thomson Reuters (intraday data); LSEG Refinitiv Germany GmbH (news archive); European Central Bank (press releases); authors' own calculations.

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Immediately following the announcement of a restrictive collateral policy, bank stocks lose value.

in market liquidity. The constructed aggregate bank stock price shows a sharp decline following the corresponding press release at 2:30 p.m., while there is hardly any movement in the 15 minutes prior to the event (Figure).

An announcement that was, by contrast, received positively by the market took place on April 22, 2020: The ECB announced measures to mitigate the impact of potential credit rating downgrades on the availability of collateral. The constructed bank stock price reacted uniformly positively, rising by more than one percent within the time window.

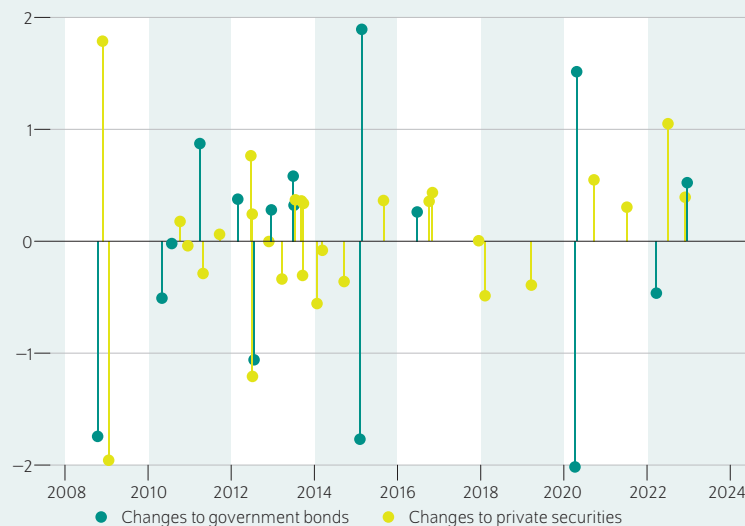
lower credit ratings as collateral, as was the case during the COVID-19 pandemic. The financial markets have already anticipated some of these adjustments and priced them in ahead of time. This is precisely why it is difficult to measure the impact of such measures.

Research to date has focused primarily on individual policy changes, such as expanding the collateral framework to include a specific class of securities. For example, one study shows that including corporate bonds as eligible central bank

Figure 1

Price reactions of European bank stocks following changes to the ECB's collateral policy

In percent



Note: The price changes of the largest banks in the EuroStoxx Banks Index were measured within a narrow 45-minute window surrounding the respective policy announcements.

Source: Thomson Reuters; European Central Bank; authors' own calculations.

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Price swings are often substantial—whether the ECB's announcement is classified as easing or tightening.

collateral lowers their yields and improves secondary market liquidity.² Another study demonstrates that government bond yields change when the central bank adjusts the haircuts for certain maturity segments.³ Further research has found that a relaxed collateral policy lowers banks' refinancing costs and increases their credit supply, thereby affecting the real economy.⁴ To date, there has been no systematic analysis of the macroeconomic effects across the full range of policy changes. However, this is necessary because, with the ongoing reduction of the ECB's large bond holdings, it is becoming apparent that euro area banks will once again rely more heavily on central bank refinancing and, consequently, on an appropriate collateral framework.

² Lorian Pelizzon et al. (2024): Collateral Eligibility of Corporate Debt in the Eurosystem. *Journal of Financial Economics* 153, 103777 (available online).

³ Juuso Nissinen and Markus Sihvonen (2024): Bond Convenience Curves and Funding Costs. *Journal of International Economics* 151, 103969 (available online).

⁴ Nuno Cassola and François Koulischer (2019): The Collateral Channel of Open Market Operations. *Journal of Financial Stability* 41, 73–90 (available online); Hanming Fang, Yongqin Wang, and Xian Wu (2025): The Collateral Channel of Monetary Policy: Evidence from China. *International Economic Review* (available online); Sjoerd van Bakkum, Marc Gabarro, and Rustom M. Irani (2018): Does a Larger Menu Increase Appetite? Collateral Eligibility and Credit Supply. *Review of Financial Studies* 31(3), 943–979 (available online); Anne-Laure Delatte, Pranav Garg, and Jean Imbs (2025): The Transmission Channels of Unconventional Monetary Policy: Evidence from a Change in Collateral Requirements in France. CEPR Discussion Paper 1369 (available online); Pia Hüttl and Matthias Kaldorf (2026): Central Banks and Financial Integration: Evidence from the Eurosystem Collateral Framework. Working Paper (forthcoming).

New identification approach using bank stock prices

Accurately measuring the impact of collateral policy is difficult for two reasons. First, changes often affect multiple asset classes simultaneously, making it difficult to select an appropriate measure. Instead of focusing on individual asset classes, this study is the first to measure the effect of changes on the users of central bank facilities themselves: the banks. The idea behind this is that changes in collateral policy directly affect banks—thus affecting their stock prices—regardless of which assets are affected by a change.

Second, the question arises as to how the effect of the announcements can be separated from the influence of the financial environment. To this end, the stock prices of the largest banks in the euro area are analyzed within a narrow 45-minute window surrounding ECB collateral policy announcements (box). This short time window ensures that other influences are virtually ruled out. The price reactions reveal how unexpected the change was: if the banks' stock prices rise, this is interpreted as an unexpected easing; if they fall, as an unexpected tightening. Thus, this study adopts an approach that overcomes both challenges—the measurement issue and the influence of the broader environment.⁵

Bank stocks react strongly to announcements regarding collateral policy

The study analyzes a comprehensive list of ECB announcements on collateral policy covering the period from the introduction of a harmonized collateral framework in January 2007 to December 2022.⁶ The immediate price reactions of bank stocks to such announcements are sometimes substantial and, on some days, exceed two percent (Figure 1). By comparison, conventional monetary policy decisions move bank stock prices by an average of only about 0.4 percent.⁷ It appears that bank stock prices are influenced not just by announcements regarding government bonds but also those regarding privately issued securities, such as corporate bonds.

Banks with lower credit ratings benefit more from easing measures

Not all bank stocks react to changes in collateral policy to the same extent. To understand which banks are particularly affected, the list of announcements is linked to bank balance sheet data. For banks with less liquid balance sheets and lower capital adequacy, price fluctuations are significantly more pronounced, regardless of whether collateral policy is relaxed or tightened. These results are plausible:

⁵ For more details, see Pia Hüttl, Gökhan Ider, and Matthias Kaldorf (2026): Collateral Policy Surprises. DIW Discussion Paper 2162 (available online).

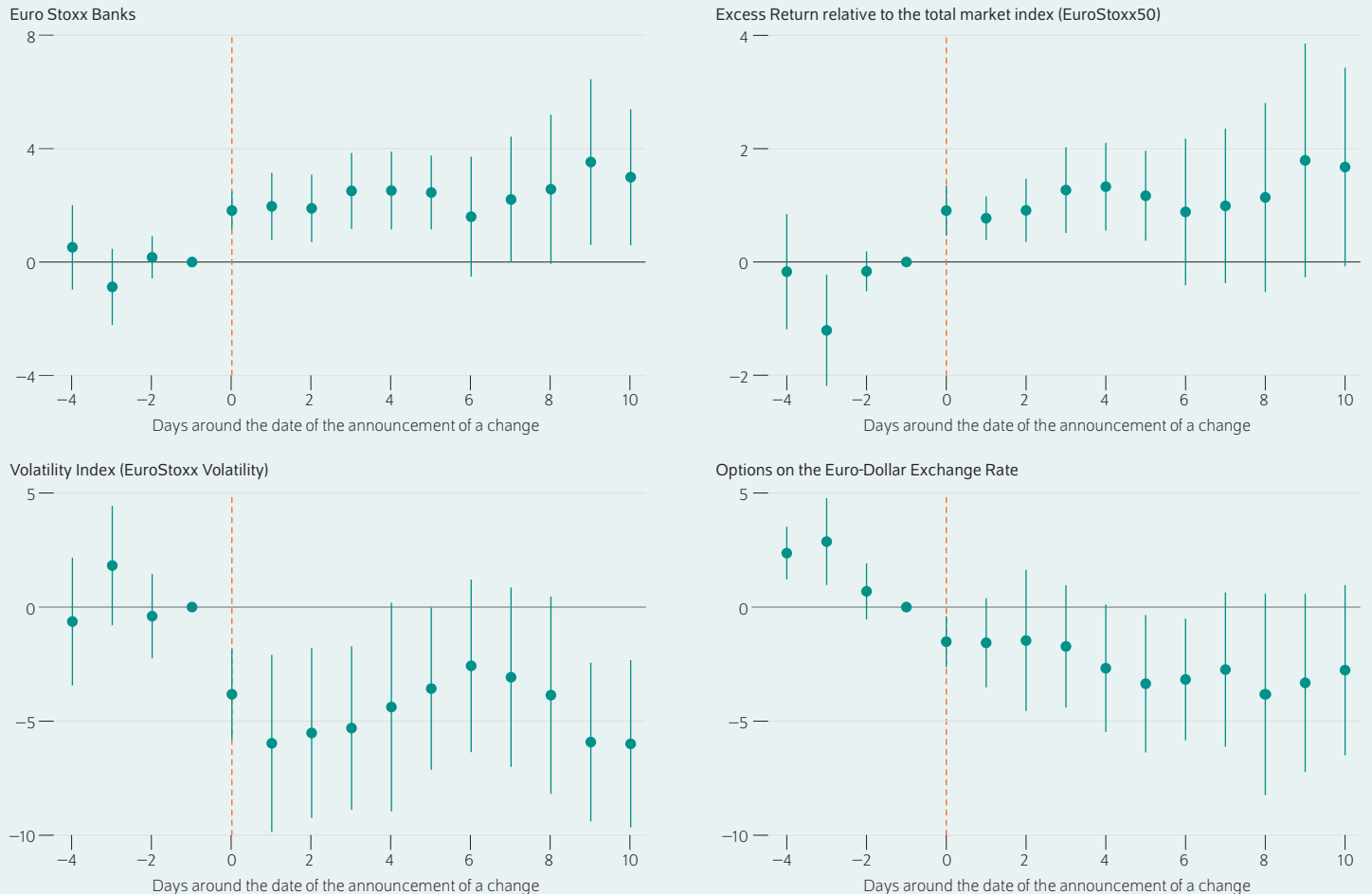
⁶ The list used here is based on and expands upon Ulrich Bindseil et al. (2017): The Eurosystem Collateral Framework Explained. ECB Occasional Paper Series, 72 ff (available online).

⁷ See Marek Jarociński and Peter Karadi (2020): Deconstructing Monetary Policy Surprises — The Role of Information Shocks. *American Economic Journal: Macroeconomics* 12(2), 1–43 (available online).

Figure 2

Macroeconomic impact following the announcement of an easing of the ECB's collateral policy

Change in percent



Note: The effects of an unexpected easing are measured using an econometric estimation method. The dependent variables are the EuroStoxx Banks Index and the excess return of the EuroStoxx Banks Index relative to the overall index (EuroStoxx50) for the stock market reaction, as well as the implied volatility of EuroStoxx50 options and the volatility of the euro-dollar exchange rate derived from option prices as an indicator of market uncertainty. The vertical lines denote the 90 percent confidence interval.

Source: Bloomberg; authors' own calculations.

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When collateral policies are eased, bank stocks rise more sharply than the overall market and uncertainty in the financial markets declines.

as these banks are specifically more dependent on access to central bank funds, they especially benefit from an expansion of the collateral framework. Collateral policy also influences the default risk of individual banks. A look at the traded credit default swaps (CDS) for individual banks confirms this pattern:⁸ when the ECB eases its collateral policy, the market-priced default risk for all banks declines and bank stock prices rise. When it tightens the policy, the opposite occurs.

⁸ A credit default swap (CDS) is a financial derivative that functions like credit default insurance. The CDS spread is the annual fee that the buyer pays to the seller for this protection. It is expressed in basis points and serves as a direct barometer of the creditworthiness and perceived default risk of a company or country. The higher the basis points, the greater the estimated default risk.

The eurozone is heterogeneous in this regard: banks headquartered in countries such as Italy and Spain (peripheral countries)⁹ are, on average, less well-capitalized, less liquid, and hold more domestic government bonds on their balance sheets than banks headquartered in Germany, France, and the Netherlands (core countries). Accordingly, banks in the peripheral countries react much more strongly: their default risk, as measured by their respective CDS spreads, falls by up to ten basis points, compared with about four basis points for

⁹ In academic literature, the term "peripheral countries" in the eurozone refers to countries that are geographically located at the outer borders and, when compared economically to the stronger economic centers, exhibit structural deficits, such as lower competitiveness, higher public debt, and more fragile banking and public finances.

banks in the core countries of France and Germany. Thus, banks in peripheral countries benefit significantly more from the easing of collateral policies.

A more lenient collateral policy increases financial asset prices and reduces uncertainty

But what is the macroeconomic impact of changes in collateral policy? Using an econometric estimation method,¹⁰ we find that, following an unexpected easing of collateral policy, the excess return of the EuroStoxx Banks index relative to the overall index increases. In other words, stock prices across the entire market rise, albeit less sharply than those of bank stocks (Figure 2). At the same time, uncertainty in the financial markets declines: the volatility index (EuroStoxx Volatility Index), a common measure of the expected range of fluctuations in European stocks, falls by about four percent. The implied volatility of options on the euro-dollar exchange rate also declines, indicating lower financial market uncertainty.

Government bonds from peripheral countries benefit particularly strongly

The effects of the collateral policy on the prices of European government bonds are particularly interesting. Following an unexpected easing, the yield spreads of all major euro-denominated government bonds relative to the risk-free benchmark rate have narrowed.¹¹ However, at around seven basis points, the decline is significantly steeper in the peripheral countries of Italy and Spain than in the core eurozone countries of Germany and France, where yield spreads have narrowed by only about one basis point (Figure 3).

One obvious explanation for this asymmetric reaction is that certain government bonds have become more attractive as collateral following an easing, causing both demand and prices to rise. However, the results point to a different mechanism: CDS spreads for sovereigns are also falling—a measure that reflects solely the default risk of the respective country and has nothing to do with a bond's suitability as collateral. In fact, CDS spreads for peripheral countries are declining by about eight basis points, while those for core countries are falling by only about two basis points.

This asymmetric effect can be explained by the structure of the banking sector: a relaxed collateral policy facilitates easier access to central bank credit and reduces banks' default risk. Healthier banks accept lower yields on government bonds—they need to demand less compensation for holding these bonds and can simultaneously hold more of them on their balance sheets. This effect is particularly pronounced among banks in peripheral countries, as they hold

a disproportionately large amount of domestic government bonds (home bias) and, thus, are less diversified. A relaxation of collateral policy primarily strengthens these banks and, through their portfolios, has a particularly strong impact on the yields of domestic government bonds.

This transmission mechanism differs fundamentally from that of conventional monetary policy. Interest rate cuts, for example, also cause government bond yields to decline, but this occurs almost uniformly across core and peripheral countries. Furthermore, conventional monetary policy has little effect not just on the default risk of banks or sovereigns, but also on bank stock prices. Conventional monetary policy thus has a broad and largely symmetrical impact across euro area countries; collateral policy, by contrast, acts primarily through bank default risk and is therefore asymmetrical—that is, it has a stronger effect in countries with weaker banking sectors.

The effect is stronger during recessions

The effects of these changes vary depending on the economic situation. During recessions, changes in collateral policy have a significantly stronger impact: the excess return on bank stocks¹² rises by 1.5 percent, compared with just 0.3 percent during periods of economic expansion. The default risk of banks also declines more sharply with a change in collateral policy during recessions—by nearly five basis points, as measured by the CDS spreads of the respective bank, compared to just one basis point during periods of economic expansion. Thus, collateral policy has its greatest impact precisely when it is most urgently needed: during recessions, the demand for central bank liquidity rises, while at the same time bank balance sheets come under greater strain. Easing the collateral framework counteracts both of these effects.

The strength of these effects also depends on how much liquidity is available in the banking system. Even after the ECB began its large-scale bond purchases in March 2015, the collateral policy continues to have measurable effects. This suggests that some banks remain dependent on direct access to central bank credit. As holdings are gradually reduced, the importance of the collateral policy will increase even further.

Conclusion: a banking union and a euro government bond could reduce asymmetry in collateral policy

This study shows that the ECB's collateral policy is far more than a technical detail of the monetary policy framework. It is an independent and effective instrument that supports not just banks but also financial and government bond markets,

¹⁰ See Óscar Jordà (2005): Estimation and Inference of Impulse Responses by Local Projections. *American Economic Review* 95(1), 161–182 (available online).

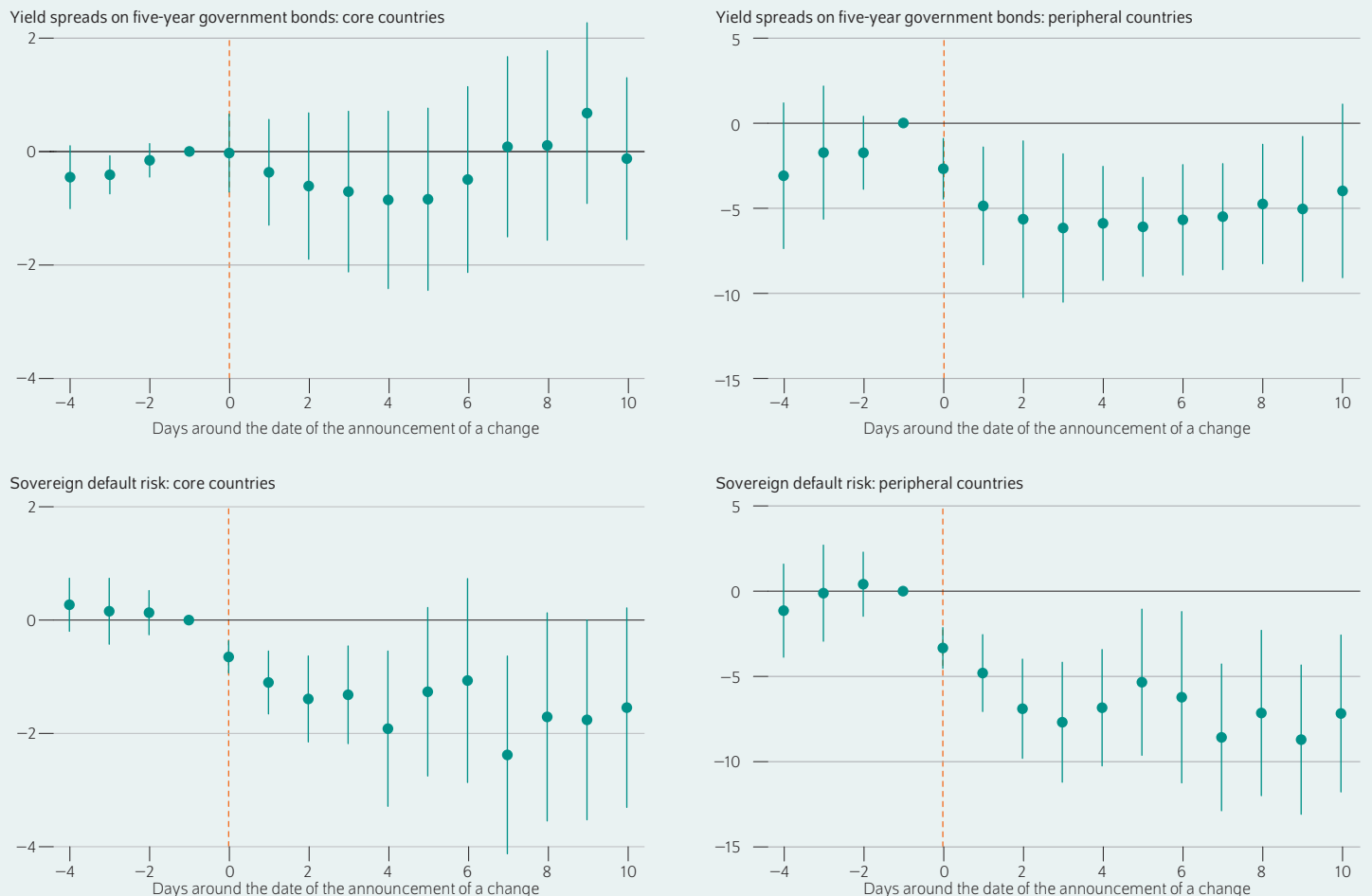
¹¹ The yield spread of a government bond refers to the difference between the yield on that government bond and a risk-free reference rate, typically the "Overnight Index Swap" rate with the same maturity.

¹² The excess return on bank stocks indicates how much better or worse bank stocks are performing compared to the overall market. It measures the difference between the return on a bank stock index (here: EuroStoxx Banks) and the return on the broader stock market (here: EuroStoxx 50).

Figure 3

Prices of European government bonds and sovereign credit default swaps following the announcement of an easing of the ECB's collateral policy

Change in basis points



Note: The yield spread refers to the difference between government bond yields and the risk-free benchmark rate. Default risk is measured by the spreads on countries' credit default swaps (CDS). Core countries include France and Germany, while peripheral countries include Spain and Italy.

Source: Bloomberg; authors' own calculations.

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When the ECB eases monetary policy, government bond yields and countries' default risk decline—more sharply in peripheral countries than in core countries.

particularly during crises. If collateral policy is relaxed during such times, it strengthens banks by lowering default risk, reducing uncertainty in financial markets, and depressing government bond yields—with particularly strong effects in the euro area periphery.

This uneven impact is structurally determined: as long as banks in some peripheral countries hold a disproportionately large amount of domestic government bonds, the collateral policy will have a greater impact on the bond markets of these countries than on those of the core countries.

Monetary policy in the euro area is actually intended to have an even impact across all member states, which it does in the case of interest rate decisions. An asymmetrical

collateral policy, however, is a potentially undesirable side effect. To counteract this, there are clear areas where European policymakers can take action. The home-bias among European banks should be reduced, for example by finalizing the banking union. This requires higher capital requirements for risky government bonds and, at the same time, a fully integrated European deposit insurance scheme, comparable to the Federal Deposit Insurance Corporation (FDIC) in the U.S. In addition, harmonized insolvency laws across Europe would improve the conditions for greater cross-border competition and diversification in the banking sector.

A safe and liquid European bond, comparable to the bonds issued by the European Commission during the COVID-19

pandemic¹³—could further reduce home bias in the banking system and, with it, the asymmetry in collateral policy.

13 During the COVID-19 pandemic, the European Commission issued a large number of bonds backed by the EU budget; these were intended to facilitate the economic recovery of member states. See the European Commission's press release of June 15, 2021: NextGenerationEU: European Commission Raises €20 Billion in First Transaction to Support Europe's Recovery (available online).

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JEL: E44, E58, G12, G21

Keywords: Central bank collateral framework, bank stocks, government bond market, high-frequency identification, intermediary asset pricing

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